DIRECTORY

OF

MINES AND METALLURGICAL ESTABLISHMENTS

EAST OF 100TH MERIDIAN,

AND OF THE MINES OF BITUMINOUS COAL AND LIGNITE IN THE WESTERN STATES AND TERRITORIES.

DIRECTORY OF MINES AND METALLURGICAL ESTABLISHMENTS.

Directory of anthracite coal mines.

PENNSYLVANIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds). (a)	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CARBON COUNTY.			*Feet.*		
No. 3 mine, Primrose and Mammoth seams.	Nesquehoning	Lehigh Coal and Nav. Co.	99,327	16-24 24-40	Anthracite	N. Y. and Phila., via C. R. R. of N. J. and L. C. and Nav. Co's canals.
No. 4 mine, Mammoth seam	Panther Creek valley	do	None	40	do	Do.
No. 5 mine, Mammoth seam	Andrewsville	do	56,371	20	do	Do.
No. 6 mine, Primrose and Mammoth seams.	do	do	93,953	8 37	do	Do.
No. 9 mine, Primrose and Mammoth seams.	Lansford	do	141,448	40	do	Do.
Honey Brook Colliery No. 2, Wharton seam.	Tresckow	Lehigh and Wilkes-Barre C. Co.	111,640	6	Anthracite, hard white ash	N. Y. and Phila. and L. V. f'ces and C. R. R. of N. J., via C. R. R. of N. J. and L. and Del. Div. canals.
Yorktown mine, Wharton and Mammoth seams.	Audenreid	Thomas John & Co	152,182	8½ 24	Anthracite, hard white ash, best domestic and steam.	Phila., N. Y. and L. V. f'ces., via L. Val. R. R., N. J. C. R. R. and Lehigh Canal.
Coleraine mine, Wharton and Mammoth seams.	Beaver Meadow	Chas. F. Shoener	153,451	25	Anthracite, hard white ash	N. Y. and Phila., via L. V. R. R., N. Pa. R. R. and Lehigh Canal.
	COLUMBIA COUNTY.					
Hazel Dell mine, Buck Mountain seam.	Centralia	Sykes & Jones	15,080	11	Anthracite, hard white ash	Perth Amboy, N. J., N. Y. and P. and R. line, via L. Valley and Phila. R. R.
Glen City Colliery, Buck Mountain seam.	Glen City	J. A. Losee	27,803	10-11	Anthracite	Erie, Pa., and places along line, via Sunbury, Hazleton and Wilkes-Barre R. R. and P. and E. R. R.
Monroe mine, Skidmore seam.	Montana	A. H. Church	11,591	18	Anthracite, white ash	
J. L. Kline mine	do	J. L. Kline	2,240		Anthracite	Neighboring towns.
Miller, Ruff & Beaver mine		Miller, Ruff & Beaver				
Piffer & Geraphy mine	Centralia	Piffer & Geraphy				
Continental Colliery, Mammoth seam.	do	Lehigh Valley Coal Co.	127,755	26	do	Perth Amboy, via L. V. R. R.
Potts mine, Mammoth seam	Conyngham township	Phila. and Reading C. and I. Co.	97,104	22	Anthracite, hard white ash	P. and R. R. R., Schuyl. Can., Susquehanna Can to the lakes, Phila. and Erie R. R.
Keystone mine, Mammoth seam.	do	do	36,400	22	Anthracite, white ash, free-burning.	Do.
	DAUPHIN COUNTY.					
Williamstown mine, Lykens Valley seam.	Williamstown	Summit Branch R. R. Co.	281,867	7	Anthracite, red ash	Phila., Balt., and the East, via Summit Branch R. R., North. Cen. R. R., and Penna. R. R.
Short Mountain mine, Lykens Valley seam.	Wiconisco	Lykens Valley Coal Co.	168,478	9	Semi anthracite, red ash	Do.
	LACKAWANNA COUNTY.					
Anthracite mine, Nos. 1 and 2 seams.	Old Forge	Anthracite Coal Co	62,905	9	Anthracite, hard, free-burning.	N. Y., via Del., Lacka., and West. R. R.
Greenwood mine, Nos. 1, 3, and 4 seams.	Lackawanna township	do	128,800	17	Anthracite, free-burning	Do.
Mount Pleasant mine, E or Diamond, F or Rock, G or Big seams.	Scranton	William T. Smith	137,957	20	Anthracite	Del., Lacka., and Western R. R. Co.
Meadow Brook and National mine.	Scranton	William Connell & Co.	236,100	6	Anthracite	Del., Lacka. and Western R. R. Co.
Erie mine, Carbondale seam	Carbondale township	Hillside Coal and Iron Co.	73,707	7½	Anthracite, very light, free-burning; chequered or open-grained.	Buffalo and Honesdale, Pa., via D and H. C Co.'s R. R., N. Y., L. E. and W. R. R., D. and H. C. Co.'s R. R. and Gravity road.
Springbrook mine, B. and D. seams.	Moosic	do	104,413	11	Anthracite, fracture partly conchoidal, partly open-grained.	Do.

a The product is that for the census year, July 1, 1869, to June 30, 1880.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LACKAWANNA CO.—continued.			*Feet.*		
Pierce mine, Archbald seam.	Archbald	Jones, Simpson & Co.	81,556	9½	Anthracite, white ash	N. Y., via Del., Lacka. and West. R. R.
Jones, Simpson & Co.'s mine, Archbald seam.	do	do	64,960	8½	Anthracite, white ash, iron and steam.	Del. and Hudson Can. Co., via Gravity road.
Filer & Livey mine, Grassy Island and Archbald seam.	Winton	Geo. Filer and Thos. Livey.	107,078	16	Anthracite	N. Y., via D., L. and W. R. R.
Jermyn No. 3 mine, Clark seams.	Green Ridge	John Jermyn	163,789	8	do	D. and H. C. Co., and D., L. and W. R. R.
Roaring Brook mine, Upper, Middle, and Lower seams.	Borough of Dunmore	Roaring Brook Coal Co.	132,023	12	do	N. Y., via D., L. and W. R. R. and Morris and Essex R. R.
School Fund mine, Rock and G seams.	Scranton	School Fund C. Asso'n, I'd.	77,952	18	do	Del. and Hudson Canal Co.
Brisbin mine, Big or G seam.	do	Del., Lack. and West. R. R. Co.	147,599	8-9	do	N. Y., Syracuse, Oswego, Buffalo, and Chicago, via D., L. and W. R. R.
Sloan mine, G or Big, F or Rock seams.	Lackawanna	do	147,663	9 6	do	Do.
Continental mine, G or Big, H or Clark seams.	do	do	148,738	8 5	do	Do.
Hampton mine, G or Diamond, F or Rock seams.	Lackawanna township	do	91,278	9½	do	Do.
Scranton Coal Company's mine, G and A seams.	do	do	None.	18	do	Do.
Cayuaga mine, G or Big seam.	Scranton	do	130,204	8	do	Do.
Archbald mine, Clark and Rock seams.	Lackawanna township	do	None.	11½	do	Do.
Bellevue mine, H or Clark, F or Rock seams.	Bellevue	do	215,809	13	do	Do.
Taylor mine, H or Clark seam.	Taylorville	do	176,129	7	do	Do.
Hyde Park mine, G or Big, F or Rock seams.	Scranton	do	19,149	15	do	Do.
Diamond mines, G or Big, F or Rock, E or Diamond seams.	do	do	399,807	20½	do	Do.
Oxford mine, E or Diamond, F or Rock seams.	Hyde Park	do	None.	12½	do	Do.
Pyne mine, Clark and I seams	Lackawanna	do	206,678	17	do	Do.
Central mine, G or Big seam.	15th Ward, Scranton	do	180,371	11	do	Do.
Dodge mine, G or Big, F or Rock seams.	Scranton	do	67,332	16	do	Do.
Chestnut Hill mine	Carbondale	E. E. Hendrick	None.		do	Local.
Capuse mine, Clark seam	Scranton	Lack., I. and C. Co	195,918	7	do	Scranton and N. Y., via D., L. and W. R. R.
Pine Brook mine, Clark seam	do	do	109,910	6½	do	Co.'s I. and S. Works, Scranton, via D., L. and W. R. R.
Von Storch mine, Clark, 14-foot and Diamond seams.	Providence	Del. and Hud. Can. Co.	272,940	19	Anthracite, hard white ash.	Rondout, N. Y., and inland cities in North and West, via D. and H. C. Co.'s Can. and R. R., and N. Y., L. E., and W. R. R., and connections.
Powderly mine, top and bottom seams.	Carbondale	do	None.	7	do	Do.
Marvine mine, 14-foot seam.	Providence	do	215,097	7-9	do	Do.
Plymouth No. 4 mine, Red Ash seam.	Plymouth	do	106,690	16	Anthracite, hard red ash	Do.
Coal Brook mine, Carbondale seam.	Carbondale	do	220,586	7	Anthracite, hard white ash.	Do.
No. 1 shaft mine, Carbondale seam.	do	do	14,225	10	do	Do.
Grassy Island mine, Diamond and Grassy Island seams.	Olyphant	do	185,362	12	do	Do.
Olyphant No. 2, or Eddy Creek mine, No. 2 and Grassy Island seams.	do	do	138,926	8	do	Do.
No. 3 shaft, Carbondale seam.	Carbondale	do	6,844	4½	do	Do.
White Oak mine, Archbald seam.	Archbald	do	163,668	7	do	Do.
Legitt's Creek mine, Diamond and 14-foot seams.	Providence	do	180,237	13	do	Do.
Racket Brook Breaker mine.	Carbondale	do	177,798		do	Do.
Elk Hill Coal and Iron Company's mine, H. and R. seams.	Dickson city	Elk Hill C. and I. Co	38,770	5	Anthracite, white ash, free-burning.	D. and H. C., via D. and H. C. Co. to Rondout and N. Y.; North by E. R. R., and Albany and Susquehanna.
Elk Creek mine, No. 1 and bottom seams.	Fell township	Breman & Bridget	19,136	5½	do	
Fair Lawn mine, Clark seam.	Scranton	Fair Lawn C. Co., limited.	30,821	7	Anthracite, hard white ash, Cupelo furnace.	D., L., and W. Co., and Scranton.
Jermyn shaft	Jermyn	John Jermyn	126,460		Anthracite	
Jermyn Slope mine	do	do	5[illegible],491		do	
Green Ridge (3 collieries), Clark seam.	Scranton	Green Ridge C. Co	110,150	7	Anthracite, white ash, hard-burning.	Del. and Hud. Canal Co.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LACKAWANNA CO.—continued.			*Feet.*		
Penna. Coal Co.'s mine, top, middle, and bottom seams.	Dunmore	Penna. Coal Co	151,895	12½	Anthracite, white ash, free-burning.	N. Y., via N. Y., L. E., and W. R. R. and Co.'s gravity road.
Clark mine, Clark and middle seams.	Carbondale	Watkins & Williams	7,332	12	do	Butler & Co., Pittston.
	LUZERNE COUNTY.					
Council Ridge mine, Buck Mountain seam.	Eckley	J. Leisenring & Co	209,481	12	Anthracite	Phila. and N. Y., via L. V. Cen. R. R.
Hollenback mine, Primrose and Holmes seams.	Plainsville	Robert S. Poole	16,800	13	Anthracite, pure primrose	N. Y. line of P. and N. Y. R. R. and N. Y. C. R. R., via Lehigh Valley R. R.
Franklin mine, Baltimore seam.	Wilkes-Barre	Franklin Coal Co	155,914	17	Anthracite, white ash	N. Y., via L. V. and Easton Amboy R. R.
Mount Pleasant mine, Mammoth and Wharton seams.	Hazleton	Pardee Sons & Co	83,349	5-40	Anthracite	L. Val., Pa.; tide-water at Perth Amboy, N. J., via L. V. R. R.
Pond Creek mine, Buck Mountain seam.	Pond Creek	Pond Creek Co	2,240	6	Anthracite, hard, pure, free-burning.	N. Y., via L. and Sus. R. R. and Cen. R. R. of N. J.
Hollywood mine, Monmouth and Wharton seams.	Hazleton	Calvin, Pardee & Co	92,211	32-40	Anthracite	L. V. R. R. Tide-water at Perth Amboy, N. J., via L. V. R. R.
Susquehanna mine, B., C., E., G., and H. seams.	East and West Nanticoke.	Susquehanna, C. Co	733,622	40	Anthracite and white ash	Havre de Grace to Charleston, S. Amboy to Maine, Baltimore, Columbia, on Pa. R. R.; Delaware City to Maine, Ohio wharf on Pa. R. R. to Saint Louis and Chicago.
Ramboille or Mill mine, Ross and — — seams.				9		N. Y., via D. L. and W. R. R.
Hollow mine, Red Ash seam.	Mill Hollow	Waddell & Walter	40,320	12	Anthracite	Morris and Essex R. R.
Columbia mine, Pittston and Chequered seams.	Marcy township	Grove Bro's	20,720	10½	do	D. L. and W. R. R. and L. and B. to Danville.
Hillman's mine, Hillman seam.	Wilkes-Barre	H. Baker Hillman	44,800	8½	Anthracite, white ash, free-burning.	N. Y. and Buffalo, via L. V. R. R., P. and N. Y. R. R., Belvidere and Del. R. R.
Lattimer mine, bottom 2-foot and 7-foot seams; Poorman, top, and 6-foot seams.	Lattimer	Pardee Bro. & Co	252,228	31	do	N. Y. and Phila., via L. V. R. R.
Beaver Brook mine, Mammoth and Wharton seams.	Beaver Brook	C. M. Dodson & Co	78,994	27	Anthracite, white ash, hard-burning.	N. Y. and Bethlehem and places between mine and N. Y. and Phila., via L. V. R. R., N. J. C. R. R. and L. Canal.
Ebervale mine, Mammoth seam.	Ebervale	Ebervale Coal Co	218,562	20-22	Anthracite	N.Y., via L. V. R. R.
Butler mine	Pittston	Butler Colliery Co	53,700	6	Anthracite, hard, free-burning.	Elmira, Rochester, Buffalo, Toronto, Chicago, and Milwaukee, via D. and H. C. R. R., Erie R. R., L. E. G'l W. and G'd Trunk of Canada.
Upper Lehigh mine, Buck Mountain seam.	Upper Lehigh	Upper Lehigh C. Co	374,115	11	Anthracite	N. Y. and Phila. and intervening points, via C. R. R. of N. J., N. P. R. R., and Bel. and Del. R. R.
East Boston mine, Cooper and Bennett seams.	Kingston	W. G. Payne & Co	116,614	17	do	N. Y., via D., L. and W. R. R.
Stout mine, Mammoth seam	Milnesville	Stout Coal Co	91,612	20-22	do	N. Y., via L. V. R. R.
Maltby mine, Maltby seam	Kingston township	Caleb S. Maltby	77,037	5	Anthracite, white ash	N. Y., via D., L. and W. R. R.
East Sugar Loaf mine, Mammoth and Wharton seams.	Stockton	Linderman Skeer & Co.	265,730	36	do	N. Y. and Phila., via L. V. R. R.
Humboldt mine, Wharton seam.	Humboldt	do	75,770	8	Anthracite, white ash, free-burning.	Do.
Sandy Run mine, Buck Mountain seam.	Sandy Run	M. S. Kemmerer & Co.	115,709	18	Anthracite	N. Y. and Phila. and intervening points, via L. and Sus. Div. N. J. C. R. R. and N. Y. and N. Pa. branch of P. and R. and by Canal.
Gaylord mine, Cooper, Bennett, and Ross seams.	Plymouth	Gaylord Coal Co	19,299	24	Anthracite, white ash, free-burning.	N. Y., Harrisburgh, and Balt., via D. L. and W. R. R., and North. Cen. R. R.
Hillside mine, A and B seams.	Pleasant Valley	Hillside C. and I. Co	106,404	10	Anthracite, fracture partly conchoidal, partly open-grained, steam and domestic.	Buffalo, Honesdale, for Erie R. R., via L. V. R. R., N. Y., L. E and W. R. R., D. and H. Co.'s R. R., N. Y., and L. E. and W. R. R., D. and H. Co.'s R. R., and Gravity road.
Avondale mine, Red Ash or Big seam.	Plymouth	Del., Lack. and West. R. R. Co.	175,065	17	Anthracite	N. Y., Syracuse, Oswego, Buffalo, and Chicago, via D. L. and W. R. R.
Boston mine, Boston and Lance seams.	do	do	143,979	5½-12	do	Do.
Everhart mine, Bottom seam.	Jenkins township	Waddell & Co	53,441	7	Anthracite red ash, free-burning, domestic, and furnace.	N. Y., via N. J. C. R. R.
Buck Mountain Coal Company mine, Buck Mountain seam.	Buck mountain	Buck Mountain Coal Co.	149,555	15-16	Anthracite, pink sandy ash, superior for steam.	Pa. and N. J., via L. V. R. R. and connections.
Plymouth No. 2 mine, H or Hillman, and F and E or Cooper seams.	Plymouth	Del. and Hud. Can. Co	108,697	18½	Anthracite, hard white ash	Rondout and N. Y., and inland cities north and west, via D. and H. C. Co.'s Canal and R. R. and N. Y., L. E. and W. R. R.
Pine Ridge mine, E and Baltimore seams.	Plains	do	93,736	15	do	Do.
Baltimore Slope mine, Baltimore seam.	Parsons	do	138,451	15	do	Do.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LUZERNE CO.—cont'd.			*Feet.*		
Plymouth No. 3 mine, Cooper and Bennett seams.	Plymouth	Del. and Hud. Can. Co.	21,460	7	Anthracite, hard white ash	Rondout and N. Y., and inland cities north and west, via D. and H. C. Co.'s Canal and R. R. and N. Y., L. E. and W. R. R.
Laurel Run mine, E or Baltimore seam.	Parsons	do	168,317	13½	do	Do.
Mill Creek mine, E or Baltimore seam.	Plains	do	212,081	15	do	Do.
Plymouth No. 5 mine, E or Baltimore seam.	Plymouth	do	179,894	15	do	Do.
Baltimore Tunnel mine, E or Baltimore seam.	Wilkes-Barre	do	195,779	15	do	Do.
Conyngham Shaft, E or Baltimore seam.	do	do	None.	15	Anthracite	Rondout, N. Y.
Hazleton No. 6 mine, Mammoth seam.	Hazleton	A. Pardee & Co.	23,852	18	Anthracite, free-burning, white ash.	Pices on L. river, tide-water and points on L. Valley and connecting roads, via L. V. R. R.
Sugar Loaf mine, Mammoth and Wharton seams.	do	do	59,121	21	do	Do.
Hazleton No. 3 mine, Mammoth seam.	do	do	None.	18	do	Do.
East Crystal Ridge mine, Mammoth seam.	do	do	47,116	18	do	Do.
Cranberry mine, Mammoth and Wharton seams.	do	do	62,146	21	do	Do.
Hazleton mine, Mammoth seam.	do	do	86,128	20	do	Do.
Laurel Hill mine, Mammoth seam.	do	do	167,061	20	do	Do.
South Sugar-Loaf mine, Mammoth and Wharton seams.	do	do	17,063	24	do	Do.
Kingston Collieries, Bennett & Cooper seam.	Kingston	Kingston C. Co., lim	462,391	17½	Anthracite	D., L. and W. R. R. and Messrs. Cunningham & Co., via D., L. and W. R. R. and N. C. R. R., and P. and E. R. R. and vessels.
Wyoming mine, Baltimore seam.	Plains	J. H. Swoyer	225,120	9-14	do	N. Y. and the west.
Sugar Notch No. 10 mine, Kidney seam.	Sugar Notch	Lehigh and Wilkes-Barre C. Co.	90,733	6	do	N. Y. and eastern markets and Cen. R. R. of N. J. and Lehigh canal.
Hollenback No. 2 mine, Baltimore seam.	Wilkes-Barre	do	25,949	16	do	Do.
Wanamie No. 18 mine, Baltimore and Ross seams.	Wanamie	do	185,662	13	do	Do.
Stanton No. 7 mine, Baltimore seam.	Wilkes-Barre	do	74,677	16	do	Do.
Reynolds No. 16 or Washington mine, Red-Ash seam.	Plymouth	do	207,179	15	do	Do.
Lance No. 11 mine, Cooper seam.	do	do	124,772	6	do	Do.
Empire No. 4 mine, Baltimore and Hillman seams.	Wilkes-Barre	do	358,457	21	do	Do.
Sugar Notch No. 9 mine, Ross and Red-Ash seams.	Sugar Notch	do	112,423	17	do	Do.
Diamond No. 1 mine, Baltimore seam.	Wilkes-Barre	do	174,059	14	do	Do.
Nottingham No. 15 mine, Red-Ash seam.	Plymouth	do	394,269	15	do	Do.
Hartford No. 6 mine, Red-Ash, Ross, and Baltimore seams.	Ashley	do	208,504	27	do	Do.
Harleigh mine, Mammoth and Wharton seams.	Harleigh	McNair & Co.	45,094	33	Anthracite, furnace, and domestic.	Phila. and tide ports near N. Y. and intervening points, via L. V. R. R. and connections.
Oak Dale mines, Nos. 1 and 2.						
Highland mines, Nos. 1 and 2, Mammoth, Highland, and Buck Mountain seams.	Jeddo	G. B. Markle & Co.	430,080	29-50	Anthracite, white and pink ash, steam.	N. Y. and Phila. and markets beyond tide-water, via L. V. R. R. and connections.
Cross Creek Collieries, Buck Mountain seam.	Drifton	Coxe Bros. & Co	415,958	11	Anthracite, red ash	Lehigh Val., N. Y., tide-water and the west, via Lehigh Val. and C. R. R. of N. J.
Phœnix mine, second and third seams.	Pittston township	Phœnix Coal Co.	42,290	16	Anthracite, white ash	N. Y., via D., L. and W. R. R.
Kingston Black Diamond mine, Bennett seam.	Kingston	T. C. Hutchison	125,113	6	Anthracite, white ash, free-burning.	
Salem mine, third seam	Shickshinny	Salem Coal Co.	44,800	3	Anthracite, fawn ash	South and west and interior within radius of 100 miles, via Pa. can. and R. R., and D., L. and W. R. R.
Enterprise mine, upper and lower seams.	Plainsville	H. C. Roberts & Co	120,240	14	Anthracite	N. Y., Rochester, Buffalo, and Chicago, via D., L. and W. R. R., and N. Y. Cen. R. R.
Forty Fort mine, Cooper & Bennett seam.	Forty Fort	J. H. Swoyer	100,270	11½	Anthracite, white ash, free-burning.	

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LUZERNE CO.—cont'd.			*Feet.*		
Tompkins mine, 7-foot seam	Pittston	A. Tompkins	9,554	4½	Anthracite, white ash, free-burning.	Elmira, Auburn, Buffalo, N. Y. and N. Y. city, via Pa. and N. Y. R. R., L. V., South. Cen., N. Y., L. E. and W., and N. Y. C. and H. R. R. R.
Warrior Run mine, B, C, D, and E seams.	Sugar Notch	A. J. Davis	56,000	31½	do	
Seneca mine, Pittston and third seams.	Pittston	Pittston Coal Co	66,838	9½	Anthracite, hard and medium.	Buffalo, Fair Haven, Watkins on Seneca lake, N. Y. and line trade, via L. V. or P. and N. Y. R. R. and over the Erie.
Twin mine, third seam	do	do	8,277	3½	do	Buffalo, N. Y., Fair Haven, Watkins, N. Y., via L. V. or P., N. Y. C. R. R., N. Y., L. E. and W. R. R.
Chauncy mine, Ross and lower seams.	Avondale	T. P. McFarlane	33,600	6, 20	Anthracite, red and white ash, free burning.	
Penna. Coal Co. (7 collieries), upper, 14-foot, 7-foot, and lower seams.	Pittston	Penna. Coal Co	1,221,426	26	Anthracite, white ash, free-burning.	N. Y., via N. Y., L. E. and W. R. R. Co.'s gravity road.
Dodson mine, Lance, Cooper, and Hillman seams.	Plymouth	Plymouth Coal Co	54,392	21	Anthracite	N. Y., via D., L. and W. R. R. and its divisions.
Exeter mine, Pittston seam	Exeter township	Lehigh Valley Coal Co	240,890	14	do	All over the country, via L. V. R. R. and its connections.
Mineral Spring mine, Baltimore seam.	Parsons borough	do	89,600	14	do	U. S. and Canada, via L. V. R. R. and its connections.
Prospect mine, Baltimore seam.	Plains township	do	229,600	8-12	do	From Atlantic coast to Rocky mountains, via L. V. R. R. and connections.
Midvale mine, Hillman, Bowkley, and Abbott seams.	do	do	48,160	22	do	Atlantic seaboard to Great Lakes and Saint Lawrence, via L. V. R. R. and connections.
Henry mine, Baltimore seam	do	do	109,760	14	do	Any point reached on Great Lakes and Saint Lawrence river, via L. V. R. R. and connections.
Spring Mountain mine	Jeansville	J. C. Haydon & Co	203,392		do	N. Y. and Phila. and east and south, via L. V. R. R. and L. V. and North Pa. R. R.
	NORTHUMBERLAND COUNTY.					
Peerless mine, Red-Ash, Pink-Ash, and Diamond seams.	Shamokin	Crinkshank & Emes	28,000	5	Anthracite, red ash, free-burning.	Phila., Balt., and Washington.
Greenback mine, No. 8, No. 9, and Buck Mountain seams.	do	H. J. Londy	26,569	18	Anthracite, white and pink ash.	Phila. and Port Richmond, via P. and R. R. R.
Enterprise mine, Nos. 8 and 9 seams.	Excelsior	Enterprise Coal Co	91,277	15	Anthracite, white ash, free-burning.	Phila, Boston, and south, via P. R. R. and canal.
Locust Gap mine, Mammoth seam.	Locust Gap	Graeber & Shepp	95,200	22	Anthracite, hard, white ash, free-burning.	Phila., N. Y., Erie, Balt., and Washington, via P. and R. and Schuylkill can. and Northern Cen. and Pa. R. R.
Royal Oak mine, Pink Ash seam.	Shamokin	Tillett & Bro	560	5	Anthracite, pink ash	Own town.
	Mount Carmel		None.		Anthracite	
Henry Clay No. 1 mine, Nos. 8 and 9 seams.	Shamokin	J. Langdon	140,325	6	do	Chicago, via North. Cen., N. Y. Cen., and H. R. R. R. and lakes.
Ben Franklin mine, Lykens Valley seam.	Dontyville	Donty & Baumgardner	50,509	7-11	Anthracite, red ash	Phila., N. Y., and Boston, via P. and R. R. R., and Schuylkill canal.
Cameron mine, Nos. 2, 8, 9, and 10 seams.	Shamokin	Mineral R. R. and Mining Co.	170,901	28	Anthracite, free-burning	Phila., Balt., and W. Erie, Buffalo, and Elmira, via North. Cen. R. R., Phila., and Erie to West and South and Penn. R. R.
Luke Fiddler mine, Nos. 8 and 9 seams.	do	do	132,614	13	Anthracite, white ash, free-burning.	Phila., Balt., Erie, and Buffalo, via North. Cen. R. R., Pa. R. R., and Phila. and Erie R. R.
Pennsylvania mine, Nos. 8 and 9 seams.	Mount Carmel	do	47,604	14	Anthracite, white ash	Do.
Hickory Ridge mine, Nos. 7, 8, and 9 seams.	Shamokin	do	None.	16	Anthracite	
Hickory Swamp mine, Nos. 8 and 9 seams.	do	do	None.	11	Anthracite, free-burning	
Monitor mine, Mammoth seam.	Locust Gap	Geo. W. Johns & Bro	122,107	22	Anthracite, white ash	Phila., via, Mahanoy and Shamokin Br. Mine Hill, Scuyl. Haven Br., and P. and R. R. R., and North. Cen. and Pa. R. R.
Black Diamond mine, upper and lower seams.	Mount Carmel	Wm. Schwenk & Co	33,937	5, 5½	Anthracite, white ash, free-burning.	
Lancaster mine, Nos. 8 and 9 seams.	Coal Run	Smith, Keiser & Co	15,636	10½	do	
Buck Ridge mine	Coal township	May Audenried & Co	84,600	14	Anthracite, white ash	Richmond, Phila., Erie, and Elmira, via P. and R. R. R., and North. Cen. R. R.
Excelsior Coal-Mining Co.'s mine, Nos. 8 and 9 seams.	do	Excelsior C. Min. Co	83,053	14	Anthracite, white ash, free-burning.	W. Buffalo, Erie, E. Phila., and New England, via E. Phila. and Read. R. R. and W. North. Cen. R. R.
Mount Carmel mine, Mammoth and Skidmore seams.	Mount Carmel	Montelius, Robinson & Co.	47,782	30	do	N. Y., Phila., Balt., Buffalo, Erie, and the west, via L. V. R. R., P. and R. R. R. and North. Cen. and Pa. R. R.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	NORTHUMBERLAND CO.—continued.			*Feet.*		
Big Mountain mine, Nos. 8 and 9 seams.	Near Shamokin	Patterson, Llewellyn & Co.	155,951	11	Anthracite, medium hard, white ash, some red and pink ash, domestic and lime and brick burning.	Phila., N. Y., Boston, Lewiston, Erie, Buffalo, and Balt., via P. and R. R. R. and North. Cen. R. R., P. and E. R. R., and N. Cen., and P. R. R.
Sterling mine, Twin seam	Shamokin	Kendrick & Co	77,684	15	Anthracite, white ash, free-burning.	Phila., Elmira, Buffalo, and Erie, via P. and R. R. R., and North. Cen. R. R.
Carson mine, Diamond seam	do	Philip Goodwill	7,458	6½	Anthracite, gray ash, free-burning.	
Mount Carmel shaft, Nos. 8 and 9 seams.	Mount Carmel township.	Phila. and Reading C. and I. Co.	204,848	17	Anthracite, white ash, free-burning.	P. and R. R. R., Schuyl Can., Sus. Can. to the lakes, Phila. and Erie R. R.
Merriam mine, Mammoth and Skidmore seams.	Coal township	do	73,584	28	do	Do.
Burnside mine, Nos. 8 and 9 seams.	do	do	57,792	17	do	Do.
Geo. Fales mine, No. 12 seam.	do	do	1,904	6	do	Do.
N. Franklin No. 2 mine, Nos. 8 and 9 seams.	Trevorton	do	88,144	17	do	Do.
Bear Valley mine, Nos. 8 and 9 seams.	Coal township	do	111,104	17	do	Do.
N. Franklin No. 1 mine, Upper Lykens Valley seam.	Zerbe township	do	None.	9	do	Do.
Helfenstein mine, Upper Lykens Valley seam.	Cameron township	do	None.	9	do	Do.
Henry Clay mine, Nos. 8 and 9 seams.	Coal township	do	None.	17	do	Do.
Locust Spring mine, Mammoth seam.	Mount Carmel township.	do	65,968	22	do	Do.
Reliance mine, Nos. 8 and 9 seams.	do	do	85,456	17	do	Do.
	SCHUYLKILL COUNTY.					
East Lehigh mine, Buck Mountain seam.	Tamaqua	Mitchel & Symons	4,403	7	Anthracite, hard, free-burning, pink ash, domestic use.	Phila. and along line of P. and R. R. R.
Cambridge mine, Primrose seam.	Shenandoah	Cambridge Coal Co	3,008	8	Anthracite, soft, free-burning.	Phila., via P. and R. R. R.
Stanton mine, Mammoth seam.	Mahanoy Plane	Miller, Hoch & Co	94,158	27½	Anthracite, hard, white ash	Do.
Bear Ridge No. 1 mine, Mammoth seam.	do	Myers, McCreary & Co	87,288	32½	Anthracite	Line of P. and R. R. R., Phila., N. Y., and Boston, to Phila., via P. and R. R. R. and Schuyl. Canal.
Bear Ridge No. 2 mine, Mammoth seam.	do	do	57,472	25	do	Do.
Palmer Vein mine, Palmer, Charley Pott, Clarkson, and Peach Mountain seams.	New Philadelphia	Alliance Coal Mining Co.	20,738	14	Anthracite, red ash	Via P. and R. R. R. to Phila., and via Schuyl. Canal to N. Y.
C Vein mine, C seam	Tamaqua	August Raabe	1,322	9	Anthracite	Tamaqua.
Kehley's Run mine, Mammoth, 7-foot, and Buck Mountain seams.	Shenandoah city	Thomas Coal Co	166,530	65½	Anthracite, hard, white ash	Via P. and R. R. R. to Phila., Del. and Raritan Canal, and vessels to N. Y. and Boston.
Sharp Mountain mine, Bancroft seam.	Pottsville	Thomas Wren	4,025	6-8	Anthracite, red ash	Pottsville and vicinity by wagon.
Peach Orchard mine, Little Tracy seam.	Howegen	T. Heilman	134	2	do	Richmond, by P. and R. R. R.
William Penn mine, Mammoth seam.	William Penn	William Penn Coal Co.	179,200	40	Anthracite	Phila. and along P. and R. R. R.
Webster mine, Buck Mountain seam.	Mahanoy City	Layton S. Baldwin	2,570	10	do	Phila. and along P. R. R. R. and branches.
New Boston mine, B, D, and E seams.	do	Joseph F. Hitch	25,749	33	do	N. Y., via L. V. R. R.
Cuyler mine, Mammoth and Buck Mountain seams.	Raven Run	S. M. Heaton & Co	139,953	35	Anthracite, hard, white ash.	Phila. and N. Y., via P. and R. R. R., and places on Atlantic coast.
Lincoln mine, Lykens Valley seam.	Tremont township	Levi Miller & Co	126,323	6	Anthracite, red ash	N. Y. and Eastern states, via P. and R. R. R. and vessels.
Draper mine, Mammoth and Primrose seams.	Gilberton	Oliver Ditson	103,277	53	Anthracite, hard, white ash.	Phila., via P. and R. R. R.
Rausch Creek mine, Mammoth seam.	Rausch Creek	Miller, Graeff & Co	109,760	12	Anthracite, gray ash, free-burning.	Harrisburg, Reading, Phila., N. Y. and Boston, via P. and R. R. R. and canal.
Big Spring mine, Speedmore seam.	New Castle	T. E. Ferrebee & Co	67	2-3	Anthracite, hard, white ash	Schuyl. Haven, Reading, Palo Alto, and Lancaster, via P. and R. R. R.
Mammoth mine	do	Quinn & Mahony	634	20	Anthracite, white ash	Dauphin county and Port Richmond, via P. and R. R. R.
Ellsworth mine, Mammoth and Leeler seams.	Broad Mountain	John R. Davis	14,603	70	Anthracite, white ash, free-burning.	Phila. and line of road, Reading and Pottstown, via P. and R. R. R.
Peach Orchard, Orchard 1 and 2 seams.	Wadesville	Morgan & Brown	1,792	3	Anthracite, red ash, free-burning.	Pottsville, via P. and R. R. R.
Primrose mine, Mammoth, Primrose, and Skidmore seams.	Mahanoy City	Caleb B. Knevals	47,488	33	Anthracite, hard, pink ash	N. Y. City and vicinity, via L. V. and Eastern and Amboy R. R.
Middleport mine, Little Diamond seam.	Middleport	Lewis Lorenze	1,120	8	Anthracite, red ash	Port Richmond and Phila., via P. and R. R. R.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SCHUYLKILL CO.—continued.			*Feet.*		
Glendon mine, Skidmore, 7-foot, and Buck Mountain seams.	Mahanoy	J. C. Hayden & Co	59,531	28	Anthracite, hard, white ash, long fracture.	N. Y., via L. V. R. R. and vessels; Phila., via L. V. R. R. and North Pa. R. R.
Laurel Ridge mine, Mammoth seam.	Gilberton	John A. Dutter	17,504	30	Anthracite, hard, white ash	Phila., via Mahanoy Plane and P. and R. R. R.
Kohinoor mine, Mammoth seam.	Shenandoah	Richard Heckscher	170,583	15-40	do	Phila., via P. and R. R. R.
Crystal mine, Mammoth seam	New Castle	Joseph Brady	1,344	125	Anthracite	Phila., and line of P. and R. R. R.
Rausch Gap mine, Skidmore seam.	Hegins township	W. H. Yohe	383	7	Anthracite, hard	To farmers and others through Lykens and Pine valleys by wagon.
Eureka mine, Mammoth seam.	Gilberton	Edward Garman & Co.	4,032	25	Anthracite, white ash	Phila., via Schuylkill Haven.
Kalmia mine, Lykens Valley seam.	Kalmia	Phillips & Shaefer	85,882	12½	Anthracite	Boston and vic., N. Y. and vic., Phila. and vic., via P. & R. R. R. and vessels.
West Lehigh mine, Buck Mountain, Skidmore, Bottom, and Mammoth seams.	Shoemaker's	Fisher Hazard	34,739	41	do	Perth Amboy, N. J., via L. V. R. R.
Staffordshire mine, Diamond seam.	Mahanoy City	Jones, Ward & Co	16,504	7	Anthracite, pink ash	Phila., via P. and R. R. R.
Saint Clair mine, Holmes seam.	Saint Clair	Atkinson & Lessig	2,800	4	Anthracite, red ash	Do.
Big Mine Run mine, Buck Mountain seam.	Near Ashland	Jere. Taylor & Co	98,405	17	Anthracite, white ash	Do.
Monitor mine, Holmes seam.	Wadesville	John Denning	2,240	5	Anthracite	Phila., and line of P. and R. R. R.
Eagle mine, 7-foot, Mammoth, and Skidmore seams.	Saint Clair	Geo. W. Johns & Bro	50,270	40	Anthracite, hard, white ash	Phila., via Mill Creek Br., Schuyl. Valley Br., and P. and R. R. R.
No. 8 mine, Mammoth seam	Coaldale	Lehigh Coal and Nav. Co.	122,170	60	Anthracite	N. Y. and Phila., via Cen. R. R. of N. J., and L. C. and Nav. Co.'s canal.
No. 10 mine, Mammoth seam.		do	120,320	50	do	Do.
No. 11 mine, Primrose, Mammoth, and Skidmore seams.	Gearytown	do	83,590	64	do	Do.
Honey Brook Nos. 1, 4, and 5 mines, Mammoth, and Wharton seams.	Audenried	Lehigh and Wilkes-Barre C. Co.	206,295	28	Anthracite, hard, white ash.	N. Y., Phila., line of L. Val., furnace, and C. R. R. of N. J., via C. R. R. of N. J. and L. and Del. divn. canals
North Star mine, Skidmore and 7-foot seams.	Mahanoy City	Reynolds, Roberts & Co.	22,400	4	do	Phila., via P. and R. R. R.
Shenandoah No. 2 mine, Mammoth seam.	Lost Creek	Phila. Coal Co	153,707	40	Anthracite, white ash	N. Y. and Phila., and points between, via L. V. R. R. and P. and R. R. R.
Colorado No. 1 mine, Mammoth seam.	Colorado	do	106,6.5	30-40	do	Do.
Lehigh No. 3 mine, Mammoth seam.	Near Shenandoah	do	110,240	40	do	Do.
Packer No. 4 mine, Mammoth, Holmes, and Primose seams.	Lost Creek	do	251,070	53	do	Do.
Lawrence mine, Mammoth seam.	Mahanoy Plain	Lawrence Merkel & Co	102,461	40	Anthracite, hard, white ash.	Phila., via P. and R. R. R.
Indian Run mine, Buck Mountain and Skidmore seams.	Near Mahanoy City	Parmley & Russell	None.	16	Anthracite	
Altamont No. 2 mine, Mammoth, 7-foot Skidmore, and Red Ash seams.	Frackville	Broad Mt. Land	560	51	Anthracite, white ash, with red, pink, and gray ash.	Phila and N. Y., via P. and R. R. R. and L. V. R. R.
Pinedale mine	Middleport	Rothermel & Lorenz.	None.		Anthracite, red ash	
Pioneer mine, Mammoth seam.	Ashland	D. Vaughan & Co	2,520	6	Anthracite, white ash, free-burning.	
West Lehigh mine, Mammoth seam.	Tamaqua	Wood & Pierce	15,904	30	do	
York Farm mine, Tunnel seam.	Yorkville borough	Job Rich	840	4½	Anthracite, red ash	Local trade.
Coal Run mine, Primrose and Diamond seams.	Saint Nicholas	Suffolk Coal Co	96,723	24	Anthracite	Phila., line of P. and R. R. R. and branches, Mass., and Maine.
Franklin mine, Lykens Valley seam.	Barry township	S. S. Bickel	39,200	8	Anthracite, red ash, free burning.	
Wolf Creek mine, Big Diamond seam. / Big Diamond mine, Big Orchard seam.	Near Minersville	James F. Donahue	4,480	6 / 3	do	Richmond and Phila. and intermediate points.
Hillside mine, Skidmore and 7-foot seams.	Mahanoy City	Harris, Spear & Co	5,500	4-5	Anthracite, white ash, bright and hard.	Phila., via P. and R. R. R.
Black Heath mine, Skidmore, Bach, Black Heath, Leader, and Red Ash seams.	South Cass township.	W. H. Harris	26,246	20	Anthracite, white ash, free-burning.	
	Llewellyn	Dan. Hock	224		Anthracite	
		R. Holahan & Bro	5,824		do	
		S. Kestenbach and 30 other small concerns.				
Palmer, No. 1 seam	New Philadelphia	John Warren	305		do	
Oakdale mine, Holmes seam.	Shenandoah	E. L. Powell	426	9	Anthracite, white ash, free-burning.	Phila.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SCHUYLKILL COUNTY—continued.			*Feet.*		
Wolf Creek Diamond mine, Little and Big Diamond and Little and Big Orchard seams.	Minersville	John W. Davis	20,170	16	Anthracite, red ash, free-burning.	
West Brookside mine, Upper Lykens Valley seam.	Porter township	Philadelphia and Reading C. and I Co.	450,464	9	Anthracite, white ash, free-burning.	P. and R. R. R., Schuyl. and Sus. canals.
Tunnel mine, Mammoth seam.	Ashland	do	85,344	22	Anthracite, hard, white ash	P. and R. R. R., Schuyl. and Sus. canals to the lakes, and Phila. R. R.
Locust Run mine, Mammoth seam.	do	do	None.	22	do	Do.
East mine, Mammoth and Buck Mountain seams.	Butler township	do	156,128	34	do	Do.
North Ashland mine, Mammoth seam.	do	do	140,784	22	do	Do.
Preston mines, No. 1 and 2, Primrose, Mammoth, Holmes, and Buck Mountain seams.	do	do	102,033	46	do	Do.
Preston mine No. 3, Mammoth seam.	do	do	97,888	22	do	Do.
Conner mine, Buck Mountain seam.	do	do	147,840	12	do	Do.
Hammond mine, Mammoth seam.	do	do	130,928	34	do	Do.
Girard mine, Mammoth seam.	Girardville	do	111,104	22	do	Do.
Girard Mammoth mine, Buck Mountain seam.	Butler township	do	None.	16	do	Do.
Indian Ridge mine, Mammoth seam	Shenandoah city	do	190,000	30	do	Do.
Plank Ridge mine, 7-foot and Buck Mountain seams.	do	do	135,296	19	do	Do.
Pine Forest mine, Skidmore, Mammoth, and 7-foot seams.	East Norwegian township.	do	87,040	30	Anthracite, white ash, free-burning.	P. and R. R. R. Schuyl., and Sus. canals.
Rainbow mine, Mammoth and 7-foot seams.	Saint Clair	do	None.	29	do	Do.
Wadesville shaft, Mammoth and 7-foot seams.	Wadesville	do	122,080	29	do	Do.
Beechwood mine, Mammoth and 7-foot seams.	Mount Laffee	do	81,596	29	do	Do.
Pottsville mine, Primrose and Diamond seams.	Norwegian township	do	27,216	17	do	P. and R. R. R., Schuyl. and Sus. canals, and P. and E. R. R. to the lakes.
Pine Knot mine	Cass township	do	None.		do	P. and R. R. R., Schuyl. and Sus. canals.
Anchor mine	do	do	None.		do	Do.
Taylorsville mine	Foster township	do	None.		do	Do.
Mine Hill Gap mine, Mammoth seam.	Cass township	do	67,648	22	do	Do.
Thomaston mine, Mammoth and Skidmore seams.	Foster township	do	138,656	27	do	Do.
Phœnix Park No. 3 mine, Diamond seam.	Cass township	do	18,704	4	Anthracite, red ash, free-burning.	Do.
Richardson mine, Mammoth and Skidmore seams.	Foster township	do	121,296	27	Anthracite, white ash, free-burning.	Do.
Glendower mine, Mammoth seam.	do	do	58,240	22	do	Do.
Forestville mine, Skidmore seam.	Cass township	do	None.	6	do	Do.
Phœnix Park No. 2 mine, Primrose seam.	do	do	13,440	13	Anthracite, red ash, free-burning.	Do.
Shenandoah City mine, Mammoth seam.	Shenandoah city	do	76,608	30	Anthracite, hard, white ash.	P. and R. R. R., Schuyl. and Sus. canals to the lakes., P. and E. R. R.
Knickerbocker mine, Mammoth seam.	Mahanoy township	do	194,544	30	do	Do.
Ellangowan mine, Mammoth and Holmes seams.	do	do	7,392	42	do	Do.
West Shenandoah mine, Mammoth, 7-foot, and Buck Mountain seams.	Shenandoah city	do	132,160	41	do	Do.
Turkey Run mine, Mammoth seam.	do	do	100,016	40	do	Do.
Gilberton mine, Buck Mountain seam.	Gilberton	do	62,048	7	do	Do.
Furnace mine, Buck Mountain seam.	do	do	34,160	12	do	P. and R. R. R., Schuyl. and Sus. canals.
Bear Run mine, Mammoth seam.	Mahanoy township	do	64,288	22	do	P. and R. R. R., Schuyl. and Sus. canals to the lakes, P. and E. R. R.
Elmwood mine, Skidmore, 7-foot, and Buck Mountain seams.	Mahanoy City	do	91,504	25	do	Do.
Boston Run mine, Mammoth seam.	Mahanoy township	do	75,936	30	do	Do.

Directory of anthracite coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SCHUYLKILL COUNTY—continued.			*Feet.*		
Mahanoy City mine, Mammoth and Holmes seams.	Mahanoy City	Philadelphia and Reading C. and I. Co.	140,560	32	Anthracite, hard, white ash.	P. and R. R. R., Schuyl. and Sus. canals to the lakes, P. and E. R. R.
North Mahanoy mine, Buck Mountain, 7 foot, and Skidmore seams.	do	do	126,896	24	do	Do.
Schuylkill mine, Buck Mountain seam.	Mahanoy township	do	59,248	16	do	Do.
Newkirk mine	Schuylkill	do	None.		do	P. and R. R. R., Schuyl. and Sus. canals.
Buckville mine	do	do	None.		do	Do.
Eagle Hill shaft, Mammoth and 7-foot seams.	Blythe township	do	116,256	29	Anthracite, white ash, free-burning.	Do.
Swatara (late Pyne) mine, Mammoth and Skidmore seams.	Reilly township	do	27,552	17	do	Do.
Otto mine, Mammoth, Black Heath, and Primrose seams.	do	do	73,136	21	do	Do.
Middle Creek shaft	Fraley township	do	None.		do	Do.
East Franklin mine, Mammoth seam.	do	do	35,392	22	do	Do.
Colket mine, Primrose, Holmes, Mammoth, and Skidmore seams.	Donaldson	do	49,728	42	do	Do.
St. Nicholas mine	West Mahanoy	do	81,003		Anthracite	
Coplay mine, Buck Mountain seam.	Mahanoy township	La Fayette Lentz	47,357	16	do	N. Y., via L. V. R. R.
	SUSQUEHANNA COUNTY.					
Forest City mine, Forest City seam.	Clifford township	Hillside C. and I. Co.	18,173	5½	Anthracite, very light, free-burning, open-grained.	N. Y., L. E. and W. R. R.

RHODE ISLAND.

	NEWPORT COUNTY.					
Mount Hope mine	Coal Mine station	Crocker Bros	6,176	4-5	Plumbaginous anthracite	Taunton, Mass., and neighborhood.
Old shaft	do	do	None.	4	do	

VIRGINIA.

	PULASKI COUNTY.					
Altoona mine	Altamaha	Altoona C. and I. Co.	2,600	25	Anthracite, white ash, free-burning.	Saltville, Va., Martin's Sta., depots at M. and O. Knoxville, Tenn., intermediate points, Fairville and int. points.

Directory of semi-anthracite coal mines.

PENNSYLVANIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SULLIVAN COUNTY.			*Feet.*		
State Line and Sullivan R. R. Company's mine.	Bernice	State Line and Sullivan R. R. Co.	70,560	8	Hard, semi-bituminous, or free-burning anthracite.	N. Y. state and west of Buffalo.

Directory of bituminous coal mines.

ALABAMA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind and use when reported.	Markets and routes.
	DE KALB COUNTY.			*Feet.*		
.....	.....	Campbell & Co	3,000	3	Bituminous	Chattanooga, Tenn., by rail.
	JACKSON COUNTY.					
.....	.....	Belmont C. and R. R. Co.	25,000	.....	do	Memphis, Charleston, R. R. locomotives, Huntsville, Tuscumbia, Florence, and other towns on M. O. C. R. R. in Alabama and Memphis, Tenn.
	JEFFERSON COUNTY.					
Jefferson mine, Jefferson and Black Creek seams.	Jefferson	J. G. Massie	28,000	2½ 3½	do	Nashville, Tenn., Montgomery, Ala., and Atlanta, Ga.
Pierce & Duffryn mine, Pierce seam.	Warrior	J. Pierce	20,000	3	Bituminous, best for steam	Atlanta, Columbus, Montgomery, and Nashville.
Pratt mines, Pratt seam	Pratt mines	Pratt Coal and Coke Co.	89,500	4½	Bituminous, soft, coke, and steam.	Furnaces and R. R. in Alabama.
Alabama Mining and Manufacturing Co.	Warrior	Ernst and Rupp	11,788	2¾	Bituminous	S. and N. Ala. R. R., Selma, Montgomery, Mobile, Ala.; Pensacola, Fla.; N. Orleans, La., and various places in adjoining states.
New Castle C. and I. Co., Black Creek and New Castle seams.	New Castle	New Castle C. and I Co.	33,106	9	.....	Alabama, Pensacola, Fla., Atlanta, Columbus, Macon, Pulaski, Columbia Franklin, and Nashville, Tenn.
	MADISON COUNTY.					
.....	.....	B. A. Simler	400	.....	Bituminous	Huntsville, Ala., by wagons.
.....	.....	Jno. Broad	600	.....	do	Do.
.....	.....	John Sullivan	200	.....	do	Do.
	SHELBY COUNTY.					
Helena mine, Little Pittsburgh and Helena seams.	Helena	Pratt Coal and Coke Co.	49,350	3-4 7	Bituminous, coke	Montgomery, Ala., East Georgia, and Alabama blast-furnaces
Montevallo mine, Montevallo seam.	Montevallo	T. H. Aldrich & Co	41,600	2½	Bituminous, hard, free-burning, non-coking, red ash.	Georgia, Alabama, and Mississippi.
North Cahaba mine, Cahaba seam.	Helena	Davis & Carr	4,500	3	Bituminous, domestic	Montgomery.
	TUSCALOOSA COUNTY.					
Johnson mine	Coaling	N. D. Johnson	12,000	2½	Bituminous, soft	Ala. Gt. So. R. R. and Mobile and Ohio R. R.
.....	Clement station	O. M. Collins	600	.....	Bituminous	
.....	.....	A. Durie	2,000	.....	do	Tuscaloosa, Ala., by wagons.
.....	.....	Gabe Washington and others.	350	.....	do	Neighborhood.
.....	Cottondale	Wiley Thompson	600	18	do	Cottondale factory, by wagons.
Chamber's mine	Near Tuscaloosa	Freeman Kelley and others.	340	.....	Bituminous, soft red ash	

ARKANSAS.

	JOHNSON COUNTY.					
.....	Grand and Prairie townships.	Allister & Allister	3,000	.....	Bituminous	Little Rock, Ark., by R. R.
.....	do	Kline & Arbaugh	6,240	.....	do	Do.
.....	do	Strewel & Siegel	318	.....	do	Do.
.....	do	Edw. S. Stienel	1,200	.....	do	Do.
.....	do	Bryan & Co	180	.....	do	Do.
.....	Lee township	L. S. & S. Philpot	300	.....	do	Russellville, Ark., by R. R.
	POPE COUNTY.					
.....	Illinois township	Onita Coal Co	1,600	2	do	Little Rock, Ark., by R. R.
.....	do	William Brooks	280	3	do	Dardenelle and Russellville, Ark., by wagon.
	SEBASTIAN COUNTY.					
.....	Sugar Loaf township	Isabel Spessard	300	.....	do	Sebastian county, Ark., by wagon.
.....	do	John Patterson	500	.....	do	Do.
.....	Marion township	Enoch B. Petty	375	.....	do	Fort Smith, Ark., by wagon.
.....	do	William J. Smart	250	.....	do	Do.
	WASHINGTON COUNTY.					
.....	Prairie township	Nancy Shepherd	80	7½	do	Hindsville, Ark., by wagon.
.....	do	John Ivy	160	1½	do	Springdale, Ark., by wagon.

Directory of bituminous coal mines—Continued.

CALIFORNIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	AMADOR COUNTY.			*Feet.*		
Ione C. and I. Co.'s mine	2½ miles south of Ione city.		60,480	10–20	Low order of lignite	San Francisco, Sacramento, Goshen, Stockton, Mercer, and other places.
Carbondale mine	6 miles northwest of Ione city.		25,200		Lignite	Do.
	CONTRA COSTA COUNTY.					
Empire Coal mines, Clark, Little, and Black Diamond seams.	6 miles south of Antioch.	M. W. Belshaw & Co.	22,400		Bituminous, non-coking	San Francisco, Antioch and C. and P. R. R., via Co.'s R. R. and barge.
Pittsburgh mine, Clark, Little, and Black Diamond seams.	6 miles from Pittsburg Landing.	Stevens, Baker & Co.	39,239		Lignite, non-coking	San Francisco, Sacramento, places about the bay, and Stockton, by rail and barges.
Black Diamond mine, Clark, Little, and Black Diamond seams.		Black Diamond C. Min. Co.	88,847	12½	Bituminous, non-coking	Blk. Diamond and San Francisco, by rail and barges.
	LOS ANGELES COUNTY.					
Santa Clara mine	12 miles east of Santa Ana.	Southern Pacific R. R. Co.	784	2½	Bituminous	Los Angeles, by wagon.
Black Star mine	8 miles west of Silverado.	Jos. Yoch	None.	14–18	Bituminous, non-coking	Santa Ana, Los Angeles, and Anaheim.

COLORADO.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BOULDER COUNTY.					
Black Diamond mine	6 miles from Boulder	William Slimpson	900	2–10	Lignite, non-coking	Boulder and Blackhawk.
Star Coal mine	Canfield	Star Consol'd C. Min Co.	17,000	15½	Lignite	Denver, Kansas, Boulder, Longmont, Greely, and Evans.
Superior mine, first and second seams.	1½ mile south of Erie	Allen McNamee	1,750	8	do	Denver.
Fox mine	East of Marshall	M. P. Fox & Co	6,250	12	do	Denver, Boulder, and mountain towns.
Marshall mine	5 miles south of Boulder	Marshall C. Min. Co	50,000	2–12	do	Do.
Jackson mine	Canfield	Jackson C. Min. Co	None.		do	
Stewart mine	14 miles E. of Boulder	Stewart	1,700	3–5½	do	Denver.
Welch mine	½ mile from Louisville.	Welch C. Min. Co	95,000	1–11	Lignite and bituminous, non-coking.	Col. C. R. R., Denver and mountain towns.
White Rock mine, top, second, and third seams.	2 miles north of White Rock.	White Rock Coal Co	140	4⅝	Semi-bituminous, compact, hard, glossy.	Boulder.
	FREMONT COUNTY.					
Coal Creek Coal Co.'s mine	8 miles southeast of Cañon City.	Colorado C. and I. Co.	88,323	3–5	Lignite, non-coking, of bituminous character; smelting works and domestic.	Denver, D. and R. G. R. R.
	GUNNISON COUNTY.					
Iowa Min. and Smelt. Co	½ mile from town, up Coal creek.	Iowa Min. and Smelt Co.	200	12–13	Bituminous, coking	Home market.
	HUERFANO COUNTY.					
La Veta C. Min. Co	4 miles southwest of La Veta.	La Veta C. Min. Co	50	8	Bituminous	La Veta.
Walsenburg mine	1½ mile west of Walsenburg.	Colorado C. and I. Co.	26,880	4–9	Semi-bituminous, non-coking; steam.	Denver and R. G. R. R. Co., Pueblo, Col., Springs, Denver and Almosa.
Bundle mine	8 miles southwest of La Veta.	Bundle	None.	6–8	Bituminous, non-coking	La Veta.
	JEFFERSON COUNTY.					
		Chas. F. Thompson	250		Lignite	Transient custom.
Golden Brick and Coal Co.'s mine.	½ mile from center of Golden.	Golden Brick and Coal Co.	2,400	9–18	Semi-bituminous, semi-lignite, non-coking, white ash.	Central and Blackhawk, Georgetown, Golden; home consumption, and a little to Denver.
		Allen & Co	4,000		Lignite	Golden county.
		Nicholls & Hoagland	10,000		do	Do.
		Oliver Thomas, jr.	4,000	3½	do	Do.
	LA PLATA COUNTY.					
Ogden Coal Bank mine	5 miles east of Animas City.	P. Ogden	None.	5½	Bituminous, coking	
Durango Coal Bed mine	3 miles S. of Durango	Durango Trust Co	None.	34	Bituminous	
Mitchel Bed mine	5 miles below Parrott City.		None.	6½	do	
	LAS ANIMAS COUNTY.					
Rifenburg mine	2¼ miles NE. of Las Animas.	W. G. Rifenburg	20,160	15 1/12	Bituminous, coking	Topeka
Trinidad C. Min. Co	4 miles NE. of Trinidad	Trinidad C. Min. Co	20,160	7	do	Do.
Scandinavian Min. Co	4 miles from Trinidad.	Scandinavian Min. Co.	1,792	7	do	Do.
Carbon C. Min. Co	do	Carbon C. Min. Co	2,016	7	do	Do.

Directory of bituminous coal mines—Continued.

COLORADO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LAS ANIMAS COUNTY—continued.			*Feet.*		
El Moro mine	6 miles S. of El Moro	Colorado C. and I. Co.	58,904	18	do	D. and R. G. R. R., Pueblo, So. Ark., Denver, Col., Springs, Cañon, Almosa, Argo Smelt Works, Poncho Springs, and miscellaneous.
	OURAY COUNTY.					
Rico Coal claim mine, upper and lower seams.	8 miles N. of Rico		None.	3-14	Bituminous, non-coking	
	PARK COUNTY.					
S. Park Coal Co. mine	3½ miles from Como	South Park C. Co	4,032	13-16	Bituminous, coking and non-coking.	
	WELD COUNTY.					
Mitchel mine	1½ mile S. of Erie	Jos. Mitchel	15,480	15	Lignite	Denver and Greely.
Boulder Valley mine	On E. limit of Erie	Boulder Valley C. Co.	31,360	20-26	do	Denver, Greely, and Cheyenne.

GEORGIA.

	DADE COUNTY.					
Castle Rock mine, Gordon seam.	Cole City	Dade Coal Co	15,000	3	Bituminous	Atlanta and Chattanooga.
Dade mine, Brown seam	do	do	139,644	4	do	Atlanta, Chattanooga, and Rising Fawn furnace.

ILLINOIS.

	BROWN COUNTY.					
——, bottom seam	La Grange	Richard Eddy	400	2	Bituminous	Ill. River steamboats.
	BUREAU COUNTY.					
Friar Joblin mine, second seam.	Mineral	Friar Joblin	1,280	4½	do	Country and railroad trade into Iowa.
Walton mine, second seam	5½ miles from C. Hollow	A. W. Walton	2,500	4½	do	Local.
Bourbonais mine, No. 6 seam.	Lovejoy	Charles A. Barney	7,400	5	Bituminous, hard, bright	Wyanet, Buda, and country.
Neponset C. and Min. Co., No. 6 seam.	Neponset	Lathrop C. and Min. Co.	7,500	4½	Bituminous, soft	Burlington, Iowa, Aurora, Ill., line of C. B. and Q. R. R., and Nebraska.
Locey's mine, third seam		George H. Locey	2,000	3⅝	Bituminous, free from sulphur; will coke.	Chicago, Joliet, small towns, and river consumption.
Sheffield Min. and Trans. Co., second seam.	Sheffield	Sheffield Min. and Trans. Co.	20,000	4½	Bituminous	Local.
Dennis mine	do	H. Dennis & H. Cann	640	4⅝	do	Do.
J. Nichols & Co.'s mine	Coal Valley	John Nichols & Co	2,000	4½	do	Local.
Bierman's shaft	do	Jos. Fletcher	4,000	4	do	
Adair shaft	Selby township	Austin Adair	4,000	4½	do	Local.
		Jos. Seeton	1,000		do	
		V. Keisenberger	1,400		do	
		J. Vanbelzer	1,300		do	
		Thomas Squire	800		do	
		Wicklin & Fleming	3,000		do	
		James Rood	1,200		do	
		Peter Duncan	3,300		do	
	Concord township	Wood & Co	800		do	Buda and Sheffield, by wagons.
	do	Alfred Lyford	1,200		do	Concord township, by wagons.
	do	E. S. Humphrey	400		do	Do.
	CLINTON COUNTY.					
Trenton mine, No. 6 seam	Trenton	Joseph Hankee	40,000	5	Bituminous, soft, fatty	St. Louis, via Ohio and Miss. R. R.
	COLES COUNTY.					
Larimore mine	Morgan township		320		Bituminous	Home consumption.
	FULTON COUNTY.					
Heald's Strip mine, No. 4 seam.	Saint David's	A. W. Heald	4,000	4⅔	Bituminous	St. Paul and Minneapolis, Minn.
Canton mine, No. 4 seam	Canton	do	22,265	4⅔-5	do	Northern Iowa and Minnesota.
——, No. 2 seam	Lewistown	James Hunter	250	2½	do	Lewistown.
Bryant mine, No. 4 seam	Bryant	Bryant Coal Company.	40,000	5	do	C. B. & Q. R. R. Co.
Farmington mine, No. 5 seam.	Farmington	P. P. Chapman	12,000	4½	Bituminous, white or gray ash	Ill. and Northern Ohio.
Orion mine, No. 5 seam	Breed's station	G. W. Hindson	60,000	4⅔	Bituminous	Peoria and Cedar Rapids.
Breckenridge mine, Geological Survey, No. 41 seam.	Astoria	W. N. Emerson & Co.	33,940	6	do	C., B. & Q. R. R. Co., Moline, Sterling, Rock Island, Beardstown, Monmouth, Ill.; Burlington, Montrose, Iowa; Minneapolis, Minn., and Upper Miss. river boats.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	FULTON COUNTY—continued.			*Feet.*		
Jackson's Bank mine	Rawalt	William Jackson	1,200	4⅞	Bituminous	Canton and local farmers' trade.
Jones' Bank mine	do	L. L. Jones	3,000	4⅝	Bituminous, soft	Toledo, Peoria and Warsaw R. R.
Fernland mine	Rawalt station	J. R. Rawalt	7,000	4⅝	do	Cedar Rapids, Iowa, and southern Minn.
Canton Coal Co.'s mine, No. 4 seam.	Canton	Canton Coal Co	9,168	4⅞	Bituminous	Iowa and Illinois.
Cuba mines, No. 4 seam	Cuba	Cuba Mine C. Co	11,747	4⅜	Bituminous, soft	Burlington and Keokuk, Iowa.
Sunny Side mine, No. 4 seam	Canton	J. & R. Saville	1,927	5	do	Canton and local.
Rutherford mine	Cuba	William Rutherford	16,989	11	do	Peoria, Keokuk, Burlington, and east as far as Indiana.
Fulton mine, No. 4 seam	do	Dongald Stewart	14,610	4⅜	do	Iowa as far northwest as Cedar Rapids, and east to Chenoa.
Whitehead mines, upper and lower seams.	"Tater Hollow"	Mark Whitehead	1,600	5½	Bituminous	Prairie City and Bushwell.
Saint David mine	Saint David	E. J. Williams	9,984	5	do	Burlington and Quincy.
Green mine	Farmington	Peleg Green	800	5	Bituminous, soft	Farmington R. R.
Civer Coal Co.'s mine, No. 5 seam.	Civer	Proctert Heald	3,600	4⅜	Bituminous	Peoria, Burlington, and Keokuk.
Kaffel mine	Farmington	William Kaffel	800	5	Bituminous, soft	Farmington.
James Stevenson mine	do	James Stevenson	600	5	do	Do.
Cook mine	3 ms. SW. of Vermont.	Eli. Cook	250	2¾	do	Vermont.
Walker mine	Vermont	Wesley Walker	300	2⅜	do	Do.
William J. Larrimore mine	do	William J. Larrimore	300	2¾	do	Do.
Dickson's shaft	Farmington	Thomas Dickson	1,000	5	do	Farmington and C., B. and Q. R. R.
Ferguson mine	do	A. Ferguson	400	5	do	Farmington.
John Kirkbride mine	Vermont	John Kirkbride	900	2⅜	do	Vermont.
Rutherford mine	Seville	Wm. Rutherford	500	4	do	Keokuk, etc.
Wadkin's shaft	do	John Dougherty	1,000	3	do	Keokuk and Warsaw.
Hood mine	4 ms. SE. of Bushwell	John Hartman & Co	2,500	3½	Bituminous, soft, nearly free from sulphur.	Bushwell.
"Orr's Bank" mine	Near Manetta	Robert Orr	600	2½	do	Do.
Iron's shaft	Seville	Hedden, Flood & Albert.	2,404	4	Bituminous, soft	Keokuk, Iowa, and other towns in the West.
Smith mine	Breed's station	W. H. Smith	2,100	4	do	Canton, Pekin, and Peoria.
Canon's shaft	Seville	N. Canon	1,815	4	do	Keokuk and Bushwell.
Grove mine	Canton	Lewis F. Bell	1,100	4⅜	Bituminous	Canton.
Ditch's shaft	do	E. F. Ditch	1,400	5	Bituminous, soft	Do.
Swanson's shaft	Table Grove	Charles Swanson	160	2½	do	Table Grove.
	Bryant	Jud & Goudy	46,000		Bituminous	
Wilcox mine	Lewistown	H. Upright	600		do	Lewistown, Ill.
	Fairview	Thomas Travers	1,100		do	
	Avon	Mr. Standard	400		do	
	do	Amos Wilson	400		do	
	Marietta	John Rochottom	1,600		do	
	do	John Henderlerton	400		do	
	do	Havens	400		do	
	do	M. Clark	400		do	
	do	Bartlett	400		do	
	Lewistown	Edw. Murer	600		do	
	do	Frank Bearce	775		do	
	do	Duncan	600		do	
	do	Henry Harnier	1,200		do	
	do	Winchell	700		do	
	do	John Arnott	600		do	
		John Harn	2,000	5½	do	St. Paul, Minn., by rail.
		James Whitehead	500	4	do	Home.
	Canton	David Auld	2,496		do	Canton, Ill., by wagon.
	Joshua township	John Bennett	2,000	5	do	Do.
	do	William H. Murphy	2,000	5½	do	Do.
	GALLATIN COUNTY.					
Bowlesville Mine Co., No. 9 key seam.	Bowlesville	Stock company	35,000	4⅞	Bituminous, soft, fatty	Ill. div'n of Ohio and Miss. R. R. and private consumers on line, and steamers on Ohio river.
	do	Abraham David	400		Bituminous	Shawneetown, by wagons.
Equality Coal Co's mine, No. 5 seam	Equality	Equality Coal Co	45,000	5	Bituminous, soft, strong, clear	St. Louis, and Evansville, Ind.
	GREENE COUNTY.					
Roodhouse mine, No. 6 seam	Roodhouse	William Bates	1,400	2⅜	Bituminous, soft	Roodhouse.
	Near Greenfield	Carter & Drake	800	3	Bituminous, soft, fatty	Neighborhood.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	GRUNDY COUNTY.			*Feet.*		
Rock's shaft	Morris	Henry Rock	200	2⅜	Bituminous	
Telfer's shaft	do	Aw. Telfer	None	3½	do	Local.
George shaft No. 2	do	William George	700	2½	*Bituminous, soft*	Do.
McBride's shaft	do	Rulison & Carr	700	2½	do	Do.
Gorridge shaft	do	S. P. Colsen	600	2½	do	Do.
Olendroff shaft	do	Henry Olendroff	600	2½	do	Do.
Watson shaft	do	Anthony Watson	450	2½	do	
Mrs. Pratt's shaft	do	Charles Conalem	400	2½	do	Do.
Gould Ridge mine	do	Gould Ridge Coal Co.	30,000	3	do	Chicago.
George Blair's shaft	do	George Blair	600	2½	do	Local.
O. K. shaft	do	Burrell, Ross & Co	6,000	2	Bituminous	Chicago.
Burrell & Co.'s No. 1 mine	do	Burrell & Co	24,000	3	Bituminous, soft	Do.
Brace C. Min. and Mfg. Co	Braceville	Brace C. Min. and Mfg. Co.	20,000	3	do	Chicago and intermediate points.
Steele shaft	¾ of a mile north of Morris.	John Steele	400	2½	Bituminous	
No. 3 mine	Coal City	M. D. Buchanan	88,362	3	Bituminous; railroad and manufactories for steam.	Chicago and all points west and north.
Sufferin mine	do	William B. Sufferin & Bro.	3,000	4¾	*Bituminous*	*Chicago.*
Hank shaft		Hank	3,000		do	
Clark shaft	Greenfield	William Clark	1,000	3	do	Country trade.
	Saratoga	E. Waterman	700	2½	Bituminous, soft	Morris, Illinois, by wagons.
	do	Alex. Telfer	2,000	2⅜	do	Chicago, Joliet, and Morris, by rail and canal.
	Greenfield	O'Mara & McConnel	500		do	Farmers.
	HENRY COUNTY.					
Round Grove mine	Burns	John Rockford	973	4½	Bituminous	Country trade.
Lathrop C. and Min. Co., No. 6 seam.	Kewanee	Lathrop C. and Min. Co.	50,000	4	Bituminous, soft	C., B. and Q. R. R. from Burlington, Iowa, to Aurora, Illinois.
Plumbtree shaft, top seam	Kewanee	E. Plumbtree	480	4	Bituminous	Country trade.
Kay's Bank mine, first seam.	Atkinson	James Kay	1,200	3	do	Do.
Cambridge mine	Cambridge	J. W. Burton	1,600	2⅝	Bituminous, hard	Cambridge, Ill.
Cleveland C. Co.'s mine	Cleveland	Cleveland C. Co	10,951	4⅝	Bituminous	C., B. and Q. R. R. routes, Chicago and northwestern local trade.
Briar Bluff mine, No. 1 seam	Briar bluff	Perry & Co	20,000	4	Bituminous, soft	Chicago, Burlington and Quincy R. R. and N. W. R. R., and local trade.
White Collar mine, second seam.	Green River	Green River Min. Co.	7,000	4-6	do	Moline, Rock Isl., and state of Iowa.
Galva Min. Co., first seam	Galva	Sundquist & Herdeen.	4,202	3⅜	Bituminous	Galva and vicinity.
Lewin, Corkill & Co.'s No. 1 mine, first seam.	do	Lewin, Corkill & Co.	3,800	4	Bituminous, soft	Do.
Lewin, Corkill & Co.'s No. 2 mine, first seam.	do	do	6,500	4	do	Galva, Cambridge, and vicinity.
Cleveland mine	Cleveland	Taylor Williams	15,000	4½	Bituminous	N. W. R. R., and Chicago, Burlington and Quincy R. R., and Sterling.
Aldrich mine	Hanna	M. M. Aldrich	1,600	4½	do	
Cambridge Coal Co.'s upper seam.	Munson	C. W. Fogg	1,050	3	do	Local farm trade.
White Collar mine, second seam.	Green River	S. P. Campbell	6,000	4	do	Geneseo, Moline, Iowa City, Homestead, and So. Wilton.
Down's Bank mine	Edford	Downs & Co	500	3½	*Bituminous, soft*	
	Kewanee	Samuel Charles	800	4	Bituminous	
	do	William Martin	400	4	do	
	do	Robert Price	800	4	do	
	do	B. Kirley	600	4	do	
	do	William Garland	400	4	do	
	do	Thomas Earl	1,000	4	do	
	Burns	J. Hadzell	1,500	4	do	
	Kewanee	J. Cater	400	4	do	
	Atkinson	William Delaney	1,000	4	do	
	do	J. Witherspoon	800	4	do	
	do	Thomas Frew	800	4	do	
	do	Mawbreny & Co	1,500	4	do	
	do	E. G. Ball	1,000	4	do	
	Geneseo	Clinton Ague	2,500	4	do	
	Osco	Yotkey Bros	1,000	4	do	
	Galva	John Dorr	600	4	do	
		Wm. Newton	1,200		do	Country trade.
	Munson	Faulkes & Co	700	2⅜	do	Geneseo and vicinity.
	do	Chas. Wood	700	2⅜	do	Cambridge and vicinity.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	JACKSON COUNTY.			*Feet.*		
Lewis mine, No. 2 seam	Murphysborough	Lewis Coal Co	37,583	6½	Bituminous, hard, strong, resembles block coking.	St. Louis., Mo., via Cairo and St. L. R. R.
Campbell mine, No. 2 seam	Seven miles from Gillsburgh.	Wm. Campbell	160	3½	Bituminous, soft, open-burning.	Vicinity.
Harrison shaft, No. 2 seam	Harrison	Carbondale Coal and Coke Co.	114	6	Bituminous, lean, semi-block, hard.	St. Louis, Mo.
Crane mine, No. 2 seam	Crane Hill	Ashba Crane	130	4½	Bituminous, open-burning, somewhat soft.	Vicinity.
Brush mine, No. 2 seam	Carbondale	Sam'l T. Brush	1,600	4½	Bituminous, dry, open-burning.	Carbondale.
Briar Hill mine, No. 2 seam		Carbondale Coal and Coke Co.	3,564	2½	Bituminous, hard	St. Louis, Mo.
Zimmerman mine, No. 2 seam.	De Soto	Geo. T. Jones	320	9	Bituminous, semi-block, hard, bright, open-burning.	Vicinity.
Smith Coal quarry, No. 2 seam.	Ava	H. C. Brownfield	400	6	Bituminous, open-burning	Do.
Gartside mine No. 2	Murphysborough	Gartside Coal Co	19,405	6	Bituminous, resembles block coking.	St. Louis, Mo.
Downem mine, No. 2 seam	Campbell Hill	Dan'l Dawson	640	2½	Bituminous, soft, open-burning.	Vicinity.
Cheatham mine, No. 2 seam	Ava	H. C. Brownfield	400	6½	do	Towns along Cairo and St. Louis R. R.
	JERSEY COUNTY.					
	Brighton	B. Weber	300	3-4	Bituminous, soft, fatty	Neighborhood.
	do	Geo. Caims	800	3-4	do	Do.
	JOHNSON COUNTY.					
Burnside mine, Conglomerate seam.	New Burnside	Jas. A. Viall	27,000	3½	Bituminous, soft, fatty	Cairo, Vincennes, and Iron Mt. R. R.
	KANKAKEE COUNTY.					
Conklin mine	Essex	Story & Dobbs	1,600	2⅝	Bituminous, soft	Farmers and country trade.
	KNOX COUNTY.					
Campbell shaft	Wataga	R. M. Campbell	1,280	4½	Bituminous, soft	Local trade.
Old Whitehead mine	do	Louis Nodine	1,334	4½	do	Wataga and vicinity.
Sparta mine	do	Dolan Walsh	2,000	4	do	Galesburgh, Monmouth, and vicinity.
William S. Lombard & Co. mine, second seam.	Soperville	W. C. Lombard	None.	5	do	Galesburgh and Henderson.
Pilot Run mine, upper seam.	Altona	George L. Clifford	5,291	4⅜	Bituminous, soft, free-burning.	Home, southern part of Henry county, northern part of Knox county.
Pilot Run mine, second seam.	Oneida	do	5,292	4⅜	Bituminous	Do.
Donaldson shaft	Sparta township	Olaf Walene	1,500	4½	do	Local trade.
	Saluda		1,000		do	
	Henderson	Peter S. Tryner	600		do	
	do	Thomas Muir	150		do	
	do	—— Peterson	600		do	
	do	—— Beard	600		do	
Powers Coal Bank mine	do		300		do	
Two small mines	Oneida		1,500		do	
	Orange township	James Randall	600		do	Knoxville, Ill., by teams.
	do	Henry Caulkins	480		do	Do.
	Knox township	Thomas W. McGill	300		do	Galesburgh, Ill., by teams.
	do	Samuel H. Harper	500		do	Knoxville, Ill., by teams.
	do	James Nelson	600		do	Do.
	Indian Point	J. H. Miller	325		do	Abingdon and vicinity, by teams.
	do	John Cox	400		do	Sec. 23, by teams.
		Charles Lucan	300		do	Home trade, by teams.
	Maquon township	William Anderson	360		do	Farmington, by teams.
	LA SALLE COUNTY.					
Coal Run Coal Co.'s mine	Streator	Coal Run Coal Company.	60,000	5	Bituminous, soft	Chicago and Joliet, via C., B. and Q. R. R., C. P. and S. W. R. R., and C. and A. R. R., and Wabash, St. L. and Pacific.
Kentucky, Carbon or Rockville, La Salle or Taylor mines, second and third seams.	La Salle	Young trustees	40,000	7	Bituminous, domestic and steam.	Chicago, N. Ill., S. W. Wis., and N. E. Iowa, via Chi. R. R. and canal, Ill. C. R. R., C., R. I and P. R. R.
Streator Coal Co.'s mine	Bruce township	Streator Coal Co	56,030	4½	Bituminous, soft	Joliet, via Chicago and Alton R. R., and east, via Mich. Central R. R.
Nos. 1, 2, and 3 shafts	Streator	Chicago, Wilmington, and Vermillion Coal Co.	349,672	5½	do	Lines of C., B. and Q., C. and N. W., C., P. and S. W., and C. A. and St. L. R. R.
James Cahill mine, third seam	Peru	James Cahill	15,000	3½	Bituminous	
Union Coal Co.'s mine, second and third seams.	do	Union Coal Co	35,000	4½	do	Chicago and Peru.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LA SALLE CO.—cont'd.			*Feet.*		
Sample's mine, upper seam	South Streator	William Sample	2,000	4⅔	Bituminous	Local farmers and others.
Stoneham's shaft	Streator	John Stoneham	2,000	5	Bituminous, soft	
Evans' shaft	do	Richard Evans	10,000	4⅚	do	Chicago and places east as far as Indiana.
Helms' shaft	One mile southwest of Streator.	Alex. Helms	9,000	5	Bituminous	Aurora, Chicago, and shipments north and south.
	Streator	J. Eades & Son	None.	5⅚	do	Chicago.
Weidknecht mine	Buffalo Rock	William Weidknecht	300	1⅔	Bituminous, soft	Local.
Vanslack mine	Streator	S. H. Vanslack	3,600	5½	do	Do.
Shelton shaft	Marseilles	Shelton & Sons	5,500	3	do	Marseilles.
McGarry shaft	Streator	George Alexander and Richard Finn.	7,500	4½	do	Aurora, etc.
Oglesby mine, second and third seams.	Oglesby	Oglesby Coal Co	40,000	9 1/12	do	Ill. Cen. R. R. north to Southern Minn., and as far as Beloit in Wisconsin.
Catrill mine, third seams	Peru	James Catrill	9,148	3½	do	Chicago, Moline, and other places on Chi., R. I. and R. R. R.
Caledonia mine	La Salle	Mitchell, Duncan & Lumsden.	5,715	5½	do	Ill. Central R. R.
Matthiessen & Hegeler mine, second seam.		Matthiessen & Hegeler		4⅚	Bituminous	Own smelting works at La Salle.
Zinc Co.'s mine	La Salle	Zinc Co	51,322			
Murray mine, second seam	Dimmock	Thomas C. Murray	400	4½	Bituminous, soft	Local.
Gatiss mine, second and third seams.	do	R. Gatiss	500	2⅔	do	Do.
Smith's Bank mine	Buffalo Rock	William Smith	200	20	do	Do.
Lipprant mine	Streator	H. Lipprant	4,000	5½	do	Chi., Ottawa, and other towns on C., B. and Q., and Wabash, St. L. Pac. R. R.
Fairburn mine	do	Robert Fairburn	1,400	4½	do	*Local.*
Crews' shaft	do	Joseph Crews	2,100	5	do	Streator and neighboring towns.
No. 2 mine, second seam	Peru	Union Coal Co	2,000	4	Bituminous	Chicago.
	Prairie Creek	J. C. Campbell	700	5	do	Surrounding country.
Maher's shaft	Rutland	William Maher	500	3½	Bituminous	Local.
	Near Ottawa	Pat Cannon	400	1½	do	
	Dear Park	Halderman Bros	900		do	Country trade.
	do	Jos. Broker	500		do	Do.
	LIVINGSTON COUNTY.					
Williams shaft	Two miles south of Streator.	John Williams	600	4¾	Bituminous, soft	
Hayson mine	do	Jos. Hayson	400	4½	do	Local.
John Kangley & Co. mine	Streator	John Kangley & Co	80,000	5	Bituminous	Chi., C., B. and Q. C. A. C. P. and S.W. R. R.
Moon shaft	Two miles south of Streator.	R. Finner	3,240	4½	do	Country trade.
Mallory shaft	Southwest of Streator.	Thomas Edwards	600	4⅔	do	Do.
Pontiac mine, second and third seams.	Pontiac	W. H. Levers	2,500	7½	do	Local.
Marshfield mine, top and lower seams.	Fairbury	John Watson & Son	1,500	7	Bituminous, soft	Surrounding country and towns having no shafts and railroads.
Central mine	do	Walton Bros	12,080	4½	Bituminous	Wabash R. R. and towns along line.
East Fairbury mine	do	John Gibb	14,210	4½	do	Do.
Edwards mine	Two miles south of Streator.	T. Edwards	600	4⅔	Bituminous, soft	
	New township	M. Peters	2,500		Bituminous	Streator, Ill.
	LOGAN COUNTY.					
Lincoln C. Min. Co	Lincoln	Lincoln C. Min. Co	60,000	5½	Bituminous, hard	C. and A. R. R. and local trade.
	M'DONOUGH COUNTY.					
Milliken's mine, Colchester seam.	Colchester	George Millikens	821	2½	Bituminous, free from sulphur and all other minerals, blacksmithing.	Quincy, Ill.
William Egerton mine, Colchester seam.	do	William Egerton	4,450	2⅔	Bituminous, free from sulphur, blacksmithing.	Do.
Quincy Coal Co., Colchester or No. 2 seam.	do	Quincy Coal Co	55,000	2½	do	Quincy and various other towns.
Colchester Coal Co.'s mine, Colchester seam.	do	Colchester Coal Co	8,473	2½	Bituminous, free from sulphur.	Quincy and other more distant towns.
	Near Bushnell	John Hood	600	3	Bituminous	
	One half mile north of Colchester.	John McGran	400	2½	do	
	do	John Spicer	400	2½	do	
	One mile northeast of Colchester.	William McIntosh	800	2½	do	

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	M'DONOUGH CO.—cont'd.			*Feet.*		
.....	One and a half miles north of Colchester.	William Williams.....	600	2⅓	Bituminous	
.....	.....do	Lewis Lewis	1,200	2⅓	.....do	
.....	One-half mile northwest of Colchester.	Michael Hume.....	500	2⅓	.....do	
.....	Near Colchester.....	John King	600	2⅓	.....do	
.....	Three miles west of Colchester.	John Zimmerman	720	2⅓	.....do	
.....	One mile west of Colchester.	Fred Vogler	500	2⅓	.....do	
.....	One and a half miles north of Colchester.	George Brent	500	2⅓	.....do	
.....	Two miles north of Colchester.	Newman Foster.....	800	2⅓	..... do	
.....	Three miles northwest of Colchester.	John McClure	800	2⅓	.....do	
.....	Colchester	William Bright	750	2⅓	.....do	
.....	Near Colchester.....	Benjamin Nelson	600	2⅓	.....do	
.....	.....do	William Hodges	1,000	2⅓	.....do	
.....	Prairie City.....	Charles Millet	1,000	1⅚	.....do	Town and vicinity.
	M'LEAN COUNTY.					
McLean Co. C. Co.'s mine, second and third seams.	Bloomington	McLean Co. Coal Co...	63,000	6	.....do	Central Ill.
	MACOUPIN COUNTY.					
South shaft, No. 6 seam.....	Carlinville	Bartels & Son.....	2,400	7	Bituminous, soft, fatty	Carlinville.
Virden mine, No. 6 seam . ..	Virden	John W. Utt.....	38,309	7½	.....do	Jacksonville, Ill., C. and A. R. R.
Carlinville mine, No. 6 seam..	*Carlinville*	*Carlinville C. Min. Co..*	*15,874*	*6*	*.....do*	*Towns along C. and A. R. R.*
Neil mine, No. 6 seam	Bunker Hill.....	William Neil & Co....	2,376	5½	.....do	Vicinity.
Staunton Coal Co.'s mine, No. 6 seam.	Staunton.....	Staunton C. Co.....	75,000	7½	Bituminous	St. Louis, Mo.
Girard mine, No. 6 seam.....	Girard	Girard C. Tile and Brick Co.	7,325	7	Bituminous, soft, fatty	Vicinity.
Weston mine, No. 6 seam.....	Staunton.....	Fritz Dingersen.....	520	6	Bituminous	Do.
Nilwood mine, No. 6 seam....	Nilwood	H. Cooper & Sons	9,000	6	Bituminous, soft, fatty	Alton.
Mount Olive mine, No. 6 seam	Mount Olive	Mt. Olive Coal Co	95,000	7½	.....do	St. Louis, Mo.
.....	Bunker Hill.....	Albert Jones.....	1,000	5	.....do	Neighborhood.
Hodgers Creek mine.....	Near Chesterfield	D. R Coleman.....	400	.....	.....do	Do.
	MADISON COUNTY.					
Abbey mine No. 3, No. 6 seam.	Collinsville.....	Abbey C. and Min. Co.	37,056	6 7/12	Bituminous, soft, coking	St. Louis, Mo.
Reese mine, No. 5 seam	North Alton	Edw. Reese	2,400	2½	Bituminous, soft, fatty.....	Alton.
Dunford mine No. 1, No. 5 seam.	.....do	Henry Taylor.....	3,000	2½	..... do	Do.
Schrameck mine, No. 6 seam.	Edwardsville.....	Frank Schrameck.....	1,755	6	Bituminous, soft, fatty, coking.	St. Louis, Mo.
Worden mine, No. 6 seam	Worden.....	Worden Mining Co ..	921	7	Bituminous, coking.....	Do.
Taylor & Bro.'s mine, No. 5 seam.	North Alton	Taylor & Bros	1,656	2½	Bituminous, soft, fatty.....	Alton.
Collinsville C. and Min. Co., No. 6 seam.	Collinsville	Collinsville Coal and Min. Co.	48,000	7	.... do	St. Louis, Mo.
Camp mine, No. 5 seam	Godfrey.....	Henry Camp	1,600	2½	.....do	Alton.
Hughes & McGuire mine, No. 5 seam.	North Alton	Hughes & McGuire...	600	2½	.....do	Do.
Heintz Bluff mine, No. 6 seam.	Collinsville	C. Heintz & Co.....	29,040	7½	Bituminous, coking	St. Louis, Mo.
Meyers mine, No. 5 seam....	Bethalto	Michael Meyers.....	2,000	4	Bituminous, soft, fatty, very friable.	Vicinity.
Watts & Co. mine, No. 5 seam.	North Alton	Watts & Co.....	2,000	2½	Bituminous, soft, fatty.....	Alton.
Mrs. Smith mine, No. 5 seam .	Edwardsville Junction	Margaret Smith.....	2,000	4½	.....do	St. Louis, Mo.
Conlen mine, No. 5 seam	North Alton	Peter Conlen.....	1,000	2½	.....do	Alton.
Cutcomb mine, No. 5 seam ...	.....do	Adolph Cutcomb.....	2,000	2½	.....do	Do.
Dunford mine No. 2, No. 5 seam.	.....do	E. Deere	4,000	2½	..... do	Do.
Mitchell mine, No. 5 seam ..	.....do	James Mitchell	3,675	2½	.....do	Do.
Rutledge mine, No. 5 seam ...	.....do	John Rutledge.....	1,936	2½	.....do	Do.
Robertson mine, No. 5 seam ..	..... do	Peter Robertson	2,160	2½	.....do	Do.
Wolf mine, No. 6 seam	Edwardsville	Wolf Bros.....	2,400	6½	Bituminous, coking.....	St. Louis, Mo.
Lumaghi mine, No. 6 seam ...	Collinsville.....	O. Lumaghi	25,228	7	.....do	Do.
Cantine mine, No. 6 seam	.....do	Cantine C. and Min. Co.	26,000	7½	.....do	Do.
Confidence mine, No. 6 seam .	Confidence.....	Seybt, Bandalier & Co	46,092	7	.....do	Do.
Alton Summit mine, No. 5 seam.	Monticello	D. Noonan	1,200	2½	Bituminous, soft, fatty.....	Alton.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MADISON CO.—cont'd.			*Feet.*		
.....	Alton Junction	M. H. Beals & Co	878	2½	Bituminous, soft, fatty, little sulphur.	Own use.
.....	Fosterburgh	William Chalangworth	620	3½	Bituminous, soft, fatty	Neighborhood.
.....	Bethalto	C. H. Flick	1,640	3½	do	Do.
.....	Godfrey township	Dennis	3,000	2½	Bituminous	Alton, Ill
.....	do	Deere Eynon	3,000	2½	do	Do.
.....	do	Kamp & Co	700	2½	do	Do.
.....	do	Crowson & Watts	670	2½	do	Do.
.....	do	Hughes & McGuire	1,200	2½	do	Do.
.....	do	Kortkamka	1,500	2½	do	Do.
.....	Edwardsville city	M. Schmidt	3,000	.....	do	St. Louis, Mo.
.....	do	A. Schramek	9,000	.....	do	Do.
	MARION COUNTY.					
Sandoval C. and Min. Co 's mine.	Sandoval	Sandoval C. and Min. Co	3,463	5½	Bituminous, soft, fatty	St. Louis, Ohio, and Miss. rivers.
Centralia mine, No. 6 seam	Centralia	Centralia Min. and Mfg. Co.	36,480	7	Bituminous, fatty	Towns along Ill. Cen. R. R.
	MARSHALL COUNTY.					
Saville mine	Near Sparland	Charles Saville	1,800	3⅔	Bituminous	Lacon.
.....	Sparland	Kelly & Flynn	450	3⅔	do	
.....	do	David Mathias	450	3⅔	do	
	MENARD COUNTY.					
North shaft	Petersburgh	C. B. Laning & Co	40,000	6	Bituminous	R. R.
Junction Coal shaft	do	T. F. Laning	5,000	6-6½	Bituminous, not very soft	Towns on C. and A. and Springfield and N. W. R. R.
Rose Hill mine	do	William Landon	320	5-6	Bituminous	Petersburgh.
South Valley mine	Tullula	W. G. Greene	3,500	6	do	Local and C. and A. R. R.
Tulsner mine	Petersburgh	W. Tulsner	200	6	do	Local.
Tullula shaft	Tullula	C. B. Laning	10,000	6	do	C. and A. R. R.
Athens C. shaft	Athens	William Parkins	1,200	6	do	Local.
	MERCER COUNTY.					
Slope No. 1 mine	Cable	Coal Valley Min. Co	59,366	3-4½	Bituminous, soft	Rock Isl., Ill., Davenport and Iowa City, Iowa, to R. R. via Rock Isl. and Mercer Co. R. R.
Isaacson mine	Parker run	J. M. Isaacson	1,075	2½	Bituminous	New Windsor, Albany and Offham.
Harriott mine	Viola	W. W. Pinkerton	3,000	4	do	Local.
Bunker Hill mine	Cable	Richard B. Ellis	9,000	4	Bituminous	Local and country trade, Rock Island and Davenport.
Camp Creek mine	Near Millersburg	L. R. Hyett	1,200	3	do	Millersburg, Aledo and Hamlet.
H. Fowler mine	Camp creek	H. Fowler	100	2½	do	Millersburg and Duncan township.
Taylor mine	Coal Dale	Robert Taylor	2,000	4	do	N'thn part of Mercer Co. and st'hn part of Rock Island Co.
Griffin mine	Richland Grove township.	Griffin Bros	1,120	2½	Bituminous, soft coking, free from pyrite.	New Windsor and country trade.
Old Dunlap mine	Four miles northeast of Aledo.	Geo. Langston and Ben Boden.	240	.....	Bituminous	Aledo and farmers.
Edwards Creek mine	Green's township	Edward Heggs	480	.....	do	Aledo, Ill.
.....	Aledo	D. Welsh	600	.....	do	
.....	Perryton	Squire Butcher	500	3	do	Do.
	MONTGOMERY COUNTY.					
Litchfield mine, No. 5 seam	Litchfield	Litchfield Coal Co	42,400	4	Bituminous, hard	St. Louis, Mo.
	MORGAN COUNTY.					
Thompson shaft	Three miles north of Neelyville.	John Thompson	1,500	4	Bituminous	Local country trade.
Neelyville mine	Neelyville	J. D. Crabbe	12,000	4½	do	Quincy, Keokuk, Hannibal, &c.
	PEORIA COUNTY.					
Adam Sholl mine, middle seam.	Sholl's siding	Adam Sholl	23,400	4½	Bituminous, soft, almost free from pyrite.	Peoria, Pekin, and line of P., P. and J. and P., D. and E. R. R.
Wilkinson & Wanthing mine, No. 4 seam.	Edwards station	Wilkinson & Wanthing.	30,000	4½	Bituminous, hard	Iowa and Minn.
Allen mine	Limestone township	Edward Allen	3,756	4½	Bituminous, medium	Peoria, Ill.
Monroe mine	do	Jas. Monroe	6,000	4½	Bituminous	Do.
Hollis mine	Hollis	Carter & Hamilton	7,200	4½	Bituminous, soft	Peoria, Pekin, and Jacksonville.
Jones mine	Mapleton	E. J. Jones	3,200	4½	Bituminous	Peoria.
Orchard mine	Hollis	Newsan Bros	14,228	4½	do	Iowa as far N.W. as Cedar Rapids, and some to Nebraska.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	PEORIA CO.—cont'd.			*Feet.*		
East Mapleton mine, No. 4 seam.	Mapleton	Frank Newsan	9,200	5½	Bituminous, soft	Iowa as far west as Cedar Rapids and east Indiana.
Pottstown mine	Pottstown	Middleton & Co.	12,000	4	do	Some in Minn., Peoria, and Iowa as far west as Cedar Rapids.
Lancaster mine, third seam	Lancaster lands	Jeffard & Beathard	10,000	4½	do	Ill. river steamboats.
Elmwood mine, No. 6 seam	Elmwood	W. J. Phelps & Son	21,000	4½	Bituminous, soft coking	Chicago, Burlington and Quincy R. R. as far west as Burlington.
Linsley & Co. mine, No. 4 seam.	Mapleton	T. Linsley & Co	12,700	4⅜	Bituminous, soft	As far west as Cedar Rapids, Iowa, and Minneapolis, Minn., and Indiana.
Kramm's Station mine	Kramm's station	E. Kramm	20,400	4	Bituminous	Iowa as far west as Cresco, NW. as far as Austin, Minn.
Hayward mine, No. 6 seam	Brimfield	W. H. Langden & Son.	9,600	4½	Bituminous, soft coking	Burlington, Iowa; Keithsburg, Ill.; and C., B. and Q. R. R.
Brost mine	Dondalville	C. E. Brost	7,000	4½	Bituminous, soft	Peoria.
Ball mine	Peoria	Ball & Moffatt	6,170	4½	do	Peoria and local trade.
Royster Brothers' mine	Dondalville	Royster Brothers	2,400	4	do	Do.
Treashur mine	Near Peoria	Walter Treashur	5,840	4¼	do	Peoria.
Noll & Fender mine	do	Noll & Fender	8,640	4½	do	Do.
Mulligan mine	4 miles west of Peoria.	Thomas Mulligan	1,000	4¼	Bituminous	Do.
Grant mine	Dondalville	Peter Grant	2,380	4½	Bituminous, soft	Do.
Fred. Mohn mine	do	Fred Mohn	1,200	4¼	do	Do.
Griswold mine	4 miles from Peoria	Wolland & Co	3,000	4¼	Bituminous	Do.
Vickery mine	Kickapoo creek	Harry Vickery	2,000	3¾	do	Do.
Clifford, Abley & Co. mine	Pottstown	Clifford, Abley & Co.	3,000	4	Bituminous, soft	
Gilfay, Lindsay & Co. mine, No. 4 seam.	Mapleton	Gilfay, Lindsay & Co.	4,800	4⅝	do	Do.
Rutherford mine, No. 4 seam	Near Peoria	James Day	6,400	4½	Bituminous	Do.
	do	F. Lanner & F. Foviatt	3,000	4¼	do	Do.
Blank mine	Peoria	George Blank	1,500	4¼	do	Do.
Kingston mine	Kingston	Kingston I. and C. Co.	None.	4½	Bituminous, soft	
Collin & Gorman mine	3 miles west of Peoria.	Collin & Gorman	14,000	4	Bituminous	
	Peoria	Paddy Hoy	3,800		do	
	do	James Wait	2,000		do	
	do	William Randle	2,500		do	
	do	Jacob Slane	400		do	
	do	Donaldson & Royster	500		do	
	do	Kidder Est	500		do	
	do	Lane. & Grishoft	600		do	
	Brimfield	James Park	400		do	
	do	William Hull	500		do	
	do	Charles Hays	700		do	
	do	John Ryon	500		do	
	do	Cyrus Brooks	400		do	
	do	John Tully	500		do	
	Mapleton	William Johnston	400		do	
	Elmwood	Thomas Hurf	1,000		do	
	do	John Conoklin	1,000		do	
	do	Avery Dalton	1,800		do	
	Brimfield	Jos. Catton	1,000	4½	do	Brimfield, Ill.
	Peoria	Frank Englke	600		do	
	PERRY COUNTY.					
Frizell mine, No. 5 seam	Duquoin	Rogers & Co	15,500	6	Bituminous, hard, fatty	Duquoin.
Tamaroa mine, No. 5 seam	Tamaroa	David Thompson	15,969	5½	do	Towns along Illinois Central R. R.
Star mine, No. 5 seam	Duquoin	Star Mining Co	15,790	6	Bituminous, fatty, does not slack much.	Do.
Sun C. and Coke Co.'s. mine, No. 5 seam.	Wall's End	Sun Coal and Coke Co.	23,267	5	Bituminous, hard, fatty	Do.
Saint John mine, No. 5 seam	Saint John	Ill. Cen., I. and C. Co.	113,987	8	do	Cairo, Ill.
Beaucoup mine, No. 5 seam	Pinckneyville	J. P. Cowens	9,875	6	do	St. Louis, Mo., via Cairo short line.
Cox mine, No. 5 seam	Tamaroa	P. White	9,200	5½	do	Towns along Illinois Central R. R.
Enterprise mine, No. 5 seam	Duquoin	Enterprise C. and Coke Co.	14,660	6	do	Towns along Ill. Cen. R. R. and north.
Galun mine, No. 5 seam	Conant station	Barwell & Carter	2,442	6	Bituminous, somewhat hard.	St. Louis, Mo., via Cairo short line.
Hammrack mine, No. 5 seam	Pinckneyville	J. M. Bayless and W. S. Rice.	400	6½	Bituminous, somewhat hard, considerable sulphur.	Pinckneyville.
	do	Pat Malene	500	7½	Bituminous, soft, fatty	Neighborhood.
	do	Thomas McCann	506	7½	do	Do.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	RANDOLPH COUNTY.			*Feet.*		
Richey mine, No. 6 seam	Sparta	James A. Wilson	800	5½	do	Vicinity.
Roberts mine, No. 6 seam	do	John Roberts	700	5	do	Do.
Rosborough mine, No. 6 seam	Rosborough station	R. H. Rosborough	14,400	6	do	St. Louis, Mo., Cairo, and St. L. R. R.
Stanley mine, No. 6 seam	Blairtown	Geo. Stanley	800	5	do	Vicinity.
Weberling mine, No. 6 seam	Percy	A. G. Holley	144	5⅔	do	Do.
Gibson mine, No. 6 seam	Sparta	Jas. Gibson	400	5	do	Do.
Eden mine, No. 6 seam	Eden	Henry Martin	2,400	5½	do	Do.
Coultersville mine, No. 6 seam	Coultersville	Jones & Nisbet	17,891	6½	Bituminous, hard, fatty	St. Louis, Mo., via Cairo short line.
Boyd mine, No. 6 seam	Sparta	D. B. Boyd	5,328	5½	Bituminous, soft, fatty	Sparta and Red Bud, Ill.
Barnard mine, No. 6 seam	Percy	Barnard & Co	27,095	7	do	Miss. river steamboats at Chester, Ill.
	ROCK ISLAND COUNTY.					
Hampton Coal Mining Co	Hampton township	Hampton C. Mining Co.	33,040	4	Bituminous, soft, very little pyrite.	Sabula, Dubuque, Cedar Rapids, Freeport, Beloit, Racine, via. Chi., Mil. and St. P. R. R.
Black Diamond mine	Coal Valley	Black Diamond Mining Co.	12,000	4	Bituminous, soft	Rock Isl., Davenport, and Moline.
Hampton mine	Happy Hollow	Taylor Williams	35,000	4⅔	Bituminous	Chi. and N. W. R. R. Co., and Chi., Mil. and St. P. R. R. Co.
Binghampton mine	Coal Valley	Coal Valley Mining Co.	27,968	8	Bituminous, soft, containing sulphur.	Rock Isl., Davenport, Iowa City, and R. R. at Rock Island.
Bowles mine	Bowlesburg	Sam'l Bowles	3,500	4	Bituminous, soft	
Etna Coal Co.'s mine	Happy Hollow	Etna Coal Co	2,000	3½	do	Moline.
Donald & Brown mine	Bowlesburg	Donald & Brown	2,000	4	do	
Williams mine	Coal Valley	David Williams	450	4	do	Local.
Phillips mine	do	John H. Phillips	500	3½	do	Do.
Hunter mine	Moline township	Horace L. Hunter	560	4	do	Do.
Allison mine	Bowlesburg	Wm. Allison	800	4	do	Do.
Venach mine	Coal Valley	Fred. Venach	850	3½	do	Do.
Edward mine	do	David Edward	1,500	3½	do	Do.
Wilson mine	do	George Wilson	300	3½	do	Do.
Adams mine	do	Wm. Adams	408	4	do	Do.
Bowles mine	Bowlesburg	Sam'l Bowles	1,500	3½	do	Bowlesburg and Moline.
Hynd mine	do	John Hynd	2,300	3½	do	Moline.
Kay mine	do	Robert Kay	320	3½	do	Local.
Wanlockhead No. 2 mine	Rapids City	H. W. Gilchrist & Co.	None.	5	Bituminous, soft	Miss. river steamboats and towns on Miss. R., C., W., St. P. R. R.
Port Byron mine	do	Taylor Williams	41,000	4½	Bituminous	Upper Miss. river and C., M. and St. P. R. R.
Wanlockhead No. 1 mine	do	H. W. Gilchrist & Co.	29,300	4½-5	Bituminous, soft	St. Clair, Clinton, Davenport R. R., and Miss. river steamboats.
Porter mine	Bowlesburg	Porter Brothers	5,000	4	do	Moline.
	Hampton	Heagy & Stoddard	33,040		Bituminous	
	Edford	Downs & Co	500		do	
	Zuma township	Zuma Coal Co	400	3	do	Port Byron, Ill.
	Drury township	Stewart R. Drury	1,000	2½	do	Steamboats on Miss. river.
	do	John Wray	480	2	do	Muscatine, Iowa.
	do	Jere. Lequatte	936		do	Do.
	SALINE COUNTY.					
Ledford mine, No. 7 seam	Ledford Station	James A. Viall	2,000	5	Bituminous, soft, fatty	Cairo, via. C. and V. R. R
	SANGAMON COUNTY.					
Old North mine	Springfield	Beard, Hickox & Co	100,000	5⅔	Bituminous	Springfield City and Springfield I. Co.
West End mine	do	Charles R. Hunt	54,400	6	do	Springfield and Ohio and Miss. R. R., and towns thereon.
Sangamon mine, No. 5 seam	do	Stame, Dresser & Co	60,000	6	do	Ill. Cen. and Wabash R. R. as far north as Dubuque, west as Quincy and Hannibal, east as Fort Wayne.
Springfield Coop. C. Co.'s mine	do	Springfield Coop. C. Co.	33,683	5½	do	Springfield and Bloomington.
East coal shaft	do	Capital C. Co	37,836	5⅚	do	Springfield and Ill. Cen. R. R., and towns on lines as far east as Clinton.
Junction mine, No. 5 seam	Woodside township	Wabash Coal Co	53,000	6	do	Line of Wabash, St. L. and Pac. R. R.
Riverton mine	Riverton	Riverton and Junction C. Co.	40,000	5⅚	do	Line of Wabash R. R. as far east as Fort Wayne, west as Springfield.
Barclay mine	Barclay	Barclay Coal Co	45,000	5⅚	do	Ill. and Cen. R. R., and as far north as Chi.
Pleasant Plains mine	Pleasant Plains	John Galloway and others.	3,700	5½	do	Local trade.
	SCHUYLER COUNTY.					
Spiller mine	Frederick township	John Spiller	115	2½	Bituminous; blacksmith and steam.	Beardstown, Cass Co., and Frederick.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
				Feet.		
	SCHUYLER CO.—cont'd.					
Kerr mine	Rushville	John Kerr	1,750	5 7/12	Bituminous, bright, hard; considerable sulphur; steam.	Rushville.
Boyd mine	do	William Boyd	1,800	5½	do	Do.
	Pleasant View	Thomas Parks	400	5½	Bituminous	
	SCOTT COUNTY.					
Frost mine	Winchester	Charles Frost	3,700	2½	Bituminous	Local.
Five small drifts	Exeter		2,000	2½	do	
	SHELBY COUNTY.					
Brophy mine, No. 15 seam	Shelbyville	Michael Brophy	800	2½	Bituminous, soft, fatty, pliable.	Vicinity.
Richardson mine, No. 15 seam	do	John Richardson	2,000	2	do	Do.
Jonathan Minto mine, No. 15 seam.	Robinson creek	John Minto	1,000	2½	do	Do.
Kurtz mine, No. 15 seam	Shelbyville	C. J. Kurtz	804	2½	do	Do.
Robinson Creek mine, No. 15 seam.	Robinson creek	Thomas Minto	1,200	2½	do	Shelbyville and Pana.
		Thomas Hancock	400		Bituminous	Neoga, Illinois.
		John Young	300		do	Neoga, Sigel, and Stewartson.
	STARK COUNTY.					
Swanson mine	Wyoming	Jos. Swanson	2,000	4	Bituminous, soft	Wyoming.
Lathrop C. Min. Co.'s mine	do	Lathrop C. Min. Co	12,000	4	do	Towns in Stark county.
Bradford mine, Clay Band seam.	Spom river	William Himes	393	4	Bituminous	Country.
Taylor mine	Wyoming	William Taylor	800	4	Bituminous, soft	Wyoming and neighboring towns.
	do	Richard Howarth	800		Bituminous	
	Modena	John Scott	500		do	
	Elmira	James Green	800		do	Country trade.
	West Jersey	John Catton	800		do	Neighborhood.
		John O'Neil	1,200	4½	do	Toulon and at bank.
		William Newton	450	4½	do	Toulon and vicinity.
		William Shaw	400	4	do	Do.
		Linkin & Son	360	4	Bituminous, soft	Stark county.
		Andrew Beck	600		do	
	SAINT CLAIR COUNTY.					
Nichols mine, No. 6 seam	Lebanon	Jos. Morris	12,000	5	Bituminous, soft, fatty	St. Louis, via O. and M. R. R.
Bennet mine, No. 6 seam	do	Donnewald, Hering & Co.	16,000	5½	do	Do.
Reinecke No. 1 mine		Conrad Reinecke	15,266	6½	Bituminous, soft, fatty	St. Louis, via Louisville and Nashville R. R.
Western mine, No. 6 seam	Belleville	Western Mining Co	18,744	6½	do	St. Louis, Mo.
Kloess, Nos. 1 and 2 mines, No. 6 seam.	do	Jno. Kloess	15,249	6½	do	St. Louis, via St. L. and Ill. R. R.
Northwestern mine, No. 6 seam.	1 mile from Belleville	Northwestern C. Min. Co.	13,902	6	do	Do.
Harry Taylor mine, No. 6 seam.	West Belleville	Henry Taylor	14,000	6	do	Do.
Kline mine, No. 6 seam	Freeburgh	Simpson & Rauth	7,997	8	do	St. Louis, via Cairo short line.
Beatty mine, No. 6 seam	Belleville	Jas. Beatty	8,000	7	do	St. Louis, via Ill. and St. L. R. R.
Wilderman mine, No. 6 seam.	Wilderman station	A. Danzer & Co	16,200	7	do	St. Louis, via Cairo short line.
Freeburgh mine, No. 6 seam.	Freeburgh	Freeburgh Coal Co	12,870	8	do	Do.
Dudley mine, No. 6 seam	S. of Heinrich station.	Dank, Bro. & Co	3,708	6	do	Do.
Rose Hill mine, No. 6 seam	West Belleville	Hazard, Wilson & Co.	20,512	6	do	St. Louis, Mo., via Ill. and St. L. R. R.
Maule & Ganot mine, No. 6 seam.	Belleville	Maule & Ganot	9,600	7	do	Belleville and St. Louis, via Ill. and St. Louis R. R.
Dank No. 1 mine, No. 6 seam.	Near Centreville station.	Dank Mining Co	35,330	6	do	St. Louis, Mo., via Cairo short line.
Great Western mine, No. 6 seam.	West Belleville	Henry Taylor	8,000	6	do	St. Louis, via Ill. and St. L. R. R.
Branch No. 2 mine, No. 6 seam.	Near Belleville	Krantz & Co	4,000	6½	do	St. Louis, via S. E. R. R.
Enterprise mine, No. 6 seam.	Rentchler station	Adam Ogden	5,800	6	do	Do.
Emmet mine, No. 6 seam	Belleville	Dutch Hollow Coal Co	16,100	7	do	Do.
Pollack mine, No. 6 seam	Birkner station	Pollack Mining Co	4,400	6	do	Do.
Knicht mine, No. 6 seam	do	Dan'l Knicht	12,341	7	do	St. Louis, via Louisville and Nasville R. R.
Lenz mine, No. 6 seam	Dutch Hollow	August Lenz	None.	7	do	St. Louis, via S. E. R. R.
I. K. L. mine, No. 6 seam	Rentchler station	Philip Tisch	5,400	6½	do	Mascontah, Ill., via S. E. R. R.
Springwell mine, No. 6 seam.	Bartlett	Matthew Needham	33,361	6½	do	St. Louis, Mo.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ST. CLAIR CO.—cont'd.			*Feet.*		
Abbey No. 2 mine, No. 6 seam.	Abbeyville	Abbey Coal Mining Co.	27,100	6½	Bituminous, soft, fatty	St. Louis, Mo.
Brandenburger No. 2 mine, No. 6 seam.	West Belleville	Wm. Brandenburger	21,000	7	do	St. Louis, via Cairo short line.
Mine No. 1, No. 6 seam	Abbeyville	Abbey Coal Mining Co.	47,084	6½	Bituminous, soft, best steam and heating.	St. Louis, Mo.
Gartside No. 3 mine, No. 6 mine.	Gartside	Gartside Coal Co	16,651	6	Bituminous, soft, fatty	East St. Louis, Ill., and St. Louis, Mo.
Hazard & Wilson mine, No. 6 seam.	West Belleville	Hazard & Wilson	47,571	6	do	St. Louis, Mo., via Cairo short line.
Laurel Hill mine, No. 6 seam.	East Belleville	J. Beard and James Beally.	1,200	6½	Bituminous soft, fatty	St. Louis, Mo.
Harmony mine, No. 6 seam	Letz station	S. A. Weissenbarn	24,561	6½	Bituminous	St. Louis, Mo., via Ill. and St. L. R. R.
Greenfield mine, No. 6 seam	West Belleville	Greenfield C. Co	12,000	5	Bituminous, soft, fatty	Do.
Stalberg mine, No. 6 seam	Belleville	John P. Heinrich	5,018	7	do	St. Louis, via Cairo short line, also Belleville.
Mulson or Reebs mine, No. 6 seam.	West Belleville	Nicholas Reeb	8,200	6½	do	St. Louis, via Cairo short line.
Schureman Bros. mine, No. 6 seam.	Reeb's station	Schureman Bros	18,999	6	do	St. Louis, Mo., via St. L. R. R.
St. Clair mine, No. 6 seam	One mile east of Caseyville.	George F. Savitz	9,734	5	do	St. Louis, Mo.
Union mine, No. 6 seam	Two miles east of Caseyville.	do	720	6	do	Do.
Van Courts mine, No. 6 seam.	One mile east of O'Fallon.	Savitz Bros	22,465	6	do	Do.
Cross-Roads mine, No. 6 seam.	Firman station	Gartside Coal Co	10,080	7¾	do	Do.
Alma mine, No. 6 seam	Alma	do	64,943	6½	do	East St. Louis, Ill., and St. Louis, Mo.
Mascoutah mine, No. 6 seam.	Mascoutah	Mascoutah Coal Co	4,800	7	do	Mascoutah.
Lippert mine, No. 6 seam	Millstadt	Fred. & Jack Lippert	400	6½	do	Millstadt.
Muskopk mine, No. 6 seam	Centreville	Daniel Muskopk & Co.	500	6	do	Do.
Horttman mine, No. 6 seam.	North Belleville	Horttman & Co	6,000	6	do	Belleville
Gellwicks & Richards mine, No. 6 seam.	Belleville	Gellwicks & Richards	1,859	6½	do	Do.
Yoch mine, No. 6 seam	Yoch station	James Yoch & Bros	26,976	6	do	St. Louis, Mo., via Ill. and St. L. R. R.
Johnson mine, No. 6 seam	Briar Hill	do	9,835	6	do	Do.
Briar Hill mine, No. 6 seam	do	John Beard & Co	9,304	5½	Bituminous, soft, strong, clear.	St. Louis, Mo.
Union mine, No. 6 seam	do	do	3,851	6½	do	Do.
Vulcan mine, No. 6 seam	Birkner station	Koelle Bros	7,000	6½	Bituminous, soft, fatty	St. Louis, Mo., via S. E. R. R.
Reutchler mine, No. 6 mine	Reutchler	D. Rinel Reutchler	5,160	6	do	St. Louis, Mo., via S. and N. R. R.
East Belleville mine, No. 6 seam.	One mile southeast of Belleville.	Hazard Wilson & Co.	6,000	6	do	St. Louis, Mo., via S. E. R. R.
Branch mine, No. 6 seam	Lenz station	Gartside Coal Co	748	6½	Bituminous, coking	St. Louis, Mo.
Padfield mine, No. 6 seam	Belleville	H. Padfield	2,250	6½	Bituminous, soft, fatty	Belleville.
Humboldt mine, No. 6 seam	West Belleville	John Schmidt	6,536	6½	do	St. Louis, Mo., via S. E. R. R.
Birkner mine, No. 6 seam	Birkner station	Birkner Min. Co	14,250	7	do	Do.
Reinecke No. 2 mine, No. 6 seam.	Belleville	Conrad Reinecke	30,532	7	do	St. Louis, Mo., via Louisville and Nashville R. R.
Dutch Hollow mine, No. 6 seam.	Birkner	Dutch Hollow C. Co	18,747	6	do	St. Louis, Mo., via S. E. R. R.
Excelsior mine, No. 6 seam	do	E. W. Harris	9,604	6½	do	St. Louis, Mo., via L. and N. R. R.
Ebner & Thomas mine, No 6 seam.	Belleville	Ebner & Thomas	4,400	7	do	St. Louis, Mo., via S. E. R. R.
Flanagan mine, No. 6 seam	S. Belleville	E. F. Flanagan	2,400	7	do	Belleville.
German mine, No. 6 seam	Belleville	John Herrst	4,000	7	do	Do.
Hollman & Rinther mine, No. 6 seam.	do	Hollman & Rinther	2,000	7	do	Do.
Winter mine, No. 6 seam	West Belleville	Wm. Ebel & Bros	2,000	6½	do	Do.
Pointer mine, No. 6 seam	Reeb station	Geo. Pointer	2,400	6½	do	Cairo short line.
Skellette & Co. mine, No. 6 seam.	do	Skellette & Co	12,657	6	do	St. Louis, Mo.
Victor mine, No. 6 seam	Birkner	E. W. Harris	12,023	6½	do	St. Louis, Mo., via L. and N. R. R.
White Oak mine, No. 6 seam	White Oak	White Oak Coal Co	33,764	7	do	St. Louis, Mo., via Cairo short line.
Heinrich mine, No. 6 seam	Heinrich station	Heinrich Coal Co	34,026	6	do	Do.
Summit or Goably mine, No. 6 seam.	Ogle station	Kennedy Coal Co	15,719	6	do	Do.
Green Mount. mine, No. 6 seam.	1 mile from W. Belleville.	Weber & Co	12,000	7	do	St. Louis, Mo., via Ill. and St. L. R. R.
		St. Libory C. Min. Co	2,700	7	Bituminous	Johanesburgh, Darmstadt, and Heinrichtown.
		Jacob Lippert	2,000	6	do	Vicinity.
		Christian Fenerhan	2,200	6	do	Do.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	TAZEWELL COUNTY.			*Feet.*		
Wesley City Coal Co.'s mine.	Wesley City	Wesley City C. Co	16,000	4½	Bituminous	Peoria and surrounding country.
Wesley No. 1 mine	do	Russia Bros	2,200	4½	Bituminous, medium	Peoria.
Vogelsang's Lakeside mine	Hilton	J. G. Vogelsang	7,000	4½	Bituminous, very soft	Peoria City and Woodford and Tazewell Co's.
Hope mine	Pekin	D. M. Alexander	8,000	11½	Bituminous, soft	Pekin.
Halley mine	Hawleys	N. C. Hawley	6,400	4	do	South as far as Mattoon, and some east.
Victor mine	Pekin	Rundle & Good	6,000	4⅚	do	Pekin and local trade.
Murray's shaft	Hilton	Jas. Murray	2,300	4	do	Pekin.
Milliard's shaft	do	Jas. Milliard	3,000	4	do	Peoria.
Mrs. Hoffman's mine	Fondulac	Mrs. Hoffman	600	4	do	Do.
Leddemian mine	Pekin	Lord & McDougal	624	4	do	Pekin.
Ledterman mine	Three miles S. of Pekin	John B. Ledterman	6,000	4½	Bituminous	Do.
Lord & McDougal mine	Pekin	Lord & McDougal	624	4	do	Do.
Disshman mine	Three miles N. of Pekin	G. D. Disshman	1,200	4½	do	Pekin and country trade.
Stoner mine	do	Martin Jeungen	1,400	4½	do	Pekin and local trade.
	VERMILLION COUNTY.					
Martin mine, Danville seam.	Jordan	Charles Tilton	1,200	6	Bituminous	Local trade.
Davis mine, Danville seam	Danville	John E. Davis	2,000	6	do	Do.
Bensill mine, Danville seam.	do	Bolser Bensill	500	6	do	Danville.
Shock mine, Danville seam	Near Oakwood	Valentine Shock	400	5	do	Local trade.
Duncan mine, Danville seam.	Danville	Henry J. Duncan	400	5½	do	Do.
Hall mine, Danville seam	Catlin	Charles Hall	500	6	do	Do.
Veach mine, Danville seam	Near Oakwood	H. L. McConoughy	250	5⅔	do	Do.
Breen mine, Danville seam	Near Danville	James Breen	250	6	do	Do.
Ellsworth mine, Danville seam	Danville	Ellsworth C. Co	115,000	6	do	Wabash, Pac., and St. L. R. R.
Danville C. Co., Danville seam	do	Danville Coal Co	52,250	6	do	Ind., Bloomington, and west, Wabash, St. L. and Pac., and Danville and S. W. R. R.
Michael Kelly mine, Danville seam.	do	Michael Kelly	10,000	6	do	Danville and Danville Junc.
Kelly mine, Danville seam	do	William Kelly	5,000	6	do	Urbana and other towns west.
Dobbins mine, Danville seam	do	Charles J. Dobbins	5,000	6½	do	Local trade.
Danville seam	do	Alban J. Jenkins	3,000	6	Bituminous, soft	Towns along Wabash R. R.
John Thomas mine, Danville seam.	Oakwood	John Thomas	2,800	5⅔	Bituminous	Local trade.
Gones mine, Danville seam	Catlin	Underhill & Henderson	2,000	6	do	Do.
Inwood mine, Danville seam.	Blount	Samuel Swicher	2,500	5⅔	do	Country trade.
Thomas France mine, Danville seam.	Fairmount	Thomas C. France & Co	2,500	6	do	Fairmount and country trade.
Jordan mine, Danville seam	do	Alex. Morrison	2,000	5	do	Local trade.
Kirkland mine, Grape Creek seam.	Grape Creek	William Kirkland	2,000	6	do	Chi. and towns between mine and Danville.
Hodges mine, Danville seam.	Danville	Benjamin F. Hodges	1,300	6½	do	Local trade.
Daniel France mine, Danville mine.	Fairmount	Daniel France	1,500	6	do	Fairmount and country trade.
Holton mine, Danville seam	Danville	G. L. Holton	1,200	6½	do	Local trade.
Blakeney mine, Grape Creek seam.	Grape Creek	E. Blakeney	1,350	6	do	Danville.
McBrune mine, Danville seam	Near Oakwood	McBrune & Yerkes	1,300	6	do	Local trade.
South Town mine, Danville seam.	South Danville	John L. Fisher	1,000	6	do	Danville.
Elisha Loyd mine, Danville seam.	Near Oakwood	Elisha Loyd	1,200	6	do	Danville and neighboring towns.
Price's Strip Bank mine, Danville seam.	do	A. Thrush	1,000	6	do	Local trade.
Hasting's Bank mine, Danville seam.	North of Danville		1,000	6	do	Danville and country trade.
Brooks' mine, Grape Creek seam.	Grape Creek	Benjamin Brooks	800	6	do	Danville.
Wolf mine, Danville seam	Catlin	George Wolf	700	6	do	Catlin.
Davis mine, Danville seam	South Danville	William E. Davis	700	6	do	Danville.
Dower mine, Grape Creek seam.	Grape Creek	John Dower	600	6	do	Do.
Williams mine, Danville seam	Danville	Andrew Fredrickson	600	6	do	Local trade.
Thomas mine, Danville seam	Catlin	Thomas Thomas	850	5⅔	do	Do.
Laferty mine, Grape Creek seam.	Grape Creek	John Laferty	400	6	do	Danville.
	WARREN COUNTY.					
Millar mine, Big seam	3 miles south of Alexis.	W. L. Millar	1,000	3-4	Bituminous	Vicinity.
Brooks mine	Brooks	S. Cocken & Brooks	None.	2⅔	Bituminous, soft	
Simcock mine	Alexis	J. Simcock	1,600	2	do	Country trade.

Directory of bituminous coal mines—Continued.

ILLINOIS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WARREN CO.—cont'd.			*Feet.*		
Barney Sloey mine, upper seam.	Greenbush township	Michael Murphy	200	2	Bituminous	Avon, Prairie City, and country.
L. S. Holden mine	Monmouth	L. S. Holden	2,800	2	Bituminous, soft	Local trade.
Compton mine	Near Avon	John B. Compton	600	1½	Bituminous, with but little sulphur.	Avon.
John Bell mine	Coldbrook	William Tporbes	827	2	Bituminous	Monmouth and surrounding country.
	4 miles S. of Kirkwood.	Geor & Bryner	1,100	2	Bituminous, soft	Kirkwood and country trade.
Chicken mine	Warren	William Chicken	120	.....	Bituminous	Monmouth and vicinity.
Uz, Winn mine	Monmouth township	Uz, Winn	760	.....	Bituminous, soft	Monmouth.
	Youngstown	J. White	350	2	Bituminous	
	do	J. Willson	350	2	do	
	do	Willson & Maflin	360	2	do	
	Prairie City	Henry Murphy	400	.....	do	
	Roseville	S. Waters	800	1⅔	do	
	do	Thomas Wamwuth	1,000	2	do	
	do	Alex Stanfield	300	2	do	
	do	Thomas Caldwell	300	2	do	
	Alexis	William Cook	300	4½	do	
	Spring Grove	do	800	.....	do	Alexis, Illinois, and country.
	WASHINGTON COUNTY.					
Dubois mine, No. 5 seam	Dubois	David Thompson	4,000	5½	Bituminous, hard, fatty	Towns along Ill. Cen. R. R.
	WILL COUNTY.					
G. and H. shafts, Braidwood seam.	Braidwood	Chicago, Wilmington, and Vermillion Coal Company.	316,488	3	Bituminous, some pyrite	Chi., via C. and A. R. R.
Globe Eureka Nos. 1 and 2 mines.	do	Eureka Coal Company.	163,989	3½	Bituminous	Do.
Hunter mine	do	Hunter Bros	1,775	3	do	Local trade.
Star mine	do	Beard, Hickox & Co.	45,000	3	Bituminous, soft	Chi. and northwest.
Diamond mine	Wilmington	Wilmington C. Mining and Mfg. Co.	84,059	.....	Bituminous	Chi., via R. R.
	WILLIAMSON COUNTY.					
Slope No. 1 mine, No. 7 seam	Carterville	Carbondale C. and Coke Co.	72,500	9	Bituminous, soft, fatty	St. Louis.
Dodd shaft, No. 7 seam	do	do	1,000	9	Bituminous	St. Louis and Cairo.
	WOODFORD COUNTY.					
Chi. and Minonk C. and Coke Co.'s mine, fourth seam.	Minonk	Minor T. Ames	101,060	3	Bituminous	Chi., nthn. Ill., Wis., Iowa, Dakota, Minn., and Ind.

INDIANA.

	CLAY COUNTY.					
Jackson mine, upper and lower seams.	Brazil	Jackson Coal Min. Co.	51,500	4	Bituminous, block	Indianapolis, Terre Haute, and Chi., via Vandalia R. R., Terre Haute R. R., C. and E. I. R. R., and L. N. A. and C. R. R.
Buckeye mine, upper seam	do	do	37,000	4	do	Do.
Morris mine	do	Brazil Block C. Co	85,321	3⅝	do	Milwaukee, Chi., Terre Haute, Indp., Battle Creek, Kalama., So. Bend, Mich. City, La Porte, and Stillwell, via C. and E. I. R. R., T. H. and I., I. P. and C., Mich. Cen., L. S., and M. S., Chi., and G'd Trunk.
Birch Creek mine	Jackson township	do	30,002	3⅝	do	Do.
Furnace mine	do	do	33,390	3½	do	Do.
Brick Factory mine, upper seam.	Brick Factory	John Moody	482	3½	do	Terre Haute and Indp., via Vandalia R. R.
Old Clay mine, upper seam	do	do	800	4	do	Do.
Diamond mine	Wickland	B. Simpson	5,004	7	do	Indp. and Mattoon, via I. and St. L. R. R.
Bartlett mine	Brazil	W. W. Risher & Co	37,900	3–4½	Bituminous, block, very free from sulphur.	Chi., Indp., Terre Haute, and country, via T. H. and I., E. T. H. and C., and C. and E. S. R. R.
National mine	Newburg	H. Wheeler & Co	10,000	7	Bituminous	Indp., La Fayette, Terre Haute, St. Louis, via Vandalia R. R. and L. N. A. and C. R. R.
Liability mine, Block seam	Near Ashersville	Archibald Love	2,160	3½	Bituminous, block, very free from sulphur; furnace.	Brazil f'ce, Terre Haute and Indp., via Vandalia R. R.
Veach mine, lower seam	Van Buren township	R. R. Roberts	3,956	3½	Bituminous, block	Indp., Green Castle, Terre Haute, and Chi., via T. H. and I. R. R. and T. H. and D. I. R. R.

Directory of bituminous coal mines—Continued.

INDIANA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CLAY COUNTY—cont'd.			*Feet.*		
California mine	Brazil	Otter Creek Min. Co	12,320	3¾	Bituminous, block	Indp., Chi., Terre Haute, and St. L., via R. R.
Dalton mine, upper seam	Carbon	Richard James & Co	720	4	do	Indp., Terre Haute, Chi., and Paris, Ill., via I. and St. L. and I. and St. L. C. and E. I. R. R.
White Ash mine, upper and lower seams.	do	Coal Bluff Min. Co	21,520	7½	do	C., C., C. and Q. R. R., and I. and St. L. R. R., and Indianapolis and Terre Haute.
Dominion mine	Van Buren township	Bennett & Crawford	975	3½	do	Terre Haute.
Gartsherrie mine, upper and lower seams.	Brazil	Watson C. and Min. Co	49,601	7½	do	Chi., and Indp., via T. H. and I. R. R., and L. N. A. and C. and E. I. R. R.
Etna mine	do	do	33,204	4	do	Do.
Coal Brook No. 3 mine, upper and lower seams.	do	Brazil and Chi. C. Co	45,000	7½	do	Chi., Indp., and Terre Haute, via Vandalia, C. and E. I., L. N. A. and C. R. R.
Markland mine, K. or L. seam	Clay City	Trunkey & Pardee	5,660	3½	Bituminous, laminated, very free from pyrite.	Terre Haute, Indp., and Chi., via T. H. and S. E. R. R. and T. H. and Worthington R. R.
Keystone mine, upper seam	Brazil, S. Branch	Omsby Coal Co	21,704	3⅜	Bituminous, block	Chi., Indp., and Terre Haute, via C. and E. S. R. R., T. H. and I., L. N. A. and E., and M. C. R. R.
Brier Hill mine, first and second seams.	Harmony	Zeller & McClellan	90,000	8	do	Indp. and Terre Haute, via T. H. and I. R. R.
Erlich mine	Turner	P. Erlich & Co	58,147	7	Bituminous	Terre Haute, Indp., and La Fayette, via Vandalia line.
Horne mine	Staunton	Jos. Somers	2,540	6½	do	Terre Haute and Indp., via T. H. and I. R. R.
Buckeye shaft, upper seam	Brazil S. Branch	A. H. Woodruff & A. J. and J. H. Trunkey.	8,000	4	Bituminous, block, laminated	Chi., via C. and E. I. R. R., and L. N. A. and C., and M. C. R. R., and I. and E. H. R. R.
Diamond mine, first seam	Harmony	Stevens C. and Min. Co	18,866	4½	Bituminous, block	Indp., via T. H. and I. R. R.
Globe mine, second seam	Ashersville	do	15,200	3⅝	do	Line of S. N. A. and C. R. R. to Kalamazoo and Battle Creek, via T. H. and I. R. R.
Chicago mine, upper and lower seams.	Carbon	Brazil and Chi. C. Co	23,857	7⅝	do	Indp. and St. Louis, via I. and St. L. R. R.
Cornwell mine	Knightsville	William Watson	53,869	4	do	Chi., via C. and E. I. R. R., and Louisville, New Albany, and Chi. R. R.
Otter Creek mine	Otter Creek	do	35,000	4	do	Chi., via C. E. and I. R. R.
Eureka mine, upper and second seams.	Brazil	Andrew & Weaver	13,645	7¼	do	Terre Haute, Indp., and Chi., via Chi., Vandalia, and Ill.
David Moody mine, upper seam.	Cardonia	David Moody	1,800	4	do	Chicago.
Penn mine, first seam	Brazil	W. W. Risher	5,000	3½	do	Do.
Oak Hill mine	Oak Hill	H. W. Perry & Bro	1,200	3⅝	do	Indp. and Terre Haute.
Campbell mine, upper seam	Brick Factory	McGuire & Baylers	75	3½	do	Brazil.
Excelsior mine, top seam	Otter Creek	Nathan Hardman	3,600	3¾	do	Indp. and Terre Haute.
Centre Point mine, second seam.	Centre Point	O. T. Dunagan	3,000	3 11/12	do	Centre Point, Ashboro', Bowling Green, and central Clay county.
Happy Hollow mine, upper seam.	Staunton	Yocum & Little	400	7	Bituminous	Staunton, Indiana.
	Sugar Ridge township.	George M. Moss	210	3	Bituminous, block	Bowling Green.
	do	Samuel D. Fortner	175	2¾	do	Do.
	Jackson township	William Butt	210	3½	do	Do.
	DAVIESS COUNTY.					
Maple Valley mine	Washington	Wilson, Kauffman & Co	4,854	4	Bituminous, soft	Line of O. and M. R. R.
S. Branch mine	do	Cabel, Wilson & Co	55,777	2½-5	do	Vincennes Olney, St. Lou's, Mitchell, Bedford, Seymour, and O. and M. R. R. Co., via O. and M. R. R.
No. 4 mine	do	do	8,080	3	do	Vincennes and St. Louis, via O. and M. R. R.
Sulphur Spring mine	do	do	71,663	2½-5	do	Mostly to O. and M. R. R. Co.
Cannelburgh mine, upper seam.	Cannelburgh	Buckeye Cannel C. Co	15,000	4	Bituminous and cannel	Chi., St. Louis, Vincennes, Indp., and New Albany, via O. and M., E. and T. H., I. and V., C. and E. I., L., N. A., and C. R. R.
Raglesville mine, upper seam.	Raglesville	Albert Strickey	350	3	Bituminous, block	Clarksburgh and Raglesville.
Mattingly mine, upper seam	Joe Church Hill	Reister & Lockmiller	420	3	do	Washington.
E. H. Evans mine, upper seam	Raglesville	Critchlou & Ragle	70	3½	do	Raglesville and Clarksburgh.
E. H. Rayman mine	Washington	John & H. Rayman	420	2½	Bituminous	Custom trade.
Ætna mine, upper seam	Rhine	Martin & Seaford	420	2	do	Washington.
Concord mine, upper seam	Near Epsom	M. D. Payne	175	2¾	do	Surrounding country.
Eureka mine	Washington	Cabel, Wilson & Co	9,600	3	Bituminous, soft	Washington.
	Montgomery station	Rev. B. Pierce	140	3½	Bituminous	Neighborhood.
	Reeves township	Harroll & Ruggless	256	3½	Bituminous, block	Alfordsville, Indiana.

Directory of bituminous coal mines—Continued.

INDIANA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	DUBOIS COUNTY.			*Feet.*		
.....	Bainbridge township	Michael Rees	175	.....	Bituminous	Jasper, Ind.
.....	do	Jos. Greft	52	3½	do	Do.
.....	Jackson township	Martin Hoffman	7	4	do	Huntingburgh.
.....	Jefferson township	Henry Schnell	70	2	Bituminous, block	Schnellville, Ind.
.....	Hall township	Henry Biershing	105	2½	do	Jasper, Ind.
.....	do	George Giel	35	.....	do	Do.
.....	Boone township	J. A. Krodel	105	3	Bituminous	Portersville, Ind.
.....	do	Albert Gray	70	.....	do	Do.
	FOUNTAIN COUNTY.					
Ogden & Bro.'s mine	Coal creek	Ogden & Bros	16,000	5	Bituminous, coking	Chi., via C. and E. I. R.R., via Danville.
Fountain Co. C. and Min. Co.	do	Fountain Co. C. and Min. Co.	105,300	5	do	Do.
Solliday & Moses mine, L. seam.	do	Solliday & Moses	3,200	5	Bituminous, coking, quite free from sulphur.	Nth. Chi. Rolling Mill, Chicago and Coal Cr., Ind.
Coal Creek mine, I. seam	Snoddy Mills	Trunkey & Pardee	72,118	5½	Bituminous, steam and domestic.	Chi. and country N. W. of Chi., via C. and E. I. R. R.
	GIBSON COUNTY.					
Stumpburg mine, upper seam.	Oakland City	Norman Taylor	600	2½	Bituminous	Oakland City and Princeton.
	GREENE COUNTY.					
.....	Richmond township	James Chaney	500	3	Bituminous	Mineral City, Ind.
.....	do	Andrew Burcham	210	2	do	Bloomfield, Ind.
.....	do	do	35	2	do	Do.
.....	do	do	175	2	do	Mineral City, Ind.
.....	Taylor township	Cyrus Isenogle	140	3	do	Bloomfield, Ind.
.....	Jackson township	Thomas D. George	140	2	Bituminous, block	Bedford, Ind.
.....	do	Nathaniel Smiley	630	2	do	Do.
.....	do	Charles Strosnidel	1,050	2	do	Do.
.....	Jackson township	Amos Porter	90	2⅝	Bituminous, block	Bedford, Ind.
.....	Stockton township	Rush Watson	280	4⅔	Bituminous, semi-block	Bloomfield, Ind.
.....	do	B. F. Watson	525	5	do	Neighborhood.
.....	do	J. E. Price	35	6⅔	do	Linton, Ind.
.....	do	Francis Lisman	140	6	do	Neighborhood.
.....	Grant township	James Landy	140	3	do	Bedford, Ind.
.....	Smith township	Theo. Jackson	175	2½	do	Worthington, Ind.
.....	Richland township	Jos. Rogers	70	.....	do	Bloomfield, Ind.
.....	Wright township	Thos. M. Smith	20	7	Bituminous	Linton, Ind.
.....	do	David Bledsoe	500	6	do	Sullivan, Ind.
.....	do	John Harrel	70	.....	do	Neighborhood.
.....	do	Robert Ellis	70	2	Bituminous, block	Do.
.....	Jefferson township	Eli Staleup	400	.....	Bituminous	Worthington, Ind.
.....	do	Emanuel Dixon	500	.....	Bituminous, block	Do.
.....	do	Wm. E. Pugh	100	.....	Bituminous, semi-block	Do.
.....	do	Geo. Heinemann	150	.....	Bituminous, block	Do.
.....	Fairplay township	R. B. McKissick	1,194	2½	do	Do.
.....	Wright township	Jas. White	7	7	Bituminous	Neighborhood.
	KNOX COUNTY.					
Edwardsport mine, upper seam.	Edwardsport	Edwardsport C. Co	23,031	4⅕	Bituminous	J. M. and I. R. R., P. C. & St. L. R. R., and I. and V. R. R.
Do	do	do	25,000	4⅕	do	Do.
.....	do	Robert E. Dant	239	3⅕	Bituminous, soft, steam	Edwardsport, Ind.
	MARTIN COUNTY.					
Cross Roads mine	Shoals	Johnson & Chenoweth	200	3	Bituminous, block	Shoals, few cars shipped to station on O. and M. and other roads.
Love Bros. mine, upper seam.	Loogootee	W. H. Love	1,200	2⅔	do	Loogootee.
.....	Baker township	Amos Porter	245	3	Bituminous	Bedford Ind.
.....	Columbia township	Philip Gammon	77	3⅝	do	Shoals, Ind.
.....	do	Nelson Cook	35	3⅓	do	Do.
Patterson	Loogootee	Wm. P. Patterson	100	4	do	Loogootee.
	OWEN COUNTY.					
.....	Marion township	John Furry	200	4	Bituminous, block	Terre Haute, Ind.
.....	do	John Schmalz	105	4	do	Spencer, Ind.
.....	do	Wm. Folliver	35	2	do	Bank, Ind.
.....	do	L. D. Cotts	315	4	do	Lancaster, Ind.
.....	do	Stephen Maegerlein	280	4	do	Neighborhood.

Directory of bituminous coal mines—Continued.

INDIANA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported	Markets and routes.
	OWEN CO.—continued.			*Feet.*		
.....	Marion township.....	John C. Stahl.....	270	4½	Bituminous, block	Marion Hill, Ind.
.....	Jefferson township....	Pryer & Clemitt	45	3½	.....do	Terre Haute, Ind.
.....	La Fayette townhip...	Winfield Norman	210	3	.....do	Spencer, Ind.
.....	.....do	David Wagoner.....	105	5	.....do	Do.
.....	Jefferson township....	Solomon Armey.....	350	3½	Bituminous	Neighborhood.
.....	.....do	Jesse Reagan	42	3⅝	Bituminous, block	Do.
.....	.....do	Josiah Hochstetler ..	210	3½	.....do	Worthington, Ind.
.....	.....do	John G. Smith.....	7	3½	.....do	Do.
.....	.....do	..... do	18	3½	.....do	Do.
.....	.....do	Jos. Needy	18	3	Bituminous	School-houses.
.....	Marion township.....	John Row.....	600	4	Bituminous, block	Bowling Green.
.....	.....do	Wolf & Gonser	35	3	.....do	Clay City, Ind.
.....	.....do	E. H. Morris.....	350	5	..... do	Do.
.....	.....do	Jacob Naalebarger....	35	4	.....do	Do.
.....	Jefferson township....	Geo. Haviland.....	18	3	.....do	Neighborhood.
	PARKE COUNTY.					
Thistle mine, L seam	Rosedale	Barnett Lewis	3,000	5½	Bituminous	Frankfort, La Fayette, and Logansport, via Terre Haute and Logansport R. R.
French Coal Co 's mine, K seam.	Nyesville	Louis N. Grinlee	18,912	4	Bituminous, dry, very bright	T. H. and L. R. R., Rockville, Waveland, Crawfordsville, La Fayette, Colfax, Frankfort, and Logansport, via T. H. and L., C. I. and St. L., and C., and F., and K. R. R.
Mammoth mine, L seam	Rosedale	Jos. Martin	8,348	5	Bituminous	Logansport, La Fayette, and intervening points, via T. H. and L. R. R.
Sand Creek No. 1 mine	Nyesville	Sand Creek Coal Company.	17,265	4	Bituminous, semi-block	Crawfordsville, La Fayette and Ind'p and L. C. and S. W. R. R. Co., via L., C. and S. W. R. R., L., N., A. and C. R. R., I., B and W. R. R., C., I., St. L. and C. R. R.
Parke County Coal Co.'s mine	Clinton Lock.....	Alexander & Cannon..	9,860	5	Bituminous	Chicago and Indianapolis.
Barnett Morey mine, Mammoth seam.	.....do	F. A. Bowen	13,308	5	Bitumidous, semi-block	Chi. and points along C. and E. I., I., D. and S., and W., St. L. and P. R. R.
	PERRY COUNTY.					
Cannelton mine.....	Cannelton.....	Amer. Cannel C. Co....	7,740	2½	Bituminous	Steamboats on Ohio river and tributaries.
McMahon mine.....	.....do	Patrick McMahon	260	2½	Bituminous, block	Cannelton.
Clark mine	..... do.	James Clark	1,303	3½	.....do	Do.
	PIKE COUNTY.					
Smith mine	Petersburg	E. F. Smith.....	700	9	Bituminous	Petersburgh.
W. H. Posey mine, K seam ..	.....do	W. H. Posey	1,225	7½	.....do	Petersburgh and White and Wabash rivers.
Posey mine	.....do	J. B. Borer	1,750	7	.....do	Petersburgh and vicinity.
.....	Patoka township.....	Ingle & Co.....	6,000	.....	Bituminous, block	Indiana.
Martin mine.....	Near Oakland City....	Jos. D. Bacon	250	6	Bituminous, semi-block	Oakland City, Ind.
.....	Marion township . ..	C. G. Beach	100	5	Bituminous	Neighborhood.
.....	Jefferson township	George Matue.....	175	4½	.....do	Do.
.....	Patoka township.....	J. P. Harris	175	5½	.....do	Oakland City, Ind.
.....	.....do	C. B. Wilder	21	.....	.....do	Augusta, Ind.
.....	.....do	Edw. Heacock	120	5	.....do	Winslow, Ind.
.....	..... do	William H. Moulton...	105	.....	.....do	Do.
.....	Monroe township	R. C. Hamilton	70	5⅝	... do	Pleasantville, Ind.
.....	.....do	Harvey Hart.....	100	.....	.....do	School-houses.
.....	Lockhart township ...	Justice Miller.....	70	2½	.... do	Neighborhood.
.....	Washington township.	Jos. Hays	500	8	.....do	Petersburgh, Ind.
.....	.....do	William Dennis	12	.....	.....do	Do.
.....	Logan township	Martin Falls	53	3	.....do	Union, Ind.
.....	.....do	D. A. Miller.....	70	3	.....do	Do.
.....	Lockhart township ...	Nathaniel Wilder	35	4½	.....do	Augusta, Ind.
.....	.....do	Alexander Sloan	150	5	.....do	Do.
.....	.....do	Hinkle, Face & Co....	700	5	.....do	Do.
.....	.....do	Thomas Scales.....	35	4	.....do	Do.
.....	.....do	John Helman	20	3½	.....do	Pikeville, Ind.
.....	.....do	D. & L. R. Broadwell..	35	1½	.....do	Do.
.....	Jefferson township....	George Mackaway....	300	.....	.....do	Pike county.
	SPENCER COUNTY.					
Medcalf mine.....	Dale	Gabriel Medcalf	245	2½	Bituminous	Dale and Rockport.
Smith & Fisher mine	Grass township	Louis G. Smith and Robert Fisher.	2,651	4	Bituminous, semi-block	Rockport.

Directory of bituminous coal mines—Continued.

INDIANA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SPENCER CO.—cont'd.			*Feet.*		
Hopkins mine, No. 11 seam	Near Newtonville	Hugh McCall	1,786	4	Bituminous, semi-block	Grandview, Newtonville, and Rockport.
Barker mine	Buffaloville	William G. Barker	637	3⅝	Bituminous, medium	Rockport and Jasper.
Farrow mine	Dale	James Farrow	840	2½	Bituminous, resembling block.	Dale and Rockport.
Staub mine	Near Mary Hill	Henry Lear	357	3	Bituminous, block	Rockport and surrounding country.
	Harrison township	Jos. Schum	25	3½	Bituminous	Ferdinand, Ind.
	SULLIVAN COUNTY.					
Shelburn mine, upper seam	Shelburn	Shelburn C. Co	14,040	4	Bituminous	E. & T. H. R. R. Co., Terre Haute, Hartford, Carlisle, and Oaktown, via E. and T. H. R. R.
Sullivan mine, upper and lower seams.	Sullivan	do	4,751	7½	do	Do.
McAnally mine, lower seam	Shelburn	McAnally & Son	3,300	5	do	Terre Haute, Paris, and Carlisle, via E. & T. H. R. R. and I. & S. T. L. R. R.
Pittsburgh mine, second seam	Hymera	Stock & Coffee	3,000	6	do	Sullivan, Carlisle, Oaktown, Vincennes, Hazleton, Princeton, via E. and T. H. R. R.
Pittsburgh mine, middle seam	Pittsburgh	Henry Snowden	750	5½	do	Terre Haute, Shelburn, and Oaktown.
	Curry township	Froment & Atkinson	700		do	Terre Haute, Ind.
	Cass township	Hancock & Co	100		do	Sullivan, Ind.
	do	R. M. Kirkham	280	7	do	Do.
	do	Henry Wilson	20	6	do	Bank.
	Near Ascension	Edwin Baskeen	130		do	Neighborhood.
	do	William C. Carpenter	53		do	Do.
	Near Ascension	Wm. Bennett	350		Bituminous	Neighborhood.
	do	Noah Crawford	175		do	Do.
	do	Asa Mahan	150		do	Do.
	Jackson township	Geo. W. Ford	63		do	Do.
	do	Green Shepherd	7		do	Do.
	Jefferson township	Ohaver, Hunter & Co	400	4½	do	Do.
	Near Ascension	David Sharp	700		do	Do.
	Cass township	W. H. Sexton	100		do	Do.
	VANDERBURGH COUNTY.					
First Avenue mine, M seam	Evansville	Thomas Sons	9,510	4½	Bituminous, coking, gray or red ash.	Evansville.
Ingleside mine	do	John Inglo & Co	31,697	4	Bituminous	Evansville City, steamboats and points within 40 miles, via S. E. R. R. and Ohio river.
	VERMILLION COUNTY.					
Brier Hill mine, L seam	Clinton	Merrill & Co	5,000	4⅝-6	Bituminous	Terre Haute, Tuscola, Indp. and Chi., via C. and E. I. R. R. and I. D. and S. R. R.
Hazel Bluff mine, L seam	*Clinton township*	*Brown & Henshaw*	4,725	5	Bituminous, coking	Chi. and Indp., Tuscola and intervening R. R. points.
	VIGO COUNTY.					
North Switch mine, upper seam.	Coal Bluff	J. S. King & Co	3,348	6½	Bituminous	Coal Bluff Mining Co.
Webster mine, second seam	do	Coal Bluff Min. Co	25,000	6	do	Terre Haute, Indp. and I. and St. L. R. R.
Somerset mine, upper seam	Lockport	Wm. A. Connely	3,130	4⅝	do	Terre Haute and Paris, via C. and T. H. and Ill. Midland.
Bright Fire mine, lower seam	Sugar Creek	W. H. Dehisle	220	5⅝	Bituminous, fat, coking, long flame.	Terre Haute and local market.
Sugar Creek mine	Maxville	Jos. Broadherst	162	4½	Bituminous	Neighborhood and Terre Haute.
Leek mine, upper seam	Fayette township	G. W. Leek	525	4⅜	do	Sanford and Terre Haute.
	do	Joshua Martin	6	4⅝	do	Neighborhood.
	do	Geo. Houser	87	4⅜	do	Sanford, Ind.
	do	Fred. Miller	35	4⅜	do	Goshen, Ind.
	do	P. W. Halloran	125	5	Bituminous, semi-block	Terre Haute, Ind.
	Sugar Creek township	Jas. Lunday	280	5½	Bituminous	St. Mary's, Ind.
	do	Philip Eckis	700	5½	do	Terre Haute, Ind.
	Near Pimento	Elizabeth Ray	200		do	Neighborhood.
	WARREN COUNTY.					
Fink mine, upper seam	Fall Creek	Andrew Fink	20	3⅝	Bituminous, block	Do.
Claypool mine, upper seam	Coal Branch	David Wells	500	3⅝	Bituminous, semi-block	Mines and Covington.
Thomas mine, second seam	Carbondale	John R. Jones	350	2¾	Bituminous, block	Neighborhood.
Hunter mine	do	R. St. C. Hunter	210	3½	Bituminous, semi-block	Do.
Luppold mine, upper seam	Fall Creek	Mathias Luppold	500	3⅞	Bituminous, block	Do.
Jarvis mine, upper seam	do	A. C. Jarvis	175	3	do	Williamsport and Attica.
Long mine, second seam	Coal Run	George Morlan	210	2½	do	Bank.
Cronkhite mine, upper seam	Coal Hollow	A. B. Cronkhite	525	3	do	Mine.

Directory of bituminous coal mines—Continued.

INDIANA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WARRICK COUNTY.			*Feet.*		
De Forest mine	Boone township	B. Menden	6,530	4-6	Bituminous	Evansville, via S. E. and I. W. R. R.
Henderson mine, M seam	do	David Henderson	1,066	4½	Bituminous, semi-block, with pyrite and calcite.	Evansville, via Evansville and Eastern R. R.
Chandler mine, No. 9 seam	Chandler station	Mushet, Hall & Co	4,571	4	Bituminous	Do.
Locust Grove mine, No. 9 seam	Newburgh	Albert Hazen	8,836	3⅝	Bituminous, heavy	Evansville, Newburgh, and steamboats at mine, via Ohio river.
Newburgh mine, I seam	do	J. & D. Love	11,571	3⅝	Bituminous, rich	Steamboats at mine.
Excelsior mine	Boone township	William H. Stone	590	5	Bituminous, clean, dry, coking.	Boonville, Evansville, and Mount Vernon.
Gough mine	Boonville	Robert Gough	525	6	Bituminous, bright, quite free from pyrite.	Boonville and Evansville, via R. R.
Boonville Coal Co., upper seam.	do	Elk Horn Mill Co	1,885	4	Bituminous, coking, quite free from pyrite, steam.	Boonville.

IOWA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ADAMS COUNTY.					
Bell mine	Carbon	Alex. Bell	2,400	1½	Bituminous	Carbon and Corning.
Rimbey mine	do	L. D. Rimby	500	1⅔	do	Do.
Gabbie mine	do	Thomas Gabbie	1,200	1½	do	Do.
Stephany mine	do	John Stephany	385	1½	do	Do.
Pickard & Hill mine	do	Pickard & Hill	802	1½	do	Do.
Combs mine	do	Albert Combs	1,450	1½	do	Do.
Bittern mine	Two miles west of Carbon.	John G. Bittern	300	1½	do	Do.
Neill mine	Two miles southwest of Carbon.	Jos. Hartshorn	700	1½	do	Local trade.
Hudspath & Hugh's mine	Ten miles north of Carbon.	Hudspath & Hughs	450	1½	do	Do.
	APPANOOSE COUNTY.					
Watson C. and Min. Co	Centerville	Watson C. and Min. Co.	14,500	3½	Bituminous, soft	Local trade.
Hubbard mine	Hilltown	John Hubbard	1,200	3	Bituminous	Do.
Schwartz mine	do	Wesley Schwartz	1,000	3	do	Do.
Kendig mine	Centerville	Benjamin Kendig	1,400	3	do	Do.
Brazil mine	do	J. A. Brazil	2,500	3	do	Local trade and as far as Keokuk.
Dickey mine	do	W. H. Dickey	3,000	3	do	Local trade.
Christian mine	do	Oliver & Dargnalt	3,100	3	do	Muscatine, Leavenworth, and Cameron.
McClarg mine	do	Thomas McClarg	1,200	3	do	Local trade.
Appanoose C. Co.'s mine	do	Appanoose Coal Co	13,200	2⅔	do	N. E. to Iowa City, W. to Van Wist, Iowa.
Gwinn	Hilltown	R. D. Gwin	1,500	3	do	Local trade.
Centerville C. Co.'s mine	Centerville	Centerville Coal Co	4,900	3	do	Local trade and Keokuk.
Miller & Houston mine	Numa	Miller & Houston	2,700	2⅔	do	Leavenworth and local trade.
Blackburn mine	do	Jos. Blackburn	1,300	2⅔	do	Do.
Caldwell mine	Caldwell	Iowa and Missouri C. and Land Co.	6,100	2½	do	North to Shell Rock, E. to Burlington and local trade.
	Dennis	Jos. Artist	1,500		do	
	BOONE COUNTY.					
Lower View Coal Co.'s mine, upper and lower seams.	Boonesborough	Lower View Coal Co	25,000	7½	do	
Logan & Camfield mine, upper and lower seams.	do	Logan & Camfield	15,000	7½	do	East to Cedar Rapids and west to Nebraska.
Boone & Marshall mine, lower seam.	do	Boone & Marshall	6,000	3½	do	Chicago and N. W. R. R.
N. W. Coal Co.'s mine	Coal Valley	N. W. Coal Co	6,000	3	do	Do.
Moingona Coal Co.'s mine, middle seam.	Moingona	Moingona Coal Co	12,000	1⅔-3	do	C. and N. W. R. R. as far west as Council Bluffs.
Boone Lower Vein C. Co.'s mine.	Coaltown	J. F. Duncombe	45,000	4½	do	Iowa R. R. Co. and private parties.
Rogers & Crow mine, upper and lower seams.	Boonesborough	Rogers & Crow	6,000	6½	do	C. and N. W. R. R. as far east as Cedar Rapids.
Hutchinson & Bro.'s mine	Zenorsville	Hutchinson & Bro	10,000	3⅔	do	N. to Callanan, east to Blairstown.
Clemmens mine	do	J. Clemmens	9,500	3⅔	do	North to Callanan.
York mine	do	Jos. York	2,000	3	do	Local trade.
	DALLAS COUNTY.					
Van Meter mine	Van Meter	Chi. and Van Meter Coal Company.	18,000	7	Bituminous	Local and Rock Island R. R.

Directory of bituminous coal mines—Continued.

IOWA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	DAVIS COUNTY.			*Feet.*		
Dye mine	3 miles SW. of Eldon	Eli Dye	500	4½	Bituminous	
Dunn mine	2 miles east of Carbon Station.	George W. Dunn	5,000	4⅔	Bituminous, locomotives	Wabash, St. L. and Pac. R. R.
	GREENE COUNTY.					
Keystone mine, lower seam	Rippey	Stout, Markham & Jones.	3,559	4½	Bituminous	
Armstrong mine, lower seam	do	Armstrong Brothers	2,000	4	do	C. and N. W. R. R. and branches.
Green County Coal Co.'s mine	do	J. F. Duncomb	3,000	4⅔	do	Iowa, Minnesota, and Nebraska.
	HAMILTON COUNTY.					
	Homer	Cuff & O'Connell	3,000		Bituminous	
	HARDIN COUNTY.					
Chaffin mine	Eldora	M. A. Chaffin	2,000	3⅚	Bituminous	Eldora and local trade.
Woodhead mine	3 miles N. of Eldora	Charles Woodhead	208	2⅙	do	Local trade.
Madden mine	2½ miles N. of Eldora	John F. Madden	252	2½	do	Do.
Shaver & Wood mine	do	Shaver & Wood	675	3½	do	Do.
	JASPER COUNTY.					
Adamson Grove mine	Adamson Grove	Kay & Drew	500	3	Bituminous	Do.
Riley mine	4 miles S. of Newton	John Riley	300	4	do	Newton.
Bieley mine	Powesheik township	Gede Bieley	4,150	4½	do	Local trade.
McIlhone mine	3 miles S. of Newton	J. McIlhone	500	4	do	Newton.
Bear Grove mine	Mount Paine township	John Hanna	600	3	do	Local trade.
Black Oak Grove mine	3 miles northwest of Lynnville.	Jas. Rusher	1,800	1⅚	do	Do.
Davidson mine	3 miles S. of Newton	Robert Davidson	3,000	5	do	
McAllister mine	do	Stewart & Brown	1,050	4	do	Newton.
Stewart & Brown mine	do	do	135	4	do	Do.
Snooks mine	do	Snooks Brothers	7,500	4	do	Do.
Lister mine	2 miles S. of Newton	William Lister	5,040	4	do	Do.
Johnson & Braden mine	Powesheik township	Johnson & Braden	1,200	5	Bituminous	Local trade.
Blackheath mine	do	Fish & Pease	2,500	5⅔	do	Do.
Adsit & Fitzhugh mine	3 miles northwest of Colfax.	Adsit & Fitzhugh	3,355	5⅔	do	Do.
Meredith mine	3 miles northwest of Lynnville.	Thomas Thompson	700	1⅚	do	Do.
Slaughter mine	Sherman township	Scott Slaughter	4,120	5	do	Do.
Jasper County C. R. R. Company's mine.	4½ miles south of Newton.	Jasper County C. R. R. Co.	29,500	5	do	Newton, Chi., R. I. and Pac. R. R.
Buckley mine	3 miles east of Monroe.	R. S. Buckley	1,800	4	do	
Edwards mine	do	Elias E. Edwards	1,080	4½	do	Local trade.
Blount mine	do	George Blount	1,600	3½	do	Do.
Morris mine	Des Moines township	James D. Morris	4,032	4	do	Do.
	JEFFERSON COUNTY.					
McLain mine	2 miles west of Fairfield	Russell, Crew & Co	700	2	Bituminous	Fairfield.
Jefferson County Coal Company's mine.	Perlee	Jefferson County Coal Co.	12,000	3⅚	do	As far north and west as Cedar Rapids also C., R. I. and P. R. R.
Washington mine	do	Washington Coal Co	19,500	3½	do	C., R. I. and P. R. R. Co.
Coalport mine	Coalport	Brown Bros	4,200	3½	do	Mount Pleasant.
Ratcliff mine	2 miles southwest of Fairfield.	R. F. Ratcliff	350	3	do	Local trade.
Sedar mine	4½ miles south of Fairfield.	James Irvine	4,000	3⅔	do	Do.
Larimore mine	5 miles southwest of Fairfield.	J. W. Larimore	500	2½	do	Do.
Finney mine	2 miles northeast of Eldon.	John Finney	1,000	3½	do	Do.
Sullivan mine	5 miles southwest of Fairfield.	William Sullivan	700	2½	do	Do.
Bishop mine	8 miles southwest of Fairfield.	John Bishop	600	2½	do	Do.
Rodabaugh mine	do	Joseph Rodabaugh	600	3	do	Do.
Overturf mine	10 miles southwest of Fairfield.	George Overturf	2,000	3½	do	Do.
	KEOKUK COUNTY.					
Star mine	What Cheer	Star Coal Co	15,000	6	Bituminous, soft, dry-burning, free from sulphur; steam.	Line of B., C. R. and N. R. R. and Minn.
Club mine	do	William Club	4,000	6	Bituminous	Local trade, and as far north as Minn.
Delta mine	2½ miles south of Delta.	Dunn Bros	5,000	5	do	Local trade.

Directory of bituminous coal mines—Continued.

IOWA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	KEOKUK CO.—cont'd.			*Feet.*		
Black Diamond mine	3 miles south of Delta.	J. M. Olive	6,000	4½	Bituminous	Local trade.
Durlane mine	2½ miles north of Sigourney.	E. F. Durlane	3,300	5	do	Sigourney and local trade.
Snyder mine	3½ miles east of What Cheer.	Snyder Bros	1,500	5	do	Local trade.
Elliot mine	3 miles southeast of What Cheer.	George Elliot	750	5	do	Do.
Lund & Ferguson's mine	What Cheer	Fox, Lund & Ferguson	3,900	7	do	What Cheer.
France, Rhodes & Bedford mine.	One-half mile northeast of What Cheer.	France, Rhodes & Bedford.	2,500	6½	Bituminous, white ash	Local trade.
Emmons mine	3 miles northwest of What Cheer.	Albert Emmons	2,100	6	Bituminous	Do.
Rincheart mine	3 miles west of Springfield.	George Rincheart	1,900	5	do	
Rowley mine	1½ miles northeast of What Cheer.	Samuel Rowley	2,000	6	do	Local trade.
	LEE COUNTY.					
	Hillsborough	Tim. Rice	500	3½	Bituminous	Do.
	LUCAS COUNTY.					
White Brush mine	Cleveland	White Brush Coal and Mining Co.	125,353	5½	Bituminous	West to Kearney, Nebr., and towns on C., B. and Q. R. R. and west of Chariton, Iowa.
Bingham mine	3 miles north of Chariton.	John Bingham	300	1½	do	Chariton.
Richmond mine	4 miles north of Chariton.	Bryan Richmond	200	1½	do	Do.
McVeighs mine	do	Charles McVeighs	160	1½	do	Do.
Farmers' Coal Co.'s mine	Russell	Farmers' Coal Co	None.	3½	do	
	MAHASKA COUNTY.					
Excelsior Coal Co.'s mine, second seam.	Oskaloosa	Excelsior Coal Co	70,000	5⅝	Bituminous	Northern Iowa, Minn., and Dakota via Cen. Iowa R. R. and connecting roads.
Consolidated Coal Co.'s 1, 2, and 3 mine.	Muchachinock	Consolidated Coal Co	109,205	6½	do	R. R. of Iowa and Minn. as far north as St. Paul, west as Omaha, east as Miss. river.
Iowa Coal Co.'s mine, Oskaloosa seam.	Beacon	C. L. Williams	29,105	6½	Bituminous, hard, small amount of sulphur.	Des Moines, Council Bluffs, Omaha, and Keokuk.
No. 5 mine	do	Consolidated Coal Co	28,000	8	Bituminous	Rock Island R. R.
Williams mine	Givin	Evan Williams	700	4	do	Givin and K. and D. V. R. R.
Moody mine	Knoxville Junction	J. W. Moody	500	5½	do	West on R. I. R. M. as far as Council Bluffs.
J. W. Walton mine	Leighton	J. W. Walton & Co	4,000	4½	do	Des Moines and local trade.
Shoemaker mine	do	Shoemaker & Son	3,700	4½	do	Local trade.
Ellis mine	Spring creek	Lindsay Ellis	1,000	6	do	Country trade.
Barroman mine	do	William Barroman	1,150	5½	do	Local trade.
Smith mine	3 miles northeast of New Sharon.	Hugh Smith	2,625	4	do	Do.
Robert Evans mine	do	Robert Evans	3,900	4½	do	
Heintzman mine	3½ miles northeast of New Sharon.	J. B. Heintzman	2,500	4	do	New Sharon and local farm trade.
Evans mine	4 miles northeast of New Sharon.	William E. Evans	2,300	4	do	Do.
Thompson mine	North of Eddyville	L. R. Thompson	400	4½	do	Local trade.
Roberts mine	Oskaloosa	J. F. Roberts	1,744	4½	do	Oskaloosa.
Ogden mine	do	John Ogden	1,800	4½	do	Do.
Guthrie mine	do	J. D. Guthrie	1,200	5½	do	Do.
Smith mine	do	Smith & Fowall	2,320	4½	do	Do.
Horahan mine	do	W. F. Horahan	2,425	6	do	Do.
Oskaloosa mine	do	John Ream & Son	3,594	5	do	Do.
Pickens mine	3 miles north of Eddyville.	Matthew Pickens	800	3½	do	Local farm trade.
Oskaloosa mine	Oskaloosa	John Burdese	8,000	5	do	Line of C., R. I. and P. R. R.
Hardin mine	North of Eddyville	Lewis Hardin	720	5	do	Local trade.
Oldham mine	3 miles north of Eddyville.	Aaron Oldham	400	4½	do	
Minnick mine	Oskaloosa	William Minnick	1,000	3½-6	do	Oskaloosa.
Long mine	do	John Long & Son	750	5½	do	
	MARION COUNTY.					
Knoxville Nos. 2 and 3 mines.	Knoxville	J. T. James & Co	10,278	4	do	Knoxville and west as far as Nebraska.
Oak Hill mine	Flagler's	George I. Butler & Co	9,472	6	do	Southwestern Iowa and Nebraska.
Knoxville City mine	Knoxville	W. A. Gamble	3,200	4	do	Local.

Directory of bituminous coal mines—Continued.

IOWA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MARION CO.—cont'd.			*Feet.*		
Ruckman mine	3 miles southeast of Knoxville.	S. M. Ruckman	1,500	3⅝	Bituminous	Knoxville.
Robinson mine	do	Lewis Beidle	512	4	do	Local trade.
S. W. Harvey mine	Knoxville	S. W. Harvey	200	3½	do	Do.
Thompson mine	Pella	William Thompson	1,300	4½	do	Pella.
Hamilton mine	2 miles northwest of Hamilton.	George W. Williams	1,600	4½	do	Via C., B. and Q. R. R. to Albion, and local trade.
Dewrose mine	Otley	W. Dewrose	500	4	do	Local trade.
Warner mine	do	L. H. Warner	600	4	do	
Marshall mine	Red Rock	Geo. Marshall	2,000	3½	do	Do.
Kinart mine	do	Sam'l Kinart	400	3½	do	Do.
Sherman mine	1½ mile NE. of Dallas	J. Duncan	600	3	do	Do.
Fortune mine	2 miles NE. of Dallas	Peter Fortune	400	4	do	Do.
Knox & Co.'s mine	3 miles SW. of Pleasantville.	Knox & Co	1,000	4	do	Do.
South Cedar mine	Marysville	R. H. Lever	3,895	5	do	Albion and Whitebreast Coal Co., and local trade.
Leibig mine	do	Wm. Tally	400	4½	do	
Flagler's mine	Flagler's	Union C. and Min. Co	30,000	6	do	Iowa and Nebraska.
	MONROE COUNTY.					
Avery Coal and Mining Co	Avery	Watson & Hammond	24,000	.....	Bituminous, soft	East to Mount Pleasant, west to Kearney, Nebr.
Hickory Grove mine, 3d seam	Hickory Grove	Hickory Grove C. Co	20,000	5	Bituminous	North to Mason City, Iowa, and intermediate points on Iowa Central R. R.
Western Coal Co.'s mine	Frederic	Akers & Jamison	3,000	4	do	Creston, Council Bluffs, Lincoln, Nebr., and other places west.
Albia Coal Co.'s mine	3 miles W. of Albia	Albia Coal Co	84,788	5½	do	South to Burlington, west to Kearney junction.
Eureka mine	Frederic	Eureka Coal Co	12,000	3⅔	Bituminous, very hard, clean, bright.	Kearney, Nebraska, and east to Mount Pleasant.
Frederic mine	do	Frederic Coal Co	12,000	3⅔	Bituminous	As far west as Nebraska.
Coalfield No. 3 mine	Coalfield	Consolidated C. Co	18,000	5	do	Northern Iowa and southern Minnesota, via I. C. R. R.
Cedar mine	3 miles W. of Albia	Jno. Hartsuck	3,000	4	do	
Moss mine	2 miles N. of Frederic	John Moss	1,500	4½	do	Local trade and Fredericksburg.
Byer mine	Avery	E. W. Byer	3,000	5	do	Local trade and west to Hastings, Nebr.
	PAGE COUNTY.					
Pinkerton mine	5 miles SW. of Clarinda	Sam'l Pinkerton	1,300	1½	do	Local trade.
Aiken mine	4 miles SE. of Clarinda	Wm. Aiken	900	1½	do	Do.
Prosser mine	2 miles SE. of Clarinda	Thos. Prosser	3,000	1½	do	Clarinda and local trade.
	POLK COUNTY.					
Watson Coal and Mining Co., second seam.	Des Moines	Watson C. and Min. Co.	28,412	4½	do	Local trade.
Sebastopol C. Co.'s mine, second seam.	Sebastopol	John Weber	3,200	4⅔	Bituminous, soft	Local trade at Des Moines.
Eureka mine, second seam	Des Moines	Eureka C. and Min. Co.	14,000	4	Bituminous	Line of C., R. I. and P. R. R. Co. west of Des Moines to Council Bluffs.
Eclipse mine, second and third seams.		Eclipse C. and Min. Co.	21,500	8	do	Line of R. I. and P. R. R. from Des Moines to Council Bluffs.
South Park mine, third seam.	Des Moines	Pioneer Coal Co	45,000	5	Bituminous, soft	
Union mine, second seam	Sebastopol	Caleb Johns	2,800	4	do	Des Moines.
Pleasant Hill mine, second seam.	Des Moines	Pleasant Hill C. Co	5,000	4½	do	Do.
Polk Co. mine, second seam	do	Polk Co. C. Co	8,000	4½	do	Des Moines and local trade.
Enterprise mine, first seam	E. Des Moines	C. J. & A. W. Carlson	150	3	do	Des Moines.
	Vandalia	Mrs. McKinney	1,000	.....	Bituminous	
	SCOTT COUNTY.					
Iowa mine	2 ms. N. of Buffalo	Felix Mackin	3,000	2⅚	Bituminous	Local trade.
Morris mine	4 ms. NE. of Buffalo	John Morris	1,400	2⅚	do	Buffalo and Davenport.
Murray mine	3½ ms. NE. of Buffalo	John Murray	1,100	2⅚	do	Do.
Williams mine	8½ ms. W. of Davenport.	Robert Williams	1,000	2⅚	do	Davenport and local trade.
James mine	8 ms. W. of Davenport.	James & Dodge	8,000	3	do	Do.
	TAYLOR COUNTY.					
Bomar mine	Nodaway township	F. J. Bomar	400	1½	Bitum'nous	Local trade.
Patch mine	do	Smith Patch	1,000	1½	do	Do.
Wilcox mine	do	Nathan Wilcox	1,000	1½	do	Do.
	VAN BUREN COUNTY.					
Business Corner mine		Alexander Finley	4,800	3⅔	Bituminous	R. R. and local trade.
Plymouth Hill mine	Farmington	Charles H. Scott	3,600	5½	Bituminous, steam	Line of B. and S. W. R. R.
Boyer's mine	Boyer's station	Iowa and Mo. C. and Land Co.	5,490	5	Bituminous	East to Burlington.

Directory of bituminous coal mines—Continued.

IOWA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WAPELLO COUNTY.			*Feet.*		
Southwestern mine, Nos. 1 and 3 seams.	Laddsdale	S. W. C. and Min. Co.	8,200	8	Bituminous, *soft, free from minerals, except black-jack.*	*R. R. and local trade on C., R. I. and P. R. R.*
Brown mine	3 ms. S. of Kirkville	Alex. Brown	1,700	5	Bituminous	Local trade, Ottumwa.
Dotts mine	Eddyville	Philip Dotts	990	4	do	Country trade.
Clark mine	5 m. W. of Eddyville	Hugh Clark	700	4	do	Farmers' trade.
Ennis mine	5 m. SE. of Ottumwa	John McColligan	200	4	do	Ottumwa.
No. 1 mine	3 miles N. of Ottumwa	W. G. Bowes	150	4	do	Do.
Briscoe mine	3 miles S. of Ottumwa	John O. Briscoe	125	2½	do	Do.
	Laddsville	Benjamin W. Ladd	8,000		do	
Wood mine	Kirkville	M. E. S. Rouble	1,350	5	do	Kirkville.
Marshall mine	do	Joshua Marshall	1,600	5	do	Country trade.
J. L. McLaughlin mine	do	J. L. McLaughlin	400	4	do	Ottumwa.
Fix & Postlewaite mine	5 miles W. of Ottumwa	Fix & Postlewaite	30,000	5	do	Ottumwa and C., B. and Q. R. R. as far east as Burlington.
Sheppard mine	3½ m. NW. of Ottumwa	William Sheppard	5,800	4	do	Ottumwa.
Goodwin mine	3 miles N. of Ottumwa	Samuel Goodwin	600	4	do	Do.
Dickson mine	Ottumwa	A. & William Dixon	2,900	4	do	Do.
Barton mine	5 miles S. of Ottumwa	William Barton	1,200	3½	do	Do.
Graves mine	3 miles N. of Ottumwa	A. L. Graves	2,000	4	do	Do.
Brownfield and two others mine.	5 m. SW. of Ottumwa	Brownfield and others.	1,500	3	do	Ottumwa and local country trade.
	WARREN COUNTY.					
Starbuck mine	Lacona	J. Starbuck	300	1¼	Bituminous	Local trade.
Johnson mine	do	John Johnson	300	1¼	do	Do.
Randolph mine	5 ms. SW. of Indianola	John Randolph	860	4½	do	Do.
Lord mine	2 miles E. of Somerset.	Edw. Lord	345	2⅝	do	Do.
Nicholson mine	1½ m. SE. of Somerset	Jones & Co	1,728	3	do	Do.
Gordon mine	2 miles E. of Somerset.	Gordon & Simonds	2,073	2⅝	do	Do.
Voyce Bros. mine	do	Voyce Bros	1,500	2⅝	do	Do.
Lumsden mine	Somerset	Lumsden Bros	2,840	3⅝	do	Somerset.
	1 mile N. of Sandyville		300	1¼	do	*Local trade.*
Robert mine	3 miles SE. of Carlisle.	Swanner Bros	4,500	4	do	Do.
Ford mine	Ford station	Ruful Ford	1,400	3½	do	C., B. and Q. R. R.
Bryant mine	1 mile south of Hammondsburg.	M. Bryant	280	1¼	do	Local trade.
Dewy mine	3 miles south of Indianola.	Moon & Channel	1,250	2½	do	Indianola.
Graham mine	Indianola	Albert Dennis	275	1¼	do	Do.
	WAYNE COUNTY.					
Happy Hollow mine	Grainville	Peter Ripper	3,000	2½	do	Allerton, Grainville, Warsaw, Corydon, and surrounding country.
	Kniffen		3,000		do	
	WEBSTER COUNTY.					
Greenside mine, upper seam.	Lehigh	H. Greenside	1,600	3½	Bituminous, some sulphur	From Iowa Falls to Cherokee, on Central R. R.
		Mill Bros	1,200		*Bituminous*	
Corey mine, upper seam	Lehigh	Silas Corey	3,000	4	Bituminous, soft	Parkersburg, Ackley, Auden, Iowa Falls, Webster City, Humboldt, Storm Lake, Cherokee, Lemars.
Tortellott mine	do	O. B. Tortellott	1,500	2½-3½	Bituminous	Local trade.
Crooked Creek C. Co.'s mine, upper and middle seams.	do	Crooked Creek R. R. & C. Co.	18,000	12	do	Ill. Central R. R. and towns along line.
Fort Dodge C. Co. mine, lower seam.	Pleasant valley	Fort Dodge Coal Co	62,000	3-8	do	Local markets for R. R. to Minn. and Dakota.
Black Diamond mine, second seam.	Lehigh	W. C. Beem	7,200	4	do	Local.
Trethan mine	do	John Trethan	312	4	do	
Barrowman mine	do	Barrowman & Sons	4,800	3	do	North as far as Minn.
Brown mine	do	Cuff & O'Connel	700	3½	do	Towns on Iowa Div. of Ill. C. R. R.
Craig mine	Near Coalville	A. Craig	5,000		do	
Hart shaft	do		2,000		do	
Collins mine	do		4,500		do	
Mann mine	Holliday creek		2,000		do	
Merikles mine	Near Coalville		1,100		do	
Irving mine	do		2,500		do	
Hart Bank mine	do	C. Hart	2,500		do	
	do	E. P. Williams	2,500		do	
	do	Wm. Stansberry	2,500		do	

Directory of bituminous coal mines—Continued.

KANSAS.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BOURBON COUNTY.			*Feet.*		
	Dry Wood township	S. Endicott	3,360	7	Bituminous, red, and block	Kansas City, Mo.
	do	J. M. Johnson	5,040	6	do	Do.
	do	Thomas Fowler	6,720	6	do	Do.
	do	G. W. Gipford	8,400	6	do	Do.
	do	A. J. Endicott	3,360	6	do	Do.
	do	John Thombury	3,360	6	do	Do.
	do	B. Bangniss	6,720	6	do	Do.
	do	J. H. Lookinbill	11,760	7	do	Do.
	do	J. F. Lookinbill	13,440	7	do	Do.
	do	E. Pillitt	42,000	6	do	Do.
	do	Samuel Koons	3,360	6	do	Do.
	do	J. W. Stroud	1,680	8	do	Do.
	do	C. Gish	3,360	7	do	Do.
	do	McDonald & Co	20,160	8	do	Do.
	do	A. Johnson	10,080	5	do	Do.
	do	William Clyborn	5,040	6	do	Do.
	do	P. P. Perry	25,200	6	do	Do.
	do	Seth Pillett	16,800	5	do	Do.
	do	T. Endicott	10,080	6	do	Do.
	do	Robert Mack	6,720	7	do	Do.
	do	E. W. Rundle	11,760	7	do	Do.
	do	William Sawyer	8,440	5	do	Do.
	do	William Simpson	13,440	6	do	Do.
	do	D. N. Phelps	20,160	5	do	Do.
	do	William White	3,360	6	do	Do.
	do	D. Conklin	13,440	7	do	Do.
	do	J. W. Purman	13,440	6	do	Do.
	do	M. Miller	6,720	5	do	Do.
	do	M. Walker	10,080	6	do	Do.
	do	J. E. Boring	16,800	6	do	Do.
	do	J. E. Mayberry	10,080	7	do	Do.
	do	M. W. Miller	3,360	5	do	Do.
	do	T. D. Stroud	10,080	8	do	Do.
	do	L. S. Humphrey	3,360	6	do	Do.
	do	W. Portwood	3,360	6	do	Do.
	do	C. T. Humphrey	1,680	5	do	Do
	do	John Q. Humphreys	3,360	6	do	Do.
	do	Alex. Given	1,680	6	do	Do.
	do	J. W. Hare	3,360	7	do	Do.
	do	William H. McPherson	1,080	6	do	Do.
	Freedom township	J. W. Boling	130	3	Bituminous	Neighborhood.
	do	N. Oats	800	10	do	Do.
	do	J. R. Wasson	120	11	do	Do.
	Pawnee township	James P. Chanceler	450	4	Bituminous, block	Home market.
	do	W. H. Longshore	800	5	Bituminous, red and block	Kansas City, Mo.
	do	Eliza Walford	650	5	Bituminous, block	Do.
	do	John Garrison	375	5	Bituminous, red and block	Home market.
	do	—— McNaughton	400	5	do	Do.
	Scott township	Peter Peterson	200	7	Bituminous	Port Scott, Kans.
	do	Henry Mayberry	500	7	do	Do.
	do	Simeon Ferris	600	7	do	Do.
			32,214		do	
	BROWN COUNTY.					
	Irving township	William Evans	400	1½	Bituminous	Brown and Doniphan counties.
	CHATAUQUA COUNTY.					
		Belville & Dunn	50		Bituminous	Local market.
		R. L. Bingon	350		do	Grenola, Kans.
		R. Killpatrick	200		do	Local market.
		James M. Sirley	100		do	Grenola, Kans.
	CHEROKEE COUNTY.					
	Mineral township	Patrick McArdle	400	12	Bituminous	Kansas City, Mo.
	do	Allen & Price	1,000	11	do	Do.
	do	Charles Paggeot	1,270	11	do	Joplin, Mo.
	do	Bartley O'Neal	4,250	11	do	Do.
	Sheridan township	James Rogers	200		do	Hallowell.

Directory of bituminous coal mines—Continued.

KANSAS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CHEROKEE CO.—cont'd.			*Feet.*		
	Sheridan township	B. F. Anbas	200		Bituminous, red and block	Hallowell.
	do	Sarah McKee	7,000		Bituminous	Do.
	do	Henry Robins	2,000		do	Do.
	do	Thomas Carr	10,000		do	Home.
	do	H. Huntsinger	2,500		do	Do.
	Tola township	W. H. Maroison	1,500	2	do	Oswego, Kans.
	Cherokee township	Union Coal Company	12,000		do	Parsons, Kans.
	do	Fred. Blatner	11,000		do	Do.
	do	Lucas & Co	12,500		do	Fort Scott, Kans.
	do	Christian Schmit	11,500		do	Parsons, Kans.
	CLOUD COUNTY.					
	Sibley township	U. Williams	300	1⅔	Bituminous	Kansas and Nebraska.
	do	A. Henderson	1,000	1⅔	do	Do.
	do	Hall & Burk	1,000	2¼	do	Do.
	do	P. M. Montgomery	500	2	do	Do.
	do	S. P. Linn	1,500	2½	do	Do.
	do	C. Murray	1,500	1⅔	do	Do.
	Aurora township	Dunn & Alford	700		do	Home market.
Pipe Creek No. 1 mine	Meredith township		2,000	3	do	Cloud and adjacent counties.
	COFFEY COUNTY.					
	California township	Dedery Kiser	650	10	Bituminous, block	Emporia and Burlington.
	do	Cyrus A. Ball	688	10	do	Do.
	do	Henry Jacobs	325	11	do	Do.
	do	C. Humphrey	500		do	Do.
	CRAWFORD COUNTY.					
	Sheridan township	Perry Enlow	480	6	Bituminous	Home.
	do	William Quinnon	500	6	do	Do.
	Osage township	Isaac Vance	400	6	do	Farmers.
	Lincoln township	John Perry	5,700		do	Kansas City, Mo.
	do	Isaac Kendall	1,000		do	Finley City, Kans.
	do	Keith & Henry	8,000		do	Kansas City, Mo.
	do	A. Harris	5,760		do	Coal Vale, Kans.
	do	J. A. Bovard & Co	6,000		do	Kansas City, Mo.
	do	Thompson & Robuck	400		do	Coal Vale, Kans
	Washington township	Jesse Carpenter	300		do	Surrounding country.
	do	Cornelius Dale	400		do	Girard, Osage, and Missidon, Kans.
	do	Henry McKahans	200		do	Grant and Crawford townships, Kans.
	do	John H. Dale	150		do	Southern Kans. and Mo.
	Baker township	Albert Stotts & Bro	600	7	do	New Pittsburgh, Kans.
	do	Cambell & Jones	900	8	do	Do.
	do	Holden Lesley	2,000	11	do	Do.
	do	A. S. Warren	1,500	9	do	Do.
	do	George Cook	600	9	do	Kansas City, Mo.
	do	George Pearson	1,500	5	do	Custova Bank.
	DOUGLAS COUNTY.					
	Eudora township	John Kreiser	240		Bituminous	Eudora and vicinity.
	FRANKLIN COUNTY.					
	Greenwood township	Bagby & Pulse	500		Bituminous	Ottawa, Kans.
	do	J. Dyer	1,000		do	Ottawa and Pomona.
	do	Bledroe Bros	400		do	Ottawa, Kans.
	do	R. J. Dyer	500		do	Do.
	do	Huchings & Pyer	1,000		do	Do.
	do	Jacob Bush	500		do	Ottawa and Williamsburgh.
	Centropolis township	Reuben Hackett	600		do	Ottawa and vicinity.
	Williamsburgh township.	Rinsbatch & Price	600		do	Ottawa, Kans.
	do	Geo. Cable	400		do	Ottawa and country.
	do	J. H. Ransom	7,500		do	Ottawa, Kans.
	do	J. B. Richel	700		do	Do.
	do	Robert Riley	400		do	Do.
	do	A. J. Hamilton	200		do	Ottawa and country.
	GREENWOOD COUNTY.					
	Eureka township	Francis H. Clarke	600		Bituminous	Eureka, Kans.

Directory of bituminous coal mines—Continued.

KANSAS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LABETTE COUNTY.			*Feet.*		
	Oswego township	S. M. Gramey	280	1⅝	Bituminous	Oswego, Kans.
	do	O. Whitney	320	1⅜	do	Do.
	do	J. W. Burgis	270	1⅜	do	Do.
	do	Thos. A. Burgess	400	1½	do	Labette county, Kansas.
	do	Dan'l Shepherd	400	1½	do	Oswego, Kans.
	Richland township	Albert Ousted	320		do	Do.
	do	Marion Timons	480		do	Chetopah, Kans.
	do	John Sastine	490		do	Do.
	do	Geo. Powers	300	3	do	Do.
	LEAVENWORTH COUNTY.					
	Kickapoo township	Leavenworth Coal Co	60,000	2	Bituminous	Kansas.
	Fairmount township	Thos. C. Brockette	588		do	Tonganoxie, Kans.
	LINN COUNTY.					
		Henry Carbon	800	1½	Bituminous	Mound City.
	Potosi township	Samuel Barker	3,000	10	do	Pleasanton, Kans.
	do	John L. Keenan	2,000	10	do	Do.
	do	Joshua Hibson	2,000	10	do	Do.
	do	Elizabeth Ford	1,500	10	do	Do.
	Stanton township	A. M. Lambert	600	2	do	Linn county, Kans.
	Sheridan township	Wm. J. Pritchett	640	6	do	Prescott, Kans.
	do	Caleb G. Deming	1,200	2	do	Do.
	MONTGOMERY COUNTY.					
	Sycamore township	Wm. Dixon	375		Bituminous	Independence.
	NEOSHO COUNTY.					
	Chetopah township	Munroe Powell	400		Bituminous	Thayer, Kans, local market.
	do	J. H. Adams	300		do	Thayer and Neosho and Quaming counties, Kansas.
	OSAGE COUNTY.					
	Barclay township	John S. Firey	150	1½	Bituminous	A., T. and S. F. R. R.
	do	Louis Humphrey	800	1	do	Hutchinson.
	do	Calvin Abbot	300	1½	do	A., T. and S. F. R. R.
	do	Jos. Saunders	200	1½	do	Country towns.
	Dragoon township	Kansas City Min. Co.	18,000	2½	do	A., T. and S. F. R. R.
	do	Underwood & Davis	9,000	2½	do	Do.
	do	Shrank, More & Rooks.	3,000	1½	do	Home sale at bank.
	do	Eureka Co	675	2¾	do	A., T. and S. F. R. R.
	do	Sheldon & Marshall	780	2	do	Do.
	Olivet township	Andrew Johnson	500		do	Farmers of township.
	Superior township	J. F. Martin and Co.	432		do	Carbon C. and M. Co.
	do	E. A. Clift	2,250		do	Do.
	do	Thomas & McCrea	1,250		do	Do.
	do	Western C. and Min. Co	2,025		do	A., T. and S. F. R. R.
	do	J. A. Drake	360		do	Osage City.
	do	J. S. F. Greene	300		do	Peterton.
	do	W. H. Close	60		do	Topeka, Kans.
	do	C. H. Conden	1,550		do	Wichita, Kans.
	do	William Lloyd	750		do	Osage City.
	do	D. S. Martin	1,500		do	Do.
	do	Jos. Dupriez	6,000		do	Wachita, Newton, and Hutchinson.
	do	John Anderson	400		do	
	Ridgeway township	Robert McKee & Co	4,800		do	Topeka.
	do	Jas. Hynd	300		do	Country trade.
	do	Thomas Thurtchly	100		do	Do.
	do	Wootzig Bros	320		do	Do.
	do	Daniel Smith	300		do	Do.
	do	William L. Greene	12,000		do	R. R. and local trade.
	do	Richard Evans	600		do	Lawrence, Kans.
	do	Fred. Holten	600		do	U. P. R. R.
	do	Carbon Coal Co	11,200		do	Kansas.
	do	William Brown	1,500		do	Local trade.
	do	Thomas Trotter	400		do	Country trade.
	do	Jos. Prescott	250		do	Local trade.
	Osage City	Scandinavian C. and M. Co.	12,000		do	Southern and Western Kansas.

Directory of bituminous coal mines—Continued.

KANSAS—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	OSAGE CO.—cont'd.			*Feet.*		
.....	Osage City	Carbon C. and Min. Co	4,320	.....	Bituminous	
.....	do	Osage Co. C and M. Co	28,000	.....	do	Newton, Kans.
.....	Agency township	L. Cunningham	600	.....	do	At mine.
	REPUBLIC COUNTY.					
.....	Grant township	Smith Bros	400	.....	Bituminous	Country market.
	SHAWNEE COUNTY.					
.....	.....	Robert Forbes	7,850	.....	Bituminous, hard	Topeka and Silver Lake.
.....	Topeka township	Southerin & Thatcher.	480	1½	Bituminous	Topeka, Kans.
.....	Missouri township	William Pears	400	4	do	Do.
.....	do	C. W. Jewell	600	1¼	do	Do.
.....	do	C. O. Knowles	600	1¼	do	Do.
.....	do	G. G. Gage	1,000	1¼	do	Do.
.....	do	L. A. Coville	500	1½	do	Do.
.....	do	S. W. Smith	60	1¼	do	Do.
.....	do	T. W. Sudder	1,000	1¼	do	Do.
	WOODSON COUNTY.					
.....	.....	Christian Phelps	200	10	Bituminous	Local.
.....	Toronto township	William Riemke	160	4	do	Yates Centre, Kans.

KENTUCKY.

	BOYD COUNTY.					
Coalton & Rush mine, No. 7 seam.	Coalton	Ashland C. and I. Ry. Co	202,091	4	Bituminous, block	Own furnace, Cincinnati, Louisville, and small towns on Ohio river.
	BREATHITT COUNTY.					
Cannel mine, No. 5 seam	Spicer's branch	Granville Spicer	500	3½	Bituminous	Irvon, Muddy Creek, Boonesborough, Clays' Ferry, Hickman, Clifton, and Frankfort.
	BUTLER COUNTY.					
Mining City mine	Mining City	James Philips	15,000	3¾	Bituminous, red ash, laminated.	Bowling Green, Ky.
Aberdeen mine, Aberdeen seam.	Aberdeen	John Mathias	2,000	3½	Bituminous	Do.
.....	Rochester	Taylor & Co	488	.....	do	Neighborhood and home.
	CARTER COUNTY.					
Star mine, No. 7 seam	Star furnace	Norton Iron Works	45,126	4	Bituminous, block	Norton Iron Works, Ashland, Ky.
	CRITTENDEN COUNTY.					
Lamb mine, No. 1 seam	Tradewater river	John M. Lamb	5,000	3 7/12	Bituminous, block	Tradewater river and Ohio river steamboats.
Christian Barnaby and J. M. Lamb mine, No. 1 seam.	do	Christian Barnaby and J. M. Lamb.	8,000	3½	Bituminous	Do.
Bell mine	Near Caseyville	Lon Alvick	2,000	4¼	Bituminous, block	Tradewater river and Caseyville.
	DAVIESS COUNTY.					
Herr mine, No. 9 seam	Owensborough	H. C. Herr	3,570	3⅝	Bituminous	Owensborough.
Bon Harbor mine	Bon harbor farm	Henman & Co., M. Shafer & Co., J. Holland.	4,800	4⅝	Bituminous, hard, bright, domestic.	Owensborough, adj. country, and steamboats on Ohio river.
	GREENUP COUNTY.					
Fulton C. Works mine, Nos. 2, 3, and 4 seams.	Wurtland	J. R. & W. Ryan	10,000	8⅝	Bituminous	Maysville, Cincinnati, and points on Ohio river.
	HANCOCK COUNTY.					
Hancock mine	Near Horsville	Amer. Cannel C. Co	21,180	2¼	Bituminous	Steamboats on Ohio river and tributaries.
Bergenroth mine, No. 1 seam.	Horsville	Bergenroth Bros	2,500	3¾	Bituminous, cannel	Hawsville and Amer. Cannel C. Co.
	HENDERSON COUNTY.					
Henderson C. and M. Co., No. 9 seam.	Henderson	Henderson C. and M. Co.	10,000	4	Bituminous, hard, non-coking	City and country trade.
People's mine, No. 9 seam	do	P. J. McNamara	5,640	4	Bituminous, block, hard, some sulphur.	Henderson.
William Jones mine, No. 9 seam.	Green river	William Jones	1,950	4	Bituminous	Along first part of Green river.
Spottsville mine	Spottsville	T. Shiver & Bro	43,533	4	Bituminous, bright, heating	Evansville and New Orleans.
	HOPKINS COUNTY.					
Earlington mine, Nos. 9 and 11 seams.	Earlington	St. Bernard's C. Co	108,302	11⅓	Bituminous	Nashville, Henderson, Hopkinsville, Goshen, and Evansville, via Henderson and Nashville branch of Louisville and Nashville R. R.

Directory of bituminous coal mines—Continued.

KENTUCKY—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	HOPKINS CO.—cont'd.			*Feet.*		
St. Charles mine, Nos. 9 and 11 seams.	St. Charles	St. Bernard's C. Co.	80,000	12	Bituminous	Louisville, Paducah, Memphis, Tenn., and N. Orleans, via Paducah and Elizabethtown R. R., and Tenn., Ohio, and Miss. rivers.
Hecla C. and Min. Co., Nos. 9 and 11 seams.	Earlington	Hecla C. and Min. Co.	29,680	12	do	Nashville, Tenn., Clarksville, Brownsville, Memphis, Tenn., and Hopkinsville, Ky.
Diamond mine, No. 9 seam	Morton's Gap	Morrow & McNary	12,000	5	do	Nashville.
Williams mine	Petersburgh	S. Harris & Co	None.	5	Bituminous, bright	Nashville, Hopkinsville, and Clarksville.
	LEE COUNTY.					
Pryse & Beatty mine, sub-conglomerate seam.	Beattyville	E. M. & Thomas Pryse	16,200	3¼	Bituminous, block	Clay's Ferry, Hickman, Tyrone, Clifton, and Frankfort.
Meyer's Branch mine, sub-conglomerate seam.	Meyer's branch	Thomas J. Phillips	3,000	3	do	Do.
Steel mine	Proctor	Daniel Steel	45	3½	do	Boonesborough, Clay's Ferry, Hickman, Grey's Creek, Clifton, and Frankfort.
South Fork mine	Proctor	Daniel Scott and John M. Davidson.	3,600	4	Bituminous, block	Boonsborough, Clay's Ferry, Hickman, Grey's Creek, Clifton, Tyrone, and Frankfort.
Mick's Branch mine	Beattyville	C. M. Beach and W. P. Hill.	500	4	Bituminous, splint	Do.
Clark mine	do	R. C. Hill	1,500	3	Bituminous	Frankfort and Hickman, Ky.
	do	C. M. Beach	760		do	Neighborhood.
	do	C. D. Tyler	760		do	Do.
	do	John Maxey	608		do	Do.
	M'LEAN COUNTY.					
	Island Station	R. H. Everly	760		Bituminous	Neighborhood and home.
	do	R. M. Karnes	395		do	Do.
	MADISON COUNTY.					
Moran mine	Big Hill	W. B. Jones	600	3½	Bituminous, block	Portion of Madison county south of Richmond.
	do	Jeff. Cox	1,330		Bituminous	Neighborhood.
	MENIFEE COUNTY.					
Cornwell & Cord mine, sub-conglomerate seam.	Cornwell	William Strofer	2,750	2½	Bituminous, hard	Mount Sterling, Winchester, and Lexington, Ky.
Campbell & Lindsay mine, No. 1 seam.	Rothwell	Campbell & Lindsay	11,400	2½	Bituminous	Mount Sterling and Lexington, Ky.
	MORGAN COUNTY.					
Pieralt mine, No. 4 seam	Black Water	Pieralt & Co	380	3½	Bituminous, cannel	Mount Sterling.
	MUHLENBURGH COUNTY.					
Mercer mine, No. 9 seam	Mercer station	Tapp & Brizendine	26,000	4 7/12	Bituminous, steam and grate	Louisville, Paducah, Ky., Tenn., and Miss., via Paducah and Elizabethtown R. R. and connecting lines.
Guylena mine, No. 11 seam	Owensborough junct'n	do	7,560	4⅝	Bituminous, bright, best English coal.	Owensborough and Louisville, Ky., via Paducah and Elizabethtown R. R., Louisville and Nashville R. R., Owensborough and Nashville R. R.
Rop mine, Nos. 11 and 12 seams.	do	C. C. Lashbrook	3,000	4½	Bituminous, very hard, almost equal to anthracite.	Owensborough and Louisville, via Owensborough and Nashville R. R., Paducah and Elizabethtown R. R.
Green River mine, No. 11 seam.	Painestown	Green River I. and C. Co.	10,800	5⅔	Bituminous, bright, domestic and steam.	Louisville, via Paducah and Elizabethtown R. R., and Louisville and Nashville R. R.
Kentucky mine, No. 11 seam.	Mercer station	W. H. Dovey	13,278	5½	Bituminous, coking	Louisville, Paducah, Elizabethtown, and points on St. L. N. R. R. in Tenn. and Miss.
Muhlenburg mine, No. 11 seam.	Muhlenburg	Tapp & Brizendine	18,000	6	do	Louisville, Ky., Tenn., Miss., Chicago, St. Louis, N. O. R. R.
McDougall mine, No. 11 seam	Paradise	John McDougall	None.	6	Bituminous, iron, gas, steam, and grate.	Bowling Green, Paradise, and Calhoun.
	OHIO COUNTY.					
Rockport mine, No. 9 seam	Rockport	Smith, Doherty, Keath & Co.	4,621	5	do	Louisville, Paducah, and towns south of P. as far as Miss., via P. and E. R. R., and L. and W. R. R.
McHenry mine, No. 9 seam	McHenry	H. D. McHenry and W. G. Duncan.	45,656	4½-5½	Bituminous	Louisville, Jackson, Tenn., for Mobile and Ohio R. R., via P. and E. R. R., L. and N. R. R., and M. P. and N. R. R.
Emporia mine, No. 9 seam	Emporia	Mercer Bros	3,004	4⅜	Bituminous, some sulphur	Jackson, Louisville, and Paducah.
Sulley mine, No. 9 seam	Cromwell	M. Stanley	12,000	4½	Bituminous	Bowling Green.
Render C. Co.'s mine, No. 9 seam.	Hamilton	Render C., I., Min., and Mfg. Co.	12,800	4⅞	Bituminous, steam and domestic.	Louisville.

Directory of bituminous coal mines—Continued.

KENTUCKY—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	PULASKI COUNTY.			*Feet.*		
Addison Branch mine, middle subconglomerate seam.	Pulaski	Thos. Raybourn	8,000	4	Bituminous	Nashville and Cumberland river.
Cumberland Coal Co.'s mine.	Greenwood	Cumberland C. Co	7,850	3–3½	do	R. S. R. R. Co., Danville, Harrodsburg, and Nicholasville.
McKean mine, first subconglomerate seam.	Thompsonville	L. Edwards & Son	1,600	3½	Bituminous, block	Nashville, Tenn., and towns on the Cumberland river.
	ROCKCASTLE COUNTY.					
Pine Hill Coal Co.'s mine	Pine Hill	C. Crooke	30,000	2¾	Bituminous	Louisville, Lebanon, Danville, Harrodsburg, Stanford, Lancaster, Richmond, via L. and V. R. R. Co.
Happy Hollow C. Co.'s mine, block seam.	do	Taylor & Co	7,200	2⅔	do	Points on Louisville, Nashville and Cincinnati Southern R. R.
Thompson & Landaman mine, subconglomerate seam.	Livingston station	Thompson & Landaman.	1,400	2½	do	Richmond, Lancaster, Lebanon, and adjacent country.
Diamond Block mine, double subconglomerate seam.	Pine Hill	R. Draimond	1,000	2½	do	Louisville, Lebanon, Harrisburg, Strafford, and Richmond.
	UNION COUNTY.					
Casey mine, No. 11 seam	Caseyville	Jno. W. Cardwell	712	3	Bituminous, bright	Steamboats on Tradewater river.
Casey mine, Bell seam	do	Cooper & Cook	5,330	3½	Bituminous, semi-cannel	Western.
Shotwell mine	De Koun	P. G. Kelsey & Co	50,230	7½	Bituminous, block cannel	Memphis, Vicksburg, and mouth of White river, via Ohio and Miss. rivers.
J. M. Davis mine, No. 1 seam.	Caseyville	J. M. Davis	2,000	3	Bituminous	Steamboats on Ohio river.
Nelson mine	do	M. M. Nelson	520	3½	Bituminous, block	Do.
Hall & Owens mine, No. 1 seam	Near Caseyville	Hall & Owens	2,000	4½	do	Local trade.
	Caseyville	Dare Wallace	600		Bituminous	Neighborhood.
	WEBSTER COUNTY.					
Bowls mine, No. 8 seam	Providence	R. H. Bowls	2,235	4	Bituminous, bright	Providence, Dixon, and adj. country.
Kate Gerins, No. 9 seam	do	T. K. Gerins	307	3½	do	Do.

MARYLAND.

	ALLEGHANY COUNTY.					
C. I. and Oil Co., and Koontz, Big Vein, and Midlothian mines, Big seam.	Midlothian and Lonaconing.	New Central C. Co	388,640	7¾	Semi-bituminous	New York and New England.
Borden shaft, Big seam	Frostburgh	Borden Mining Co	163,025	11	do	Do.
Borden mine, Big seam	do	do	29,812	9	do	New England.
Blaen, Avon C. Co.'s mine, Big seam.		Blaen, Avon C. Co	55,920	8	do	New York, Baltimore, Boston, and Providence.
Lonaconing mine, Big seam	Lonaconing	George's Cr. C. and I Co.	223,476	10	do	New England, Baltimore, and District of Columbia.
Savage mine, Savage seam	Mt. Savage	Union Min. Co	4,028	2½	do	Home consumption.
Bowery mine, 14 foot seam	Bowery furnace	Cumberland C. and I. Co.	7,047	12½	do	Do.
Caledonia mine, Big seam	Barton	American Coal Co	None.	8	do	New England, New York, and New Jersey.
Jackson mine, Big seam	Lonaconing	do	121,281	10	do	Do.
Swanton mine, Cumberland seam.	Barton	Stephen S. Lee & Son	51,050	10	do	Baltimore and Eastern markets.
Piedmont mine, Big and 3-foot seams.	do	Piedmont C. and I. Co.	11,200	11	Bituminous	Baltimore, Philadelphia, and Boston.
Rutland mine, 14-foot seam	Western Port	Hampshire and Balt. C. Co.	98,135	11	Semi-bituminous	Baltimore.
Midland mine, 14-foot seam	Midland	do	12,827	14	do	Alexandria.
National mine, 14-foot seam		do	19,222	10	do	Do.
Potomac Coal Co.'s mine, 14-foot seam.	Barton	Potomac Coal Co	92,380	8	do	Baltimore and Boston.
New Reading or Canton mine, 6-foot seam.	New Reading		None.	5	Bituminous	
Savage, Mountain, Detmold, and Kingsland mines, Big seam.	Lonaconing	Maryland C. Co	89,749	7½	Semi-bituminous, steam and blacksmith.	New England and the United States.
Grant Coal Co.'s mine	Near Pompey Smash	Grant Coal Co	73	7	do	Baltimore and Georgetown, D. C
Ocean No. 1 mine, Big seam	Ocean	Consolidation C. Co	116,520	10	do	Eastern cities on Atlantic seaboard north of Norfolk Va.
Ocean No. 2 mine, Big seam	Near Frostburgh	do	3,997	10	do	Frostburgh.
Ocean No. 3 mine, Big seam	Near Hoffman	do	332,056	10	do	Eastern cities on Atlantic seaboard north of Norfolk, Va.
Ocean No. 4 mine, Big seam	Near Frostburgh	do	158,569	10	do	Do.
Hamill mine, Big seam	On. C. and P. R. R.	Md. Union C. Co	138,468	14	Semi-bituminous, smithing, manufacturing, and steam.	As far west as Nebraska and the east and Atlantic seaboard.

Directory of bituminous coal mines—Continued.

MARYLAND—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ALLEGHANY CO.—cont'd.			*Feet*		
Atlantic mine, Big seam	Pekin	Atlantic and George's Creek Consolidated C. Co.	73,898	7½	Semi-bituminous	Baltimore.
	Western Port	G. W. Spangler	1,800		Semi-bituminous	Piedmont, Md.
	Election district No. 1.	Hensel & Kidmore	3,000	9	do	Frostburgh.
	Election district No. 12.	Thomas W. Neff	500	4	do	Cokhart Village.
	Barrallville	Fred. Currie	500	9	do	Local.
	GARRETT COUNTY.					
North Branch Co.'s mine, Nos. 1 and 2 seams.	Bloomington	William A. Brydon	840	9	Semi-bituminous, free burning.	Baltimore and the east, local on line of B. and O. R. R., and west of Ohio river.
Empire mine, 6-foot and 4-foot seams.	do	Piedmont C. and I. Co	4,480	8	Semi-bituminous	Baltimore and line of B. and O. R. R.
George's Creek mine, Big seam.	On C. and P. R. R	Md. Union C. Co	23,450	14	Semi-bituminous, smithing, manufacturing, and steam.	As far west as Nebraska, and the east and Atlantic seaboard.
	Bloomington	Charles A. Muller	600		Semi-bituminous	Bloomington, etc.
	do	Thomas Michaels	400		do	Bloomington and Western Port.

MICHIGAN.

	JACKSON COUNTY.					
	Blackman	Eureka Coal Co	20,000	3⅝	Bituminous	Jackson.
	do	Michigan Coal Co	800	4	do	Do.
	Jackson	James & Evans	5,500	3	do	Do.
	do	Jackson Coal Co	55,000	3½	do	Do.
	do	do	4,500	3½	do	Do.
	SAGINAW COUNTY.					
	Saginaw township	Samuel Shattuck	None.		Cannel	
	SHIAWASSEE COUNTY.					
	Corunna	Corunna Coal Co	15,000		Bituminous	D., T. H. and M. R. R. and sundry cities in Michigan.

MISSOURI.

	ADAIR COUNTY.					
	Nineveh township	John D. Miller	None.		Bituminous	
	do	Hannibal C. Co	3,204	3	Bituminous, hard	Quincy R. R. Co.
Besauke mine	do		1,200	4	do	Kirksville, Mo.
	AUDRAIN COUNTY.					
		J. A. Judy	1,174	2½	Bituminous	Mexico, Mo.
	BARTON COUNTY.					
	Le Roy township	J. W. Eastas	1,524	1½	Bituminous	Parry Switch, Mo.
	do	J. McDusmott	5,000	2½	do	Finley City, Kans.
	do	John Parry	10,000	2½	do	Do.
	do	Thos. Reese	5,000	1½	do	Parry Switch, Kans.
	Central township	Saml. Geivet	100	6	Bituminous, block	Lamar, Mo.
	Richland township	Ansel Church	400	15	Bituminous	Barton county, Mo.
	BATES COUNTY.					
	New Home	Ward Bros	4,000	5	Bituminous	Butler and vicinity, Mo.
	do	G. W. Wagoner	2,500	5	do	Bates and adjoining counties.
	do	Wm. Griggs	3,000	5	do	Do.
	do	Wm. Karr	2,800	5	do	Butler and vicinity, Mo.
	do	M. Wolfe	2,500	1	do	Do.
	do	G. Shafer	2,000	5	do	Bates county.
	Homer	Benj. Good	400	3	do	Country trade.
	do	Ephraim D. Warner	25	4	do	Do.
	do	John P. McGaw	160	3	do	Do.
	do	Nelson Cole	None.	3	do	Do.
	Prairie township	Thos. Gunnerson	500	3	do	Local.
	do	do	600	2	do	Do.
	do	E. Shafer	600	2½	do	Do.
	Deer Creek township	John Mendy	300		do	Harrisville, Mo.

Directory of bituminous coal mines—Continued.

MISSOURI—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BOONE COUNTY.			*Feet.*		
		D. W. McQuitty	400	2	Bituminous	Rocheport.
	CALLAWAY COUNTY.					
		S. B. Lee	320		Bituminous	Fulton City.
		Martin Reid	480		do	Do.
	CARROLL COUNTY.					
	Carrollton township	Ely Smith	1,600		Bituminous, soft	Carrollton.
	CHARITON COUNTY.					
	Yellow Creek	Riddell & Allen	100	2	Bituminous	Home.
	do	T. P. Wilkerson	150	2	do	Do.
	do	Mo. M. Smith	140	2	do	Do.
	do	Gordon Frank	200	2	do	Do.
	COLE COUNTY.					
	Marion township	James A. Elston	250		Bituminous	Jefferson City, Mo.
	do	Thomas Casperi	660		do	Do.
	COOPER COUNTY.					
	Boonville township	Daniel G. Davis	600		Bituminous	Boonville, Mo.
	do	James R. Sloan	400		do	Do.
	do	Weber & Vollrath	500		do	Do.
	do	Weber & Co	6,500		do	Boonville and state.
	DADE COUNTY.					
	Cedar township	McIntosh & Workman	560	8	Bituminous	At mine.
	HENRY COUNTY.					
		Peter Dubuque	450	6	Bituminous	Montrose and country.
		William Drummond	1,000		do	Montrose.
		Nathan Virrs	225	6	do	Montrose and country.
	Clinton township	John Hudspeth	20,000		do	Sedalia, Mo.
	do	J. M. Swavely	1,680	2½	do	Clinton, Mo.
	do	Bridges & Co	578	2⅔	do	Sedalia, Mo.
	do	C. W. Jordan	2,400	3	do	Do.
		Osage C. and Min. Co	30,000	4	do	M. K. and T. R. R.
	JOHNSON COUNTY.					
	Madison township	P. H. Rhea	300	10	Bituminous	Holden, Mo.
	do	M. Parkhurst	500	6	do	Do.
	do	James Moore	500	6	do	Do.
	do	William Lapesh	610	6	do	Do.
	Warrensburgh	W. Thompson	5,000		do	Warrensburgh.
	LA FAYETTE COUNTY.					
Windsor mine		Windsor Coal Co	16,000		Bituminous	C. and A. R. R.
	Wellington	J. C. McGrew	3,396		do	Kansas City, Mo.
	do	Andrew Carler	720		do	Do.
	Lexington township	Reid, Waddell & Taylor.	20,144		do	Do.
Reid & Waddell mine	do		10,920		do	Do.
	do	Reid, Waddell & Davis	8,554		do	Do.
	do	J. W. Grudy & Co	2,800		do	Do.
	do	O'Melley	6,000		do	Do.
	do	Thomas B. Clagett	1,500		do	Lexington.
	do	J. H. Graham	208		do	Do.
	do	William T. Bell	2,000		do	Do.
	do	Henry Macey	900		do	Kansas City, Mo.
	Sinabar township	Thomas Perrie	400		do	Odessa and Bates, Mo.
		John Wollenman	900		do	Dover and River, Missouri.
		James Harrison	265	2	do	Steamboats.
		Bartley & Williams	1,100	3¾	do	La Fayette county, Missouri.
	LINN COUNTY.					
	Yellow Creek township		150	1½	Bituminous	Brookfield, Mo.
	do		175	1½	do	Do.
	LIVINGSTON COUNTY.					
	Chillicothe township	William Cox	500		Bituminous	Chillicothe, Mo.
	do	Abel Cox	800		do	Grundy and Livingston.
	Mooresville township	Charles W. Garlick	500	1½	do	Breckenridge, Mo.

Directory of bituminous coal mines—Continued.

MARYLAND—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MACON COUNTY.			*Feet.*		
.....	Hudson township	Chas. Magms	500	.....	Bituminous	Macon city.
.....	do	Wm. Chope	600	.....	do	Do.
.....	do	Willis Dameron	600	.....	do	Do.
.....	do	Jas. House	520	.....	do	Do.
.....	do	Chas. Fortner	400	.....	do	Do.
.....	do	Wm. Rosey	500	.....	do	Do.
.....	Narrows township	W. H. Jones & Co	15,000	.....	do	Moberly and Queen City.
.....	Lyda township	Richard Hartwell	250	1½	do	La Plata, Mo.
.....	Bevier township	Louis & Snively	50,000	4	do	Miss. and Mo.
.....	do	Oakdale C. Co	25,000	4	do	Mo., Kans. and Nebr.
.....	do	Thos. Wadell	15,0 0	4	do	Do.
.....	do	M. C. and M. Co	42,000	4	do	Do.
.....	Lingo township	T. M. Johson	2,500	4	do	St. Joseph and Kansas City, Mo.
.....	Independence tw'p	John Branhan	100	2	do	La Plata, Mo.
.....	Round Grove	Isaac Gee	1,950	2	do	Hannibal, Mo.
	MONTGOMERY COUNTY.					
.....	Prairie township	Dan'l Ulrich	500	.....	Bituminous	Middletown and Ashley.
.....	do	Jas. Schindler	390	.....	do	Wellsville and Middletown.
Six mines			1,410	.....	do	
	NODAWAY COUNTY.					
.....	Green township	George Monahan	367	1¼	Bituminous	Maryville, Mo.
.....	do	David J. B. Kimball	280	1½	do	Do.
.....	do	N. H. Hichings	160	1 1/12	do	Do.
.....	do	Wm. Pascol	655	1¼	do	Do.
.....	do	Rufus Ellsworth	240	1¼	do	Quitman, Mo.
.....	do	John Neely	240	1¼	do	Maryville, Mo.
.....	do	Wm. Holt	*240	1¼	do	Do.
.....	do	Troget Putner	160	1½	do	Do.
	PUTNAM COUNTY.					
.....	Grant township	J. W. Wells	100	.....	Bituminous	Moulton and Iowa.
.....	Lincoln township	E. G. Holloway	1,000	3	do	Unionville, Mo.
.....	do	L. Ketchaw & Brother.	14,000	3⅓	do	Burlington, Iowa.
	RALLS COUNTY.					
.....	Jasper township	J. M. Lambuilt	200	2⅔	Bituminous	Adjoining counties.
	RANDOLPH COUNTY.					
.....	Prairie township	Jackson C. and M. Co.	19,200	4	Bituminous	Kansas, Mo., Wab., St. L. and P. R. R. Co.
.....	do	R. D. Blair & Co	20,000	3½	do	Mexico, Mo., and C. and A. R. R.
.....	do	Perch Coal Co	960	4	do	Glasgow, Mo.
.....	do	Osage C. and Min. Co.	15,000	3½	do	M., K. and T. R. R.
.....	Sugar Creek township	Huntsville C. and Min. Co.	3,600	4	do	Kansas City.
.....	do	John B. Williams & Co.	700	4	do	Moberly, Mo.
.....	Jackson township	Ballot & Amick	1,400	10	do	Jacksonville and vicinity.
.....	Salt Spring township	James Baly & Co	13,140	.....	do	Council Bluffs, Mo.
Carbon mine	do		4,320	4 1/12	do	Kansas City.
.....	Hunterville township	Independent C. and M. Co.	12,000	4	do	Do.
.....	do	G. W. Taylor	1,800	4	do	Kansas City and Omaha.
.....	do	Stewart C. and M. Co.	27,500	4	do	Brunswick, Stanbury, Kansas City, and Moberly.
.....	Silver Creek township	John Gibson	125	1⅔	do	Mount Airy, Clifton, and Roanoke.
	RAY COUNTY.					
.....		J. C. McGrew	20,000	2	Bituminous	Kansas City, Mo.
.....		Thomas & Co	2,000	2	do	Do.
.....		Ernst & Crasen	200	2	do	Do.
.....		C. Burnett	2,500	2	do	Do.
.....	Richmond township	Hirtley & Wilds	1,800	.....	do	Richmond and Saint Joseph.
.....	do	Stotwell & Co	None.	.....	do	Saint Joseph.
.....	do	J. R. Hauncher	580	2	do	Richmond, Mo.
.....	do	D. T. Duval	1,000	2½	do	Do.
Russel mine	Crooked River twp		450	.....	do	Norborne.
Eckke mine	do		500	.....	do	Hardin.
Esry mine	do		500	.....	do	Norborne.

Directory of bituminous coal mines—Continued.

MARYLAND—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	SAINT CHARLES COUNTY.			*Feet.*		
.....	Saint Charles township	Michael Beckerle	2,400	2½	Bituminous	Saint Charles, Mo.
.....	do	Jacob Jungerman	2,000	2½	do	Do.
.....	do	E. C. Cunningham	1,500	2½	do	Do.
	SAINT CLAIR COUNTY.					
.....	Appleton City	E. A. Adams	400	1½	Bituminous	Appleton City.
.....	do	F. Johnson	950	1	do	Do.
	SALINE COUNTY.					
.....	Blackwater township	John Lauer	720	.....	Bituminous	Marshall, Mo.
.....	Clay township	William Hunter	100	.....	do	Saline county.
.....	do	Caine Davis	800	.....	do	Do.
.....	do	W. Pennock	500	.....	do	Do.
.....	do	J. P. Copeland	1,000	.....	do	State of Mo.
.....	do	Sarah Johnson	100	.....	do	Saline county.
.....	do	Charles Brown	200	.....	do	Do.
.....	Arrowrock township	J. Sappington	5,000	.....	Bituminous and cannel	Marshall, Mo.
.....	Jefferson township	B. C. Gains	15	.....	Bituminous	
.....	do	C. W. Hall	7	.....	do	
	SULLIVAN COUNTY.					
.....	Duncan township	George Hughes	1,500	.....	Bituminous	Browning, Mo.
Westlake's Bank mine	Buchanan township	.....	100	2	do	Buchanan township and Pollock.
	VERNON COUNTY.					
.....	.....	Arch. Thompson	720	5	Bituminous	Clayton, Mo.
.....	Virgil township	Richard H. O'Neal	110	7	do	Farm houses.

MONTANA TERRITORY.

	GALLATIN COUNTY.					
Chestnut mine	8 miles east of Bozeman.	Jas. D. Chestnut	224	6½	Lignite, coking	Bozeman and Fort Ellis.

NEBRASKA.

	PAWNEE COUNTY.					
.....	Southfork township	Victor Allarge	200	.....	Bituminous	Pawnee City.

NORTH CAROLINA.

	CHATHAM COUNTY.					
Gulf mine	Gulf	E. L. Houghton	350	6½	Bituminous	Raleigh, Charlotte, Fayetteville and Lawrenceburg.
Egypt mine	Egypt	.....	None.	4½	Bituminous, coke	Raleigh, Fayetteville, Portsmouth, and Wilmington.

OHIO.

	ATHENS COUNTY.					
Lick Run mine, No. 6 seam	Lick Run	W. A. Shoemaker & Co.	20,000	7	Bituminous, open-burning	Columbus, via C. and H. V. R. R. and north and west.
Ingham's mine, No. 6 seam	Kings	King Bros	4,020	2½	do	Towns westward on line of M. and C. R. R.
Poston & Pendleton mine, Nos. 6 and 7 seams.	Nelsonville	Poston & Pendleton	51,490	6½	Bituminous, white ash, open-burning.	Via C. and H. V. R. R., Ohio canal, and M. and C. R. R.
Hocking Valley C. and Salt Co.'s mine.	Chauncey	Hocking Valley C. & Salt Co.	3,453	6	Bituminous, open-burning	Own use and neighborhood.
Floodwood mine, No. 6 seam	Floodwood	B. B. & N. B. Sheffield	20,000	5 5/12	do	Via C. and H. V. R. R. to Columbus, thence north and northwest.
Hamley Run mine, No. 6 seam.	Hamley run	H. C. Will & Co	11,051	6	do	Via C. and H. V. R. R., and Detroit.
Nelsonville C. Min. Co.'s, Nelsonville seam.	Nelsonville	Nelsonville C. Min. Co.	16,520	6	do	Ohio, Ind., Mich., and Ill.
Akron Furnace mine, No. 6 seam.	Buchtel	Akron Iron Co	75,000	6½	Bituminous, open-burning, iron manufacturing.	Detroit, Mich., Rich., Ind., northern and western Ohio, etc.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ATHENS CO.—cont'd.			*Feet.*		
Section 10 mine, No. 6 seam	Nelsonville	W. B. Brooks & Son	12,520	.....	Bituminous, open-burning	Northern Ohio and northwest.
Carbondale mine, No. 6 seam	Carbondale	McClintock & Smith	63,000	3¾	Bituminous, white ash, open-burning.	Chillicothe and Cincinnati.
Laurel Hill mine, No. 6 seam	Brettland	Jas. O. Guild	24,591	6	Bituminous	Columbus, Cleveland, Toledo, Dayton, and Springfield.
Nelsonville C. and Coke Co.'s mine, No. 7 seam.	Buchtel	Nelsonville Coal and Coke Co.	3,705	6	Bituminous, coking or cementing.	Northern and central Ohio and northwest.
.....	Nelsonville	J. W. Crain & Co	1,600	.....	Bituminous	Springfield, Ohio.
.....	do	E. C. Washburn	1,200	.....	do	Nelsonville, Ohio.
.....	do	Rasser & Conkner	1,000	.....	do	Do.
.....	do	Matthew Butt	1,600	.....	do	Do.
	BELMONT COUNTY.					
Pittsburgh mine, No. 8 seam	Bellaire	Beckershausen & Sterritt.	26,000	6½	Bituminous	Parkersburgh, Ohio river steamboats, and Bellaire and L. W. R. R.
Hellings mine	Martin's Ferry	Henry Hellings	9,600	5½	do	Martin's Ferry.
Kidd mine, No. 8 seam	Quincy	John Kidd	20,000	5¾	Bituminous, cementing	Balt. and Ohio R. R. Co.
Bernard mine, No. 6 seam	Bellaire	W. G. Bernard	7,000	5½	Bituminous	Bellaire and river trade.
Wegee mine, No. 6 seam	Wegee	P. Shover	12,288	5⅝	do	Farmers and mills between Wheeling and Parkersburgh, West Va.
Union mine, Pittsburgh seam	Dillie's bottom	T. Davis & Son	14,217	5⅝	Bituminous, soft; iron and steel.	Ohio river points from Moundsville to Parkersburgh, West Va.
Rainey Bank mine, No. 8 seam.	Rainey's switch	Rainey Bank C. Co	100,000	5½	Bituminous, cementing	Cleveland.
Franklin mine, Wheeling or Pittsburgh seam.	Stewartsville	Stewart & Mehan	18,000	5¾	Bituminous, coking	B. and O. R. R.
Barnesville mine, Nos. 8 and 8 C seams.	Barnesville	C. Dawson	5,000	9	Bituminous	Local.
Belmont mine, Wheeling seam	Bellaire	Belmont Coal Co	65,443	5½	do	Points between mine and Louisville, Ky., and home.
.....	Near Bellaire	Wm. Davie & Bro	2,400	.....	do	B. and O. R. R.
.....	do	Jos. Gallaher	2,000	.....	do	Local market.
.....	do	C. C. & J. Kelly	1,700	.....	do	Bellaire, Ohio.
.....	do	Wm. Alton	1,680	.....	do	Do.
.....	do	I. C. Henry	3,400	.....	do	Do.
.....	do	J. S. Sullivan	3,800	.....	do	Do.
.....	Bellaire and vicinity	Beck & Rankin	1,200	.....	do	River to steamboats.
.....	do	F. Auschutz	2,000	.....	do	Powhatan and vicinity.
.....	do	Bonar & Kocher	1,200	.....	do	Do.
.....	do	I. J. Betts, F. Owens, and others.	1,200	.....	do	Do.
.....	do	W. V. Wallace	800	.....	do	Local market.
.....	do	John Lewis	1,600	.....	do	Do.
.....	Bridgeport and vicinity	B. W. McCormick	6,000	.....	do	West Wheeling, local.
.....	do	Robert Cruth	2,880	.....	do	Do.
Rhodes mine	do	Mike Lyell	4,750	.....	do	Bridgeport and vicinity.
.....	do	B. McConnehaugh	6,400	.....	do	Do.
.....	do	Wilban McConnehaugh	13,000	.....	do	Do.
.....	do	William Fraser	2,400	.....	do	Do.
.....	.....	Persons about Saint Clairsville.	4,000	.....	do	Saint Clairsville, Ohio.
.....	.....	Persons about Flushing.	800	.....	do	Flushing, Ohio.
.....	.....	Persons about Morristown.	800	.....	do	Morristown, Ohio.
.....	.....	Persons about Mamocks and Glencoe.	1,000	.....	do	Mamocks and vicinity.
.....	.....	Persons about Goshen township.	1,200	.....	do	Belmont, Fairmont, etc.
.....	Bridgeport, Martin's Ferry, etc.	R. Heatherington	3,000	.....	do	Bridgeport and local.
.....	do	H. Kinlein	6,300	.....	do	Do.
.....	do	Carl Allen	2,400	.....	do	Do.
.....	do	A. D. Newland	2,836	.....	do	Martin's Ferry.
.....	do	William Brooks	6,000	.....	do	Do.
.....	do	H. Deal and others	6,500	.....	do	Glen's Run and vicinity.
.....	Bellaire and others	A. Keyler	480	.....	do	Bellaire, Ohio.
.....	do	R. Haslop	2,000	.....	do	Do.
.....	do	J. Haffman	1,953	.....	do	Do.
.....	do	Mrs. Fowler and others	3,000	.....	do	Badgersburgh and vicinity.
.....	.....	Persons in Mead twp	800	.....	do	Local market.
.....	.....	Persons in Somerset township.	1,000	.....	do	Do.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BELMONT CO.—cont'd.			*Feet.*		
.....	.....	Simeon Merrill	3,520	.....	Bituminous	Infirmary and country.
.....	Bellaire	Estate of E. G. Morgan	11,100	.....	do	Bellaire, Ohio.
.....	do	Jas. Rufer	1,500	.....	do	Do.
.....	Pultney township	Wilson S. Dailey	3,600	.....	do	Saint Clairsville.
	CARROLL COUNTY.					
Empire mine	Dell Roy	Empire Coal Company	1,367	5	Bituminous, soft, white ash	Canton and Cleveland.
Connotton Valley mine, No. 6 seam.	do	Connotton Valley Coal Company.	970	5¼	Bituminous	Canton, Akron, and Cleveland.
.....	.....	D. O. Rutan	1,120	.....	Bituminous, cementing	Carrollton, Ohio.
.....	.....	J. Huston	800	.....	do	Do.
.....	.....	John Moody	1,600	.....	Bituminous	Do.
.....	.....	Wm. Brann	800	.....	do	Neighborhood.
.....	.....	Jas. C. Price	800	.....	do	Do.
.....	.....	Sam'l Baker	880	.....	do	Do.
.....	.....	Sam'l Allen	450	.....	do	Do.
.....	.....	Levi Hunt	500	.....	do	Do.
.....	.....	Wm. Benedum	490	.....	do	Do.
.....	.....	Asbury Harsh and others.	650	.....	do	Do.
.....	.....	Several farmers	600	.....	do	Do.
.....	.....	Jackson W. Allen	450	.....	do	Do.
	COLUMBIANA COUNTY.					
Graffton Iron Co.'s mine	Leetonia	Graffton Iron Co	20,253	2½	Bituminous, coking	Only at furnace.
Maple Hill mine, No. 6 seam	*Teegardin*	*Maple Hill Co*	23,526	4	Bituminous, open-burning	Cleveland and points along line of N. Y., P., and O. R. R.
Shelton mine, No. 6 seam	do	Wm. Barrett	3,000	6	do	Cleveland, Ohio.
Rock Hill mine, No. 3 seam	Robbins station	P. C. Maurer & Co	9,895	3½	Bituminous, soft	Cleveland and Niles, Ohio.
Columbiana C. Co.'s mine, Salineville, Big, and Strip seams.	Salineville	Columbiana C. Co	44,707	9	Bituminous, open-burning and cementing, white ash.	Cleveland, via C. and P. R. R.
Diamond Valley Coal Co.'s mine, Salineville Strip seam.	do	Diamond Valley C. Co.	2,333	3	Bituminous, cementing, low in sulphur, white ash.	C. and P. R. R.
New Lisbon Salt Co.'s mine, No. 5 seam.	.....	Robert Eells	4,512	3	Bituminous, open-burning	New Lisbon, Ohio, largely at owners' salt-works.
Prospect Hill mine, No. 7 and No. 7 A seams.	East Palestine	Filer & Lawton	20,112	7	Bituminous, cementing, gas	Cleveland, New Castle, Penna., Youngstown, local trade.
State Line mine, No. 7 and No. 7 A seams.	do	State Line C. Co	101,800	6 1/12	Bituminous, low in sulphur, cementing, white and reddish ash.	Pitts., Fort Wayne and Chicago R. R.
Shaft Coal Co.'s mine, Salineville Big seam.	Salineville	Ohio and Penna. C. Co.	16,110	5½	Bituminous, moderately cementing.	Cleveland.
Hayes mine, Salineville Big seam.	do	do	43,718	5	do	Do.
Jones mine, Salineville Big seam.	do	do	53,520	5	do	Do.
Conrad mine, Salineville Big seam.	do	do	13,998	5½	do	Do.
Cherry Valley Iron Works' mine.	Leetonia	Cherry Valley I. Works	72,996	2½	Bituminous, soft	Co.'s blast-furnaces and rolling-mill.
Crannage & Anderson mine, Salineville Strip seam.	Salineville	Manufacturer's C. Co	17,000	3	Bituminous, moderately cementing, white ash.	
Farmer mine, Salineville Big seam.	do	do	30,000	5½	Bituminous, moderately cementing.	Cleveland.
.....	Unity township	Samuel Sheets	480	.....	Bituminous	Palestine and surrounding country.
.....	do	Jos. Davis	300	.....	do	Unity township.
.....	do	Samuel Wilhelm	280	.....	do	Do.
.....	do	—— Hizey	200	.....	do	Do.
.....	.....	A. J. Cowan	640	.....	do	Neighborhood.
.....	.....	Syme & Henry	1,832	.....	do	Do.
.....	.....	Henry Mounts	920	.....	do	Do.
.....	.....	Battin & Pettit	1,000	.....	do	Do.
.....	.....	W. B. Stout	960	.....	do	Do.
.....	.....	A. Armstrong	1,500	.....	do	Cleveland, Ohio.
.....	.....	J. R. Donley	1,440	.....	Bituminous, cementing	New Lisbon, Ohio.
.....	.....	Minor & Co	900	.....	Bituminous	Do.
.....	.....	Jacob Forker	480	.....	do	Neighborhood.
.....	.....	William Ramsey	400	.....	do	Do.
.....	.....	William Powell	1,600	.....	do	Do.
.....	.....	Nathan Stanley	400	.....	do	Do.
.....	.....	Pettet & Shreve	480	.....	do	Do.
.....	.....	Washington Bros	500	.....	do	Do.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	COLUMBIANA COUNTY—continued.			*Feet.*		
		Four farmers	500		Bituminous	Neighborhood.
		Six farmers	800		do	Do.
		Isaac Warwick	400		do	Do.
		David Walker	400		do	Do.
		Walter Barr	480		do	Do.
		Jos. Ritchie and others	500		do	Do.
		K. Thomas Temple	400		do	Do.
		David Kelley	450		do	Do.
		H. Nicholson	500		do	Do.
		George Jeffrey	480		do	Do.
		James Murphy	600		do	Do.
	Knox township	Stanley & Co	1,000	3	do	Georgetown, Ohio.
	do	Gideon Stanley	1,000	2	do	Do.
	do	Jos. J. Shrue	400	3	do	Home.
	do	Ruben Sheegan	900	3	do	Do.
	Elk Run township	Thomas Stephenson	8,000	3	do	Do.
	Wellsville	D. Hibbits	200		do	Wellsville.
	do	R. M. Josephs	300	4	do	Do.
	do	J. McCollough	500	4	do	Do.
	COSHOCTON COUNTY.					
Hay mine, No. 6 seam	Coshocton	William G. Hay	4,000	4	Bituminous, moderately cementing.	Coshocton and vicinity.
Beech Hollow mine, No. 6 seam.	do	Prosser & Cassingham	20,000	3½	Bituminous, moderately cementing, purple ash.	Newark and line of P., C. and St. L. R. R.
Coalport mine, No. 6 seam	Franklin station	S. Barnes & Co	15,500	3¾	Bituminous, moderately cementing.	Do.
Home mine, No. 6 seam	Coshocton	G. W. Ricketts	11,064	3⅓	Bituminous, moderately cemementing, purple ash.	Newark, Columbus, Springfield, and Mount Vernon.
Union Coal and Mining Co.'s mine, No. 6 seam.	do	Union Coal and Mining Co.	18,000	4	do	Line of P. C. and St. L. R. R., Newark, Columbus, and Richmond, Indiana.
	Tuscarawas and Jackson townships.	William R. Hall	1,400		Bituminous	Coshocton.
	do	George Randle	600		do	Roscoe and vicinity.
	do	William G. Moffitt	1,080		do	Do.
	do	Williams & De Gong	2,000		do	Wichsville and Dennison.
	Franklin township	George Barclay	640		Bituminous, cementing	Neighborhood.
	do	David Davis	2,000		do	Newark and Ohio canal.
		James Fitch	600		Bituminous	
		William Poland	400		do	
		Edw. Powell	440		do	
		Wilson & McGarrity	942		do	
	Jackson township	Ira Bell	1,250	3½	do	Surrounding country.
	do	Edw. Prosser	3,500	4	do	Newark.
	do	Jos. Stubbs	1,200	4	do	Surrounding country.
	do	Jas. Passmore	500	4	do	Do.
	Coshocton	Jos. Robeson	1,500	4	do	Coshocton.
	GALLIA COUNTY.					
Cheshire mine, Pittsburgh seam.	Cheshire	Chas. A. Carl	8,539	4	Bituminous, open-burning, white ash.	Gallipolis, Ohio, and other points along Ohio river, in Ohio and W. Va.
Small mine	Bush's Mill	Chas. R. Small	2,000	3½	Bituminous, open-burning	Ohio river steamboats.
	Centerville	Wm. S Morgan	400		Bituminous	Centerville, Ohio.
	Kygerville	Asel Ysel	600		do	Neighborhood.
	Cheshire	Geo. Ritz	840		do	Do.
	Addison township	Jos. Rife	600		do	Addison township.
	do	John Shaber	400		do	Do.
	GUERNSEY COUNTY.					
Cambridge C. Co.'s mine	Cambridge	Cambridge C. Co	42,000	5½	Bituminous, free-burning	B. and O. R. R. Co., Can. Southern and Mich. Cen. R. R., local trade in Ind., Mich., and Northern Ohio.
Scott's Salt Mfg. and Min. Co.	Danford	Scott's Salt Mfg. and Min. Co.	40,000	5½	Bituminous	B. and O. R. R. Co., and Mich. Central R. R., and lake trade.
Guernsey Coal Co.'s mine, No. 7 seam.	Cambridge	Guernsey Coal Co	8,000	5½	Bituminous, slightly cementing, rather soft.	Balt. and O. and Northwestern R. R.
Nicholson mine, No. 7 seam	do	Ohio Coal Co	48,000	6	Bituminous	Cleveland, Marietta, and Mansfield.
Shaft mine	Byesville	Manufacturers' C. Co	16,600	5½	do	Cleveland.
		Thos. Ford and others	1,200		do	Middletown, Ohio.
		D. Mc. Peak and others	800		do	Antrim and vicinity.
		J. W. Secrist and others	800		do	Point Pleasant.
	Munroe township	Jas. Giles	250	2½	do	New Birmingham, Ohio.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	HARRISON COUNTY.			*Feet.*		
.....	German township	Samuel Mull	600	.....	Bituminous	
.....	Franklin township	McMillen & Bro	2,000	.....	do	Deersville.
.....	.....	Jas. Kerr	800	4½	do	Cadiz, Ohio.
.....	.....	J. H. Fare	1,000	4½	do	Do.
.....	.....	M. S. Jameson	1,600	4½	do	Do.
.....	Rumley township.	John Lowmiller	800	.....	do	Rumley, township.
.....	do	Isaac Stewart	1,200	.....	do	Do.
.....	Monroe township	Abraham Weyant	400	4	do	Bowerston township.
.....	do	Harrison Mining Co	12,000	4	do	Columbus and Detroit.
	HOCKING COUNTY.					
Gore mine	Gore	Thomas Iron Works	42,987	7½	Bituminous, open-burning, white ash, iron manufacturing.	Exclusively for iron-works, Gore furnace, and Winona.
Carbon Hill mine, No. 6 seam	Carbon Hill	J. H. Somers	70,000	7½	Bituminous, open-burning	Northern and central Ohio and northwest.
Lee Furnace mine, No. 6 seam.	Mowry	Hocking Iron Co	7,000	7	Bituminous, open-burning, iron manufacturing.	Exclusively in furnace of company.
Section 19 mine, No. 6 seam	Nelsonville	W. B. Brooks & Son	112,683	6	Bituminous, open-burning	Northern Ohio and northwest.
Craft's Iron Co.'s mine, No. 6 seam.	Greendale	.....	15,200	8	Bituminous, open-burning, blast furnaces.	Exclusively at furnace.
Black Diamond mine, No. 6 seam.	Haydenville	P. Hayden	83,000	5½	Bituminous, open-burning, white ash.	Columbus, Dayton, Springfield, Xenia, Del., Toledo, Fostoria, Fort Wayne, Inda, Bello Fountaine, Marion, Mount Vernon, Circleville, Chillicothe, Athens, Hillsborough, and Lynchburgh.
.....	Washington township.	Thomas Harris	300	.....	Bituminous	Neighborhood.
	HOLMES COUNTY.					
Mayers mine, No. 6 seam	Millersburgh	Bowen Bros	9,613	4	Bituminous, open-burning	Mount Vernon, Danville, Napoleon, and Westerville.
.....	.....	Henry Ablett	450	.....	Bituminous	Millersburgh, Ohio.
.....	.....	John Horn	400	.....	do	Do.
.....	.....	Valentine Hershberger	400	.....	do	Neighborhood.
.....	Prairie township	George Chambard	700	1½	do	Home.
.....	Salt Creek township	John Ewing	800	.....	do	Fredericksburgh, Ohio.
.....	do	John F. Armstrong	600	.....	do	Do.
	JACKSON COUNTY.					
Eliza Furnace mine, Wellston seam.	Wellston	H. S. Bundy	2,500	4½	Bituminous, open-burning, white ash, iron manufacting.	Cincinnati and Dayton, Ohio.
Huron mine, No. 1 seam	Jackson	Huron Iron Company	12,000	3½	Bituminous, white ash, low in sulphur, iron manufacturing.	Own furnace and employés.
Milton Furnace and C. Co.'s mine, Wellston seam.	Wellston	Milton Furnace and Coal Company.	38,000	4	Bituminous, open-burning, iron manufacturing.	Mostly own furnace, rest to Scioto-ville.
Martin mine, Jackson Hill seam.	Coalton	John P. Martin	5,000	3	Bituminous, open-burning, white ash.	Dayton and Springfield, Ohio.
Wilson mine, Jackson Hill seam.	do	J. H. Wilson & Son	13,500	3	do	Dayton, Springfield, Toledo, and Sandusky.
Jones & Morgan mine, Jackson Hill seam.	do	Jones & Morgan	7,930	3	Bituminous, white ash, open-burning.	Dayton and Chillicothe, Ohio.
Scott, Mohler & Co. mine, Jackson Hill seam.	do	Scott, Mohler & Co	8,000	3½	do	Dayton, Xenia, and Washington, Ohio.
Carr mine, Jackson Hill seam	Jackson	I. S. Carr	3,000	2 7/12	do	Dayton, Springfield, and Sandusky, Ohio.
McKitterick mine, Jackson Hill seam.	do	J. J. McKitterick	4,000	2⅔	Bituminous, white ash, open-burning, block.	Dayton and Springfield, Ohio.
Newport mine, Jackson Hill seam.	do	James Newport	3,000	2⅔	Bituminous, white ash, open-burning.	Line of Springfield Southern R. R.
Miller & Co. mine, No. 1 seam.	do	W. N. Miller & Co	2,400	3½	Bituminous, white ash, open burning, iron manufacturing.	Jackson, Ohio.
Kyle, Shotts & Co. mine, No. 1 seam.	do	Kyle, Shotts & Co	5,000	4	do	Jackson and Springfield, Ohio.
Price Bro.'s mine, Jackson Hill seam.	do	Price Bros	8,000	2½	Bituminous, open-burning	Dayton, Springfield, Sandusky, Tiffin, and Toledo, Ohio.
Globe Iron Co.'s mine, No. 1 seam.	do	Globe Iron Co	24,000	4	Bituminous, open-burning, iron manufacturing.	Own furnace.
Tropic mine, No. 1 seam	do	Tropic Iron Co	4,648	4	do	Do.
Wellston C. and I. Co.'s mine, Wellston seam.	Wellston	Wellston C. and I. Co	20,555	4	Bituminous, open-burning, white ash, iron manufacturing.	Own furnace, Cincinnati, Hillsborough, Greenfield, and Dayton.
Star Furnace Co.'s mine, No. 1 seam.	Jackson	Star Furnace Co	2,815	3½	Bituminous, open-burning, white ash, low in sulphur, iron working.	Own use.
Oak Hill F. B. and C. Co.'s mine, No. 5 seam.	Oak Hill	O. A. F. B. and C. Co	2,880	3	Bituminous, open-burning, purple ash.	Oak Hill, Ohio, principally used by fire brick co.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	JACKSON CO.—cont'd.			*Feet.*		
Darling mine, Jackson Hill seam.	Coalton	Pimlott & Hall	11,000	3½	Bituminous, block, open-burning.	Dayton and Springfield, Ohio.
Callayhan & Galliland mine, No. 1 seam.	Jackson	Callayhan & Galliland	4,800	3¾	Bituminous, white ash, open-burning, iron working.	Springfield and Washington, Ohio.
Darling mine	Coalton	Pimlott & Hall	12,000	3½	Bituminous	Springfield, Dayton, Toledo, and Sandusky.
Jackson Co.'s cannel mine, Jackson Hill seam.	do	Cooper & Scott	2,440	3	Bituminous and cannel, open-burning.	Dayton and Chillicothe, Ohio.
Ætna Fire Brick Co.'s mine, No. 5 seam.	Oak Hill	Ætna Fire Brick Co	1,700	3½	Bituminous, open-burning	Oak Hill, Ohio.
Globe mine	Jackson	Globe Iron Co	18,000	3½	Bituminous	Own Fulton furnace.
		Jefferson Furnace Co	340		do	Furnace families.
		E. J. Jankins	400		do	Oak Hill, Ohio.
		John Thomas	840		do	Do.
		Clare, Didnit & Co	480		do	Furnace families.
		Keystone Co	600		do	Do.
		John Cobb	440		do	Cincinnati, Ohio.
		Lewis Gibson	600		do	Jackson, Ohio.
		Richard Bartlett	1,200		do	Do.
		Thompson & Moore	4,000		do	M. and C. R. R line.
		William Chambers	400		do	Jackson, Ohio.
		Henry Vanfassen	1,200		do	Do.
		Jefferson Howe	480		do	Do.
	Monroe furnace	Union Iron Co	520		do	Furnace families.
		Cornelia furnace	400		do	Do.
	JEFFERSON COUNTY.					
High shaft, No. 6 seam	Steubenville	Steubenville C. and Min. Co.	50,076	3⅝	Bituminous, soft, coking, mfg. iron and sharp-edged tools, steam and blacksmithing.	Steubenville City, P., C. and St. L. R. R., Columbus, Dayton, and Urbana.
Walnut Hill mine	Yorkville	O. and P. C. Co. and S. M. Bloomer.	78,000	5	Bituminous	Cleveland, Bellaire, Wellsville, Fort Wayne R. R.
Jefferson C. & I. Co., No. 6 seam.	Steubenville	Jefferson C. and I. Co	37,030	4	Bituminous, coking	
Groff mine, No. 7 seam	Linton	W. W. Nessly	12,672	4	Bituminous	Cleveland.
Steubenville Furnace and I. Co.'s mine, No. 6 seam.	Steubenville	Steubenville Fce. and I. Co.	28,955	3½	Bituminous, coking	Furnace.
Diamond mine, No. 6 seam	Linton	S. N and W. G. McCullough.	16,702	6⅝	Bituminous	Local.
La Grange mine	Phillipsburgh	Alex. Gilchrist	4,000	4½	do	Steamboat trade.
Rush Run mine, Steubenville seam.	Rush run	Rush Run Shaft C. Co.	7,000	4 11/12	do	Cleveland, Ohio.
Jefferson mine, Steubenville seam.	Steubenville	Jefferson Iron Works.	64,318	3⅜	Bituminous, soft	Jefferson Iron Works.
Hammondsville mine, Hammondsville strip seam.	Hammondsville	W. H. Wallace & Sons.	12,275	2½	Bituminous, free from pyrite and slate.	Cleveland.
Junction Iron Co	Mingo junction	Junction Iron Co	10,012		Bituminous	
	Irondale	Isaac Thomas	700		do	Local and on R. R.
	Springfield township	Cicero Davidson	550	5	do	Local trade.
	do	Levi Miller	500	5	do	Do.
	Wayne township	Harrison H. Albaugh	680		do	Wayne twp., Jefferson Co.
	do	Henry M. Ralston	600		do	Do.
	LAWRENCE COUNTY.					
Hanging Rock mine, No. 5 seam.	New Castle	Means, Kyle & Co	56,400	3½	Bituminous	Hanging Rock, Ohio, steamboats, also along Ohio river as far as Louisville, Ky.
Sheridan Min. Co., No. 6 seam.	Sheridon C. Works	Sheridon Min. Co	24,000	3½	do	Cincinnati, Louisville, and Portsmouth, via Ohio river.
Washington furnace mine, No. 6 seam.	Washington furnace	Union Iron Co	12,000	3	do	Own furnace.
		W. C. Hutchins & Co	1,000		do	Waterloo and vicinity.
		Geo. W. Collins	500		do	Hanging Rock and vicinity.
		T. Caldwell	400		do	Do.
		T. J. Neal and others	280		do	Vicinity of Gallia Co.
		J. M. Kelley	2,440		do	West Ironton.
		I. H. McGee	480		do	Rock Camp.
		Wm. Wilson	1,520		do	Marion.
		A. Massey	800		do	Oak Ridge.
		Thos. Tagg and others	1,000		do	Greasy Ridge.
		I. M. Sloan	800		do	Arabia.
	Ironton	Wm. Herdman	4,527		do	Ironton, Ohio.
	do	John A. Blackwell	1,355		do	Do.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LAWRENCE CO.—cont'd.			*Feet.*		
	Ironton	S. Klein	1,005		Bituminous	Ironton, Ohio.
	do	T. G. Atkins	500		do	Do.
	do	S. C. Simpson	1,312		do	Do.
	do	A. Francisco	1,045		do	Do.
	Near Ironton	I. Gillin	2,200		do	Do.
	do	C. T. M. Kemp	2,200		do	Do.
	do	Mr. Lawless	1,200		do	Do.
	do	G. Thompson	470		do	Do.
	do	Geo. May	900		do	Do.
	do	Wm. Kelley	400		do	Do.
	Elizabeth township	Etna Iron Works	2,800		do	Ourselves.
	do	Lawrence Iron M'f'g Co.	1,200		do	R. R. engines.
	do	Means, Kyle & Co.	1,200		do	Pine Grove furnace.
	Rome township	Owen Gillett	700		do	Proctorville, Ohio.
	do	Spencer Gillett	750		do	Do.
	MAHONING COUNTY.					
Darrow mine, No. 1 seam	Lowellville	Struther's Iron Co	3,555	3	Bituminous, block	Struther's furnace,
John Henry mine, Mineral Ridge seam.	Ohltown	Homer Baldwin	10,678	3	Bituminous	Cleveland.
Walter mine, Nos. 3 and 4 seams.	Washingtonville	Walter & Co	19,809	6	do	Do.
Buckeye mine, No. 1 seam	Scrip hill	James Neilson	7,814	2¼	do	Youngstown.
Enterprise mine, No. 1 seam	Youngstown	Mahoning Iron Co	1,890	3	Bituminous, open-burning; *furnace.*	Do.
Foster mine, No. 1 seam	do	Foster Coal Co	48,929	4	Bituminous, block	Western and home.
Kyle mine	Kyle Corners	Kyle Coal Co	50,000	4	do	Youngstown and Cleveland.
Ohltown mine, No. 1 seam	Ohltown	Harris, Maurer & Co	16,780	3	Bituminous, domestic, rolling-mill, and steam.	Niles.
Pennel mine	Austintown	New Lisbon Coal Co	18,000	2–4	Bituminous	Youngstown, Niles, and Cleveland.
Powers mine	Youngstown	A. and W. Powers	38,850	3½	Bituminous, furnaces	Cleveland, Fairport, and Youngstown.
Austin mine, Mineral Ridge seam.	Mineral ridge	Todd, Wells & Co	17,000	3½	Bituminous	Cleveland.
———, Mineral Ridge seam	do	Campbell Coal Co	2,000	4	do	Local trade.
	MEDINA COUNTY.					
Wadsworth C. Co.'s mine, No. 1 seam.	Wadsworth township	Wadsworth Coal Co	56,000	4	Bituminous, open-burning, white ash.	Akron and N. Y., Penn., and O. R. R. Co.
Diamond mine, No. 1 seam	do	Humphrey & Coleman	50,000	4	do	Do.
	MEIGS COUNTY.					
Pomeroy Coal Co.'s mine, No. 8 seam.	Pomeroy	Pomeroy Coal Co	180,266	4¾	Bituminous	Maysville, Ky, Cincinnati, Ohio, Louisville, Ky., Portsmouth and Ripley, Ohio.
Slope mine, first seam	Syracuse	Union Mines Co	5,964	5	do	Towns along Ohio river.
Riverside mine, Pomeroy seam.	Antiquity	Ohio Coal Co	8,000	5⅔	do	Cincinnati and Louisville.
Syracuse Salt and Coal Co.'s mine, Pittsburgh seam.	Syracuse	Syracuse Salt and Coal Co.	53,339	4⅔	do	Steamboats, Cincinnati, and salt furnace.
S. Wyllys Pomeroy's mine, Pomeroy seam.	Pomeroy	S. W. Pomeroy	33,000	5	do	Cincinnati.
Williams mine, Pomeroy seam.	Minersville	John E. Williams	40,056	4⅔	do	Cincinnati and Louisville.
	Pomeroy and vicinity.	M. Ebbersbuch	2,600		do	Pomeroy, Ohio, and vicinity.
	do	Seth Pain	2,000		do	Rutland, Ohio, and vicinity
	do	John Stiff	1,000		do	Vicinity of Middleport.
	do	John Carr	800		do	Do.
	do	R. G. Wells	1,000		do	Paigeville, Ohio.
	Pomeroy and vicinity.	*H. S. Holt*	*400*		*do*	*New Lima, Ohio.*
	Middleport, Pomeroy, and vicinity.	Jos. Wells	4,000		do	Middleport and vicinity.
	do	R. H. Hayman	3,000		do	Do.
	do	J. G. Stewart	2,000		do	Do.
	do	William Snowdon	2,000		do	Do.
	do	George Russell	2,000		do	Do.
	do	Thomas King	1,200		do	Do.
	Pomeroy and vicinity.	N. Watson	800		do	Middleport and vicinity of mine.
	do	I. Bradfield	800		do	Do.
	do	P. Hysell	2,000		do	Do.
	do	James Donaldson	2,400		do	Pomeroy and vicinity of mine.
	do	S. F. Moore	1,200		do	Do.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MEIGS CO.—cont'd.			*Feet.*		
	Pomeroy and vicinity.	John Carlton and others.	2,400		Bituminous	Pomeroy and vicinity of Chester.
	do	J. M. Strider	800		do	Pomeroy and mill.
	do	Montague estate	400		do	Pomeroy and vicinity.
	do	Montgomery & Hawk.	800		do	Bungtown and mill.
	do	Thomas Bradford and others.	2,000		do	Rock Spring and vicinity.
	do	C. Haber	2,400		do	Middleport and vicinity of mine.
	MONROE COUNTY.					
	Stafford township	Persons in Stafford	1,600		Bituminous	Local.
	Perry township	Kincaid & Bottenfield.	800		do	Antioch, Ohio.
	Center township	Aaron Morris	60		do	Woodsfield, Ohio.
	do	John Friax	400		do	Do.
	do	Samuel Smith	400		do	Do.
	do	Robert McCanemore	50		do	Do.
	MORGAN COUNTY.					
		William Whipple	1,200		Bituminous	McConnelsville, Ohio.
		Martin, Kinnard & Co.	750		Bituminous	Neighborhood.
		Nathan Woodyard	800		do	Do.
		Jno. Barnes	480		do	Windsor, Ohio.
		Martin Spurier	450		do	Neighborhood.
	MUSKINGUM COUNTY.					
Orvins mine, No. 6 seam	Orvins' landing	Jas. Orvins	10,000	3½	Bituminous, cementing	McConnelsville and intermediate points to Muskingum river.
Seelover mine	Zanesville	W. H. Seelover	1,664	3	Bituminous, open-burning	Zanesville.
Bridwell mine	do	Jas. Bridwell	2,080	3	do	Do.
Monitor mine	do	Hiram Cowell	2,080	3	do	Do.
Muskingum Valley mine, No. 6 seam.	Roseville	Geo. Vlereborne	10,000	3½	do	Cincinnati, Circleville, and Washington, Ohio.
Peacock mine, No. 6 seam	Gilbert	D. Matthews & Co	10,000	3	Bituminous, cementing	Newark, Mt. Vernon, Cleveland, Columbus, Dayton, and points in that range of country.
Del Carbo mine, No. 6 seam	Roseville	Consolidated C. & M. Co.	22,000	4½	Bituminous, open-burning	Zanesville, Cincinnati, Columbus, Washington, and Circleville, Ohio.
	Coal mines	Geo. E. Langan	1,600		Bituminous	Zanesville.
	do	Lewis Harper	4,056		do	Do.
	do	Eli Lucas	2,028		do	Do.
	do	J. W. Walls	1,480		do	Do.
	do	Z. Reed	4,000		do	Do.
	do	J. Morgan	3,000		do	Do.
	do	Henry Greiner	4,000		do	Do.
	do	E. Harper	6,280		do	Do.
	do	J. L. Taylor	3,348		do	Do.
	do	Isaac Melvin	1,600		do	Do.
	do	P. G. McCormick	2,418		do	Do.
	do	John Richards	1,800		do	Do.
	Madison township	J. Varley	1,800		do	Dresden and surrounding country.
	do	Henry McCain	1,200		do	Do.
	do	Jas. Little	1,000		do	Do.
	Zanesville corporation.	P. Stockdale	800		do	Zanesville.
	do	Orrin Ballou	2,400		do	Do.
	Jackson township	L. B. Goff & Bro. and George Netliers.	200		do	Frazeysburgh and Irville.
	Hopewell township	Henry Dick	1,453		do	Western part of Muskingum county and eastern townships of Licking county.
	do	Jos. Porter	530		do	Do.
	do	Samuel Porter	600		do	Do.
	do	George Porter	300		do	Do.
	Coal mines	J. Stevens	1,800		Bituminous, cementing	Salt furnace and Neighborhood.
	do	Charles Stone	640		do	McConnellsville, Ohio.
	do	G. Scarvill	1,000		do	Do.
	do	S. Guttini	2,000		do	Salt furnace.
	do	H. Blundy	3,600		do	Do.
	do	J. S. Marcellus	800		Bituminous, open-burning	Zanesville, Ohio.
	do	Henry Horton	4,800		Bituminous	Do.
	do	G. Wheeler	5,200		do	Do.
	do	J. J. Granger	1,600		do	Do

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MUSKINGUM CO.—cont'd.			*Feet.*		
.....	Coal mines	Thomas Potts	3,000	.....	Bituminous	Zanesville, Ohio.
.....	do	R. White	2,663	.....	do	Do.
.....	do	George Trout	800	.....	do	McConnellsville, Ohio.
.....	.....	Isaac Crofft	800	.....	do	Newtonville, Ohio.
.....	.....	Andrew Goodheart	800	.....	do	Neighborhood.
.....	.....	Lett Bros	600	.....	do	Do.
.....	.....	Harrison Roberts	420	.....	do	Do.
.....	Harrison township	James Robinson	697	.....	do	McConnellsville and Taylorville.
.....	Muskingum township	Beattie Johnston	400	.....	do	Local.
.....	do	Ewing Fletcher	400	.....	do	Do.
	NOBLE COUNTY.					
Macksburgh mine, Pittsburgh seam.	Macksburg	Ohio Coal Co	10,000	.....	Bituminous, somewhat cementing.	Line of C. and M. R. R
.....	.....	Parties in Beaver twp.	1,200	.....	Bituminous	Beaver township.
.....	.....	Parties in Brookfield township.	800	.....	do	Brookfield township.
.....	.....	Parties in Buffalo twp.	700	.....	do	Buffalo township.
.....	.....	Parties in Center twp.	720	.....	do	Center township.
.....	.....	Parties in Elk twp	2,040	.....	do	Elk township.
.....	.....	Parties in Enoch twp.	600	.....	do	Enoch township.
.....	.....	Parties in Jefferson township.	1,000	.....	do	Jefferson township.
.....	.....	Parties in Marion twp.	640	.....	do	Marion township.
.....	.....	Parties in Seneca twp.	500	.....	do	Seneca township.
.....	.....	Parties in haron twp.	160	.....	do	Sharon township.
.....	.....	Various parties	560	.....	do	Stock township.
.....	.....	do	1,000	.....	do	Olive township.
.....	.....	do	1,000	.....	do	Caldwell township.
.....	.....	do	600	.....	do	Jackson township.
.....	Beaver township	William Lashley	600	4¾	do	Kennensburgh and vicinity.
.....	Marion township	John H. Shenkland	800	.....	do	Summerfield, Ohio.
.....	do	O'Neil Horton	640	.....	do	Do.
.....	Olive township	Toler Bros	400	.....	do	Caldwell, Ohio.
.....	do	Ezra Davis	450	.....	do	Do.
.....	do	William Cunningham	350	.....	do	Caldwell and vicinity.
	PERRY COUNTY.					
Consolidated C. and Min. Co., No. 6 seam.	New Straitsville	Consol. C. and Min. Co.	67,964	11	Bituminous	Central Ohio and Ohio lake ports.
Tague mine, Nelsonville seam.	McCluney	M. & P. Tague	16,862	3½	Bituminous, open-burning	Points on Cincinnati and Muskingum Valley R. R.
Tunnel Hill mine, Nelsonville seam.	New Lexington	Lyonsdale Coal Co	3,343	3½	do	Do.
No. 3 mine, No. 6 seam	Rendville	Ohio Central C. Co	15,000	8	Bituminous, open-burning, iron-making.	
Troy mine, No. 6 seam	New Straitsville	Thomas C. and I. Co.	108,569	10	do	Cleveland, Toledo, Detroit, W. and N.W.
XX mine, No. 6 seam	Shawnee	Sandusky and Shawnee C. and I. Co.	6,071	8	Bituminous, white-ash, open-burning; iron-making.	Own furnace exclusively.
Davies mine, No. 6 seam	Bristol station	Daniel E. Davies	3,120	3	Bituminous, open-burning	Along B. and O R. R.
Jones mine, No. 6 seam	McCluney	S. & J. Jones	7,200	3½	do	Along Cin. and Muskingum Val. R. R.
Sunday Creek mine, No. 6 seam.	Rendville	Sunday Creek C. Co	5,222	8½	do	Toledo, Cleveland and Columbus, by Ohio Cen. R. R.
Straitsville C. M. Co.'s mine, No. 6 seam.	New Straitsville	Straitsville Central Min. Co.	121,072	10	Bituminous, open-burning white-ash.	Columbus, Cleveland, Dayton, Springfield, Sandusky, Detroit, etc.
Baird Iron Co.'s mine, No. 6 seam.	Baird Iron Works	Baird Iron Co	15,749	10	Bituminous, dry-burning	Own furnace.
Brilliant mine, No. 6 seam	McCuneville	J. E. Payne	5,000	3½	Bituminous, open-burning	Along B. & O. R. R. and Cen. O. R. R.
N. Y. and Straitsville C. and I. Co.'s mine, No. 6 seam.	Shawnee	N. Y. and Straitsville C. and I. Co.	100,000	8	Bituminous, open-burning; iron manufacturing.	Vilas furnace, Toledo, Detroit, north and northwest.
Straitsville C. Co.'s mine, No. 6 seam.	New Straitsville	Straitsville C. Co	77,646	9	do	Cleveland, Detroit, Dayton, Toledo, etc.
Furnace C. Co.'s mine, No. 6 seam.	Shawnee	Jas. G. Manly	42,179	9	Bituminous, open-burning; smelting iron.	Zanesville and Columbus, Ohio.
Card & Upson C. Co.'s mine, Nelsonville seam.	do	Card & Upson C. Co	47,879	9½	Bituminous, open-burning	Lake trade north and northwest, via B. and O. R. R.
Straitsville Min. Co., No. 6 seam.	New Straitsville	J. S. Doe & Co	92,640	8	do	Ohio, Mich., Cana., and parts of Wis., Ind., and Ill.
Shawnee Valley C. and I. Co.'s mine, No. 6 seam.	Shawnee	Shawnee Valley C. and I. Co.	64,163	9–12	Bituminous, hard, dry	Toledo, Ohio, Detroit, Mich., Chi., Ill. and points on lake Erie.
Chicago mine, No. 6 seam	New Straitsville	W. P. Rend & Co	51,872	8	Bituminous, open-burning white-ash.	Chicago, Ill., and Columbus, Ohio.
Sunday Creek mine, No. 6 seam	Rendville	do	25,000	7	Bituminous, very pure	Chicago, Cleveland, and Columbus.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	PERRY CO.—cont'd.			*Feet.*		
Straitsville Cannel C. Co.'s mine, Nelsonville seam.	Shawnee	M. A. Corcoran	33,772	12	Bituminous, open-burning	Northwest, Columbus, Chicago, Detroit, etc., Toledo, and Sandusky.
	Coal-mining	S. S. Avery	1,251		Bituminous	New Lexington, Ohio.
	do	Isaac Denny	1,000		do	Do.
	do	Thomas Green	800		do	Northern Perry county, Ohio.
	PORTAGE COUNTY.					
Wilson mine	Palmyra	W. B. Wilson	10,900	4	Bituminous block, open-burning, splint.	Cleveland and Chicago.
Black Diamond mine, No. 1 seam.	do	P. L. Kimberly	16,380	3½	Bituminous, open-burning	Do.
	Atwater township	David Johns	500		Bituminous	Local.
	SCIOTO COUNTY.					
Webster Fire-Brick Co.'s mine, No. 3 seam.	Webster	Webster Fire-Brick and C. Co.	2,200	1 5/12	Bituminous, open-burning, purple-ash.	Webster Fire-Brick Works.
	Bloom township	Edw. Kühner	320		Cannel	Portsmouth, Ohio.
	do	W. L. Cook	560		do	New Vienna, Ohio.
	Vernon township	John Campbell	285		Bituminous	Furnace families.
	STARK COUNTY.					
Wamington mine, Massillon seam.	Massillon	Wamington C. Co	24,150	4	Bituminous	Lake ports.
Hadley mine, No. 4 seam	North Industry	Brown & Hadley	7,500	3½	Bituminous, open-burning	Canton, Ohio, and neighborhood.
Welty mine, No. 3 seam	Canton	Abraham Welty	3,000	3⅝	do	Canton, Ohio.
Smith, Borst & Co.'s mine, Limestone seam.	Greentown	Smith, Borst & Co	2,260	4	do	Line of Valley R. R.
Holwick mine, second seam	Osnaburgh	Frank Bowen	3,600	4½-5	Bituminous, soft, smithing	Canton and Akron, Ohio.
Lawrence mine, No. 1 seam	North Lawrence	Ridgway, Burton & Co	58,000	4½	Bituminous, open-burning, manufacturing of iron.	Cleveland, Toledo, Wooster, Mansfield, Lima, and Ft. Wayne, Ind.
Oak Hill mine, No. 1 seam	Massillon	James Neall & Co	26,000	3½	Bituminous, open-burning, low in sulphur.	Line of P., Ft W. and C. R. R., from Massillon westward to Bourbon, Ind., Toledo, Cleveland, Ann Arbor, Mich., &c.
Willow Bank No. 3 mine, Massillon seam.	Millport	Willow Bank C. Co	21,210	4	Bituminous	Cleveland, via Ohio canal.
Sippo mine, Massillon seam	Massillon	Sippo Coal Co	5,000	4	Bituminous, open-burning	Cleveland.
Massillon City mine, No. 1, seam.	do	Henry Foltz and J. F. Pocock.	32,995	5	Bituminous, open-burning, white ash, low in sulphur.	Cleveland and Massillon.
Grove Coal Co's mine, No. 1 seam.	do	Grove Coal Co	25,134	4	Bituminous; iron making	Cleveland.
Pigeon Run mine, No. 1 seam.	Pigeon Run	Massillon and Pigeon Run C. Co.	25,000	5	Bituminous, open-burning, white ash, low in sulphur.	Lake Erie ports, Cleveland and Black river.
Thomas mine, No. 6 seam	Alliance	J. L. Thomas	3,000	2½	Bituminous, cementing	Alliance.
Rhodes mine, Massillon seam	Massillon	Rhodes Coal Co	26,693	4¼	Bituminous	Lake ports.
Willow Bank mine, Massillon seam.	do	Willow Bank C. Co	14,282	4½	do	Cleveland, via Ohio canal, lake ports, via Black river and C. T. V, and W. R. R.
McCallum & Poto mine, No. 6 seam.	Limaville	McCallum & Poto	1,626	3 5/12	Bituminous, open-burning	Neighborhood.
Camp Creek mine, No. 1 seam	Pigeon Run	O. Young & Co	18,000	4½	Bituminous, open-burning, white ash.	Lake Erie ports.
		Charles Feiby	480		Bituminous	Canton.
		Harrison Tailor	490		do	Do.
		Schutzner & Hollenstern.	480		do	Do.
		Jesse Miller	400		do	Do.
		Jacob Slemmer	400		do	Do.
		John Kains	400		do	Do.
		Lewis Kemmerle	480		do	Do.
		Jos. Miller	400		do	Do.
		Jacob Bros	480		do	Do.
		Christopher Krider	400		do	Do.
		J. H. Ross	490		do	Waynesburgh.
		Peter Shoenebarger	490		do	Canton.
		Abraham Spoonsellar	475		do	Do.
		Geo. Oyster and others	800		do	Do.
		Judge Frease	400		do	Do.
		J. Oberlin and others	600		do	Do.
		Harbert and others	500		do	Neighborhood.
		Worstler and others	400		do	Do.
		Stainsburg Co	700		do	Do.
		Isaac Smith	500		do	Do.
		Martin Brothers	400		do	Do.
		John Clark	400		do	Do.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	STARK CO.—cont'd.			*Feet.*		
		Infirmary neighborh'd	500		Bituminous	Neighborhood.
	Alliance	A. Dixon	1,000		Bituminous, open-burning	Alliance, Ohio.
	do	Thomas Lowe	1,700		do	Do.
	do	Eli Grant	1,570		do	Do.
	do	Black, Lewis & Reynolds.	700		do	Do.
	do	John P. Ebachardt	720		Bituminous	Canton, Ohio.
		Abraham Clark	2,200		do	Do.
		Peter Newman	2,000		do	Do.
		Albert Smith	3,120		do	Neighborhood.
		Andrew Monery	1,880		do	Canton, Ohio.
		John Lictenwalter	2,000		do	Do.
		John Yoho	900		do	Do.
		David Kinney	1,200		do	Do.
		Kinney Brothers	750		do	Do.
		Moyadore C. Co	700		do	Moyadore, Ohio.
		Clayton Hall	1,200		do	Greentown, Ohio.
		John Sausser	2,000		do	Canton, Ohio.
		J. S. P. Gordon	600		do	Do.
		Fred. Fetzer	1,200		do	Massillon, Ohio.
		Henry Koontz	1,500		do	Do.
		Morgan Owens	3,000		do	Cleveland, Ohio.
		Schrock & Evans	800		do	Canal, Fulton, Ohio.
		J. Lever	500		do	Do.
	Lexington township	David D. Waugh	2,800		do	Alliance, Ohio.
	do	William K. Ellett	800		do	Do.
	do	Charles W. Nolan	800		do	Do.
	Bethlehem township	George Shepler	400	3	do	Navarre.
	do	Jos. Hare	600	3	do	Do.
	Lawrence township	John Seaver	1,000	4	do	Local trade.
	do	Hower, Simmons & Co.	1,500	3	do	Cleveland, Ohio.
	SUMMIT COUNYY.					
Nimisila mine, No. 1 seam	New Portage	Nimisila Coal Co	25,000	4½	Bituminous, open-burning; iron making.	Cleveland, Ohio, and other towns on lake Erie.
Norton Coal Co.'s mine, No. 1 seam.	Dennison	Norton Coal Co	21,000	4	Bituminous, open-burning, white ash.	N. Y., Penn, and O. R. R. Co.
Summit Bank mine	Springfield	Middlebury C. Co	13,838	4	Bituminous	Cleveland and Akron.
Summit mine, No. 1 seam	Coventry	Summit Mine C. Co	21,570		Bituminous, open-burning	Cleveland.
Brewster mine, No. 1 seam	do	Brewster Coal Co	18,550	4	do	Cleveland and Akron.
Brewster Bros. mine, No. 1 seam.	Middlebury	Brewster Bros. C. Co.	9,000	4½	do	Cleveland and neighborhood.
		John Beese	2,500		Bituminous	Neighborhood.
		John Collier	2,000		do	Do.
		Brewster Coal Co	2,000		do	Do.
	TRUMBULL COUNTY.					
Burnett mine, No. 1 seam	Hubbard	Andrew & Hitchcock	86,290	4	Bituminous, block	Home, blast-furnaces, and western trade.
Lovebank mine, No. 1 seam	Hubbard	Andrew & Hitchcock	30,774	4	Bituminous	Western markets and home.
Brookfield mine	Brookfield	Curtis & Boyce	25,623	3	Bituminous, block	Erie, Pa., Erie and Pittsburgh R. R.
Holliday mine, No. 1 seam	Vienna	Holliday Coal Co	65,000	2-4	do	Cleveland, Chicago, Buffalo, and Youngstown.
Hubbard mine	Hubbard	D. H. Williams	2,000	2	do	Hubbard.
Blackberry shaft, Brier Hill seam.	Vienna	Vienna C. and I. Co	39,073	4	do	Cleveland and Buffalo
McCurdy C. Co.'s mine, Brier Hill seam.	Sodom	McCurdy Coal Co	24,351	4	do	Youngstown and Cleveland, Ohio.
New Slope mine, No. 1 seam	Mineral Ridge	Osborn Coal Co	*16,000*	4½	*Bituminous; domestic and for puddling iron.*	*Niles and Cleveland, Ohio.*
No. 8 mine. Brier Hill seam	Coalburgh	Mahoning C. Co	37,189	2-4	Bituminous, block	Youngstown and Cleveland.
No. 3 mine, No. 1 seam	do	do	50,479	2-4	Bituminous, block, dry-burning; furnaces.	Youngstown, Cleveland, Atlantic and Lake Shore R. R., now called N. Y., P. and O. R. R.
Otis or Cleveland mine, No. 1 seam.	Brookfield	Otis Coal Co	47,610	2-4	Bituminous, block; furnaces, mills, and stream.	Cleveland, Canada, Rochester, N. Y., and Chicago. Lake Shore, Atlantic and Great Western R. R.
Brookfield mine, No. 1 seam	do	Brookfield Coal Co	87,075	2-4	Bituminous, open-burning, free from pyrite.	Sharon, Pa., Cleveland, A. and G. W. R. R., now the N. Y., P. and O. R. R.
No. 9 mine, No. 1 seam	Liberty	Mahoning Coal Co	706	4	Bituminous block, dry-burning; iron smelting.	Cleveland and Youngstown.
Shenango mine, No. 1 seam	Hubbard	Shenango Coal Co	40,000	1½-4½	Bituminous, open-burning, free from pyrite; furnaces.	Erie, Cleveland, Sharon, Youngstown Middlesex, via N. Y., P. and O. R. R., and E. and P. R. R.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	TRUMBULL CO.—cont'd.			*Feet.*		
John Henry mine	Mineral Ridge	Homer Baldwin	10,453	.....	Bituminous, with blackband iron ore.	
Kline mine, Brier Hill seam	Church Hill	Tod Iron Co.	40,000	2-3	Bituminous; iron smelting	Brier Hill furnaces, near Youngstown.
Church Hill mine, No. 1 seam	do	Church Hill C. Co.	90,274	4	Bituminous, block, dry-burning; iron smelting.	Cleveland, Chicago, Canada, N. Y., P. and O. R. R.
Cambria mine, Mineral Ridge seam.	Mineral Ridge	Wm. T. Williams & Co.	27,017	3	Bituminous, with blackband ore.	Cleveland, Niles, and Warren, Ohio.
	Brookfield	Jones & Ferguson	400	3½	Bituminous, block	Youngstown, Ohio.
	Mineral Ridge	Morris Williams	650	4	Bituminous	Local trade.
	do	William Hitchen	650	4	do	Do.
	do	Evans Brothers	125	4	do	Do.
	do	Wm. Phillips & Son	125	4	do	Do.
	do	T. O. Pritchard	340	4	do	Do.
	do	Lewis O. Jenkins	60	4	do	Do.
	TUSCARAWAS COUNTY.					
Wilhelmi mine, No. 5 seam	Canal Dover	C. W. Bodez	6,000	4	Bituminous, moderately cementing.	Sugar Creek Salt-Works.
Goshen Ridge mine, No. 6 seam.	New Philadelphia	Mathias & McFarland	10,000	4½	Bituminous, cementing	Cleveland, and along Ohio canal.
New Phila. Salt Works mine, No. 5 seam.	do	Custer, Scott & Waddington.	2,500	4	do	Salt-works of company and local.
Newcastle mine, No. 6 seam	do	Groff & Daut	6,500	4½	do	Cleveland, and along Ohio canal.
Tubbs & Dunn mine, No. 5 seam.	do	Tubbs & Dunn	5,000	4⅝	Bituminous, slightly cementing.	New Philadelphia.
Glasgow, Port Washington Iron and Coal Co.'s mine, Benton seam.	Glasgow	Glasgow, Port Washington Iron and Coal Co.	3,500	14	do	Own furnace and men.
Andreas mine, No. 6 seam	Wrichsville	John Bruner	6,000	3⅝	Bituminous, cementing	P., C. and St. L. R. R., Cleveland via Tuscarawas Valley R. R.
Newberry mine, No. 5 seam	Mineral Point	C. E. Holden	3,715	4	do	Fire-Clay Works, Mineral Point, and Cleveland, Ohio.
Tunnel mine, No. 5 seam	do	Tuscarawas Coal and Iron Co.	30,000	3½	do	Do.
Block Vein Coal Co.'s mine, No. 5 seam.	do	J. L. Morris	9,000	3	Bituminous, moderately cementing.	Cleveland, via C. and P. R. R.
Cleveland Coal Co.'s mine, Salineville Big seam.	Salineville	Ohio and Pennsylvania Coal Co.	35,874	5½	do	Cleveland.
Tuscarawas Valley Coal Co.'s mine, No. 6 seam.	Pike's Run	Tuscarawas Valley C. Co.	75,436	4⅝	Bituminous, cementing	Northern Ohio and Lake Erie ports.
Mount Carbon mine, No. 6 seam.	Trenton	C. P. Minnick	7,000	3⅝	do	Cleveland by canal.
	Sandy township	J. Byeily	800	.....	Bituminous	
	do	J. L. Birk	1,097	.....	do	
	Franklin township	John Byeily and others	1,120	.....	do	Franklin township.
	do	Robert Ramsay	1,520	.....	do	Do.
	do	Henry Beck	80	.....	do	Do.
	do	George Haas	200	.....	do	Do.
	do	Samuel Swaby	40	.....	do	Do.
	Mill township	Thomas A. Packer	200	.....	do	Uhricksville township.
	Goshen township	J. W. King	2,500	.....	do	New Philadelphia and country.
	do	Thomas Peaker	1,600	.....	do	Do.
	Goshen, Warwick, and Mill townships.	William Humunel	624	.....	Bituminous, open-burning	New Philadelphia, Ohio.
	do	Josiah Dorsey	940	.....	do	Do.
	do	W. R. Jones	2,000	.....	Bituminous, cementing	Cleveland, Ohio.
	Goshen, Warwick, and Mill townships.	Nicholas Hart	8,775	.....	do	Do.
	do	A. Horning	5,600	.....	do	Do.
	do	W. B. Rennie	1,580	.....	do	Uhricksville and Dennison.
	Goshen and Dover townships.	Dover Salt Co.	6,600	.....	Bituminous, open-burning	Own consumption.
	do	Jos. Kranz	1,000	.....	do	Dover, Ohio.
	do	A. Schneider	1,600	.....	do	Do.
	do	J. W. Ferris	1,640	.....	do	New Philadelphia, Ohio.
	do	Thos. Steel	1,320	.....	do	Do.
	do	J. D. McIlvaim	1,000	.....	do	Do.
		J. Miller	800	.....	do	New Comerstown, Ohio.
		S. J. Crites	2,450	.....	do	Dover, Ohio.
		Geo. Ault	2,108	.....	do	Do.
		Wm. Weal	500	.....	do	New Philadelphia, Ohio.
		Wm. Noftsker	400	.....	do	Points on Ohio canal.
		Geo. Mathias	2,500	.....	do	New Philadelphia, Ohio.

Directory of bituminous coal mines—Continued.

OHIO—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	TUSCARAWAS COUNTY—continued.			Feet.		
	Fairfield township	John L. Kennedy	100		Bituminous	New Cumberland and country.
	do	David Burgess	140		do	Canal Dover and country.
	do	B. H. Riggle	40		do	Country.
	do	Mrs. W. H. Powell	140		do	New Cumberland and country.
	do	Thos. Scott	120		do	Do.
	do	David Shively	80		do	Do.
	Washington township	John Fivecoats	750	4	do	Surrounding country.
	Franklin township	Philip Zigler	1,500	5	Bituminous, open-burning	Strasburgh and Winfield.
	do	Jos. Patterson	1,000	5	do	Beach City and Strasburgh.
	do	Hull & Warner	500	4	do	Strasburgh and vicinity.
	VINTON COUNTY.					
Hope Furnace mine, No. 6 seam.	Hope furnace	H. Heasly	2,400	3	Bituminous, open-burning, purple ash.	Along Marrietta and Cincinnati R. R.
Moonville mine, No. 6 seam	Moonville	do	1,200	3	do	Do.
Town mine, No. 4 seam	Zaleski	Zaleski Co	35,000	3¾	Bituminous, open-burning, white ash.	Do.
Coalmont mine, No. 6 seam	do	do	18,000	4½	do	Do.
	Wilkesville	John Blore	600		Bituminous	Wilkesville and Salem, Ohio.
	WASHINGTON COUNTY.					
		D. Rumble	1,200		Bituminous	Lowell and vicinity.
		Mrs. Starling	200		do	Do.
		Mr. Norman	200		do	Do.
		W. K. Ellison and others.	1,200		do	Do.
		Nick Basil	*400*		*do*	Do.
		Coal Run, or Sycamore M. Co.	21,000		do	Steamboats on Muskingum river.
		Parties in Waterford township.	800		do	Waterford township.
		Parties in Wesley township.	960		do	Wesley township.
		Parties in Newport township.	640		do	Newport township.
		Parties in Maxburg and Vic.	1,000		do	Maxburgh and vicinity.
	Waterford township	Gordin, Hardin & Co.	2,649		do	Marrietta and Beverly, Ohio.
	WAYNE COUNTY.					
Mobile mine	Doylestown	H. C. Galehouse	2,500	4	Bituminous, open-burning, white ash.	Smithville, Doylestown, Easton, Ohio, and neighborhood.
Silver Creek mine	do	Silver C. M and R. R. Co.	42,378	4	do	Toledo and Cleveland, Ohio, Detroit, Mich., and Collinwood, Ohio.
		Edgell Bros	800		*Bituminous*	*Neighborhood.*
		Seibling, Miller & Co	1,500		do	Do.
		Edwin Baysinger	1,000		do	Do.
		M. Elhenny & Stenson.	2,000		do	Wooster, Ohio.
		Roebuck & Co	1,100		do	Do.
		Elias Mast	800		do	Neighborhood.
		Charles Stait	300		do	Do.
		M. Clarke	400		do	Do.
		Asaph Rumbaugh	300		do	Do.
		Barney Flowers	350		do	Do.
		Christopher Beckar	400		do	Do.
		Mrs. Flory	400		do	Do.
		J. L. Smith	350		do	Do.
		Peter Frazer	300		do	Do.
		Thos. Davis	450		do	Do.
		Benj. Davis	*400*		*do*	Do.
	Salt Creek township	Bernard Faline	225		do	Home.

OREGON.

	COOS COUNTY.					
Eastport Coal Co.'s mine	⅞ mile southwest of Eastport.	Merchants' Exchange.	16,800	6½	Lignite	San Francisco.
Newport Coal Co.'s mine	3 miles southwest of Marshfield.		26,405		do	San Francisco and Coos bay.
South Port Coal Co.'s mine	7 miles from Marshfield.		None.		Lignite, quite hard	

Directory of bituminous coal mines—Continued.

PENNSYLVANIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ALLEGHENY COUNTY.			*Feet.*		
Eagle Nest mine, Pittsburgh seam.	Coultersville	Wm. Duncan	6,840	5	Bituminous, gas	Pittsburgh and Cin., via Youghiogheny, Monongahela, and Ohio rivers.
Enterprise mine, Pittsburgh seam.	Banksville	Hartley & Marshall	106,854	4½	*Bituminous, gas, steam*	New Orleans, Chicago, Buffalo, Cleveland, and all lake intermediate points, via Ohio and Pittsburgh and L. Erie R. R. and connections.
——, 6-foot seam	Elizabeth	Horner & Roberts	85,511	4½	Bituminous	
Pine Run mine	Coal Valley	James Lynn & Co	69,118	4½	do	Cincinnati, Louisville, and New Orleans, via Ohio and Miss. rivers.
Ormsly, Bausman & Knox's mine, Pittsburgh seam.	Pittsburgh	Birmingham C. Co	218,060	4½	do	Pittsburgh to New Orleans, via Ohio and Miss. rivers.
Six-mile Ferry Nos. 1 and 2 mines, Pittsburgh seam.	Baldwin and Mifflin township.	H. B. Hayes & Bro	69,563	4½	do	River ports from Pittsburgh to New Orleans, via Monongahela, Ohio, and Miss. rivers.
McConnell's mine	Walker's mills	Jos. McConnel	15,750	4½	do	Pittsburgh.
Belview mine	Hites	Belview Coal Co	23,040	6	do	
Beck's Run mine, Pittsburgh seam.	Lower Saint Clair township.	H. B. Hayes & Bro	33,130	4½	Bituminous, gas	Pittsburgh to New Orleans, via Monongahela, Ohio and Miss. rivers.
Robbins, Lynn & Co.'s mine, Pittsburgh seam.	Milesville	Robbins, Lynn & Co	22,800	5	Bituminous	Cincinnati, Louisville, and New Orleans, via Monon., Ohio, and Miss. rivers.
Bellevue mine	Bellevue	Gumbert & Huey	40,368	5½	Bituminous, almost free from sulphur and other impurities.	Cincinnati, Ohio, Louisville, Ky., via Monongahela and Ohio rivers.
Clark mine, Pittsburgh seam.	Bridgeville	Jas. Clark	23,730	4⅜	Bituminous	Pittsburgh and N. W. markets, via Pbg., Cin. and St. Louis R. R., P. T. W. R. R., and C. R. W. R. R.
Venture mine, Pittsburgh seam.	Banksville	Grey & Bell	55,480	4¼	do	Pittsburgh and lower river cities, via Saw Mill Run R. R.
Coal Ridge mine, Pittsburgh seam.	do	do	50,540	4¼	do	Pittsburgh, via Saw Mill Run R. R.
Chess mine, Pittsburgh seam.	35th ward, Pittsburgh	do	35,000	4¼	do	Pittsburgh rolling-mills.
Robbins & Jenkins mine	Monongahela river	Robbins & Jenkins	57,905		do	River markets, via Ohio and Monongahela rivers.
Lovedale mine	Elizabeth	Wood, Schrader & Co	62,687		do	River markets, Ohio, etc., via Ohio river.
Enterprise mine, Pittsburgh seam.	West Elizabeth	O'Neil & Co	82,890	4	do	Cin., Louisville, Memphis, Arkansas City, Natchez, and New Orleans, via river.
Old Eagle mine	Elkhorn	W. H. Brown	27,007	4½	*Bituminous; steam and gas.*	*Cin., Cairo, St. Louis, New Orleans, via* Monongahela, Ohio, and Miss. rivers.
Wm. Stone mine	McKeesport	Wm. Stone's heirs	95,000	4½	Bituminous	Cin., Ohio, via Ohio and Monongahela rivers.
Oak Hill No. 4 mine	Turtle Creek	N. Y. and Cleveland Gas C. Co.	323,152	4⅜	Bituminous; gas	Pittsburgh, Cleveland, Chi., Milwaukee, and Canada, via Pa. R. R. and C. and P. R. R.
Oak Hill No. 3 mine, Pittsburgh seam.	do	do	36,241	4⅜	do	Do.
Plum Creek mine	Plum Creek	do	254,030	4½	Bituminous	Pittsburgh, via Allegheny Valley R. R.
Sandy Creek No. 1 mine, Pittsburgh seam.	Sandy Creek	do	260,962	4½	Bituminous; gas	Do.
Duquesne mine, Pittsburgh seam.	Edgewood station	do	20,302	4⅜	do	Pittsburgh, via Penn. R. R.
Corey & Co	Braddocksfield	Corey & Co	25,308	5	do	East and west on Penn. R. R., B. and O. R. R. Co., P. R. R., Pbg. and C. and St. L., A. V. R. R., C. and P. R. R., B. and O. R. R., P. S. L. E. R. R., and all roads at Pittsburgh.
Montour & Cliff mine	Imperial	Imperial Coal Co	88,361	4½	Bituminous	Lake Erie ports, via Pbg. and L. Erie R. R., and N. Y. P. and O. R. R.
Fort Pitt mine, Pittsburgh seam.	Fort Pitt station	Fort Pitt Coal Co	30,000	4¼	Bituminous; steam and gas.	Local Pittsburgh trade and western cities, via P. C. and S. L. R. R.
Cherry mine	Hay's Crossing	Morris McCue	31,249	4⅜	Bituminous	Pittsburgh and east and west.
Nixon mine	Leetsdale	Chartins Valley C. Co.	25,080	4½	do	Pittsburgh and Allegheny City, via P., C. and St. L. R. R.
Summer Hill mine	Woodville	Frank Armstrong	28,672	3 11/12	do	Pittsburgh, via P., C. and St. L. R. R.
Fairhaven mine	Fairhaven	Pittsburgh and Castle Shannon R. R. Co.	103,200	4½	Bituminous; rolling-mills and glass-houses.	Pittsburgh, via own road.
American Iron Works' mine, Pittsburgh seam.	Pittsburgh	Jones & Laughlin	81,250	4½	Bituminous	Works of Jones & Laughlin.
Green Spring mine	Braddock	Thomas Faucett	91,200	4½	do	Cin., Louisville, and New Orleans, via Ohio, Monongahela and Miss. rivers.
Keystone mine, Pittsburgh seam.	Saltsburg	W. H. Brown's heirs	181,213	4½	do	Cin., Louisville, Cairo, Memphis, New Orleans, and St. Louis, via Mon., Ohio, Miss., and Upper Miss. rivers.
Cornell & Werlings' mine, Pittsburgh seam.	Allegheny	do	103,300	4½	do	Cin., Louisville, and points on Miss. river, via Ohio and Miss. rivers.
Braddock Gas-Coal mine	Wilkins township	John Giles	1,900	4½	do	Pittsburgh and Allegheny City.
	Leasdale	Lindsay M. Causland	5,000	2	do	Neighborhood.
Phœnix Gas-Coal Company's mine.	Chartiers and Union townships.	F. C. Negley, T. C. Dickson, and J. B. Stewart.	6,960	6	Bituminous; steam, iron, and gas manufacturing.	Pittsburgh, Chi. and lake trade.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ALLEGHENY CO.—cont'd.			*Feet.*		
Squirrel Hill mine	Twenty-second ward, Pittsburgh.	Alfred Harrison	9,120	4	Bituminous, lump and slack	East Liberty and Oakland.
Glenshaw mine, Freeport seam.	Glenshaw	Thomas W. Shaw	3,192	3½	Bituminous	Home.
Pleasantville mine	Harrison township	Jackson Pugh	1,140	3	Bituminous, hard block	Natrona and Tarentum.
Sable Coal Works mine	Pennsylvania twp	M. Durkin	9,944	5	Bituminous	Pittsburgh.
McCauley Brothers' mine	Wilkins township	James McCauley	1,900	4½	....do	Braddocks and suburbs.
Etter mine	Wilkinsburgh	John Etter	7,200	4½	....do	Pittsburgh and suburbs.
Etna and Vesuvius mine, Freeport seam.	Hites	Belview Coal Co	33,980	5	....do	Pittsburgh and Allegheny City, via W. Penn. R. R.
Eclipse mine	Saw Mill run	John Carlin & Co	17,733	4½	....do	Pittsburgh, Cleveland, Buffalo, Youngstown, and Meadville, N. Y., and B. and O. R. R. Co., via Little Saw Mill R. R., P. and G. E. Q. S. and M. S. and N. Y. P. and O. R. R.
Camp Hill mine, Pittsburgh seam.	Scott and Collier townships.	Steen & Sons	68,400	4½	Bituminous, very hard	Pittsburgh, via P. C. and S. L. R. R.
Bower Hill mine	Bower Hill	A. J. Schulte	37,333	.....	Bituminous	Pittsburgh, and all points east and west, via P. C. and S. L. R. R. and P. F. W. and E. R. R. and connections.
M. Graver & Co	Pennsylvania twp	M. Graver & Co	35,729	4½	Bituminous; gas	Pittsburgh and oil regions, via A. V. R. R.
Mansfield C. and Coke Co., Mansfield seam.	Mansfield	Mansfield C. and Coke Company.	100,872	4½	Bituminous, block; gas	Erie, Cleveland, Ashtabula, Toledo, Chi., and western country, and Dominion of Canada.
J. Weinman mine	Wilkinsburgh	J. Weinman & Co	7,904	5	Bituminous	East Pittsburgh and Wilkinsburgh.
Oak Hill mine, Pittsburgh seam.	Allegheny	Dickson, Stewart & Co	23,187	4⅔	Bituminous; gas	Pittsburgh and western and northern points, by lake and R. R.
Grant mine	Mansfield	Grant Coal Company	45,332	4½	Bituminous; steam and gas	Erie, Pittsburgh, New Castle, Sharon, and Sharpsville, via P. C. and St. L. R. R., and P. F. W. and C. and E. and R. R. R.
Willow Grove mine	Willow Grove	T. B. Robbins & Co	28,445	3-4½	Bituminous, block; steam and gas.	Principal points in northwest Indiana, Ohio, and Ill., via P. C. and St. L. R. R., and J. B. and W. T. P. and W.
National mine, Pittsburgh seam.	Allegheny	National C. Co., lim.	21,325	4	Bituminous; steam, gas, and forge.	Pittsburgh and Allegheny, Ohio, Ind., Ill., and Iowa, via P. C. and St. L. R. R., J. B. and W. R. R., T. P. and W., and N. C. R. W.
Oak Ridge mine, Pittsburgh seam.	Oakdale	Oak Ridge C. Co., lim.	37,317	4½	Bituminous	Pittsburgh, via P. C. and St. L. R. R.
Alpsville mine	Alpsville	Carroll & Dunn	26,057	4⅔	....do	McKeesport and Pittsburgh, via B. and O. R. R.
Youghiogheny mine, Pittsburgh seam.	Elizabeth township	James O'Neil	46,537	5	....do	Cin., Louisville, Memphis, New Orleans, and St. Louis, via Ohio, Miss. and Mon. rivers.
Penney mine	Lincoln township	Penny Coal Company	52,440	4½	....do	Cin. and Louisville, via Ohio river.
Jones' mine	W. Elizabeth	Mrs. George Jones	43,677	5	....do	Pittsburgh, Mon. slack-water.
Hampton mine, Pittsburgh seam.	Wilkinsburgh	John McIntyn	73,530	4⅔	....do	Pittsburgh and western points on lakes and R. R.
Jefferson mine, Pittsburgh seam.	Coal valley	Foster, Clark & Wood.	56,083	4½	....do	New Orleans, via Monongahela, Ohio, and Miss. rivers.
Camden mine	Camden	George Lyde & Sons	62,700	4	....do	Cin., Louisville, and New Orleans, via Ohio and Miss rivers.
Wenona mine	Wenona	Jas. Skillen	8,360	4½	....do	Pittsburgh, via Mon. river.
Habesman mine	Baldwin	Jos. Walton & Co	67,526	4½	....do	Cin., Louisville, and New Orleans, via Mon., Ohio, and Miss. rivers.
Lower Works mine	West Elizabeth	....do	90,755	4½	....do	Do.
Upper Works mine	Petersburgh	....do	81,293	4½	....do	Do.
Aunty mine	Dravosburgh	J. C. Risher	75,620	4 5/12	Bituminous; gas and manufacturing.	Do.
Wood mine	Chartier's township	Wettengel & Garmley.	27,620	4⅔	Bituminous, lump and slack	Allegheny City and Pittsburgh.
Windbridle mine	East Liberty	Jacob Weinman	4,370	5	Bituminous	East Pittsburgh.
Penna. Salt Manufacturing Co.'s mine, first seam.	Natrona	Penna. Salt Manufacting Co.	34,232	2⅔	....do	Natrona works and employés.
Nimick mine	Union township	Thos. Fox	11,825	4½	....do	Allegheny and Pittsburgh.
Rock Run mine	Rock Run	W. J. Snodgian	24,000	4	....do	Cin., Louisville, and New Orleans, via Mon., Ohio, and Miss. rivers.
Wm. Neal's mine, River seam.	McKeesport	Wm. Neal (deceased)	29,216	4	....do	Western points along Ohio and Miss. rivers.
Allequippa mine, Pittsburgh seam.	Camden	Wigham, Baily & Co	51,147	4	....do	Cin. and New Orleans, via Mon., Ohio, and Miss. rivers.
Glendale mine	Scott township	S. B. Gregg	13,680	4½	....do	Chi., via P. C. and St. L., and S. P. and W. and C. R. R.
Sreet's Run mine, 4-foot seam.	Hope Church	I. D. Risher	68,430	4	Bituminous; gas	Louisville and N. Orleans, via Ohio and Miss. rivers.
Osceola Coal Co.'s mine, Pittsburgh seam.	Osceola	Osceola Coal Co	68,360	4½	Bituminous	Balt., Pittsburgh, Braddock, Demmler, and McKeesport, via B. and O. R. R. and Yough. river.
.....	Natrona	W. A. Nisbet	2,000	4	....do	Home and neighborhood.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ALLEGHENY CO.—cont'd.			Feet.		
.....	Logan's Ferry	Jos. Farneth	1,140	4½	Bituminous	Neighborhood.
.....	.....	Caleb Foster	950	5	do	Do.
.....	Versailles township	W. R. Cooper	1,020	3⅔	do	McKeesport and neighborhood.
.....	Buena Vista	S. & K. Eichar	907	6	do	Buena Vista and country.
.....	Moon township	Wm. Onstott	589	5	do	Neighborhood.
.....	Shaler township	J. H. Hieber	1,422	2-4	do	Do.
.....	Mansfield	John Rosser	541	4½	do	Do.
.....	West End	Wilmore W. Morris	1,140	4¼	do	Neighborhood and home.
.....	West Deer township	A. Martin	789	3½	do	Neighborhood.
.....	Wilkinsburg	John H. Ward	1,140	5	do	Do.
.....	Baldwin township	Lewis Matthews	608	4½	do	Neighborhood and home.
.....	Rich Hills	Wm. Mason	675	4½	do	Neighborhood.
.....	Banksville	David Harris & Bro	1,216	4	do	Pittsburgh and neighborhood.
.....	Steubenville pike	Jacob Jackson	2,500	4½	do	Home and neighborhood.
.....	21st ward, Pittsburgh	Isaac O. McMinn	1,140	4½	do	Neighborhood.
.....	West Liberty	John Smith	1,520	4	do	Do.
.....	do	Chas. Lees and Wm. Woodall.	1,026	4½	do	Do.
.....	Baldwin township	M. Englert	700	.....	do	Do.
.....	Maple Valley	Benj. Hallam	2,000	4½	do	Do.
.....	Bridgerville	Sam'l Rimmell	627	4½	do	Do.
.....	Rich Hill	Jas. Marshall	1,536	5	do	Do.
.....	Knoxville	Knoxville Land Impt. Co.	950	4¼	do	Home and neighborhood.
.....	Elizabeth	David Cochenour	786	5	do	Neighborhood.
.....	Penn township	J. Blackadore	2,774	4½	do	Home and neighborhood.
.....	Near Allegheny	Jas. L. Orr & Co	2,660	4	do	Neighborhood.
	ARMSTRONG COUNTY.					
Rimerton mine, Middle Freeport seam.	Rimerton	Rimerton C. and Min. Co.	4,451	3½	Bituminous, soft	Oil City to Buffalo.
Mahoning Fce. mine, Middle Freeport seam.	Mahoning Furnace	Wesley Wilson & Co	2,200	4	Bituminous; coke, steam, domestic, blacksmithing, and furnace.	
.....	E. Franklin township	P. Mechling	2,140	3½	Bituminous	Kittanning.
Leechburgh I. Works mine	Leechburgh	Kirkpatrick & Co	9,000	4	do	Own works.
.....	do	Jos. E. Beale	7,800	4	do	Own use, and neighborhood.
New Bethlehem mine	New Bethlehem	Sandy Lick Gas, Coal and Coke Co.	10,134	.....	do	
Stewartson Furnace mine	Mahoning	F. B. & A. Laughlin	15,100	.....	Bituminous, furnace	Furnace.
.....	S. Buffalo township	Jas. Stewart	1,800	.....	Bituminous	R. R. pump station.
Red Bank mine	Mahoning	Red Bank Mining Co	9,000	.....	Bituminous, soft cannel	N. Y. Central.
.....	Cowanshannoc twp	Wm. Roof	562	.....	Bituminous	Surrounding country.
.....	Kittanning	Moses Murphy	1,200	4 12/12	do	Neighborhood.
.....	Worthington	Graff & Firth	800	4	do	Neighborhood, and own use.
.....	Kiskiminitas	John Gamble & Son	1,000	3½	do	Own use.
.....	Kittanning	Ross Reynolds	1,408	4	do	Do.
.....	Brocketville	Emanuel Hellier and Jos. Stenitte.	664	3 10/12	do	Neighborhood.
.....	Kittanning	Henry C. Keller	960	3⅔	do	Do.
.....	do	A. Thompson	800	3	do	Do.
.....	Templeton	Peter J. Brice	800	2	Bituminous, soft	Neighborhood and own use.
.....	Freeport	John Kennedy	1,000	.....	Bituminous	Neighborhood.
.....	Leechburgh	L. A. Keppel	800	4	do	Do.
.....	North Freedom	Enoch Booser	780	4½	do	Do.
.....	Queenstown	Edw. Jennings	960	4	do	Do.
	BEAVER COUNTY.					
.....	Brush creek	Charles Cunning	800	4	Bituminous	Neighborhood.
Elness mine, 3-foot seam	Pulaski township	James M. Nugent	1,200	2½	do	Beaver Falls and vicinity.
Point Breeze mine, Block seam.	Glasgow	W. H. Wallover	95	2½	Bituminous, soft block	Glasgow.
Wolf Run mine, Stone seam	Brighton township	A. M. Harn	570	2	Bituminous	Bridgewater.
Enon mine	Darlington township	William Pickles	1,520	3	Bituminous; blacksmithing.	Enon valley and country trade.
Elizabeth mine	Georgetown	Orr & McKinley	400	4	Bituminous; steam and domestic.	East Liverpool, Ohio.
Bolsville mine	Rochester township	Patrick McLaughlin	2,750	2 1/12	Bituminous	Rochester and Bolesville.
Couch mine	Pulaski township	O. H. Couch	4,800	2	do	New Brighton Pottery Company.
Dawson mine	Ohioville	Daniel Dawson	2,318	4	do	Oil wells and country trade.
Beaver Block mine	Cannelton	James Suthern	8,290	2-3½	do	Cleveland and Youngstown, via P. F. W. and C. Y. P. and E. P. R. R

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BEAVER CO.—cont'd.			*Feet.*		
Mansfield Cannel mine, No. 4 seam.	Cannelton	J. F. Mansfield	23,100	8	Cannel	N. Y., Boston, Buffalo, Erie, Cleveland, Chi., via P. and H. W. and C. and R. R. R. and vessels and Erie canal.
Baker mine	Clinton	L. S. Hoyt	33,000	8	Bituminous	Penna. R. R. Co., via E. and P. R. R.
Davidson mine	Beaver Falls	A. Davidson	3,351	2	do	Beaver Falls.
Beaver Falls mine	Beaver	George Bolan	1,432	2½	do	Do.
Forksburgh mine	New Brighton	Henry Fish	1,520	2	do	New Brighton and vicinity.
Glass mine	do	G. W. Glass & Bros	10,000	2	Bituminous, very hard	New Brighton and own use.
Clayton mine, Upper and Lower Freeport seams.	Beaver Falls	J. and W. F. Clayton	4,464	3 5/12	Bituminous	Beaver Falls.
	Industry	John Duck	1,710		do	Own use.
	Near Cannelton	F. Butts	900		do	Cleveland, Ohio.
	Pulaski township	John Brain	863		do	
Barens mine		Walter Young	1,131		do	Neighborhood.
	Pulaski township	Job Cook	684		do	Do.
Ross mine		James H. Coburn	529		do	Do.
	Glasgow	Henry Udick	577		Bituminous, soft	Do.
	Smith's Ferry	W. C. Timmins	615		Bituminous, block	Own use.
	Near New Brighton	Henry Barr	402		Bituminous	Do.
	New Brighton	O. Molton	512		do	Neighborhood.
	Rochester township	William Moon	475		do	Neighborhood and New Brighton.
	Industry	Gomer E. and David R. Lewis.	600		do	Neighborhood.
	New Galilee	J. S. Hudson	760		do	Do.
	Raccoon Creek	J. C. Frank	576		do	Own use.
	Rochester township	John J. Foster	570		do	Neighborhood.
	Coal Pit run	William Bromley	509		Bituminous and cannel	Do.
	Hookstown	John B. Swany	380	4	Bituminous	Do.
	Darlington	John N. Craft	855	2½	do	Neighborhood and home.
	Smith's Ferry	Daniel Wolf	380	1⅝	do	Neighborhood.
	Rochester	Jos. Anderton	893		do	Do.
	Pulaski township	Thomas and Jas. Funkhouser.	2,660	2½	Bituminous, hard	Do.
	Brown's	Jerome Powell	760	2	Bituminous	Do.
	do	Hannah Robinson	760	2	do	Do.
	BEDFORD COUNTY.					
Mt. Equity and Parrott mine, Kelley seam.	Six Mile Run	Kemble Coal and Iron Co.	45,682	3	Semi-bituminous	Riddlesburgh.
Lane and Cambria mine, Kelley seam.	Sandy Run	Richard Langdon	38,500	4½	Bituminous; coke and steam	Philadelphia and Baltimore.
Duval mine, Cook seam	Fairplay	Meers Bros	7,984	3⅝	Semi-bituminous	New York and Brooklyn.
	BLAIR COUNTY.					
Porter mine, Miller seam	Allegheny township	Denniston, Porter & Co.	63,338	2 11/12	Semi-bituminous	Rolling-mills, factories, lime kilns in Blair Co., also blast-furnaces.
Tunnel Hill mine, 4-foot seam	Bennington	Kittanning C. Co	6,510	4	do	Philadelphia.
Glen White mine, Miller seam.	Glen White	Glen White C. and Lum. Co.	21,109	2½	Semi-bituminous, coke	
Coal Bank mine	Near Hollidaysburg	H. R. Myers	2,117	3	Semi-bituminous	Hollidaysburgh, Altoona, and neighborhood.
Horseshoe mine	Logan township	S. C. Baker	19,800	4	do	Neighboring furnaces and rolling-mills.
Bennington mine, Miller seam.	Bennington	Blair I. and C. Co	118,209	3	do	Hollidaysburgh, via Pa. R. R.
	Logan township	E. G. Kelly	4,750		Bituminous	
	Near Bennington	Denniston, Porter & Co.	58,000	3	Semi-bituminous	Iron works in Blair and adj. counties.
	BRADFORD COUNTY.					
Carbon Run mine, B seam	Carbon Run	Schraeder Coal Co	215,202	4	do	Northern part of state of N. Y.
Towanda Coal Co.'s mine, B seam.	Barclay	Towanda Coal Co	285,763	3½	do	N. Y., Lake Erie and Western R. R. Co.
	BUTLER COUNTY.					
Acbarr mine	Hilliard's	Acbarr Min. Co	682	5 7/12	Bituminous, peacock	Erie, Buffalo, and Meadville, via E. and P. R. R., L. and A. R. R., E. and P. R. R., the lakes, and N. Y., P. and O. R. R.
Fullerton mine	Karns City	Wm. Penberthy	2,577	3	Bituminous	P. and K. C. R. R. and Parker Glass Co. line, via P. and K. C. R. R. and K. C. and B. R. R.
Barnes mine, Kittanning seam.	Harrisburgh station	Mercer Min. and Mfg. Co.	99,167	3	do	Cleveland, Erie, and Meadville, via Shenango and Allegheny, E. and P., and N. Y., P. and O. R. R.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	BUTLER CO.—cont'd.			*Feet.*		
Burnett mine	Hilliard's	Burnett C. and Coke Co.	17,500	11⅝	Semi-bituminous, coke	Erie, Meadville, and Buffalo, via E. and P. R. R., N. Y., P. and O. R. R., Erie, and lakes.
Gallespie & McEntier mine	Freeport township	J. O. Mealy	1,520	3¾	Bituminous	Freeport Town, Quekenhernss & Bro.'s distilleries.
Harrisville mine	Harrisville	W. P. Brown	340	3½	do	Harrisville.
Kirk mine	Butler township	Elias W. Kirk	1,200	4	Bituminous, soft	Country trade.
McQuiston mine	Butler	Robert Clark	530	3⅝	Bituminous	Butler.
Watson mine, Summit seam	Fairview	Andrew Watson	1,057	2⅝	Bituminous, block	Neighborhood.
Schaffner mine	Near Butler	Samuel Schaffner	760	3½–4	Bituminous, gas	Butler.
Bredin mine	Butler township	Jacob Schwillie	1,624	3⅝	Bituminous	Do.
	Donegal township	C. Weiner	1,630	3½	do	Millerstown.
Studebaker mine	Worth township	Jos. H. Studebaker	670	3¼	do	Butler, Mercer, and Lawrence counties.
Henry mine, 3-foot seam	Butler	Noah Henry	1,140	2⅝	Bituminous; smithing	Butler and small country trade.
Walas mine, 3-foot seam	Karns City	Tack, Moorhead & A. B. Evans.	2,280	3½	Bituminous	United Pipe Line pump station, and wells in neighborhood.
Negley Seam mine, Negley seam.	Butler	John N. Muntz	1,150	3½	do	Butler.
Coal Valley mine	Allegheny township	B. F. Hitchcock	1,100	2¾	do	Local trade.
Union C. and Coke Co.'s mine, Middle Kittanning seam.	Coalville	Boyce, Spearman, Rawle, Kinsbury & Stayc.	None.	3	Semi-bituminous, block	Greenville, Cleveland, and Erie.
	North Hope	William Jenkins	600		Bituminous, cannel, block	Oil wells and vicinity.
	Winfield township	James Simmers, jr	350	3	Bituminous	Neighborhood and home.
	Parker	N. H. Beatty	646	5¾	do	Do.
	Parker Landing	Potts Bros	1,144	3	do	Neighborhood.
	Jackson township	Samuel Shoffen	836	3	do	Neighborhood and home.
	Harmony	Zatty, Mohr & Rader	912	3	do	Do.
	Rodger's Farm	R. J. Lewis	684	3¾	Bituminous, soft	Neighborhood.
	Petrolia	John Kugan	456	2	Bituminous	Do.
	do	Thomas L. Thomas	874	4	do	Neighborhood and home.
	Unionville	Eli D. Eagal	800	3¾	do	Neighborhood.
	Sandy Point	J. W. Zimmerman	608	3 7/12	do	Do.
	Martinsburgh	William Storey	720	6	do	Do.
	do	D. L. McKelvey	760	5	Bituminous, soft	Do.
	do	A. Jenkins	418	2½	do	Do.
	Saint Joe	Samuel Thornberg	570		Bituminous	Do.
	Butler	John McElroy	646	3½	do	Neighborhood and home.
	Portersville	William Covert	1,520	4	do	Neighborhood.
	Saint Joe	Matt. Caslow	720		do	Do.
	Butler	McGailey & Medoker	695	3	do	
	Parker township	T. M. Barnes	1,057	3½	do	Neighborhood and home.
	Millford Farm	Karne, Wangler, McCleod & Stewart.	1,261	4	do	Do.
	Sloan Farm	J. M. Sloan	622	3½	do	Neighborhood.
	Centre township	Henry Seibohl	760	2⅝	do	Neighborhood and home.
	Millerstown	David T. Hodges	505	2¾	Bituminous, soft	Neighborhood.
	Barker	T. M. Barrun	95	3½	Bituminous	Oil mills.
	do	Watson & Son	98	2½	do	Home.
	do	J. Kusick	43	5	do	House and oil mill.
	do	Patt & Bro	1,320	3	do	Parker City.
	do	D. S. McKay	200	4	do	Oil mills.
	do	P. Sweny	70	4	do	Do.
	Donegal township	Frederick Damm	562	3½	Bituminous, soft	Neighborhood.
	Mercer township	Saml. Walters	877	3¾	Bituminous	Neighborhood and home.
	CAMBRIA COUNTY.					
Bens Creek mine, B seam	Washington township	S. H. Smith	28,993	4	Semi-bituminous	Altoona, Phila. and points west of Pittsburgh.
——, Lemon seam	Taylor township	D. Prosset	2,822	2¾	do	Home.
Lloyd mine, B seam	Lloydsville	Bells Gap R. R. Co	91,837	5	Semi-bituminous, very tender, free from much pyrite.	Home, via Pa. R. R.
Cement Mill mine, Cement and Limestone seam.	Johnstown	A. J. Haw	14,784	3½	Bituminous	Home.
Sonman mine, B seam	Sonman	W. H. Piper & Co	104,400	4½	do	Balt., Phil., N. Y., N. E. states, main line of P. R. R. in Pa.
Stineman mine, B seam	South Fork	J. C. Stineman	18,000	4¼	Bituminous, very tender	Phila.
Plack & Fogle mine, Lemon seam.	Hemlock	Caron & Leahry	4,200	4½	Bituminous; coke, iron manufacturing, lime kiln, and brick burning.	Cambria, Blair and Huntingdon co's, also Cleveland, Ohio, and N. J.
S. Fork C. Works mine, B seam.	South Fork	S. Fork C. Works Co	18,000	4	Bituminous	Altoona and Eastward.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CAMBRIA CO.—cont'd.			Feet.		
Hopkins & Griffith mine, Cement seam.	Conemaugh Boro	Hopkins & Griffith	5,000	3⅝	Bituminous; domestic and steam.	Johnstown and domestic.
Cushon mine	do	Cambria Iron Co	8,460		Bituminous	
Rolling Mill mine	Lower Yoder township	do	185,920		do	
Gautier mine	Conemaugh Boro	do	18,225		do	
Lilley Sta. C. and Coke Wks. mine.	Lilley Station	Jas. H. Dysart & Co	6,000		do	
Conemaugh mine	E. Conemaugh	Cambria Iron Co	26,000		do	
Martin mine, E and B seam	Martindale	John C. Martin	10,000	9	Semi-bituminous	Pa., N. Y., and N. E. states.
Woodvale mine, Miller seam		Johnstown Mfg. Co	18,013		do	Home.
Mentzer's Bens Creek mine	Bens Creek	E. W. Mentzer	18,701	4	Bituminous	
	Stony Creek and Conemaugh.	Ebenezer James	2,000	3½	do	Johnstown, Pa.
	do	John Horrocks	1,200	3⅝	do	Do.
	do	Thomas Gore	550	3¼	do	Do.
	do	Jacob Levergood	700	3	do	Do.
	do	John Bishop	550	4	do	Do.
	Dayton township	Benjamin Benchoff	1,500	4	do	Home.
	do	Cambria Iron Co	1,200	4	do	Do.
	Gallitzin township	G. A. Christy	2,000	5	do	Loretto and Gallitzin.
	do	Daniel Hanlon	420		do	Chesspring and Gallitzin.
	CAMERON COUNTY.					
Mount Hope mine, Mount Hope seam.	Cameron	Jacob Elias	43,000	3	Bituminous	Buffalo from Chutes to Emporium, thence to Buffalo, via B. and N. Y. R. R.
	CENTRE COUNTY.					
Snow Shoe mine, B, D, and F seams.	Snow Shoe	Bellefonte and Snow Shoe R. R. Co.	85,731	14¼	Bituminous; iron working, making gas and coke.	Bellefonte, Williamsport, Milton, Northumberland, Catasauqua, Pottstown, via Bellefonte and Snow Shoe R. R., Bald Eagle Valley R. R., and Pa. R. R. and connections.
Black Diamond mine	Powelton	William J. Jackson	45,840	4	Bituminous; steam	Greenwich and Cuba.
Coal Bank mine	Bush township	Enterprise C. Co	None.		Bituminous	
	CLARION COUNTY.					
Mineral Ridge C. Co.'s mine, Kittanning seam.	Monterey	T. J. Skidmore	52,393	3¼	Bituminous; steam	Buffalo, N. Y., Irvineton, via A. D. R. R., P. T. and B. R. R., D. A. V. and R. R. R., and L. S. and M. S. R. R.
J. B. Miller mine	Sligo	J. B. Miller	2,270	3	Bituminous	Owner's works.
Kribbs mine	Beaver city	Edwin Rawe	500	2	do	Oil wells.
Church Hill C. Co.'s mine, Kittanning seam.	W. Monterey	Church Hill C. Co	6,000	3	do	Oil City, Buffalo, via Allegheny Valley R. R. and B. and S. W. R. R.
Clarion C. Co.'s mine, Clarion seam.	Clarion	Clarion Coal Co	20,200	3⅜	do	Along line Foxburgh Clarion R. R., Clarion town, via Foxburgh and St. Petersburgh R. R., Emlenton and Shippensville and Clarion R. R.
Pittsburgh C. and M. Co., Catfish seam.	Catfish	Pittsburgh C. and M. Co.	55,000	3½	Bituminous, hard, very strong	Buffalo, all western Ontario, via A. V. R. R., P. F. and P. R. R., B. and S. W. R. R., N. Y. and H. R. R. R., N. Y. L. E. and W. R. R., Gt. West. R. R., and Grand Trunk R. R.
Fairmount mine, Lower C and Lower Freeport seams.	Fairmount City	Fairmount Coal Co	77,424	11	Bituminous	Titusville, Pa., Buffalo, N. Y., and Can.
Pine Run C. and M. Co., C seam.	East Brady	Stephenson & Mitchell	12,225	3⅝	do	Buffalo, Erie, Oil City, Franklin, and Foxburgh, via A. V. R. R., P. T. and B. R. R., B. and S. W. R. R., and L. S. and M. S. R. R.
Brady's Bend mine	do	Brady's Bend Min. Co.	18,000		do	Line of A. V. R. R.
Black Diamond mine	Knox	Daniel Barnett	1,070	3	do	Elk City and Beaver township.
Benninger mine	Madison township	James Benninger	400		do	Surrounding country.
	Beaver township	D. Foster	600		do	Elk City and vicinity.
	Ashland township	Joseph Sneddai	6,000		do	Edinburgh, Pa.
Sligo Branch C. Co	Madison township	Sligo Branch C. Co	21,279		do	Oil City and Buffalo, N. Y.
Red Bank Fee	On A. V. R. R	Reynolds & Co	None.		do	Furnace.
	Brinkerton	Samuel Reed	600	3	do	Neighborhood.
	Perryville	John Youngling	556	3	do	Do.
	Clarion	S. G. Sloan	456	3	do	Neighborhood and home.
	Brady township	William Jardine	1,160	4	do	Do.
	Vic. of Stone House	Buzza & Snedden	833	2 1/16	do	Neighborhood.
		F. Hallman	2,250	1⅝	Bituminous, soft	Do.
	Near Strattonville	James G. Wilson	635	3½	Bituminous	Neighborhood and home.
	Turkey City	James Berry	600	5½	Bituminous; steam	Do.
	do	Edinger Bros	456	2½	Bituminous, soft	Do.
	Richland township	Peter Dunn	380	2½	Bituminous	Do.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CLARION CO.—cont'd.			*Feet.*		
.....	Salem township	William Diltman	263	2⅓	Bituminous, soft	Neighborhood and home.
.....	Richland township	J. W. Blair	464	4⅔	Bituminous	Do.
.....	West Freedom	J. B. Grazier	399	2	do	Do.
.....	Foxburgh	Thomas Tregoming	857	4	do	Neighborhood.
.....	East Brady	Elder & Bennett	250	.....	do	
.....	Elk City	H. B. Santrock	1,824	2½	do	Do.
.....	West Freedom	Harrison McCall	684	2½	do	Neighborhood and home.
.....	Lamartine	Jacob Kribbs	380	.....	do	Neighborhood.
.....	Salem	Harris Hoas	437	.....	do	Do.
	CLEARFIELD COUNTY.					
Laurel Run mine	Decatur township	John Nuttall & Co	64,587	5⅓	Bituminous	Harrisburg, Balto., Phila., and N. Y.
Decatur mine	Morris township	do	59,738	4⅔	do	Do.
Morrisdale mine, D seam	Morrisdale Mines	R. Buligton	144,649	4½	do	Eastern Pa., N. Y., and New Eng. states.
Beaver mine, B seam	Near Houtzdale	John Morris & Co	4,838	4½-5	do	Line of Pa. R. R. and Reading R. R.
Leonard mine, Bagshaw seam	Philipsburg	John Ashcroft	8,400	3⅔	do	P. R. R. Co. and P. and R.
Franklin mine, B seam	Houtzdale	Kittanning Coal Co	131,405	4½-5	do	
Moshannon mine, B and D seams.	Moshannon station	Moshannon C. Co	74,508	4-5	do	Line of Penna. and Phila. and Reading R. R.'s and branches.
Excelsior mine, B seam	Houtzdale	Fisher Bros. & Miller	192,000	4⅔	Semi-bituminous	Phila., N. Y., Boston, and R. R. trade of Pa.
Penn mine, B seam	do	Reakut Bros. & Co	35,693	4	Bituminous	Phila., Harrisburg, Boston, etc.
Sterling No. 1 mine, E seam	Sterling	Robt. Hare, Powell & Co.	236,719	5	do	Phila., N. Y., Boston, and steamship lines in New England and Middle states.
Sterling No. 2 mine, E seam	Houtzdale	do	69,650	5½	do	Phila., N. Y., Boston, New England and Middle states.
Ocean mine, B seam	Near Houtzdale	Whitehead & Co	201,660	4½	do	Philadelphia.
Webster mine, B seam	Houtzdale	Webster C. Co., lim	130,121	4⅓	Semi-bituminous	Penna., N. Y., and New England.
Reading mine, B seam	Osceola Mills	Henry Liveright	21,799	4⅓	do	Middle and eastern part of Pa.
Goss Run mine	Woodward township	Berwind, White & Co	111,625	5½	do	New Eng. states and ocean steamers.
Eureka mine, E seam	Houtzdale	do	47,997	5⅓	do	Do.
Mapleton mine	Decatur township	do	50,925	4⅓	do	Pennsylvania, New England states, and ocean steamers.
.....	Morris township	B. R. Wigton	45,000	.....	Bituminous	Philadelphia.
Hilldrup and Sandy Lick mine.	.....	Sandy Lick Gas C. and Coke Co.	56,048	.....	do	
Rochester mine	Du Bois	Bell, Lewis & Yates	None.	.....	do	
Derby mine	Philipsburg	Thos. Barnes & Bro	28,000	4	do	Do.
.....	Coal mining	Espeh Bros	1,000	.....	do	Osceola Mill, Pa.
.....	do	John Wilkinson	3,000	.....	do	Tyrone, Pa.
.....	do	D. C Burkett	1,000	.....	do	Osceola Mills, Pa.
.....	Penn. township	George Hartshorn	571	4	do	Local trade.
.....	Pike township	James Norris	138	3	do	Curwinsville.
.....	do	George Norris	100	3	do	Do.
.....	Clearfield borough	Lee & Bigler	1,200	.....	do	Home, Clearfield.
.....	Morris township	John Mone	400	4	do	Morris township and neighborhood.
	CLINTON COUNTY.					
.....	East Keating township	Wistar C. and I. Co	328	.....	Bituminous	Local.
.....	.....	Mary Greenough & Co.	100	.....	do	Queen Run brick works.
.....	.....	Frederick Morris	2,400	.....	do	Farrandsville brick works.
	ELK COUNTY.					
Daguscahonda mine, C seam.	Daguscahonda	Northwestern Mining and Exchange Co.	110,807	3½	Bituminous; steam	Buffalo and Olean, via Phila. and Erie R. R., Dunkirk, A. Valley and Pitts. R. R., Buffalo and Jamestown R. R., P. and E. R. R., and B., N. Y. and P. R. R.
Glen Mayo mine	Johnsonburg	James H. Mayo & Co	17,000	4	Bituminous, red ash, free-burning; steam.	Erie, Buffalo, Bradford oil regions, and local tracts along P. and E. R. R., via P. and E., Buffalo and S. Western, Erie, Dunkirk, A. Val., Pitts., Buffalo, N. Y., Phila. R. R.
Eureka mine, C seam	Daguscahonda	Daniel Eldridge	30,344	3	Bituminous; steam	Erie and Buffalo, via Dagus. R. R., P. and E. R. R., Phila., Buffalo and N. Y. R. R.
St. Mary's Coal Co.'s mine, B seam.	St. Mary's	St. Mary's Coal Co	88,000	3½	Bituminous, soft	Home, via P. and E. R. R.
Cascade mine, 4-foot seam	do	Kaull & Hall	35,000	4	Bituminous	Buffalo and line of P. and E. R. R., via P. and E. R. R., and Buffalo, N. Y. and Phila. R. R.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	FAYETTE COUNTY.			*Feet.*		
James Rutherford mine	Fayette City	Briggs & Co	10,505	5½	Bituminous	Pittsburgh, via Monongahela river.
Washington mine	Broad Ford	S. Cochran, Sons & Co.	12,958		do	
Globe Works mine	Sherrick's station	A. A. Hutchinson & Bro.	90,000		Bituminous, coking	
Spring Grove Coke Works mine.	Dawson	James Cochran and Sol. Keister.	55,176		Bituminous	
Youngstown mine	Uniontown	Youngstown Coke Co. (limited).	2,485		do	
Connelsville Gas Coke Co.'s mine.	Wheeler	Connelsville Gas and Coke Co.	70,586		do	
Cedar Hill mine, upper and lower seams.	Jefferson township	Morgan & Dixon	25,941	7	do	Pittsburgh and Cincinnati, via Monongahela and Ohio rivers.
Diamond Coke Works mine	McClure station	McClure & Co	37,248		do	
Painter C. and Coke Works mine.	do	do	144,942		do	
Fair Chance Furnace Coke Works mine.		Fair Chance Furnace Co.	10,220		do	
Franklin mine		B. F. Keister & Co	10,000		do	
Mt. Braddock Coke Works mine.		S. Colvin & Co	65,000		do	
Umpire mine	Brownsville	John S. Cunningham & Co.	30,769	6½	do	Pittsburgh, Pa., via Monongahela river.
Turnbull & Hall mine	Turnbull's landing	Jos. Turnbull and John Hall.	62,700	5⅔	do	Pittsburgh, Allegheny, and E. Liverpool, Ohio.
	Brownsville	Henry Wilkins	4,880	9	do	Home.
Home Coke Works mine	Eversae	Sherrick & Wiley	15,000	8	Bituminous, coking	
Oliphant Furnace mine Pittsburgh seam.	Oliphant furnace	H. & R. C. Oliphant	8,064	8	do	Furnaces on property.
Lemont Coke Works mine	Lemont Furnace	Hogsett, Hanna & Co	63,350		Bituminous	
Pennsville mine	Pennsville	A. H. Sherrick	33,875		do	
Dexter Coke Works mine		J. R. Stauffer & Co	24,776		do	
Pittsbg. and Connelsville Gas C. and Coke Co's. mine.	Connelsville	Pbg. and Connelsville G., C., and C. Co.	159,903		do	
Morrell & Wickham mine	Near Connelsville	Cambria Iron Co	560		do	
Uniondale Coke Works mine.	Dunbar	Reid Bros.	57,750		do	
Henry Clay, Frick, Morgan, Foundery, Eagle, Summit, Anchor, Valley, and Tip Top mines.		H. C. Frick & Co	547,200		Semi-bituminous	
Fountain mine	Fountain mills	A. P. Blake	24,500	9	do	
Deer Park mine	Dunbar	Mahoning Coke Co	55,832		Bituminous	
Hill Farm mine	Near Dunbar	Dunbar Furnace Co	58,500		Bituminous, coking	
Parish Coke Works mine	Ferguson station	do	9,310		do	
Mt. Braddock's C. Wks. mine.		Chas. H. Armstrong & Son.	9,200		Bituminous	
Sterling Works mine	Tyrone	J. M. Schoonmaker	250,000		Bituminous, coking	
Tyrone mine	Broad Ford	Laughlin & Co	65,558		Bituminous	
	North Union township.	John McFadden	1,000		do	Uniontown.
Chi. & Connellson Coke Co., limited, mine.	Uniontown	Chi. and Coke Connellson Co., limited.	None.		do	
Fort Hill Coke Works mine	Dawson	W. J. Rainey	None.		do	
Jackson mine	do	Jackson Min. Co	28,500	7	do	Pittsburgh and Kittanning, Pa., and Cleveland, Ohio, via B. and O. and C. and R. R. R.
Excelsior mine	Monongahela river	Winnott & Bortner	5,320	6	do	Pittsburgh.
Carondelet mine, river seam	Fayette City	Frazer & Frye	30,696		do	Pittsburgh, via Monongahela river.
Percy mine, Pittsburgh seam.	Dunbar	Percy Min. Co	37,540	8	do	B. and O. R. R., brickyards at Mt. Braddock and Dunbar, and Dunbar furnace, via Fayette Co. branch of B. and O. R. R.
Furnace mine, Connelsville seam.	Everson	Everson, Macrum & Co.	52,417	9	do	Charlotte furnace and Scottdale rolling-mill.
Little Alps mine	Opp. California	Little Alps C. Co., lim.	37,536	5	do	Pittsburgh, Cincinnati, Louisville, and New Orleans, via Monongahela, Ohio, and Miss. rivers.
Tremont mine, 7-foot seam	Belle Vernon	Geo. W. Clarke	22,800	6	do	Pittsburgh, Cincinnati, Madison, Ind., Louisville, New Orleans, via Mon., Ohio, and Miss. rivers.
Garrows' Coal Works mine	Monongahela river	Jos. Garrow	8,269	7	do	Pittsburgh, via Mon. river.
Eldorado mine	Moyer's station	Zuck & Henry	38,285	8	Bituminous, soft, coking	Cleveland, Ohio, via P. R. R., C. & P.
Little Redstone mine, Pittsburgh seam.	Near Fayette City	James Rutherford	10,133	5½	Bituminous, hard	Pittsburgh and Orleans, via Mon. river.
Margaret mine, 9-foot seam	National road	John Snider	3,750	9	Bituminous	Uniontown, Fayette county.
—— Pittsburgh seam	Uniontown	John H. King	3,465	9	do	Do.
	Washington township.	R. C. Schmertz & Co	10,280	6	do	Belle Vernon glass works.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	FAYETTE CO.—cont'd.			Feet.		
Bridgeport mine	Bridgeport	M. Crawford	3,000	6	Bituminous	Bridgeport, Brownsville, and surrounding country.
	Belle Vernon	S. F. Jones & Co	1,505	6	do	Belle Vernon and vicinity.
Freeman and Hopwood mine, Connelsville seam.	Monroe	N. H. Black	2,812	9	Bituminous, coking	Uniontown and Monroe.
	Whitsettville	Jesse Stricklin	570	9	Bituminous	Neighborhood and home.
	Buttonwood	Harrison Henshaw	1,456	9	do	Do.
	Brownville	John Hartsook	1,200	9	do	
	Belle Vernon	George Vernon	1,400	9	do	Neighborhood.
	GREENE COUNTY.					
Slippery Rock mine, top and bottom seams.	Franklin township	Robert A. Haskinson	3,800	5	Bituminous	Waynesburgh.
Reese and Bolivar mine		Reese & Bolivar	621	3	do	Neighborhood.
	Gray's landing	William Gray & Sons	1,600	5-9	do	Home.
	Waynesburg	B. F. Sayers	760		do	Neighborhood.
	HUNTINGDON COUNTY.					
Ocean and Howe mine, A and B seams.	Dudley	William H. Sweet & Co.	15,931	3½	Bituminous	Greenwich Point and Phila.
Cumberland mine	Coalmont	do	3,243	3	do	Eastern markets, N. Y., and Phila.
Robertsdale mine, B and C seams.	Robertsdale	Rock Hill I. & C. Co	121,023	6	Semi-bituminous	Co.'s furnaces, eastern Pa., and N. J.
Carbon mine, Cook seam	Broad Top city	Meers Bros	24,876	4¼	do	N. Y. and Brooklyn.
Mooredale mine, Cook seam	Dudley	Reakut Bro. & Co	19,660	2⅝	do	Phila.
Powelton Plane mine, Burnet seam.	Powelton	Robert H. Powell & Co	22,472	5	do	Phila., N. Y., Boston, New Eng. states, and local trade on R. R.
	INDIANA COUNTY.					
Smith mine, Pittsburgh seam.	Smith station	Robert Smith	8,400	6	Bituminous	Inda., New Florence, Altoona, Black Lick, Pa., and P. R. R Co.
Turner mine, Pittsburgh seam.	do	J. M. Turner	8,400	6	do	Do.
	Near Blairsville	Phillip Stiffey	875	7	Semi-bituminous	Blairsville, Pa.
	do	Isaac Hicks	700	6	do	Do.
	do	Edw. Hicks	525	6	do	Do.
	do	Jacob Kuhn	875	7	do	Do.
	do	Jacob Geary	875	7	do	Do.
	Indiana borough	J. & D. S. W. Shepherd.	700	6	do	Indiana borough.
	do	John S. Agey	525	6	do	Do.
	do	Samuel Shearer	3,500	7	do	Do.
	do	John C. Markle	3,500	7	do	Do.
	Rochester mills	Samuel Lowry	1,050	13	do	Neighborhood.
	do	Samuel Barr	700	10	do	Do.
	Near Black Lick	Black Lick Mfg. Co	7,500	4	do	Fire-brick works of company.
	do	Hugh Rager	3,000	4	do	Do.
	do	Louis Aber	2,000	4	do	Do.
	W. Lebanon	Thomas Smith	720	6	Bituminous	Neighborhood.
	Burrel township	Porter J. Snitner	1,000	6	do	Blairsville.
		Samuel Dixon	400	6	do	Do.
	Armstrong township	Holston Bros	800		do	Home.
	S. Mahoning township.	A. Weamer	400	4	do	Country trade.
	JEFFERSON COUNTY.					
Hamilton mine	Reynoldsville	Hamilton Coal Co	53,333	5-6	Bituminous; steam, gas, forge, and coke.	Buffalo, via Emporium over B. and R. R., and Oil City, via A. V. R. R. and B. and L. W. R. R.
Washington mine, Freeport No. 2 seam.	Pancoast	Frank Williams & Co.	25,912	6	Bituminous, very free from slate, sulphur, and other impurities; gas and steam.	Buffalo, via A. V. R. R., E. and P. R. R., and B., N. Y. and P. R R.
Pancoast mine, Freeport No. 2 seam.	do	Reynoldsville C. Co	37,336	5	do	Do.
Soldier Run mine, Upper Freeport seam.	Reynoldsville	Powers, Brown & Co	31,056	5	do	Buffalo, Canada, west and intermediate points, via B. and N. Y. and P. R. R., and B. and S. W. R. R., and A. V. R. R.
Bolger mine, A seam	Winslow township	P. F. Bolger	1,261	4¾	Bituminous, soft	Reynoldsville, Brookville, and Emerickville.
Diamond Coal Co.'s mine	Reynoldsville	Diamond Coal Co	25,800		Bituminous	
	Brookville	Jacob Mineweaser	760	3	Bituminous, soft	Neighborhood.
	Roseville	W. B. Cowan	831	3	Bituminous	Do.
	Punxsutawney	Wm. G. Campbell	1,050	8	do	Neighborhood and home.
	Brookville	W. A. Watts	760	2½	do	Neighborhood.
	Knox township	David A. Eslaugh	646	4½	do	Neighborhood and home.
	Brookville	Wm. Carberry	570	3	do	Neighborhood.
	Stanton	Wm. Henigon	570	5	Bituminous, hard, no sulphur.	Neighborhood and home.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LAWRENCE COUNTY.			*Feet.*		
Beaver mine	Clinton	Lee & Patterson	43,300	3	Bituminous; steam, gas, and R. R.	Erie, via E. and P. R. R.
Clinton C. Works mine	do	Clinton Coal Co	15,957	3	Bituminous; gas and steam	Erie, New Castle, Youngstown, Niles, Erie and Pittsburgh, and Ashtabula and Pittsburgh R. R.
Davidson mine, 3-foot seam	Wampum	W. B. Enos	20,000	2¾	Bituminous	New Castle, Youngstown, Sharon, and Erie, via P. and C. R. R., and E. and P. R. R.
Welsh mine, 3-foot seam	do	Wampum C. and I. Co.	39,600	2⅝	do	New Castle, Sharon, Ashtabula, and Youngstown, via E. and P. R. R.
	Neshannock township.	Jas. M. Keast	1,800	3	Bituminous, soft	Teamsters and farmers.
Simpson mine	Coal Town	David Speer & Son	2,284	3⅝	Bituminous	New Castle.
Edinburgh mine	Edinburgh	Mahoning Valley I. Co.	3,521	2½–6½	do	Home.
Bell & Sankey mine	Coal Centre	Bell & Sankey	3,675	4½	do	City use and rolling-mill.
Robt. H. Peeble mine, 4-foot seam.	Neshannock township.	Neshannock C. Co.	15,000	3½	do	New Castle.
Croton mine	Hickory township	Patrick Kennedy	2,940	2½	Bituminous, soft, free from pyrite.	Croton Gap Works and New Castle.
Wallace & McBride mine	W. New Castle	Sharpless & Kincaid	7,883	3	Bituminous, soft	New Castle.
	Peeble farm	Robt. H. Peeble	1,260	3½–4	Bituminous	
	Mount Air	John D. Mitchell	958	6	do	Neighborhood.
	Plain Grove township.	Wm. Bennett	968	3	do	Do.
	East Brook	Sam'l Slater	380	2½	do	Neighborhood and home.
Wallace mine		Sharpless & Kincaid	784	3	do	Neighborhood.
McChesney mine		John Wigley	653	2½	do	Do.
	New Castle	John Wooley	760		do	
	New Bedford	John Waddell	694	3½	do	Do.
Wright mine		S. P. Wright	350	2½	do	Do.
	Neshannock township.	Isaac Smith	1,217	4	do	Do.
	Pulaski	Sam'l English	300	3	do	Neighborhood and home.
	Locust Grove	H. W. Bay	705	3½	do	Neighborhood.
	Coal Town	Alex. McClaren	538	2¾	do	Do.
	LYCOMING COUNTY.					
Old Red Run mine, B and C seams.	Ralston		None.	6	Semi-bituminous	
McIntyre Co.'s mine, E and B seams.	McIntyre	McIntyre Coal Co	200,928	5½	do	Pa., N. Y. state, Canada, and western states.
	McKEAN COUNTY.					
Old and Instanter drifts, Barras and Teutonia seams.	Clermont	Buffalo Coal Co	108,173	2–3½	Semi-bituminous	Buffalo, McKean and Buff. R. R., Buffalo, N. Y. and Phila. R. R.
Buttsville mine	Buttsville	J. E. Butts, jr	39,205	3½	Bituminous	Carrollton and towns along Bradford branch of Erie R. R. and along Western Division of Erie R. R.
	MERCER COUNTY.					
Stoneborough mine, Kittaning seam.	Stoneborough	Mercer I. and C. Co	77,282	4½	Bituminous	Buffalo, N. Y., Erie, Pa., Cleveland and Ashtabula, Ohio, and oil country, via railroad.
Orangeville mine, Block seam	Pymatuning	Morris Coal Co	16,096	2½	Bituminous, hard	Kent, Salamanca, Oil City, Franklin and Meadville, via P. and O. R. R.
Bethel Coal Co.'s mine	Shenango township	Curtis & Boyer	18,788	3	Bituminous, block	Blast-furnaces in neighborhood, and Erie, Pa., via E. and P. R. R.
Pardoe mine, No. 3 seam	Pardoe	Mercer Min. and Manufacturing Co.	93,000	4⅝	Bituminous	Shenango, N. Y., P. and O. R. R., Cleveland, Erie and Ashtabula, via Shenango and Allegheny R. R., L., E. and W. and M. S. R. R., N. Y. and P. and O., and E. and P. R. R.
Pacific Slope mine	Sharon	W. B. Dunham	25,870	1½	do	Local iron-works connected with mine.
Pierce Frampton mine, Block seam.	Oakland	Oakland Coal Co	10,637	1½–4½	Bituminous, block	Sharpsville, Erie, Pa., and Cleveland, Ohio, via Sharpsville R. R., and E. and P. R. R., and N. Y., P. and O. R. R.
Oakland No. 3 mine, Block seam.	do	do	15,540	1½–4½	do	Do.
Neshannock mine	do	John Phillips & Co	22,900	2⅝	Semi-bituminous, block	Sharpsville and Erie, via Sharpsville R. R. and E. and P. R. R.
Hickory mine, Block seam	Hickory township	Hickory Coal Co	34,480	3⅝	do	Do.
Wise mine	do	Snyder Coal Co	47,400	3½	Bituminous, block	Sharon and Erie, Pa., via Sharpsville and Oakland R. R., and E. and P. R. R.
Rankin mine, Block seam	do	Enoch Filer	2,378	2½–3½	do	Sharon and Erie, Pa.
	North Hickory	F. A. Crawford	600		do	Sharpsville.
Carbon Coal Co.'s mine, No. 1 seam.	Neshannock	A. Parch	4,000	2½	Bituminous, soft	Sharpsville, via Sharpsville R. R.
Laird mine	Shenango township	Thos. Laird	7,290	3	Bituminous, block	West Middlesex.
Home mine	Hickory township	Buhl, Westerman & Co.	15,689	2	do	Erie, via E. and P. R. R.
Hoffman mine	do	Hoffman Bros	3,600	2	do	Sharon.
Wheeler Iron Co.'s mine	Shenango township	Wheeler Iron Co	1,300		do	Own furnace.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	MERCER CO.—cont'd.			*Feet.*		
Duncan C. Co.'s mine	Orangeville	Duncan C. Co	25,800	3½	Bituminous, block	Cleveland, Ohio, Chicago, Ill., and Meadville, Pa.
Hermitage mine, Block seam	Hermitage	Wm. Mottisher	740	2½	do	Sharpsville.
Pine Run mine	do	John Sheddon	1,500	3	do	Do.
Wright mine		J. H. Wright	565	4	Bituminous	Mercer and vicinity.
Bailey Bros. mine, B seam	Sandy lake	Jas. G. and H. B. Bailey	3,300	4¼	do	Sandy Lake village and Cochranton and also farmers.
Jackson mine, No. 3 seam	Jackson Centre	Jackson C. Co	32,000	4	do	Ashtabula, via N. F. and L. S. and M. S. R. R's.
	Jay Hill	Jacob and A. M. Zuschlag.	2,906	4	do	Neighborhood, home, and shipped.
	Pini township	Danl. Ross	532	3	do	Home and neighborhood.
	Sharon	Henry Bombeck	800	2	do	Neighborhood.
	Hermitage	Crawford Bros	800	2½	do	Do.
	Transfer	Lyman Carrier	800	3½	do	Neighborhood and shipped.
	Berlin Road	W. S. Huff	700	3	do	Neighborhood.
	Hickory	Henry Holsaffle	3,053	2½	do	Furnaces.
	Crills	Wm. Houston	1,750	4	do	Neighborhood.
	Stony Hill	Chas. Williams	1,000	2¾	do	Do.
	Hickory	Henry Ulrich	450	2½–3½	do	Do.
	Oak Hill	Perry A. Coon	700	3½	do	Do.
Fox mine		John Ebberts	500	4½	do	Do.
		P. H. Ebberts	1,500	4½	do	Neighborhood and home.
	North Liberty	I. W. Donniston	912	3	do	
	Wolf Creek	J. W. Emery	1,000	5	do	
Chestnut Ridge mine		Anton Hellig	3,762	3½	do	Neighborhood.
	Greenville	F. W. Looser	2,000	3-4	Bituminous, block	Do.
	Luckarick	Jas. Thomson	700	5	Bituminous, soft	Mercer.
		Three persons	2,656		Bituminous	
	SOMERSET COUNTY.					
Meyersdale C. Co.'s mine, Pittsburgh seam.	Meyersdale	Meyersdale C. Co	2,800	6-7	do	Balt., Md., via B. and O. R. R.
Salisbury mine	N. Salisbury	C. W. Williams	25,536	9	do	Hagerstown, Fredericktown, and Balt. Md., via B. and O. R. R.
Cumberland mine	N. Myersdale	J. W. Williams	6,379	7½	do	Do.
Balto. and Cumberland mine, Hirsch seam.	Keystone Junction	Adam Kreitzburg	21,504	4	do	Baltimore.
Salisbury Central mine, Pittsburgh seam.	Salisbury	Balto. and Cumberland C. Co. (limited).	17,480	9	do	Do.
Casselman C. Co.'s mine	Garrett	Casselman C. Co	336	3	Semi-bituminous	Baltimore and Cumberland.
Philson I. and C. Co.'s mine, Upper Berlin seam.	Berlin	S. Philson and Cam Krisanger.	3,345	4	Semi-bituminous; domestic, and steam.	Balt. and local trade on B. and O. R. R.
Cumberland and Elk Lick mine.	Meyersdale	Cumb. and Elk Lick C. Co.	110,779	6	do	Do.
Berlin mine	Berlin	B. D. Morgan & Co	9,677	4	do	Phila., Pa., Balto., Md., Wilmington, Del., etc., via B. and O. R. R.
Keystone mine, Pittsburgh seam.	N. Meyersdale	Keystone C. Co	80,640	6½	Semi-bituminous, small amt. of sulphur.	Balt. and Phila., via B. and O. R. R., Penna. R. R.
	Addison township	Liston Bros	455	6	Semi-bituminous	Petersburgh, Somerset county.
	do	Wm. Miller	525	6	do	Do.
	N. Berlin	Jno. Miller	385	8	do	Berlin, Somerset county.
	do	Jacob Musser	490	8	do	Do.
	N. Buckstown	Jacob McGregor	700	7	do	Bedford county.
	do	Andrew Slotter	700	7	do	Do.
	do	Conrad Stoy	700	7	do	Do.
	do	Geo. Lambert	700	7	do	Do.
	Somerset township	Nicholas Berkey	875	7	do	Somerset county.
	do	Rudolph Homer	700	7	do	Do.
	do	Adam Zumpstein	525	7	do	Do.
	do	Jacob Zeigler	525	7	do	Do.
	Elk Lick	Jere Keim	700	10	do	Elk Lick borough.
	TIOGA COUNTY.					
Blossburgh mine	Arnot	Blossburgh C. Co	279,085	6½	Semi-bituminous	N. Y. state principally, Western states, and Canada, via Tioga R. R.
Antrim mine, Bloss. seam	Antrim	Fall Brook C. Co	232,802	4	do	Central part of N. Y. state, via Corning, Cowanesque and Antrim R. R., Syracuse, Geneva and Corning R. R., N. Y. C. and H. R. R. R., and Erie canal.
Fall Brook mine, Bloss. seam	Fall Brook	do	156,490	4	do	Do.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	TIOGA CO.—cont'd.			*Feet.*		
Morris Run mine, Bloss. seam	Morris Run	Morris Run C. Min. Co.	269,380	1⅝-⅞	Semi-bituminous	Albany, Troy, Utica, Syracuse, Rochester, Buffalo, Auburn, Corning, Geneva, Chicago, and Milwaukee, via T. R. R., C. C. and A. R. R., N. Y. C. and H. R. R., E. R. R., and canal.
Mitchell mine, Bloss. seam	Willson Creek	Albert Dale	610	4	Bituminous	Wellsborough.
Lanark mine, Bloss. seam	Wellsborough	William Boatman and Robert Brownlee.	60	3⅝	Semi-bituminous	Do.
	VENANGO COUNTY.					
Philadelphia mine	Cranberry	James Kennedy	5,916	2½	Bituminous, free from slate, considerable sulphur; steam.	Oil City.
Berringer mine, Limestone seam.	Berringer farm	James T. Dye	684	2½	Bituminous	Bullion oil district.
Maple Grove mine	Raymilton	S. P. McCalmont	11,000	4	do	Franklin, Oil City, and Erie, via L. S. and M. S. R. R., and own road.
McElhinny mine	French Creek township.	Tiel & McDowell	3,522	3½	Bituminous; steam	Franklin and vicinity.
	Clinton township	Samuel Walter	1,000	3	Bituminous	Bullion oil district.
	Irwin	Thomas H. Price	2,000	.....	Bituminous, soft	Vicinity.
	Agnew mills	Piper & Bro	1,291	2½	Bituminous	Neighborhood.
	Cranberry	J. P. Steffey	380	2½	do	Neighborhood and home.
	WASHINGTON COUNTY.					
Laurel Hill mine	N. McDonald	W. P. Rend & Co	47,928	4½	Bituminous	Chicago, Ill., via P. C. and St. L. R. R.
Midway Block C. Co.'s mine	Midway	G. W. Crawford & Co	13,095	4½	Bituminous, block	Chicago and the lakes, via P. C. and St. L. R. R.
Cincinnati mine	Coal Bluff	J. S. Neel	41,172	5	Bituminous	Cincinnati and Louisville.
Black Hill mine	Union township	Heyser & Co., lim	8,069	4½	do	Mills and vicinity, and Chicago, Toledo, and Ohio, via Div. of P. M. M., also via Brinton to East Liberty and Ohio.
Cliff mine, Pittsburgh seam	White Mills station	Scully & Co	68,200	5	Bituminous; gas	Pittsburgh, Cleveland, Chicago, and all lower river towns, via Pa. R. R. and branches, and Mon. and Ohio rivers.
Keystone C. Co.'s mine, Pittsburgh seam.	Hanlin	Keystone C. Co., lim	None.	4-4½	Bituminous	Via Ohio river and P. C. and St. L. R. R.
American C. Works mine	Wood's Run	F. H. Coursin	19,000	7¾	do	Pittsburgh, Cincinnati, Louisville, Ky., New Orleans, and Alabama, via Mon., Ohio, and Miss. rivers.
Banner Works mine, River seam.	White Mills station	James H. Gamble and J. M. Risher.	37,500	4½	do	Cincinnati and Louisville, Ky.
Allison mine	Chartier's township	Jno. Allison	31,000	5½	Bituminous; gas and steam	Washington and Chicago, Ill., via P. C. and St. L. R. R.
Walnut Hill mine	Midway	Robbins & Arnot	43,717	3½-5	Bituminous, block; gas and steam.	Chicago, Cincinnati, Xenia, and Columbus, via P. C. and St. L. R. R.
Enterprise C. Works mine, Pittsburgh seam.	Washington	V. Harding	12,570	4¾	Bituminous; gas	Washington, Waynesburgh, and along lines of B. and O. R. R., and Waynesburgh and Washington R. R., and Chicago, Ill., via P. S. R. R., N. W. R. R., and B. and O. R. R.
Burr Hill mine, Pittsburgh seam.	McDonald	J. D. Santers	18,516	4½	Bituminous	Chicago, Indp., and northern Ind., via P. C. and St. L. R. R
Robbin's mine, Block seam	Midway	Robbin's Block C. Co	60,274	3½-5	Bituminous; fuel, steam, and gas.	Columbus, Logansport, Bradford Junction, and Indp., via P. C. and St. L. R. R.
Shire Oak mine, Youghiogheny seam.	Shire Oak	Blackburn & Mort	34,200	4½	Bituminous	Cincinnati, Louisville, and New Orleans, via Mon., Ohio, and Miss. rivers.
Knob mine	West Brownsville	S. H. Pearsall & Co	18,066	6	do	Pittsburgh, Cincinnati, Louisville, and New Orleans, via Monongahela and Ohio rivers.
Legler's Valley mine, River seam.	Finleyville	Jacob Legler	4,560	5	do	Washington, Pa., and Wheeling, W. Va., via P. S. R. R. and P. and O. R. R.
T. J. Wood mine	Allen township	T. J. Wood	26,650	7	do	Pittsburgh, Cincinnati, Louisville, and New Orleans, via Monongahela, Ohio, and Mississippi rivers.
Wellington mine	Wood's Run	R. Wellington	7,600	7	do	Pittsburgh, Pa., via Monongahela river.
Globe mine	California	Crowthus, Musgrave & Co.	73,140	7½	do	Pittsburgh and Ohio river, via Monongahela river.
Courtney mine	Courtney Station	Berry, Cook & Co	16,872	4¾	do	Pittsburgh and Ohio, via P., F. and W. and C. R. R. and E. and P. R. R.
Coal Bluff mine, Pittsburgh seam.	Coal Bluff	Patterson & Co	56,640	4½	do	West and northwest to Indiana, Ohio, Illinois, Wisconsin, and Minnesota, via P., F. W. and C. R. R., P. C. and and S. and L. R. R.
Warne mine	Monongahela City	H. A. Warne & Co	17,116	4½	do	Pittsburgh, via Monongahela river.
S. R. Cook mine	Chartiers township	James G. Shearn	550	4½	Bituminous, lump and slack.	Cannonsburgh and vicinity and Chicago.
Locust Grove C. and Lime Works.	Cannonsburgh	W. S. White & Son	3,967	4¾	Bituminous	Local.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WASHINGTON CO.—continued.			*Feet.*		
Evans mine	Evansburgh	W. H. Evans	4,200	4¾	Bituminous	Chicago, Washington, Pa., and Cannonsburgh.
Cannonsburgh C. Works, Bench seam.	Cannonsburgh	K. V. H. Cook	1,900	5	do	Local and western.
Greenfield C. Works	Greenfield	I. S. Neel	65,000	7	do	Pittsburgh, Cincinnati, and Louisville, via Monongahela and Ohio rivers.
Harlem mine, River seam	Harlem	Louis Staile	16,114	4½	do	Cincinnati.
Abe Hays mine, River seam	Monongahela City	W. S. B. Hays	22,751	4⅝-5	Bituminous; gas and blacksmithing.	Pittsburgh, Cincinnati, Louisville, and New Orleans.
Black Diamond mine, River seam.	Black Diamond	Louis Staile	42,401	4½	Bituminous; gas	Cincinnati, Saint Louis, and all river towns to New Orleans.
Buffalo mine, Pittsburgh seam.	Limetown	J. W. Ellsworth and J. J. Steutler.	None.	4½	Bituminous	Indiana, Illinois, Minnesota, Iowa, and other western and northern states, via P. C. and St. L. R. R.
Catsburgh mine	Monongahela City	Louis Staile	None.		do	
New Eagle mine	do	Lindsay & M'Cutcheon	29,647		do	Pittsburgh, Cincinnati, Louisville, and New Orleans, via river and P. and C. R. R.; also own rolling-mill.
Elizabeth C. Co. mine	Carroll township	Elizabeth C. Co., lim	19,069	4½	Bituminous, soft	Pittsburgh, Cincinnati, and Louisville, via Monongahela and Ohio rivers.
Twilight mine	Twilight	Charles Huske	180	6	Bituminous	Home.
Clipper C. Works	Allenport	E. C. Furlong	30,991	7	do	Pittsburgh, via Monongahela river.
Huston C. Works	Limetown	John T. Huston & Co.	10,200	5	do	Down river, Cincinnati, etc. via Ohio river.
Champion mine, Upper and Lower seams.	Wood's Run	Morgan & Dixon	26,286	7	do	Pittsburgh and Cincinnati, Ohio, via Monongahela and Ohio rivers.
Smith mine	Pike Run	Moore & Smith	22,780		do	Ohio river markets, via Monongahela and Ohio rivers.
	Arden	Fred. Marshall	800	4½	Bituminous, soft	Neighborhood.
	Burgettstown	Stevenavit	1,140	5	Bituminous	Do.
	Pike Run	George Siddell	760	9	Bituminous	Neighborhood.
	Hanlin	Jos. Ferguson	800	5	do	Do.
	Lone Pine	H. M. Walton	570	3	do	Do.
	do	Amos Wise	456	3	do	Do.
	Monongahela city	Jos. Kennedy	1,140	4	do	Do.
	McComb's station	Robt. McComb	950	5	do	Do.
	Monongahela city	Isaac S. Keeny	950	5	do	Do.
	Fredericktown	Louis Phillips	950	7	do	Neighborhood and home.
	Burgettstown	John Andrews	950		do	Neighborhood.
	Greenfield	Saml. Keath	1,520	7	Semi-bituminous	Do.
	Ewing station	J. H. Ewing	1,575		Bituminous	Neighborhood and home.
	E. Bethlehem twp	B. F. Hawthorne	800		do	Neighborhood.
	WESTMORELAND COUNTY.					
Millwood mine, Pittsburgh seam.	Millwood	Millwood C. and Coke Co.	91,146	5	Semi-bituminous	Penna. R. R. Co.
Bessemer Coke Works mine.		C. P. Markle and Sons.	45,888		Bituminous	
Hazlet C. and Coke Works mine.	Mullen's station	Boyle and Rafferty	181,710		do	
Armstrong mine, Yohogany seam.	Armstrong station	C. H. Armstrong	44,080	4½	do	Pittsburgh, via B. and O. R. R.
Amieville mine	Amieville	N. I. Bigley	48,000	5	do	Baltimore, Md., Pittsburgh, Pa., and intermediate points, via B. and O. R. R.
Loyal Hanna mine, Connellsville seam.	Latrobe	Loyal Hanna C. and Coke Co.	118,191	6½	do	Mostly coked, also W. Va. and Pa. R. R.
Apollo Iron Works mine		Laufman & Co	16,386	3½	Bituminous; iron mfg	Own use.
Youghiogheny Gas C. Co. mine.	W. Newton	Youghiogheny Gas C. Co.	32,460	6	Bituminous, gas	Balt., Md., and Pittsburgh Pa., via B. and O. R. R.
White Ball mine, Pittsburgh seam.	Yohoghany	McCandless, King & Co.	38,080	5½	do	N. Eng. States and N. Y. State.
Shafton mine, Pittsburgh seam.	Shafton	Shafton Coal Co.	19,600	5	do	Pa. R. R. Co.
Shaft No. 1, Pittsburgh seam.	Irwin	Penn. Gas Coal Co	180,004	5	do	N. E., N. Y., N. J., Pa., South, Mexico and Cuba, via Pa. R. R. and B and O. R. R.
Shaft No. 2, Pittsburgh seam.	do	do	159,905	5	do	Do.
Irwin, Southside, Larimer, 1 and 2, Fisher, Westm'd, and Spring Hill mines, Pittsburgh seam.	Penna. to Larimer Sta., on P. R. R.	Westmoreland C. Co	534,626	5	Bituminous	Atlantic cities by R. R. to tide-water, also beyond by C., incl. export to Cuba and Brazil.
Jones & Watkins mine	Crumbies	Jones & Watkins	13,751	5	do	Cincinnati and Louisville, via Ohio river.
Ocean mine, second seam	Scott Haven	W. L. Scott & Co	152,000	5	Bituminous; gas	Erie, Pa., and Baltimore, Md. via Pa. R. R. and B. and O. R. R.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WESTMORELAND CO.—continued.			*Feet.*		
Eureka mine	Jacob's creek	Fox, Kifer & Aspey	24,890	8½	Bituminous; gas and coking.	Baltimore, Md., Pittsburgh and Youngstown, Ohio, via P. and O. R. R. and P. and L. E. R. R.
Iron City mine	Webster	Phillips & Mittenzney	22,800	5	Bituminous; domestic and manufacturing.	Cincinnati and Louisville, via Ohio river.
Union Gas C. Works mine	do	Jacob Tower, jr	13,870	4½	Bituminous	Pittsburgh, Cincinnati, Louisville, via Ohio and Monongahela rivers.
North Webster mine	do	John Gilmore	50,897	4½	do	Cincinnati, Pittsburgh, Louisville, Evansville, Cairo, Nashville, Saint Louis, Memphis, and New Orleans, via Monongahela and Ohio rivers.
SW. Coal Co., limited, mine, *Connelsville seam.*	Tarrs	SW. C. Co., limited	36,000	4	Bituminous; coking	Pa. R. R. Co., rolling-mill works, and domestic use, via Pa. R. R. and branches.
Lichburg mine	Near Lichburg	D. B. Ashbaugh	81,050	4	Bituminous	Altoona, Harrisburg, Millheim, Louistown, and Mantua, via W. R. R. and Pa. R. R.
Saltburgh mine, 7-foot seam.	Saltburgh	Saltburgh Coal Co	78,325	7	Bituminous, block	Pa. R. R. Co.
M. Saxman, jr., & Co.'s mine, Pittsburgh seam.	Latrobe	M. Saxman, jr., & Co	60,000	7	Bituminous	Eastern markets along Pa. R. R.
Webster Coal Co.'s mine, Pittsburgh seam.	Webster	John & W. C. Guffey	12,105	4½	Bituminous; gas	Pittsburgh, Cincinnati, and Louisville, via Monongahela and Ohio rivers.
Markle Coal Works mine, 6-foot seam.	Junction City	C. P. Markle & Sons	9,226	5½	Bituminous	Own use at West Newton paper-mills, via B. and O. R. R.
Saxman mine, top and bottom seams.	Near Latrobe	D. J. Saxman	1,440	9	do	Latrobe and vicinity.
——, 9-foot seam	Scottdale	W. A. Kifer	18,240	8	do	Scottdale.
J. Saxman mine	Latrobe	H. C. Best	2,400	6	do	Latrobe.
Mary Long mine, Main seam.	Hempfield	P. S. Kuhn	3,504	7	do	
	Hempfield township	John D. Miller	1,024	7	do	Greensburgh and vicinity.
Rostraver mine	*Rostraver*	*Abraham Rupert*	*38,000*	5	do	Cincinnati, Ohio, Madison, Ind., via Monongahela and Ohio rivers.
No. 4 mine, Pittsburgh seam	Sewickley station	Penna. Gas C. Co	202,691	5	do	New England, New York, New Jersey, Pennsylvania, Southern Mexico, and Cuba, via Pa. R. R. and B. and O. R. R.
Coal Run mine, Pittsburgh seam.	Irwin	do	182,845	5	do	Do.
Greensburgh mine, 7-foot seam.	Greensburgh	Greensburgh C. Co	28,100	7	do	Via Pa. R. R. and S. W. branch.
Waverly Coal and Coke Co.'s mine.	Suntleton	Waverly C. and Coke Co.	80,000	8	do	New York and New England ports, and West, via B. and O. R. R., P. and L. E. R. R., and Pa. R. R.
American Coke Works mine.	Stonersville	Samuel Warden & Co	20,441		do	
Standard mine	Mount Pleasant	A. A. Hutchinson & Bro.	150,000		do	
W. Overton mine	W. Overton	A. C. Overholt & Co	63,000		do	
Union Coke Works mine	Stoners	Hurst, Stoner & Co	73,064		do	
Star mine	Stauffer	B. F. Coughenour	12,500		do	
Isabella Coke works mine	Cokeville	Isabella Furnace Co	96,000		do	
Rising Sun Coke works mine.	Mount Pleasant	Markle & Co	45,429		do	
Mullin mine	Bridgeport	H. C. Frick & Co	35,600		Semi-bituminous	
Buckeye mine	Mount Pleasant	J. M. Cochran	60,299		Bituminous	
Morewood mine	do	Morewood Coke Co	29,850		Semi-bituminous	
Alice mine	do	J. M. Schoonmaker	None.		Bituminous	
Monastery mine	Latrobe	Edgar Thompson Steel Co.	10,000	8	do	Western points
Emma mine	Mount Pleasant	J. W. Overholt	22,248		do	
Enterprise Coke works mine.	Tarrs	Dillinger & Rafferty	27,360		do	
	Bolivar	Reese, Hammond & Co	2,000	5	Bituminous, soft	Home.
	Burrell	Henry Ellerman & Co.	1,330	4½	Bituminous	Do.
	New Salem	Henry Hugns	673	7	do	Neighborhood.
	Greensburgh	Robert Lowry	1,312	7	do	Do.
	Larimer station	Adam Robb	456	5	do	Neighborhood and home.
	Latrobe	E. J. Reed	1,710	6½	do	Neighborhood.
	Pennsylvania twp	Steiner & Walton	729	6	do	Do.
	Manor	John Sowash	698	6	Bituminous; gas	Neighborhood and home.
	Bolivar	Murtland & Scott	2,090	6	Bituminous	Do.
	Franklin township	John Stewart	950	6	do	Do.
	Merwin	John Hunter	520	6	do	Neighborhood.
	Paintersville station	J. H. King	2,625	4½	do	Home.
	Pleasant Unity	William Wright	760	8	Bituminous; coking	Neighborhood.
	Coal Hill	Paul Peterson	608	7	Bituminous	Do.
	Tarrs' station	Henry H. Tarrs	1,520	9	do	Do.
	Pinkerton	John Pinkerton	1,140	8	Bituminous; gas	Do.
	Youngstown	Horbach heirs and J. B. Anderson.	700	9	Bituminous	Do.

Directory of bituminous coal mines—Continued.

PENNSYLVANIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	WESTMORELAND CO.—continued.			*Feet.*		
.....	Lockport station	Gardner Bros	1,683	5	Bituminous	Neighborhood and home.
.....	Greensburgh	J. C. McCausland	1,026	7	do	Neighborhood.
.....	Murrysville	O. M. Haymaker & Bro.	760	.....	do	Do.
.....	Mount Pleasant	R. K. Hisson	532	.....	do	Do.
.....	Beatty station	Saint Vincent Abbey	1,520	8	do	Home.
.....	Greensburgh	John Rugh	768	7	do	Neighborhood and home.
.....	Pleasant Unity	George Chambers	800	9	Bituminous; coking	Do.
.....	Adamsburgh	Adam Kemerer	855	5	Bituminous	Neighborhood.

TENNESSEE.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	ANDERSON COUNTY.					
Black Diamond mine, E seam	Coal Creek	Black Diamond C. Co.	18,000	4½-5	Bituminous	Knoxville, Atlanta, and other points in Tennessee and Georgia.
Weldon mine, E seam	do	E. Tenn. Coal Co	1,400	4½-5	do	Knoxville, etc.
Central C. Co.'s mine, E seam	do	Central Coal Co	15,000	4½-5	do	Knoxville, Atlanta, Chattanooga, Bristol, and intermediate points, via K. and O. R. R., E. T., V. and G. R. R., and W. and A. R. R.
Knoxville Iron Co.'s mine	do	Knoxville Iron Co	96,918	5½-6	do	Chattanooga, Atlanta, intermediate points, Bristol and line of A. M. and O. R. R., and Knoxville, via K. and O. R. R. and E. T., V. and G. R. R.
E. Tenn. Coal Co.'s mine	do	E. Tenn. Coal Co	3,500	4½	Bituminous, hard	Knoxville and other towns in Tenn., Dalton, Marrietta, Atlanta, Athens, Macon, Augusta, Columbia, and Rome, via K. and O. R. R., E. T., V. and G. R. R., W. and A. R. R., M. and C. R. R.
Franklin Coal Co.'s mine	.....	.....	None.	.....	Bituminous	
Enterprise Coal Co.'s mine	.....	.....	None.	.....	do	
Coal Creek Coal Co.'s mine	Coal Creek	Coal Creek Coal Co.	None.	5	Semi-bituminous	Tenn., Ga., Ala., S. C., and Va.
Anderson County Coal Co.'s mine, 5-foot seam.	do	Coal Creek Coal Co. and O. P. Temple.	6,000	4½	Bituminous	Do.
	CAMPBELL COUNTY.					
Campbell Co. mine	Caryville	H. P. Stone	1,200	2½-3½	Bituminous; gas	Knoxville and Atlanta.
	CUMBERLAND COUNTY.					
Brown mine	Crossville	G. W. Brown	24	7	Bituminous, hard	Crossville and blacksmiths of vicinity.
	FRANKLIN COUNTY.					
University mine, University seam.	Sewanee	University Coal Co.	1,000	2	Bituminous, laminated, free-burning, hard.	Sewanee, Shelbyville, Fayetteville, and Winchester.
Shake Rag mine, Shake Rag seam.	do	do	275	2	do	Do.
Anderson mine, Cliff seam	Anderson	Thomas J. Johns	50	3	Bituminous, hard, red ash, free-burning.	Nashville, Chattanooga, Memphis, Atlanta, Macon, Columbus, Augusta, Savannah, and Port Royal.
	GRUNDY COUNTY.					
Sewanee mine, Sewanee seam.	Tracy City	Tenn. C. and R. R. Co	200,000	4	Semi-bituminous, coking, soft, friable, free from sulphur.	Atlanta, Rome, Chattanooga, Nashville, St. Louis, via R. R.
	HAMILTON COUNTY.					
Soddy mine, Nos. 7, 9, and 10 seams.	Soddy	Soddy Coal Co	50,000	8½	Semi-bituminous	Chattanooga, Atlanta, and all principal southern cities.
Hamilton mine	Melville	Thomas Parker	None.	3½	Bituminous, hard, free from pyrite and other impurities.	Chattanooga and points south.
	MARION COUNTY.					
Etna mine, Kelly seam	Whiteside	D. B. Pillsbury	18,000	2½-2¾	Semi-bituminous	All over the south, and some to Inda., via N. C. and St. L. R. R. and connections
Victoria mine, Sewanee seam.	.....	S. S. C. I. and L. Co	17,030	2½-3	Bituminous	Home.
Battle Creek mine, Battle Creek seam.	Battle Creek	.....	6,560	1⅔	Bituminous, irregular-block.	Nashville, Chatt., and intermediate places.
.....	.....	Jacob Houtz	300	2	Bituminous	Decatur, Ala.
.....	.....	David McNabb	325	2	do	Do.
	ROANE COUNTY.					
Roane Iron Co.'s mine, Rockwood seam.	Rockwood	Roane Iron Co	56,000	5	Semi-bituminous	All used in furnace.
Oakdale I. Works' mine	Oakdale	Oakdale I. Works	None.	2-3	Bituminous; furnaces and smelting iron.	
	WHITE COUNTY.					
Little Brice mine, Brown & Little seam.	Sparta	William Hodge	2,000	3½-4½	Bituminous	Sparta, Tenn.

Directory of bituminous coal mines—Continued.

VIRGINIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	CHESTERFIELD COUNTY.			*Feet.*		
Bright Hope mine, Top; middle, and bottom seams.	Clover Hill	Bright Hope R. Co.	19,040	27–30	Bituminous	Richmond, Petersburgh, Norfolk, Va., and tide-water cities on Atlantic coast.
Cunliff mine	Coalfield	Geo. H. & Jno. Jewett.	6,720	25	do	Richmond, Va.
Union mine	Midlothian	Jacob Baach	1,638	8	do	Do.
Midlothian mine	do	R. S. Burrows	13,122	4⅔	do	Richmond and Manchester.

WASHINGTON TERRITORY.

	KING COUNTY.					
Seattle C. and Transp. Co.'s mine, Nos. 2, 3, 4, and 5, Bagley, 7-ft., and Alsworth seams.	10 miles from Seattle	Seattle C. and Transp. Co.	138,764	71	Lignite, hard, bright, non-coking.	San Francisco, Cal.
Old Talbot & Renton mine, Upper and lower Old and New Talbot seams.	13 miles southeast of Seattle.	Renton C. Co	3,339	48½	Lignite	San Francisco and Seattle.
	PIERCE COUNTY.					
Wilkeson mine, Ainsworth & Wright seam.	31 miles southeast of New Tacoma.	A co-operative company.	261	19	Bituminous, coking; blacksmithing.	New Tacoma.
	THURSTON COUNTY.					
Thurston C. Co's mine	Four miles from Tenino	Thurston C. Co.	2,651	8¼	Lignite, non-coking	Portland, Or., and Olympia, Washington Ter.

WEST VIRGINIA.

	BARBOUR COUNTY.					
	Philippi	Lewis Wilson	950	5	Semi-bituminous	Philippi.
	BOONE COUNTY.					
Peytona Cannel C. Co.'s mine, Cannel seam.	Peytona	Peytona Cannel C. Co.	22,400	1½	Cannel	St. Louis, Cincinnati, and New York, via Kana. and Ohio rivers, Chesapeake and O. R. R., and by sea.
	BROOKE COUNTY.					
	Middle Ferry	Nathaniel Wells	2,280	5	Semi-bituminous	Steamboats on Ohio river.
	Bethany Dist	Thos. Henderson	760	5	do	Bethany and vicinity.
	do	Jno. E. Curtis	950	5	do	Do.
	do	Jas. E. Councilman	684	5	do	Do.
	do	Alex. Campbell	665	5	do	Do.
	Short Run	Robt. Young	3,800	5	do	Steamboats on Ohio river.
	do	John Bowman	4,560	5	do	Do.
	Lazearville	Jos. Thompson	5,700	5	do	Wellsburgh, Lazearville, and vicinity.
	do	Henry G. Lazear	7,600	5	do	Wellsburg and other places along R. R.
	Wellsburgh	Forbes, Carmichael & Co.	9,500	5	do	Wellsburg and other places along Ohio river.
	DODDRIDGE COUNTY.					
	West Union	Jos. Chevraunt	760	4	Semi-bituminous	West Union.
	FAYETTE COUNTY.					
Faulkner mine, Kanawha seam.	Frederick	Fred. K. Faulkner	44,800	5⅝	Bituminous; gas and steam	N. Y., Phila., Richmond and Cin., via Ches. and O. R. R., and Kanawha and Ohio rivers.
Nuttallburgh mine	Nuttallburgh	John Nuttall	56,000	3½	Bituminous, coking; steamships.	Richmond and Cin., via C. and O. R. R.
Eureka mine, Gas seam	Coal Valley	Eureka C. Co	10,363	6	Bituminous; gas	Ches. and Ohio R. R.
Coal Valley C. Co.'s mine, Gas and Splint seams.	do	A. T. Toman	15,878	6½	Bituminous, splint or block	Richmond, Va., N. Y., and other eastern cities, *also Balt., via C. and O. R. R.*
Gauley Mt. mine, Gauley Mt. seam.	Ansted	Hawks Nest C. Co., lim	24,417	11	Bituminous, soft, coking	Boston, N. Y., Portland, Me., and Richmond, Va., via C. and O. R. R., James riv., the Atlantic, and Ohio river.
Fire Creek mine, Fire Creek seam.	Fire Creek	Fire Cr. C. and Coke Co.	20,200	3–4	Semi-bituminous, red ash	N. Y., Boston, Phila., Norfolk, Richmond, Petersburgh, Lynchburgh, and local points on C and O. R. R., Cincinnati, Louisville, and other western markets, via C. and O. R. R.
Elm mine, Sewell seam	Elm Station	Beury, Cooper & Williams.	11,200	4–4⅔	Semi-bituminous, coking	C. and O. Coal Agency, Va., and Low Moor Iron Co.
Eagle mine, Eagle seam	Eagle	Stone & Wyant	24,640	4¼	Bituminous	Cin. C. and O. R. R. Co. and local points, via C. and O. R. R.
Hawk's Nest mine, Fire Creek seam.	Hawk's Nest	New River C. and Coke Co.	6,720	2⅝–3½	do	Richmond, Va., via C. and O. R. R.

Directory of bituminous coal mines—Continued.

WEST VIRGINIA.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	FAYETTE CO.—cont'd.			*Feet.*		
Crescent mine, Coal Valley seam.	Crescent	W. R. Johnson	50,400	6½	Bituminous, gas, and splint.	Cincinnati, Newton, Huntingdon, Richmond, Lynchburgh, Danville, N. Y., and New England states.
Quinnimont mine, Quinnimont seam.	Quinnimont	Pa. and Va. C. and I. Co.	44,800	3	Semi-bituminous	Local coke ovens.
Cedar Grove C. Co.'s mine			None.		Bituminous	
Fayette C. and Coke Co.'s mine.			None.		do	
Longdale Iron Co.'s mine	Sewell	Longdale Iron Co	15,450		do	
Pine-Top mine	2 miles northeast of Fayette C. H.	Connell & McDonald	800	3½	do	Most at Fayetteville.
	GRANT COUNTY.					
	Williamsport	F. A. Nydigger	350	8	Bituminous	Williamsport.
	Luney's Creek	Andrew J. Ankeny	420	6	Semi-bituminous	Luney's Creek.
	HANCOCK COUNTY.					
	New Cumberland	Reuben Hobbs	7,600	3½	Bituminous	Steamboats on Ohio river.
	do	Samuel G. Hineman	5,700	3½	do	New Cumberland.
	do	Geo. W. Dairs	1,140	3½	do	Do.
	do	Fred Myers	760	3½	do	Do.
	Fairview	Philip Dawson	380	3½	Semi-bituminous	Fairview and vicinity.
	do	Robt. Miller	570	3½	do	Do.
	do	Wm. S. Matthews	3,800	3½	do	Factories of Fairview.
	HARRISON COUNTY.					
Monongahela Gas Coal mine.	Wilsonburgh	H. G. Davis	22,400	8½	Bituminous; gas	B. and O. R. R. Co. and a few local points.
Harrison Co. C. Co. mine	Clarksburgh	Harrison Co. C. Co	29,382	9	do	Parkersburgh, Chicago, and line of B. and O. R. R.
Murphy Run mine	do	Executors of Burr Wakeman.	16,800	8½	do	New York city, Washington, and Annapolis.
Despard mine, Gas seam	do	Despard C. Co	43,050	9	do	Baltimore and other points along B. and O. R. R.
Farland Gas C. Co.'s mine	do	J. T. Farland	14,560	9	do	Chicago and o her western points.
Patrick Dolan mine	Wolf Summit	Patrick Dolan	1,000	7	do	B. and O. R. R. Co.
Luther M. Patton mine	Clarksburgh	Luther M. Patton	1,800	9	do	Clarksburgh.
	do	Jackson & Camden	1,600	9	Bituminous, gas	Do.
	do	Thos. S. Finnell	700	9	do	Do.
	KANAWHA COUNTY.					
Coalburg mine, Coalburg seam.	Coalburg	Robinson C. Co	71,680	4–4½	Bituminous, hard, splint	New York, Richmond, and Cincinnati, via R. R., Kanawha and Ohio rivers.
Robinson Cedar Grove mine, Blacksburg seam.	Cedar Grove	do	500	3¾–4	Bituminous, soft; gas, steam, and blacksmithing.	Cincinnati, via barges and Great Kanawha and Ohio rivers.
Campbell's Creek C. and Oil Co.'s mine, Campbell's Creek seam.	Malden	Campbell's C. and Oil Co.	100,000	5	Bituminous, white ash	Cincinnati and Covington, Ky., in'e-rior of Ohio and Ky., via Great Kanawha and Ohio rivers and R. R.
Kanawha C. Co.'s mine, Coal Valley seam.	Morris creek	Kanawha C. Co	6,552	5	Bituminous, soft; gas and steam.	Richmond, Va., along line of C. and O. R. R. and Cincinnati, via C. and O. R. R. and Ohio river.
Pioneer mine, Campbell's Creek seam.	Campbell's creek	Pioneer C. Co	64,360	5½	Semi-cannel	Cincinnati, Ohio, via Narrow Gauge R. R. and Kanawha and Ohio rivers.
Bennington mine, Bennington seam.	London district	W. S. Carkin	11,225	3	Bituminous, soft	Cincinnati, via Kanawha and Ohio rivers.
Snow Hill mine, Coalburg seam.	Snow Hill	Snow Hill Salt Co	10,000	4	Bituminous, hard	Snow Hill salt-furnace.
East Bank mine, Coalburg seam.	Coalburg	Stuart M. Buck	20,082	3	Bituminous, splint	Cincinnati, Huntingdon, Richmond, James River, Petersburg, Lynchburg, and Charlotteville, via C. and O. R. R.
Campbell's Creek mine, Campbell's Creek seam.	Malden	Dana Bros	10,000	6½	Bituminous, splint, and semi-cannel.	Cincinnati and Louisville, via Kanawha and Ohio rivers.
Cannelton mine, No. 4 seam	Cannelton	Cannelton C. Co	34,358	2½	Cannel	New York and other Atlantic coast cities, via C. and O. R. R. and vessels.
Dickinsons mine, Campbell's Creek seam.	Dickinsons	J. I. Dickinsons	6,400	5	Bituminous	Salt works at mine.
Splint Coal mine, Pt. Diam. seam.	Splint Coal, est	Splint C. Co	None.	2½	Bituminous, splint; salt-making.	Do.
Dana Bro.'s mine, Campbell's Creek seam.	Campbell's creek	Dana Bros	8,000	6	Bituminous	Cincinnati.
Peabody mine, Peabody seam	Opposite Coalburg	Peabody Coal Co	800	3	do	Kanawha and Ohio river valleys
Dan'l Boone or Brooks mine, Brooks seam.	Breamville	Breamville Salt Co	20,000	4½	Bituminous, splint	Kanawha valley, Cincinnati, Own Salt-Works, and Charleston, W. Va.
Mount Morris C. Co.'s mine	Morris creek	Mount Morris C. Co	4,284	5⅔	Bituminous	Richmond, Cincinnati, and Lower Ohio, via C. and O. R. R., James river, seaboard, and Ohio river.

Directory of bituminous coal mines—Continued.

WEST VIRGINIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	LEWIS COUNTY.			*Feet.*		
	Weston	Jacob Acheson	525	6	Semi-bituminous	Weston.
	do	Richard Barett	630	6	do	Do.
	Hacker's Creek dist.	Nathan Bush	525	7	do	Gaston.
	MARION COUNTY.					
Central Gas mine, 9-foot seam.	Fairmont	Oliver Jackson	6,784	8	Semi-bituminous; gas.	Local points on B. and O. R. R., Chicago, Ill., Tiffin and Newark, Ohio.
Palatine mine, 9 foot seam	Near Palatine	Newburg Orrel Coal Co.	24,765	7	Bituminous; gas	Baltimore and other points along B. and O. R. R., also B. and O. R. R. Co.
Gaston mine, 9-foot seam	Near Fairmont	Gaston Gas-Coal Co	24,627	8	do	Baltimore, Washington City, Chicago, Saint Louis, and other western points.
W. Fairmont and M. Con. Gas Coal Co.'s mine	Fairmont	W. Fairmont and M. Con. Gas Coal Co.	3,500	7½	do	Balt. and N. Y.
	Worthington	William J Bryant	796	9	do	Worthington.
	Riversville	Austin Merrill	700	6	Bituminous	Riversville.
	Palatine	Thomas H. Barnes	1,706	9	Bituminous; gas	Palatine.
	do	John F. Stroud	1,436	9	do	Do.
	do	George Adams	749	9	do	Do.
	Fairmont	Beeson & Rhebart	1,792	9	Bituminous	Fairmont.
	do	William Gaskill	1,278	9	do	Do.
	do	Elmer Hamilton	1,043	9	do	Do.
	do	Matthew L. Fleming	885	9	do	Do.
	do	Hamilton Barnes	718	9	do	Do
	Fairview	Morgan & Co	875	6	do	Fairview.
	Barrackville	William McCray	700	6	do	Barrackville.
	MARSHALL COUNTY.					
Boggs Run mine	Boggs Run	Boggs Run Min. Co	24,587	5½	Bituminous	B. and O. R. R. Co., Wheeling.
Benwood Coal Works mine	Benwood	Benwood Coal Works	7,520	5	do	Benwood and Wheeling, and points along B. and O. R. R.
Benwood Iron Works mine		Benwood Iron Works	27,390	5	do	Own use at mill in Benwood.
	Benwood	Schad & De Temple	3,800	5	Semi-bituminous	Factories and residents of Benwood.
	Moundsville	Lewis S. Newman	1,140	4	do	Moundsville and vicinity.
	do	Harry W. Brooks	2,660	4	do	Moundsville and State penitentiary.
	MASON COUNTY.					
Hartford City Coal and Salt Co.'s mine.	Hartford City	G. W. Mordock	24,291	4½	Bituminous	Home sales for mf'g salt and retail.
Camden mine	Camden	Consolidated C. and Min Co.	19,400	4	do	Cin., Maysville, Ky., Augusta, Vanceburg, Ky., and Aberdeen, Ohio.
Clifton mine	Clifton	O. and W. Va. Min. and Mf'g Co.	9,492	4½	do	Home and Cin., and other towns on Ohio river below mine.
Sterling mine	do	Sterling C. Co	37,505	4½	Semi-bituminous	Towns along Ohio river.
	MINERAL COUNTY.					
Davis mine, Big seam	Near Piedmont	H. G. Davis & Bro.	61,376	14	Semi-bituminous, blacksmithing.	Balt., Chi., St. Louis, and other points westward.
	Near Burlington	John S. Pierce	880	9	do	Romney.
	Piedmont	Charles P. Dawson	475	6	do	Piedmont.
	MONONGAHELA COUNTY.					
	Morgantown	Chadwick & Meeks	1,400	6	Bituminous	Morgantown.
	do	William Utt	977	6	do	Do.
	do	John Robinson	833	6	do	Do.
	do	Thomas W. Anderson	7,074	6	do	Do.
	Andy	Alex. W. Brown	700	4	do	Andy.
	Laurel Point	Henry Bros	875	10	do	Laurel Point.
	do	Thomas Kyler	700	10	do	Do.
	OHIO COUNTY.					
	Manchester	R. L. Kimberly	20,713	5	Bituminous	Wheeling.
	do	Joseph Werner	6,000	5	do	Do.
	do	McGrinley & McCormick.	5,000	5	do	Do.
	Wheeling	Belmont Nail Co	26,445	5	do	Wheeling (iron-works).
	do	J. L. Hobbs	3,573	5½	do	Wheeling (glass-works).
Riverside Iron Works mine	do	Riverside Iron Works	24,475	5	do	Riverside Iron Works.
Crescent and Richletown mine	do	Casley & Brooks	45,000	5	do	Local trade.
	do	La Belle Iron Works	17,005	5½	do	La Belle Iron Works.
	Fulton	Walter Marshall	7,135	7	Semi-bituminous	Wheeling.
	South Wheeling	M. W. Bell	8,000	5	do	Do.
	Wheeling	Central Glass Co	12,000	5	do	Glass works of company.

Directory of bituminous coal mines—Continued.

WEST VIRGINIA—Continued.

Name of mine and seam.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Thickness of seam.	Kind, and use when reported.	Markets and routes.
	OHIO CO.—cont'd.			*Feet.*		
.....	Wheeling	Wheeling Iron and Nail Co.	22,425	5	do	Company's iron and steel works.
.....	Triadelphia	John Stratton	1,800	5	do	Triadelphia and vicinity.
.....	Elm Grove	W. T. Chambers & Co.	10,469	5	do	Wheeling and B. and O. R. R.
	PLEASANT COUNTY.					
.....	Bull Creek	William M. Caldwell	3,800	2	Semi-bituminous	Coal-oil works.
	PRESTON COUNTY.					
Irondale mine	Irondale	Felix Nemegyer	22,400	4	Bituminous, coke, fuel, and machinery.	Own furnace and operators.
Austen mine	Austen	C. S. Hurd	27,776	5	Semi-bituminous, coke and domestic.	Ironton furnace, Taylor Co., and local points on B. and O. R. R.
Newburg Orrel mine	.....	Newburg Orrel C. Co.	68,383	8	Bituminous, gas	Balt. and B. and O. R. R. Co.
Waldorf mine	Austin	C. S. Hurd	18,000	.....	Bituminous	
	PUTNAM COUNTY.					
Raymond mine, 6-foot seam.	Raymond city	Mannet & Co	49,000	6	Bituminous, semi-cannel	Cin., Louisville, Ind., Frankfort, and Lexington, via R. R. and Kana. and Ohio rivers.
	RANDOLPH COUNTY.					
.....	Beverly	Stephen B. Hart	525	7	Semi-bituminous	Beverly.
.....	Roaring creek	Pittston C. Co	805	7	do	Beverly, etc.
	RITCHIE COUNTY.					
.....	Petroleum	David Pugh	2,625	3	Semi-bituminous	Petroleum.
	TAYLOR COUNTY.					
Montauk Gas C. Co.'s mine, 9-foot seam.	Flemington	Montauk Gas C. Co.	68,705	8	Bituminous, gas	New York.
Tyrconnell mine, Pittsburgh seam.	Tyrconnell	Newburg Orrel C. Co.	32,504	8	do	Balt. and points on the B. and O. R. R.
.....	.....	Chris. Robinson	1,050	7	Bituminous	Grafton.
.....	.....	Geo. Elliot	700	7	do	Prunty town.
	WETZEL COUNTY.					
.....	Porter's fall	Gustavus L. Wright	380	2	Semi-bituminous	Porter's fall and vicinity.
.....	New Martinsville	Patrick Magee	380	2	do	New Martinsville.
	WOOD COUNTY.					
.....	Volcano	Volcano Oil Co	10,944	5	Semi-bituminous	Volcano.
.....	do	Michael Bean	4,750	5	do	Do.

WYOMING TERRITORY.

	CARBON COUNTY.					
Carbon mine	.....	Union Pacific R'y Co.	95,954	6½	Lignite, non-coking	Omaha.
	CROOK COUNTY.					
Philadelphia C. Co.'s mine	21 miles NW. of Spearfish, D. T.	Philadelphia Coal Co.	None.	3½-4	Bituminous, lignite	Deadwood, Dak.
Hay Creek mine	do	Blossburg Coal Co	22	8	do	Do.
	SWEETWATER COUNTY.					
Rock Spring mine	.....	Union Pacific R. R. Co.	249,642	2-12	Lignite, non-coking	
	UINTAH COUNTY.					
Rocky Mt. C. and I. Co. mine.	3 miles N. of Evanston	Rocky Mt. C. and I. Co	73,554	26	Semi-bituminous, non-coking	C. P. R. R., Virginia City, and domestic use in R. R., and towns in Nevada.
Almy mine	4½ miles N. of Evanston	Coal Dep. Union Div. U. P. R. R.	73,554	26	do	U. P. R. R. locomotives, and domestic use in St. Louis city and other towns.
Almy mine	.....	Union Pacific R. R. Co.	96,869	4-26	do	
Collett mine	Cokeville	.....	No returns.	10-15	.....	
Smith mine	25 m's S. of Twin creek	.....	None.	10-12	.....	
Mammoth mine	Between Harris' fork and Bridger's creek.	.....	None.	55-65	.....	
Bell mine	Head of Twin creek	.....	No returns.	60	.....	

Directory of iron-ore mines.

ALABAMA.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BIBB COUNTY.					
Iron View	Green Pond	J. H. Sharp	5,670	Limonite	Nos. 1 and 2 foundery	South Pittsburgh.
	CALHOUN COUNTY.					
Tecumseh	Jacksonville	Tecumseh Iron Co	1,100	Limonite		Ridge Valley furnace, Ga.
Woodstock	Anniston	Woodstock Iron Co	23,378	do	Car-wheel, pig, and spiegeleisen.	All smelted by Woodstock Iron Co.
		Snow & Clardy	2,180	do		
		John Gordon	141	do		
		Charles Martin	31	do		
		Patrick Fahey	800	do		
		E. B. Nelson	216	do		
	CHEROKEE COUNTY.					
Tecumseh	Tecumseh	Tecumseh Iron Co	20,000	Limonite	Castings, wrought iron, and all kinds of steel, except Bessemer.	
Round Mountain Iron Works.	Round mountain	Round Mountain Iron Works.	1,089	Fossil	Car-wheels, ordnance, chilled rolls, and heavy machinery.	
Stonewall	Stonewall	Miller & Robinson	7,371	Limonite	Ordinary mill and foundery.	All consumed at furnace.
Rock Run furnace	Pleasant Gap	Gray & Bass	4,536	do	Car-wheels	
	DE KALB COUNTY.					
Portersville	Portersville	Rogers & Killian	227	Fossil	Ordinary mill and foundery.	Chattanooga Iron Co., Rising Fawn, Ga., via Ala. Great Southern R. R.
	ETOWAH COUNTY.					
Atalla	Atalla	O. Christopher	11,340	Fossil	Mixing	
Do	do	S. M. Winchester	9,004	do		All piled at railroad.
	JEFFERSON COUNTY.					
New Castle Coal and Iron Co.	New Castle	New Castle Coal and Iron Co.	4,082	Blackband		
Eureka	Oxmoor	Jackson & De Barleber.	40,213	Fossil	Ordinary mill and foundery.	All worked by Eureka furnace.
Alabama Mining and Manufacturing Co.	Warrior	Ernest & Rupp	1,680	Blackband, with coal.		Oxmoor furnace.
	SAINT CLAIR COUNTY.					
Saint Clair	Near Springfield	Hugh Carlisle	12,685	Fossil		Southern States Coal, Iron and Land Co., and Rising Fawn furnace, Rising Fawn, Ga.
	SHELBY COUNTY.					
Shelby	Shelby Iron Works	Shelby Iron Co	25,787	Limonite	Car-wheel pig	Small amount to Central Iron Works, Galena.
	TALLADEGA COUNTY.					
Ore lands of Alabama furnace.	Alabama furnace	Alabama Iron Co	1,140	Limonite	Car-wheels	All used in furnace.
		J. A. Curry	70	do		
		M. S. Curry	9	do		
		David Johnson	617	do		
		Meril Street	111	do		
		Caldwell & Portlow	2,420	do		
		Henry Snow	668	do		
		John H. Riggs	294	do		
	TUSCALOOSA COUNTY.					
Standiford	Green Pond	Blalock Hickman & Salmonds.	14,152	do	Com. mill and foundery	All to Eureka furnace, Oxmoor, via Ala. Gt. Southern R. R. & Nth. & Sth. R. R.

COLORADO.

	LAKE COUNTY.					
Breece		Breece Mining Co	8,482	Specular	Flux	Various smelting establishments about Leadville.

Directory of iron-ore mines—Continued.

CONNECTICUT.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	LITCHFIELD COUNTY.					
Chatfield	Salisbury	Chatfield Mining Co	11,200	Limonite	Cast car-wheels	Home market, Sharon Valley I. Co., Hunts Lyman I. Co., Barnum, Richardson Co., Cornwall, Bridge Co., Millerton I. Co., Lime Rock.
Salisbury Old Hill	Ore Hill	Brookpit Mining Co	14,405	do	Car-wheels and malleable castings.	Barnum, Richardson Co., North Canaan, Hunts Lyman, So. Canaan, Kent. I. Co., Kent, Cornwall, Bridge I. Co., Lime Rock, Sharon Val. I. Co., Irondale, Millerton & N. East.
Davis ore-bed	Salisbury	Davis Digging Co	9,272	do	do	Furnace of Barnum, Richardson & Co., Hunt & Lyman Iron Co., Huntsville, Conn., Lime Rock Iron Co., Lime Rock, Conn.
Kent ore-bed	Near Kent		None.	do		
Roxbury or Shepaug	Roxbury		None.	Spathic		
Chapin	Two miles west of Chapinville.	J. and N. C. Scoville	140	Limonite		

DELAWARE.

	NEW CASTLE COUNTY.					
E. Chestnut Hill	Newark	Thos. B. McConaughey	2,054	Limonite	Gray forge and boiler iron.	Schuylkill and Philadelphia.
Chestnut Hill	do	Wm. McConaughey	672	do	do	Schuylkill.

GEORGIA.

	BARTOW COUNTY.					
Roane I. Co.'s			None.	Specular		
Munford's I. ore-bank.			3,000	Limonite		
Bartow I. Ore Bank	Bartow Iron Works.	Bartow Fce. Co	3,584	do	Mill iron	Own furnace.
Munford	Four miles from Rogers station.	Munford	3,920	do	Foundery and rail	Rogers furnace, W. & A. R. R., Atlanta Rolling-Mill, Vulcan I. & Nail Wks., Chatt., Tenn.; Lookout Rolling-Mill, Chatt., Tenn.; Knoxville I. Wks., Knoxville, Tenn., & Bartow I. Wks.
Roane I. Co.'s	Bartow station		None.	Specular		Chattanooga.
Diamond	Cartersville		119	Limonite		
Rogers			None.	do		
	Cartersville		680	do		
		Mark A. Cooper	50	do		
	DADE COUNTY.					
Rising Fawn	Rising Fawn	James C. Warner & Co.	44,225	Fossil	Stores, machinery, bar-iron, and nails.	
		D. Little	517	do		
		D. W. J. Taylor	493	do		
		P. A. Cooper	369	do		
		B. & G. Meeler	493	do		
		C. E. Lynch	369	do		
		A. H. Smith	493	do		
		C. M. Tatum	246	do		
	POLK COUNTY.					
Cherokee Iron Co	Cedartown	Cherokee I. and R. R. Co.	11,620	Limonite	Foundery and mill	All used in company's furnace.
Etna ore-banks	Prior's station	C. M. Pennington	6,237	do	Car-wheels	Used in furnace.
		Vandeventer & McAllister.	15,000	do		

INDIANA.

	MARTIN COUNTY.					
		Tomlinson	351	Limonite		
		Harvey Neighbors	136	do		
		John James	11	do		
		D. Collins	14	do		

Directory of iron-ore mines—Continued.

KENTUCKY.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BATH COUNTY.					
		Bath furnace	550	Limonite		
	BOYD COUNTY.					
		D. D. Geiger	634	Carbonate		
		F. G. Gallup	440	do		
		Ashland furnace	1,390	do		
		Joseph Johnson	327	do		
		Isaac Johnson	150	do		
		John Paul Jones & Co	344	do		
		George Wurts	300	do		
	CARTER COUNTY.					
Star furnace	Star furnace	Norton Iron Works Co.	2,495	Carbonate	All kinds of merchant iron.	Used in own furnace, Ashland, Boyd county.
		S. S. Dugan	1,500	do		
		H. W. Bates	1,000	do		
		Numerous small openings.	1,700	do		
		do	8,054	do		
	ESTILL COUNTY.					
		Estill furnace	1,500	Carbonate		
	GREENUP COUNTY.					
Hunnewell	Hunnewell	Eastern Ky. R. R. Co	9,381	Carbonate	Foundery Nos. 1 and 2 and mill.	
Penna furnace	Penna furnace	do	4,536	do	do	
		J. L. Worthington	141	do		
	LYON COUNTY.					
Centre furnace	Centre furnace	J. H. Hilman	8,505	Limonite	Car-wheels and boiler-plate.	Cincinnati, St. Louis, Louisville, Pittsburgh, Evansville, and Tenn. Rolling-Works.
	POWELL COUNTY.					
		Estill furnace	1,500	Carbonate		
	TRIGG COUNTY.					
Trigg furnace	Trigg furnace	D. Hilman & Sons	None.	Limonite	Boiler-plate, malleable castings, car-wheels, and fine castings of all kinds.	
Centre furnace	Centre furnace	J. H. Hilman	8,605	do	Car-wheels and boiler-plate.	
		Sylvester Copley	49	Carbonate		
		George Kidd	13	do		
		Barber & Fowler	9	do		
		Chris. Tompast	28	do		
		William Guard	110	do		
		Fred. Diderich	11	do		
		Hiram Payne	17	do		
		L. Guller	3	do		
		Elisha Williams	13	do		
		Samuel Calliban	33	do		
		William Deal	2	do		
		Adrian Millior	247	do		
		Alixis Henshaw	11	do		
		J. L. Price	226	do		
		R. M. Knight	74	do		
		Jasper Stanly	786	do		
		J. M. Berry	6	do		
		Elias McCoy	2	do		
		B. F. Willis	7	do		
		Jere Triplett	105	do		
		Lewis & Barber	54	do		
		Joseph Brown	501	do		
		Chris, Konns	285	do		
		John Jordan	249	do		
		Fred Fossin	68	do		
		J. W. Darby	251	do		
		Green Reve	132	do		
		R. F. Dingess	24	do		
		John Tanner	4	do		
		Elias Henshaw	7	do		
		John Dingess	30	do		

Directory of iron-ore mines—Continued.

KENTUCKY—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	TRIGG COUNTY—continued.					
		D. C. Callihan	19	Carbonate		
		George Donta	9	do		
		Cam. Brown	468	do		
		James Prior	454	do		
		Mat. Tufts	128	do		
		Abe. Jackson	127	do		
		Dave Roberson	197	do		
		Chas. Tazeman	13	do		
		W. and M. Gevhart	486	do		
		Asa Tanner	36	do		
		Elias Kittles	95	do		
		Rans. Williams	405	do		
		Joseph Boggs	8	do		
		C. Myres	14	do		
		Pat. Leary	888	do		
		Bud. Henshaw	635	do		
		George Collins	17	do		
		Chas. Tanner	30	do		
		George Myres	93	do		
		August Wolta	37	do		
		Monroe Stanley	118	do		
		Frank McKenzie & Bro.	19	do		
		Wm. Campbell	100	do		
		Thomas Johns	14	do		
		John Darley	19	do		
		Tim. Evans	19	do		
		Sam. Rice	48	do		
		Harden Riggs	32	do		
		Marion Bucky	223	do		
		Fred. Simpson	27	do		
		Wm. Sneddy	19	do		
		Dave and Jack McFarm.	77	do		
		Man. Gevhart	7	do		
		Joe. Kimbler	63	do		
		Fred. Myres	189	do		
		Jno. Callihan	2	do		
		Joseph Jeffres	29	do		
		Peter Molsbarger	38	do		
		George Neici	55	do		
		Jno. Lewis	99	do		
		Chas. Croft	150	do		
		Sam'l Patterson	5	do		
		Joseph Coffer	8	do		
		Wm. Molsburger	17	do		
		Harrison Tultz	113	do		
		Company Teams	868	do		
		Henry Straight	1	do		
		Wm. May	95	do		
		Chis. Slim	44	do		
		Wm. Konns	151	do		
		Fred. Donta	304	do		
		R. Brown	422	do		
		L. S. Tufts	155	do		
		Chas. Springer	73	do		
		F. M. Glidden	145	do		
		Farmers' Nat'l Bank	211	do		
			280	do		

MAINE.

Katahadin	PISCATAQUIS COUNTY. Katahdin I. Works	Katahdin I. Co.	6,000	Limonite	Car-wheels, chilled plows, malleable castings, Bessemer and Siemens for sheet.	

Directory of iron-ore mines—Continued.

MARYLAND.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	ANNE ARUNDEL COUNTY.					
	Jessup's	Dr. A. S. Linthicum	2,472	Carbonate		
		Barker & Phelps	62	do		
		C. Bauer	10	do		
		J. H. Bruff	12	do		
		C. Butler	10	do		
		Mrs. Ella Cockey	10	do		
		Mrs. Peter F. Cockey	5	do		
		Creidler & Spears	38	do		
		Allan Dorsey	16	do		
		William H. Dorsey	45	do		
		E. A. Erp	10	do		
		J. Fisher	13	do		
		B. Green	12	do		
		M. Green	11	do		
		Samuel Hallin	15	do		
		R. Jeffrey	10	do		
		P. O. Malloy	44	do		
		R. B. Mason	187	do		
		C. Millbrook	120	do		
		P. Mitchell	134	do		
		Shipley & Fairbanks	10	do		
		C. Warfield	14	do		
		James Kyne	368	do		
		Jno. S. Tyson	310	do		
		Henry Myers	3	do		
		Josh. Anderson	69	do		
		William Phelps	104	do		
		George K. Bowers	31	do		
		W. H. Brooks	20	do		
		W. L. Gardner	150	do		
		John Gross	38	do		
		Thomas I. King	250	do		
		Paul R. Lamp & Co	99	do		
		Stephen Lingohr	52	do		
		Fred. Sliver	141	do		
		Hog Powell	4	do		
		Thomas Scully	90	do		
		Richard Smeardon	13	do		
		B. Brooks	33	do		
		W. Butler	26	do		
		William Englehart	11	do		
		—— Henderson	8	do		
		William Makely	4	do		
		Michael Scully	15	do		
		John I. Plummer	10	do		
		—— Welsh	13	do		
		Willis Corbin	15	do		
		Thomas H. Hood	74	do		
		Samuel Jeffreys	22	do		
		John Latchford	31	do		
		Joshua Owens	47	do		
		John Snorter	11	do		
		William Stockett	86	do		
		E. H. Shipley	182	do		
		Murty Kyne	554	do		
	ALLEGHANY COUNTY.					
Bowery	Bowery furnace	C. C. & I. Co	3,253	Limonite	Wrought and cast iron	
		Bowery furnace	1,005	Fossil		
		C. M. McCulloh	240	Limonite		
		James Cane	13	Fossil		
	BALTIMORE COUNTY.					
Wood	Timonium	Ashland Iron Co	560	Limonite	1, 2, and 3 foundery	Ashland.
Green Spring	Green Spring	do	4,032	do	do	Do.
Port Spring	Port Spring	do	5,040	do	do	Do.

Directory of iron ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
Morris	Two miles from Baltimore.	Geo. P. Whitaker & Co.	2,240	Carbonate	Car-wheels and mill-castings.	Operator's Principio furnace.
Oregon	Oregon	Ashland Iron Co	5,600	Limonite	Iron of great strength	All to Ashland.
Kelly	Port Spring	do	4,704	do	1, 2, and 3 foundery	Do.
Worthington	Worthington valley	do	3,360	do	do	Do.
		G. Boyce	2	Carbonate		
		John Briel	11	do		
		T. Briel	5	do		
		Benjamin Brooks	3	do		
		John Brown	2	do		
		Benjamin Brown	3	do		
		John Bryan	3	do		
		J. Bullinger	9	do		
		E. Burke	62	do		
		Mrs. S. J. Burke	135	do		
		David Bury	4	do		
		Frank Bury	108	do		
		R. Burton	3	do		
		George Woods	20	do		
		G. Wagner	11	do		
		Joseph Weeks	6	do		
		F. Wehr	147	do		
		—— Wells	3	do		
		Peter White	10	do		
		George Mills	55	do		
		J. Mason	2	do		
		C. Owen	1	do		
		William Peters	60	do		
		John Pugh	13	do		
		William Pugh	66	do		
		Rever & Brady	510	do		
		Henry Rever	190	do		
		John Riley	3	do		
		George Ruff	43	do		
		John Scott	46	do		
		William Seymour	5	do		
		J. Kaler	8	do		
		Charles King	8	do		
		George King	5	do		
		Conrad Krill	10	do		
		J. Kurtz	11	do		
		Frank Linkham	16	do		
		Robert Linn	50	do		
		Noble Lorenz	75	do		
		Fred. Martin	10	do		
		Henry Martin	47	do		
		Wm. Martin	24	do		
		J. McDermot	18	do		
		—— McLaughlin	16	do		
		Jno. Hamer	3	do		
		R. Harvey	11	do		
		Halbert Hoffman	1,241	do		
		Sam'l A. Holland	133	do		
		Wm. Holson	64	do		
		J. Horney	31	do		
		Chas. Howard	7	do		
		Geo. Howard	177	do		
		Jno. Hummel	13	do		
		W. Hutson	1	do		
		J. Isaacs	10	do		
		Henry Johnson	4	do		
		—— Joynes	2	do		
		Wm. Fairbanks	122	do		
		—— Eiford	2	do		
		H. Englehart	13	do		
		Jno. Fisher	202	do		
		H. Fiske	11	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		Jacob Frank	21	Carbonate		
		Wm. Geiser	18	do		
		Thomas Grace	1	do		
		Jere Webb	16	do		
		John Webb	2	do		
		John Wiley	28	do		
		George Williams	6	do		
		Jacob Wisner	1,478	do		
		Samuel Woods	44	do		
		J. Spiegle	94	do		
		George Shriver	28	do		
		Henry Shriver	22	do		
		S. Shriver	50	do		
		Samuel Sneed	16	do		
		A. W. Shanklin	92	do		
		Benjamin Snowden	3	do		
		William S. Stewart	3	do		
		David Stier	6	do		
		J. Summerfield	29	do		
		Alex. Thornton	6	do		
		H. Tieman	42	do		
		William Swan	19	do		
		William Gettmann	2	do		
		D. Gregory	2	do		
		Conrad Grill	7	do		
		J. S. Hayes	1	do		
		William F. Hughs	98	do		
		Henry Ackers	100	do		
		James Asher	22	do		
		Jno. Johnson	10	do		
		—— Kahler	9	do		
		Simon Kern	260	do		
		Jno. Lanning	105	do		
		Reuben Louge	217	do		
		Thomas Lynn	56	do		
		—— Madden	10	do		
		John Martin	45	do		
		R. B. Mason	395	do		
		—— McDermot	3	do		
		David McLaughlin	1	do		
		Henry Myers	158	do		
		Chris. Millbrook	30	do		
		—— Miller	31	do		
		Thomas Moore	2	do		
		Louis Motz	81	do		
		Jno. Müller	7	do		
		George Rannusson	3	do		
		David Ring	107	do		
		—— Ravel	1	do		
		Jno. Q. Adams	1	do		
		A. F. Affelder	46	do		
		Thomas A. Agnew	29	do		
		Conrad Aubel	12	do		
		Henry Bach	19	do		
		H. Bacher	2	do		
		Frank Zulcorn	133	do		
		Philip Zink	8	do		
		—— Bentley	1	do		
		—— Button	2	do		
		P. Curry	1	do		
		—— Gorsuch	22	do		
		—— Pitsinger	12	do		
		—— Rathimell	8	do		
		—— Villet	1	do		
		—— Wagner	1	do		
		—— Weinrich	3	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		Frank Corns	1	Carbonate		
		Sam'l Diggs	32	do		
		James Dougherty	1	do		
		Lewis Eck	5	do		
		Geo. Ehrman	9	do		
		Chas. Evans	7	do		
		Geo. Frank	7	do		
		Henry Gabel	104	do		
		Geo. Hammer	1	do		
		—— Hall	14	do		
		Geo. Hammerbacher	96	do		
		Haugh & Lyons	18	do		
		Frank Haynes	17	do		
		Geo. Himmel	4	do		
		Fred. Holson	2	do		
		Conrad Aber	14	do		
		C. Baker	11	do		
		Theodore Baker	15	do		
		M. Ballet	11	do		
		F. Banger	4	do		
		M. Beerman	10	do		
		Joseph Bennett	29	do		
		Thomas Bennett	36	do		
		A. Fock	2	do		
		F. W. Brady	209	do		
		J. Brown	11	do		
		Chas. Buerhaus	156	do		
		Jno. Burns	66	do		
		F. Bobbock	1	do		
		Edward Williams	29	do		
		S. Willis	6	do		
		E. W. Wooden	1	do		
		Wm. Wright	42	do		
		Frank Trincow	21	do		
		Conrad Zink	28	do		
		Henry Smith	2	do		
		Richard Smith	24	do		
		H. Jasper	18	do		
		James Taylor	8	do		
		W. Taylor	3	do		
		H. Thomas	12	do		
		Fred. Ditzel	19	do		
		James Downey	127	do		
		Wm. Downey	8	do		
		H. Dunkins	35	do		
		Jacob F. Ebaugh	8	do		
		Jno. Eschelman	3	do		
		Geo. Eisel	87	do		
		J. Edods	1	do		
		Wm. Effoede	9	do		
		Geo. Ellenberger	46	do		
		Geo. O. Ely	8	do		
		Henry Elrich	2	do		
		Mrs. M. R. Ewing	375	do		
		Wm. H. Butler	18	do		
		Owen Carney	256	do		
		Henry Chaney	9	do		
		Joshua Cohen	1	do		
		G. Cohs	20	do		
		—— Coleman	3	do		
		Frank Counters	3	do		
		Wesley B. Coursey	722	do		
		Robt. Creighton	8	do		
		Chas. Crowner	29	do		
		D. Deboy	9	do		
		E. Dilworth	17	do		
		R. Dilworth	109	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		John Madio	7	Carbonate		
		Jacob Mast	78	do		
		J. M. Matthews	8	do		
		Chris. Maywald	12	do		
		William F. McKenney	41	do		
		Richard Menser	10	do		
		William McMahony	10	do		
		David Miller	1	do		
		E. Miller	147	do		
		J. H. Miller	88	do		
		John Mitchell	1	do		
		Edward Montgomery	25	do		
		Robert Morgan	21	do		
		Thomas Murray	2	do		
		Townes Mercer	8	do		
		Ludwig Nagle	131	do		
		J. H. Nagle	2	do		
		George Nairoy	130	do		
		C. Newton	15	do		
		Jacob Odensoss	695	do		
		John Odensoss	91	do		
		John H. Ogle	100	do		
		J. Orich	15	do		
		George Ochs	11	do		
		C. P. Paine	237	do		
		W. H. Patterson	11	do		
		William Platter	18	do		
		Gottlieb Kühner	18	do		
		H. Hoffman	2	do		
		William Hubbert	1	do		
		William Hipple	175	do		
		Andrew Jackson	79	do		
		J. Jackson	1	do		
		Richard Johnson	3	do		
		Samuel Johnson	2	do		
		William Johnson	1	do		
		John Jukes	6	do		
		Elias T. Jenkins	14	do		
		John Kalb	37	do		
		William Kalb	16	do		
		Henry Kellenberg	3	do		
		Pegin Lerawad	1	do		
		Simon Seigel	3	do		
		William Limburg	2	do		
		S. Lingohr	391	do		
		Conrad Lochman	206	do		
		Michael Logan	89	do		
		Fred. Link	38	do		
		Henry Link	20	do		
		Moses Lewis	11	do		
		George Lewis	15	do		
		Lewis Lohn	3	do		
		—— Leckemann	3	do		
		Howard Bowie	2	do		
		Edward Hall	6	do		
		T. B. Hall	46	do		
		Jno. Hallman	17	do		
		—— Hafner	4	do		
		Wm. Hamman	123	do		
		Henry Hausman	169	do		
		Jno. Harrold	10	do		
		Wm. Harris	20	do		
		August Herkenberg	10	do		
		Wm. Hayward	12	do		
		Jno. Helwig	10	do		
		Conrad Helwig	338	do		
		Chas. Hammerbacher	34	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued..

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		Robt. Gable	30	Carbonate		
		W. H. Gable	36	do		
		Geo. P. Gamble	71	do		
		Edward Garrigan	121	do		
		Michael Gogan	317	do		
		Chas. Gegner	67	do		
		Chas. Gibson	4	do		
		Paul Geigner	1	do		
		Sam'l Griffin	34	do		
		Wm. Ham	3	do		
		Jno. Hamlin	5	do		
		Chas. Haberkom	94	do		
		Fred. Haberkom	310	do		
		John Farmer	5	do		
		Obadiah Farmer	56	do		
		John M. Finch	3	do		
		C. Flock	327	do		
		George Fouch	66	do		
		John Fouch	27	do		
		Leonard Forrest	5	do		
		Henry Frederick	3	do		
		Joseph Frederick	25	do		
		E. Freeman	2	do		
		—— Freeburg	3	do		
		Charles H. Gable	147	do		
		Joseph Gable	1	do		
		A. Koppeman	6	do		
		John Kelly	23	do		
		R. Kelly	52	do		
		G. Kessner	1	do		
		C. Kalnie	52	do		
		Henry King	3	do		
		Jacob Kramer	9	do		
		A. Kramer	1	do		
		John Kramer	99	do		
		Robert Kramer	2	do		
		Thomas Kramer	4	do		
		John Kromer	84	do		
		Edward Ross	13	do		
		G. Roth	4	do		
		J. Roth	5	do		
		E. Rogan	3	do		
		George Rogan	9	do		
		H. Rogan	1	do		
		Lawrence Rogan	26	do		
		B. Sandman	26	do		
		Benj. Sawyer	5	do		
		Charles Schabedolf	18	do		
		R. Plummer	2	do		
		George Pumphrey	47	do		
		James Pumphrey	35	do		
		Wm. Queen	22	do		
		Elias Queen	21	do		
		Joseph Queen	6	do		
		Chas. T. Randle	43	do		
		Geo. Randle	16	do		
		R. C. Randle	21	do		
		Wm. T. Randle	367	do		
		—— Reinhardt	4	do		
		—— Ricketts	1	do		
		James Riley	3	do		
		Simon Woods	24	do		
		Chas. Wroten	5	do		
		Jno. Weender	206	do		
		Moses Young	4	do		
		Calas Heish	6	do		
		Fred. Hilts	19	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		A. Higdon	1	Carbonate		
		E. Higdon	1	do		
		Robert Higdon	18	do		
		N. H. Higdon	4	do		
		Zenoka Higdon	10	do		
		Philip Heims	16	do		
		William Heims	4	do		
		J. Hoerr	7	do		
		Robert Hopkins	1	do		
		Henry Hink	280	do		
		G. W. Hoffman	131	do		
		Samuel Allen	3	do		
		S. Allseet	7	do		
		Thomas Allseet	5	do		
		Joseph Anderson	49	do		
		John Baker	1	do		
		L. H. Barnett	17	do		
		Henry Bell	46	do		
		Silas Bell	2	do		
		Adam Bender	204	do		
		B. F. Berry	6	do		
		Charles Bidon	251	do		
		L. Blagburn	13	do		
		Geo. M. Ballet	11	do		
		Chas. Bartles	24	do		
		S. Bryant	147	do		
		James Canoles	204	do		
		Wm. Canoles	31	do		
		Thos. Carnes	43	do		
		Thos. Chisholm	30	do		
		Ben. Cook	1	do		
		Peter Cook	27	do		
		Frank Dennis	75	do		
		Daniel Diegel	1	do		
		Jno. Richardson	5	do		
		Joseph Rittenburg	65	do		
		Joshua Scott	18	do		
		August Simon	1	do		
		Josiah Skillman	9	do		
		Mrs. Henry Smith	453	do		
		Bart. Tremper	92	do		
		Joseph Tremper	57	do		
		J. Ulrich	8	do		
		Ernest Weikert	69	do		
		Jno. Winkler	9	do		
		Geo. B. Wartz	2	do		
		Silas Yellowby	7	do		
		N. Ziegler	21	do		
		Frank Zinkham	4	do		
		Patrick O'Brien	1,374	do		
		Joshua Owens	13	do		
		T. J. Richardson	55	do		
		Rittlehouse & Schwartz	6	do		
		Christian Schwartz	15	do		
		George N. Walker	13	do		
		Peter Garrigan	191	do		
		M. Affelder	84	do		
		T. Agnew & Co	286	do		
		John Bowen	4	do		
		Geo. M. Buckingham	10	do		
		D. J. Cook	8	do		
		Richard Daily	10	do		
		August Deering	71	do		
		John Dixon	5	do		
		John Jackson	17	do		
		John Kemp	23	do		
		August Krich	85	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		John Cassidy	4	Carbonate		
		James L. Crafton	17	do		
		J. Deboy	4	do		
		E. Hartke	25	do		
		John Ireland	19	do		
		L. Queen	3	do		
		James D. Reckitt	7	do		
		Y. P. Shultipey	6	do		
		Thomas Gran	2	do		
		Edward Greely	159	do		
		Mrs. Sophia Grill	28	do		
		William Guy	1	do		
		Peter Hagan	80	do		
		H. Hamer	3	do		
		William Furgenstein	2	do		
		William Button	2	do		
		A. Copples	33	do		
		Michael Carr	71	do		
		Patrick Carr	181	do		
		Peter Carr	26	do		
		John W. Clantice	12	do		
		William Cole	122	do		
		—— Conway	19	do		
		Joseph Craig	4	do		
		John Diggs	1	do		
		Daniel Donnelly	24	do		
		John Downs	6	do		
		T. Cornes	24	do		
		J. Thurman	2	do		
		Alexander Tyler	8	do		
		John W. Wade	128	do		
		W. H. Wade	564	do		
		August Watts	29	do		
		George Watts	19	do		
		Thomas W. Jenkins	122	do		
		Frank Koster	135	do		
		Latham & Little	4	do		
		John Leonard	74	do		
		Henry Levi	68	do		
		John Magsamen	81	do		
		Charles Mason	64	do		
		John McCormick	109	do		
		James McLaughlin	13	do		
		Michael Fester	1	do		
		Charles Fiska	33	do		
		William Furkenstein	17	do		
		Jonas Gabriel	75	do		
		Jacob Gerst	62	do		
		John Gerst	51	do		
		Peter Gerst	46	do		
		Robert Ray	21	do		
		Fred. Ulrich	7	do		
		M. Ziegler	22	do		
		Miscellaneous	212	do		
		No name	56	do		
		Christian Bury	22	do		
		Mary C. Cook	21	do		
		F. Dentzel	12	do		
		—— Haberkorn	26	do		
		J. B. Hanney	10	do		
		W. T. Jenkins	177	do		
		—— Johnson	6	do		
		S. Krill	32	do		
		F. Krause	11	do		
		James R. Osburn	14	do		
		Charles H. Dimen	7	do		
		R. G. Dampbey	368	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		P. Flynn	12	Carbonate		
		B. J. Galloway	240	do		
		Thomas Griffin	21	do		
		J. T. B. Parlett	45	do		
		E. Rawlins	37	do		
		Dr. Ridgely	6	do		
		John Ridgely	500	do		
		J. Sedicum	10	do		
		W. B. Sweitzer	166	do		
		H. Ulrich	10	do		
		J. J. Watle	12	do		
		W. Watle	11	do		
		H. Baranger	603	do		
		H. Frybecker	603	do		
		R. Novock	603	do		
		George A. Smith	603	do		
		F. Wehr	603	do		
		J. Hammerbacher	603	do		
		R. G. Dumphey	270	do		
		J. B. Hall	11	do		
		A. Harrold	11	do		
		B. Kramer	11	do		
		A. Links	27	do		
		Joshua Mathews	200	do		
		E. McCauly	11	do		
		Pat. O'Neil	270	do		
		Howard Ridgley	130	do		
		Miscellaneous	52	do		
		G. Bauers	1,276	do		
		O. B. Benson	41	do		
		Louis Berman	2	do		
		William Boblitz	26	do		
		—— Brady	6	do		
		Henry Brewis	37	do		
		L. Butler	3	do		
		—— Schichells	1	do		
		Charles Schulthies	3	do		
		Paul Schulthies	32	do		
		Charles Schwartz	688	do		
		John Schwartz	611	do		
		G. M. Seiss	31	do		
		Paul Sentz	4	do		
		Dennis Simnes	114	do		
		Jacob Smith	335	do		
		John Smith	122	do		
		Joseph Smith	176	do		
		William Snyder	3	do		
		—— Soap	1	do		
		James Rittenhouse	331	do		
		John Robinson	11	do		
		William Robinson	3	do		
		Names unknown	97	do		
		William H. Merrett	48	do		
		Wesley Miller	6	do		
		George Mohr	17	do		
		Henry Mohr	11	do		
		John Mohr	51	do		
		John Neiser	55	do		
		Fred. Noble	12	do		
		M. N. Peters	101	do		
		Prescoe Bros	6	do		
		Samuel Pugh	1	do		
		Thomas Pugh	61	do		
		Henry Reishort	10	do		
		Henry Hurst	9	do		
		John Hurst	11	do		
		Lewis Hurst	12	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BALTIMORE COUNTY—continued.					
		Valentine Roberts	7	Carbonate		
		James Robinson	24	do		
		John Rosengarten	3	do		
		Isaac Smith	28	do		
		Frank Weikert	11	do		
		John White	2	do		
		John Williams	9	do		
		—— Wirth	7	do		
		—— Wright	7	do		
		A. F. Haberkom	103	do		
		L. Hartigan	7	do		
		William Hedrick	2	do		
		B. Johnson	53	do		
		Thomas Kenney	167	do		
		George H. Merryman	7	do		
		George W. Miller	43	do		
		F. C. Moore	118	do		
		Mrs. C. Welch	598	do		
		B. Wilson	67	do		
		H. C. Wilson	23	do		
		John Adams	6	do		
		John G. Bosley	31	do		
		Jacob Brillhart	13	do		
		John Binton	46	do		
		Frank Corcoran	32	do		
	CARROLL COUNTY.					
Eusor ore-bank	New Windsor	Wrightsville Iron Co.	1,054	Limonite	Neutral forge and foundry.	
Miller's ore-bank	Millers	do	2,078	do	do	
Bachman valley	Ebbvale	Grove Bros.	4,804	do	Foundery and forge pig.	All smelted in our furnaces at Danville, Pa.
		Samuel Erb	47	do		
		Mineral Hill Mining Co.	218	Magnetite		
		Avondale mine	6,603	Limonite		
		Westminster ore-bed	143	do		
		Myers ore-bank	1,356	do		
		Horace L. Brook	132	do		
		James Maxwell	10	do		
	CECIL COUNTY.					
		Principio I. furnace	2,016	do		
	FREDERICK COUNTY.					
Catoctin	Catoctin furnace	J. B. Kunkel	17,843	do	Car-wheels, malleable and machine castings, steam-cylinder, boiler, and armor-plates.	
		Mrs. McPherson	99	do		
		C. S. Hurd	224	do		
	HARFORD COUNTY.					
		John Lynch	191	Carbonate		
		James Stansbury	2	do		
		E. C. Velly	3	do		
		A. P. McCombs	81	Limonite		
	HOWARD COUNTY.					
		W. J. Disney	12	Carbonate		
		P. J. Mitchell	507	do		
		T. H. Talbot	47	do		
		T. H. Brown	1,171	do		
		J. C. Gaylor	122	do		
		A. J. Harmon	58	do		
		William Henson	8	do		
		T. H. Hoods	11	do		
		Samuel Jeffreys	79	do		
		William E. Jeffreys	23	do		
		R. B. Mason	162	do		
		P. G. Mitchell	2,729	do		
		Michael Reynolds	3,740	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	HOWARD COUNTY—continued.					
		V. Riemsneider	148	Carbonate		
		Wm. M. Stockett	32	do		
		Thomas Wheeler	8	do		
		W. Mass	10	do		
		Chas. A. McCann	10	do		
		H. Myers	13	do		
		J. Norris	28	do		
		V. Reimsnyder	231	do		
		J. Smith	11	do		
		Geo. W. Dorsey	18	do		
		Benj. Green	109	do		
		Michael Loffy	731	do		
		Jno. McManus	287	do		
		—— Menshaw	13	do		
		William Yeager	104	do		
		William Kyne	50	do		
		H. Russell	48	do		
		George W. Hobbs	2,873	do		
		W. Walker	11	do		
		P. R. Wilson	1,123	do		
		William Caples	7	do		
		C. Williams	7	do		
		Jno. Wesley	16	do		
		E. A. R. Earp	6	do		
		F. Ellster	5	do		
		A. L. Guyton	20	do		
		Joseph Hartke	9	do		
		Owen Kearney	10	do		
		A. S. Linthicum	64	do		
	MONTGOMERY COUNTY.					
		Philip Bird	25	do		
	PRINCE GEORGE COUNTY.					
		C. C. Jacobs	38	do		
		J. B. Ridgeway	28	do		
		G. Simon & Bro	35	do		
		Cæsar Smith	10	do		
		Smith & Friel	145	do		
		Richard Smith	368	do		
		B. Sullivan	8	do		
		Geo. N. Walker	55	do		
		James Watts	30	do		
		Jno. Wells	24	do		
		Geo. Wheeler	5	do		
		James Woods	1,755	do		
		S. Rufus Belt	53	do		
		James O'Brien	827	do		
		Thos. Burfit	97	do		
		R. W. Burgess	224	do		
		James Collins	720	do		
		John Coughlin	12	do		
		Thos. Foster	9	do		
		Chaney Howell	8	do		
		W. F. Howell	26	do		
		W. A. Linthicum	46	do		
		Wm. Alton	10	do		
		R. Anderson	62	do		
		L. Brashears	6	do		
		John Brewer	15	do		
		H. Brock	2	do		
		O. Brown	5	do		
		W. T. Jones	2	do		
		Antoine Lemoine	50	do		
		Chas. Lorentz	29	do		
		Brook Matthews	4	do		
		Moses Matthews	3	do		

Directory of iron-ore mines—Continued.

MARYLAND—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	PRINCE GEORGE COUNTY—cont'd.					
		Buck Merson	35	Carbonate		
		R. McFee	42	do		
		Carl Millbrook	306	do		
		Joseph Miller	46	do		
		Geo. Mitchell	2	do		
		Mark & Clymer	414	do		
		D. O'Brien	19	do		
		A. Robinson	48	do		
		Geo. Donaldson	436	do		
		Peter Dorsey	13	do		
		Mrs. M. Duval	8	do		
		M. Fallow	2	do		
		Patrick Friel	417	do		
		B. Gorsuch	4	do		
		B. Haker	54	do		
		Wm. Hicks	7	do		
		T. Hopkins	15	do		
		Jno. Ingraham	8	do		
		R. T. Jeffries	3	do		
		Notley Johnson	113	do		
		Wm. Shay	216	do		
		Henry Brebaker	14	do		
		Dennis Collins	123	do		
		Mrs. James Collins	29	do		
		Charles Lorenz	25	do		
		Catherine Yockel	15	do		
		George Yokel	609	do		
		Welling & Harrison	55	do		
		James Simnes	130	do		
		John Walker	53	do		
		L. G. Welsh	97	do		
		Halbert Hoffman	1,058	do		
		Hugh Watts	28	do		
		R. W. Burgess	39	do		
		Thomas Carrick	21	do		
		Frank Carter	35	do		
		Joseph Carter	12	do		
		Charles J. Chalk	22	do		
		Dr. Childs	7	do		
		Josh Crawford	2	do		
		John Latchford	892	do		
		Mrs. E. W. Lester	12	do		
		Charles Lorentz	238	do		
		Michael McCann	35	do		
		Welleng & Anderson	23	do		
		George H. Beall	754	do		
		Johanna Burfit	469	do		
		James T. Perkins	112	do		
		John Simms	20	do		
		J. McMullikin	48	do		
		John S. Tyson	26	do		
	WASHINGTON COUNTY.					
		Antietam furnace	560	Limonite		

MASSACHUSETTS.

	BERKSHIRE COUNTY.					
C. Leet ore-bed	West Stockbridge	Hudson Iron Co	19,079	Limonite		Hudson Iron Co., Hudson, N. Y., via B. & A. R. R.
Mason & Bliss	Cheshire	Jagger Iron Co	1,368	do		
Bank	Richmond	John Raser	5,040	do	Foundery, machinery, stove-plate, mowing- and reaping-machines.	Pomroy Iron Co., West Stockbridge, Mass.
Bacon	do	Charles B. North	280	do	do	West Stockbridge.

Directory of iron-ore mines—Continued.

MASSACHUSETTS—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BERKSHIRE COUNTY—continued.					
Gates	Richmond township		None.	Limonite		
Andrews	do		None.	do		
Hancock Shakers	Pittsfield township		None.	do		
O. B. Goodrich	West Stockbridge	Lawrence Moffatt	2,197	do	Car-wheels	Pomroy I. Works, West Stockbridge, Mass.
O. B. Sherman	Lanesborough	J. L. Colby	5,660	do	do	
Leet	West Stockbridge	Richmond Iron Works	9,211	do	Cannon, car-wheels, and strong machinery.	Furnaces of Richmond Iron Works.
Cone	Richmond	do	7,828	do	do	Own furnace.
Cheever	do	do	12,694	do	do	

MICHIGAN.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BARAGA COUNTY.					
Spurr Mt. I. Min. Co.	Spurr mountain		None.	Magnetite		
	MARQUETTE COUNTY.					
Milwaukee	Negaunee	John Q. Adams and James F. Foley.	3,360	Limonite		Cleveland, Ohio.
Edward	Humboldt	W. W. Wheaton	None.	Magnetite and specular.		Do.
Michigamme	Michigamme	Michigamme Co	66,158	Magnetite		Cleveland, Erie, Ashtabula, and Chicago.
L. Superior I. Co	Ishpeming	Lake Superior I. Co	215,930	Specular and hematite.	Bessemer steel, pig	Cleveland, Ohio, Chicago, Ill., Detroit, Mich., Buffalo, N. Y., and Erie, Pa.
Kloman	Republic	Shenaway, Wicker & Co	None.	Specular		Lake Erie ports.
Howe, "Old Pittsburg", or L. Superior.	Palmer	D. H. Bacon and W. N. Morse.	981	do	Bessemer	Cleveland, Ohio.
Goodrich	Stoneville	A. E. Goodrich	6,720	do	do	Chicago, Ill., and Milwaukee, Wis.
Champion	Champion	Champion Iron Co	99,600	Magnetite and specular.	Bessemer pig	Cleveland, Ashtabula, Erie, and Chicago.
New York	Ishpeming	New York Iron mine	44,971	Specular	Bessemer steel, mill, bar, hoop, sheet iron, nails, etc.	Chicago and lake Erie ports.
Chicago	Negaunee	W. S. Calhoun and J. F. Stevens.	3,304	Limonite	Foundery	Cleveland, Ohio.
Bessemer	do	King & Wheeler	24,640	do	Bessemer	Do.
Mitchell	Tilden	Mitchell Mining Co	17,920	do	do	Do.
Keystone	Champion	Saginaw Mining Co	10,080	Magnetite and specular.	Mill and foundery	Do.
Saginaw	Stoneville	do	30,240	Specular	Bessemer	Do.
National	National	National Iron mine	33,600	do	Bessemer steel	Do.
Barnum	Ishpeming	Iron Cliffs Co	28,000	do	do	Chi. and Cleveland, via C. and N. W. R. R.
Section 12	Negaunee	do	6,720	Limonite		Do.
Republic	Republic	Republic Iron Co	224,000	Specular and magnetite.	Bessemer and mill	Lake Erie ports, by M. H. and O. R. R., and lake.
Winthrop		Winthrop Hem. Co	47,168	Limonite	Pig, especially Bessemer	Pa., Ohio, Ill., Mich., and Minn., via C. and N. W. R. R., M. H. and O. R. R., and lake.
McComber	Negaunee	McComber Iron Co	33,600	do	All kinds	Middle and western states.
Cleveland Iron Mining Co.	Ishpeming	Cleveland I. M. Co	125,440	Specular	do	Do.
Salisbury	do	Iron Cliffs Co	25,000	Limonite	Bessemer steel	Chicago and Cleveland, via C. and N. W. R. R., and water.
Cambria	Negaunee	Cambria Mining Co	6,720	do	do	Chicago, via C. and N. W. R. R., and water.
Pendill	do	Union Mining Co	20,160	do	Car-wheels, malleable and gray castings, agricultural implements, and machinery.	Local.
Gilmore	do	Iron Cliffs Co	None.	Specular		
Excelsior	Ishpeming	do	None.	do		
Foster	Negaunee	do	None.	Limonite		
Humboldt	Humboldt	Humboldt Iron Co	17,321	Magnetite and specular.	Car-wheels and malleable iron.	Cleveland, Ohio.
Cheshire	Cheshire	Cheshire Iron Co	20,582	Hematite	Bessemer steel, red short, foundery, and mill.	Cleveland, Ashtabula, via C. and N. W. R. R., and lake.
Jackson	Negaunee	Jackson Iron Co	134,585	Specular	Bessemer	Sharon, Chicago, and Cleveland, Fayette.
Manganese	do	J. W. Schadt and Chas. Schrottky.	11,200	Limonite		Cleveland and Chicago, via M. H. and O. R. R.
N. Y. Hematite	do	Neil & Sweeny	2,240	do		Via C. and N. W. R. R.
Cleveland Hem	Ishpeming	Robert Nelson	18,730	do	Steel rail	Appleton, Wis., and Chicago.
Palmer or Cascade			33,508	Specular		
Elmore		Neeley & Sweeny	None.			

Directory of iron-ore mines—Continued.

MICHIGAN—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	MARQUETTE COUNTY—continued.					
Rolling-Mill	Negaunee	George Berringer	14,157	Limonite		Cleveland, Ohio, Joliet, Ill., and some local furnaces.
Lake Angeline	Ishpeming	Pittsburgh and Lake Angeline Iron Co.	16,719	Specular	Bessemer steel	Chicago.
	MENOMINEE COUNTY.					
Vulcan	Vulcan	Menominee Mining Co.	83,394	Hematite	Bessemer steel	Milwaukee, Chicago, Cleveland, Pittsburgh, and Johnstown.
Norway and Cyclops.	Norway	do	210,875	do	do	Do.
Quinnesec	Quinnesec	do	63,689	do	do	Do.
Lowell and E. Vulcan	Vulcan	do	6,171	do	do	Do.
Chapin		do	7,878	do	do	Do.
Stephenson	Norway	Lumbermen's Min. Co.	14,000	do	Mixing with hard ores and Bessemer steel.	Chicago, Cleveland, and Milwaukee.
Cornell	Quinnesec	Wright & Cornell	7,840	do	Bessemer	Cleveland, Ohio.
Curry Iron Co.	Vulcan	John Outhwaite	21,813	do	Bessemer steel and mill.	Pittsburgh and Mahoning valley.
Ludington	Iron Mountain city	Lumbermen's Min. Co.	2,800	do	Bessemer steel	Chicago, Cleveland, Milwaukee, and Erie, via lake.
Perkins	Norway	Saginaw Mining Co.	35,840	do		Cleveland, Ohio.
Brenn	Waucedah	Emmett Mining Co.	5,600	do		Cleveland, Ashtabula, and Chicago, via C. and N. W. R. R., and boat.
Emmet	do	do	31,447			

MISSOURI.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	CRAWFORD COUNTY.					
Scotia No. 2	7 ms. S. of Bourbon.	Scotia Iron Co	11,200	Hematite and specular.	Bessemer pig	Smelted by Scotia furnace, Scotia.
Taylor	9 miles NW. of Cuba.	James & Green	819	do	Bessemer	All to Vulcan Steel Works, St. Louis, Mo.
McGarvey or McDonald.	8 miles SW. of Leasburg.	McGarvey	633	Hematite	Bessemer pig	All to Missouri Iron Co., Saint Louis, Mo.
Iron Ridge No. 2	Iron Ridge	Republic Iron Min. Co	336	Hematite and specular.	do	South Saint Louis.
Zane or Shotwell	2 ms. NE. of Midland	Midland Blast-Furnace Co.	784	do	Bessemer steel	All to Midland Blast-Furnace Co.
Steelville, Seay or Marsh.	1 mile S. of Steelville.	Phillips, Bennett & Thurman.	1,680	Specular	Foundery	Do.
Wilson's Mills	1 mile S. of Wilson's Mills.	J. D. Butt	62	do		
Pinnell	2½ miles NE. of Leasbury.	E. A. Pinnell	506	Hematite	Bessemer pig	All to Saint Vulcan Steel Works.
Meramac I. Min. Co.	Cherry Valley	Meramac I. Min. Co	60,385	Specular	Fix. and all kinds of pig.	Carondelet and Midland.
R. R. ore bank	1½ miles NE. of Midland.	M. B. F. Co	1,493	do	Bessemer and foundery	All to M. B. F. Co.
Clark No. 1	Near Midland	N. G. Clark	336	do	Bessemer pig	Do.
Cole	5½ ms. S. of Bourbon.	Wm. James, Isaac Davis, John and James Reves.	734	Hematite and specular.	Bessemer pig and best wrought.	Vulcan Steel Works, St. Louis, also Inda.
Smith or Clark No. 2.	2½ miles W. of Cuba.	N. G. Clark	225	do	Bessemer steel	All to Saint Louis.
Iron Ridge	Iron ridge	Republic I. Min. Co.	7,840	do	Bessemer pig	All to So. Saint Louis Vulcan Steel Works.
	DENT COUNTY.					
Orchard	Salem	Salem Iron Co	940	Hematite and specular.	Bessemer pig	Lewis Iron Co., Grand Tower, Ill.
Morns	6 miles E. of Salem	Dent Iron Co	560	do	do	
Jamison	3 miles S. of Salem	Missouri Iron Co	873	do	Mixing for Bessemer pig.	Saint Louis, Mo.
Pomeroy	3 miles NW. of Salem.	Eben James	9,487	do	Bessemer pig, neutral	All to Saint Louis.
Pittsburgh or Preston.	Salem	Missouri Iron Co	644	do	Mixing	Saint Louis, Mo.
Simmon's Mountain	1 mile SW. of Salem.	do	17,608	do	Bessemer pig	Do.
Thomas	4 miles W. of Salem	M. B. F. Co	2,493	do	Foundery	All to M. B. F. Co.
Sligo	2 miles E. of Sligo furnace.	Sligo Furnace Co	460	do		All smelted at Sligo furnace.
Riverside	7 miles SE. of Salem.	Riverside Iron Works.	9,859	do	Mixing for mill	Riverside Iron Works, Wheeling, W. Va.
Watkins	12 miles NW. of Salem.	W. J. Sanky	1,676	do	Bessemer pig	All to Saint Louis.
Hawkins	2 miles W. of Avery.	M. B. F. Co	2,201	do	Mixing for Bessemer pig.	All to M. B. F. Co.
Dry Fork	12 miles N. of Salem.	S. M. Smith & Co	1,725	do	Bessemer pig and mixing.	All to Saint Louis.
Fitzwater	5 miles S. of Sligo furnace.	Sligo Furnace Co	2,300	do	Fix	Mo. Iron Co., Saint Louis, Mo.
Hitchen's Creek	9 miles E. of Salem	William James	499	do	Bessemer pig and fix.	Wabash Iron Co., Terre Haute, Ind., and East Saint Louis, Mo.
Forgason or Milsap	Salem	M. B. F. Co	7,543	do	Bessemer pig	All to M. B. F. Co.

Directory of iron-ore mines—Continued.

MISSOURI—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	FRANKLIN COUNTY.					
Hurst or Halligan	3 miles S. of Dry branch.	Booth, Smith & Co.	336	Hematite and specular.	Bessemer steel	Vulcan Iron Works, Saint Louis.
Saint Clair	Saint Clair	Bennett & Buskipp	2,128	do	do	St. Louis, Mo., and Shoals, Ind.
Judith Spring M. Co.	Stanton Copper mines.	Bennett & Thurman	5,600	do	Steel	Do.
	GASCONADE COUNTY.					
Keffer	12 miles north of Cuba.	Phillips, Bennett & Thurman.	1,120	Hematite and specular.		Mo. Furnace Co., Saint Louis, Mo.
	IRON COUNTY.					
Pilot Knob	Pilot Knob	Pilot Knob Iron Co	52,761	Specular	Bessemer pig	Carondelet, Mo., Pittsburgh, Pa., Pilot Knob, Mo., Grand Tower, Ill., Wheeling, W. Va., and Ashland, Ohio, via St. L., I. Mt. and So. R. R. and Miss. and Ohio rivers.
Russel Mountain	3 miles west of Pilot Knob.	Peckham Iron Co	56	do		Kommswick, Jefferson county.
Shephard Mountain	Pilot Knob	Pilot Knob Iron Co	4,480	do	Bessemer pig	Saint Louis, Mo., Pilot Knob Iron Co.
	PHELPS COUNTY.					
Dawson	Near Rolla	William James	27	Hematite and specular.	Bessemer steel, pig	Carondelet.
Clinton	12 miles northwest of Salem.	Missouri Iron Co	15,361	Specular	Bessemer pig	Saint Louis.
McDole	Maramec Iron Works	William James	278	Hematite and specular.	Bessemer steel, pig	Carondelet, Mo.
Hyer	Near Rolla	do	585	do	Bessemer pig	Do.
Reed	do	do	1,650	do	do	Do.
Saint James	Saint James	do	279	do	Bessemer pig, boiler, cast-steel, malleable castings, and car-wheels.	Moselle county, Mo., Big Muddy county, Ill., Western Iron Co., Ind., Ozark county, Mo., Gaylord Iron and Pipe Co., Newport, Ky.
Lamb	4 miles north of Avery station.	Saint Louis Iron Mining Co.	2,735	do	Bessemer pig and fix	Carondelet, Mo., and Wheeling, W. Va.
Stimpson	12 miles south of Saint James.	Missouri Furnace Co.	5,600	do	Bessemer pig	Missouri Furnace Co., Saint Louis, Mo.
Smith	12 miles southwest of Salem.	Missouri Iron Co	2,811	do	do	All to Saint Louis.
	SAINT FRANÇOIS COUNTY.					
Iron Mountain	Iron Mountain	Iron Mountain Co	144,153	Specular	Bessemer pig, crucible steel, strong tensile, strain bar and plate, car-wheels, malleable castings and mixing.	St. Louis and Upper Ohio river, via I. Mt. R. R. and Ohio river.
Wilson ore bank	2 miles south of Bismarck.	Reuben W. Wilson	112	Limonite	Flux	Saint Joe Lead Co. Mine, La Motte.
	WASHINGTON COUNTY.					
Burnett ore bank	14 miles northwest of Potosi.	Frank Burnett	214	Hematite	Bessemer pig	Carondelet, Mo.

NEW JERSEY.

	BERGEN COUNTY.					
Butler	Near Sufferns	G. W. Suffern and R. F. Galloway.	280	Magnetite		
	HUNTERDON COUNTY.					
Hager	Milford	Holland Mining Co	800	do	Foundery	Coleraine Iron Works, Gainson Furnace, Lyons Station and Redington, Pa., via B. and D. R. R. and Lehigh R. R.
Turkey Hill	West End	West End Iron Co	11,087	do	Bessemer pig	Bethlehem Iron Co., Bethlehem, Allentown Iron Co., Allentown, Carbon Iron and Pipe Co., Parryville, Lucy Furnace Co., South Glendon, Dunbar Furnace Co., Dunbar and Crane Iron Co., Catasauqua, Pa.
Silverthorn	High Bridge	S. K. Large & Co	252	do	Grey forge	Coleraine Iron Co., Redington, Pa.
Large	do	do	112	do	No. 1 foundery	Lehigh Iron Co., Allentown, Pa.
Cregar	do	Andrew Cregar	280	do	Foundery	Allentown, Pa.
Eveland	Glen Gardner	Lewis Barnes	224	do	Rolling-mill	
Pidcock	Near Anderson	T. and S. Pidcock	150	do		Musconetcong Iron Co., Stanhope, N. J., and Carbon Iron Company, Coplay, Pa.
Radley	Lebanon	Lewis Barnes	78	Limonite		
Petty	Near Bloomsbury	David McCrea	45	Magnetite		
Wean	West End	John P. Wean	566	Limonite		All to Easton, Pa.

Directory of iron-ore mines—Continued.

NEW JERSEY—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	HUNTERDON COUNTY—continued.					
Maberry	Glen Gardner	Halsey J. Boardman	336	Magnetite	Bessemer	
Case	Near Pattenburgh	David McCrea	28	do		
Neighbor	Near Califon	Sylvester Neighbor	896	Limonite	Bessemer steel	All to Taylor Iron Works, Chester, N. J.
Union Church	Norton	Cooper & Hewitt	None.	Magnetite		Durham Iron Works.
Swayze	West End	West End Iron Co	None.	do		
Asbury	Asbury	do	54	do	Bessemer	Carbon I. and P. Co. and Crane Iron Co.
Old Furnace	High Bridge	E. P. Merritt and F. H. Smith.	None.	do		
Rodenbaugh	Bethlehem township	West End Iron Co	31	do	Bessemer	Carbon I. and P. Co., Parryville, Pa.
Annandale	Annandale	Lewis Barnes	627	do	Rolling-mill	Keystone furnace, Reading, Pa., and Topton furnace, near Reading, Pa.
Taylor	High Bridge	Llewellyn James	2,114	do	Grey forge	Hokendauqua.
Sharp	do	David Neighbor	None.	do	Ordinary pig	Peter Uhler's furnace, Glendon.
Gray	Whitehall	Saucon Iron Co	1,940	do	Foundery, forge, and Bessemer.	
Turkey Hill	West End		None.			
Burrill	Tewksbury township		None.			
Fisher or Fix Hill	do		None.			
Wild Cat	Bethlehem township	Theo. Hoffman	None.			
Wright	do		None.			
Mattison	Lebanon township		None.			
Nalf	Holland township		None.			
	MORRIS COUNTY.					
Randall Hill	Mine Hill	Crane Iron Co	8,303	do	No. 1 foundery pig	Catasauqua, Pa.
Millen	do	Executor estate of Jas. C. Lord.	1,263	do	Foundery and gray forge.	Port Oram and Boonton, N. J., via D., L. and W. R. R.
Baker	do	Lackawanna Coal and Iron Co.	14,096	do	Bessemer pig and foundery.	Franklin furnace, Franklin, N. J.; Saucon Iron Co., Hellertown; Lehigh Iron Co., Allentown; Bergman & Co., Danville; Bergen Iron Co, Secaucus, and Musconetcong Co., Stanhope.
Hibernia	Hibernia	Glendon Iron Co	85,623	do	Mixing for forge and foundery.	Glendon furnace and Lehigh furnaces, via Hibernia Mine R. R., D., L. and W. R. R. and L. V. R. R.
Green Pond	Near Charlotteburgh	Chas. E. Maxwell	18,053	do	All kinds of pig except cold short.	N. J. and Pa., via C. and G. P. R. R., and Midland R. R.
Hacklebarney	Chester	Chester Iron Co	31,182	do	Rolling-mill	Aitkin Bros., Pottsville; Crane Iron Co., Catasauqua; Reading Iron Co., Reading; Pennsylvania Steel Co.; Montgomery Iron Co.; Jas. Hoover & Sons, G. H. Brown, Andover Iron Co., and Cooper & Hewitt.
Black Hills	Near Suckasunny	A. Pardee	2,195	do	Bessemer	Secaucus, N. J., via M. and E. R. R.
King	do	do	2,564	do	Foundery	Furnaces in Lehigh Valley, and some to Musconetcong Iron Works, via D. L. & W. R. R. and C. R. R. of N. J.
Weldon	Jefferson township	Wm. E. Dodge and others.	1,277	do	Forge	Local furnaces and Lehigh Valley.
Hurd	Port Oram	Thomas Iron Co	11,200	do	Foundery pig, bar-iron	High Bridge, C. R. R. of N. J., and S. and T. Div.
Stoutenburgh	Schooley mountain	Jos. Wharton	1,680	do	No. 1 pig and forge	Lehigh Valley, Pa.; Stanhope, Sussex Co., N. J., via M. and E. R. R., and H. B. C. R. R. of N. J.
Samson	Chester	Cooper, Hewitt & Co	3,360	do	Foundery and mill	Lehigh Valley and Durham furnaces, via C. R. R. of N. J., Pa. R. R., and L. V. R.R.
Combs	Ironia	Mrs. Julia A. Canfield	4,480	do	Bessemer pig	Lackawanna Coal and Iron Co., Scranton, Pa., via D., L. and W. R. R.
Cooper	Chester	Cooper Iron Mining Co.	5,867	do	Forge and foundery	Chestnut Hill Iron Co., Musconetcong Iron Co., Pottstown Iron Co., Lehigh Iron Co., and Coplay Iron Co., via D., L. and W. R. R. and L. V. R. R.
Dodge	Jefferson township	Wm. E. Dodge and others.	358	do	Forge	Local furnaces and Lehigh Valley.
Bryant	Suckasunny	John D. Evans	6,720	do	Bessemer	Bethlehem Iron Co., Bethlehem, Pa., via D., L. and W. R. R. and L. V. R. R.
Dickerson	Near Suckasunny	A. Pardee	28,014	do	Foundery pig	Musconetcong Iron Works and Lehigh Valley furnaces, via D., L. and W. R. R. and C. R. R. of N. J.
Lawrence & De Hart	Near Ironia	Reading Iron Co	763	do	do	Reading Iron Works, Reading, Pa., via D., L. and W. R. R., L. V. R. R., and P. and R. R. R.
Sterling	Port Oram	Thomas Iron Co	16,800	do	Foundery pig and bar	H. B. C. R. R. of N. J. and S. and T. division.
Orchard	do	Executor estate of Jas. C. Lord.	14,048	do	Foundery and gray forge	Port Oram furnace, Port Oram; Boonton furnace, Boonton, and Lehigh and Schuylkill Val. furnaces, via D., L. and W. R. R. and various Pennsylvania railroads.
Byram	Mine Hill	Andover Iron Co	16,666	do	No. 1 foundery	Andover furnace, Phillipsburgh, N. J.

Directory of iron-ore mines—Continued.

NEW JERSEY—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	MORRIS CO.—cont'd.					
Mount Olive	Mount Olive	Wm. George & Co	1,625	Magnetite	Mill and wrought-iron pipe.	Reading Iron Works and Lyon furnace, via C. R. R. of N. J., and L. R. R.
Rockaway Valley	Near Powerville	Paul P. Todd	569	do	Forge and foundery	Boonton furnace, Boonton.
Gove	Drakesville	Francis N. Gove	3,020	do	No. 1 foundery	Coleraine furnace, Lehigh Valley, via M. and E. R. R. and L. V. R. R.
Charlotteburgh Davenport	Charlotteburgh Green Pond	Cooper & Hewitt	3,920	do		Pennsylvania and New Jersey, via D., L. and W. R. R.
Beach Glen	Hibernia	Executor of estate of Jas. C. Lord.	9,480	do	Foundery and gray forge	Boonton furnace, Boonton, and Lehigh Valley furnace, via Hibernia R. R., D., L. and W. R. R. and L. V. R. R.
Mount Hope	Mount Hope	Mount Hope Mining Co.	50,379	do		Furnaces in Lehigh valley, via Mount Hope Min'l R. R., D., L. and W. R. R. C. R. R. of N. J., and L. V. R. R.
Richard	Near Dover	Thomas Iron Co	35,464	do	Mixing for foundery and forge.	Thomas Iron Co., Hokendauqua, via M. and E. R. R., L. V. R. R., and Mt. Hope R. R.
Dalrymple	Near Mine Hill	Crane Iron Co	2,651	do	No. 1 foundery	Catasauqua, Pa., via N. J. C. R. R. and L. and S. R. R.
Teabo	Near Dover	Glendon Iron Co	22,468	do	Mixing for forge and foundery.	Glendon furnace, near Easton, Pa., via Mt. Hope R. R., D. L., and W. R. R. and L. V. R. R.
Hurd	Hurdtown	do	29,232	do	do	Glendon Furnace, near Easton, Pa.
Mount Pleasant	Port Oram	Executor of estate of James C. Lord.	22,525	do		Lehigh and Schuylkill valleys and Boonton, N. J., via C. R. R. of N. J., L. V. R. R., and M. and E. R. R.
Huff	do	Chester Iron Co	5,015	do	No. 2 foundery and gray forge.	Edgehill furnace, Edgehill, Allentown Iron Co., Carbon Iron Co., and Warwick Iron Co., via N. J. C. R. R. and L. V. R. R.
Ford	Jefferson township	Musconetcong Iron Works.	17,584	do	Mixing for rolling-mill and foundery.	Musconetcong Iron Works, Stanhope.
Lower Wood	Hibernia	Andover Iron Co	41,575	do	High grades of bar	Andover furnace, Phillipsburgh, via Hibernia R. R. and D. L. and W. R. R.
Allen		do	10,133	do	No. 1 forge	Andover furnace, Phillipsburg, via Mt. Hope R. R. and H. B. and N. J. C. R. R.
Washington Forge	Port Oram	R. P. Brown & Co	2,722	do		Pottsville and Allentown Carbon Iron and Pipe Co. and Cordelia Iron Co., via N. J. C. R. R., M. and E. R. R., and L. V. and L. and S. R. R.
Beers	Morris Plains	John H. Beers	22	do		Wilson's furnace, Rockaway.
Willis Hibernia	Hibernia	Bethlehem Iron Co	10,975	do	Foundery and forge	Lehigh valley region, principally own use.
Skellenger	Ironia	Thomas M. Reynolds	4,904	do	Bessemer pig	Delaware, Lackawanna, and Western Coal and Iron Co., Scranton, Pa.
Evers	Mine Hill	Saucon Mining Co	2,513	do		Saucon Mineral Co., Hellertown, Pa.
Pitney	Hacklebarney	Cooper, Hewitt & Co	2,800	do	Foundery	Pequest furnace, Pequest and Lehigh Valley furnaces, Pennsylvania.
Topping	Chester	W. J. Taylor & Co	878	do	Neutral	Chester furnace, Chester, N. J.
Brotherton	Mine Hill	George & Pullman	4,738	do	No. 1 foundery	Allentown Iron Co., Allentown, Montgomery Iron Co., Macungie Iron Co., Macungie, Carbon Iron Co., and various Pennsylvania furnaces.
Split Rock Pond	Split Rock pond	William S. De Camp	560	do		
Cobb	Split Rock	Split Rock Forge and Mining Co.	1,288	do	Boiler-plate and wire	
High Ledge	Drakesville	P. A. Freeman	1,120	do		Lehigh Iron Co., Allentown; Musconetcong Iron Co., Stanhope; Aitkin Bros., Pottsville; Thomas Iron Co., Keystone furnaces.
King	do	T. F. & W. E. King	280	do		Aitkin Bros., Pottsville, and Dauphin furnaces.
Beach	Hibernia	Andover Iron Co	357	do	Gray forge	All to Andover furnace, Phillipsburgh.
Fisher or Beattyestown.	Near Beattyestown		None.			
Naughright	Near German valley		do			
Haun	Schooley's mountain	William W. Marsh	150	do		
Marsh	do		None.	do		
Osborne	Mount Olive		None.			
Langdon	Southwest of Chester		None.			
Hedges	Chester		None.			
Swayze	Near Chester		None.			
Squiers	do		None.			
Lewis or Herrick	Randolph township		None.			
Baker	Mine Hill		None.			
Cramer	Two miles east of Hacketstown.		None.			
Scofield	Jefferson township		None.			
Irondale	Near Port Oram		None.			
De Bow	West of Pompton Plains.	Thomas D. Hussie	112	do		

Directory of iron-ore mines—Continued.

NEW JERSEY—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	MORRIS CO.—cont'd.					
Scrub Oak	Mine Hill	Andover Iron Co	1,680	Magnetite	Gray forge	Andover furnace, Phillipsburgh.
Kahart	Pequannac township		50	do		
Dufford	Washington township.	Port Oram Furnace Co.	500	Limonite		
Howell Tract	Rockaway township.	William S. De Camp	None.			
Poole	Washington township.		None.			
Appleget	Mt. Olive township		None.			
Denmark	Rockaway township.	Jones & Fiedler	150	Magnetite		
	PASSAIC COUNTY.					
Centennial	Warwick mountain	E. H. Wright	1,340	Magnetite	Bessemer and foundery	Elmira, N. Y.; Greenwood, N. Y., and Hokendauqua, Pa., via N. Y., L. E. and W. and W. V. R. R.
Pike's Peak	Stonybrook	M. J. Ryerson	112	do	Bessemer	Bloomington forge, N. J.
Ringwood	Ringwood	Cooper & Hewitt	26,482	do		Pa. and N. J., via N. Y. and G. L. R. R., D., L. and W. R. R., and Morris Canal.
Brown	Midvale	N. Y. and N. J. Bessemer Ore Co.	1,232	do		Saucon Iron Co., Hellertown, Pa.
Wallis	W. Milford township		None.			
	SUSSEX COUNTY.					
Roseville	Roseville	Andover Iron Co	1,347	Magnetite	Bessemer pig	Andover furnace, Phillipsburgh, via Sussex R. R. and D., L. and W. R. R.
Andover Sulphur Hill	Andover	W. J. Taylor & Co	15,202	do	Bessemer	Chester, N. J., and Pottsville, Pa., via Sussex R. R., D., L. and W. R. R., and C. R. R. of N. J.
Pardee-Ogden	Sparta township	Musconetcong Iron Works.	8,080	do	Foundery or forge	Stanhope, N. J.
Sickles	Sparta	Blooming Ridge Mining Co.	1,008	do	Bessemer steel	Musconetcong furnace, Stanhope and Secaucus furnace, Secaucus, via Midland R. R. of N. J., D., L. and W. R. R., and M. and E. R. R.
Hill	Franklin	Franklin Iron Co	6,720	do	Bessemer pig	Scranton, Pa., via S. D., L. and W. R. R.
Davenport	Ogdensburgh	Aitkins Bros	1,120	do	No. 1 foundery pig	Pottsville, Pa., via O. M. R. R. and Morris canal.
Canistear	Canistear	Franklin Iron Co	10,080	do	Bessemer	Own furnace.
Pike's Peak	Franklin	do	8,960	do	Bessemer pig	Smelted by owners.
McKain	Cranberry reservoir.	Clarkson Bird	224	do		
Welling	Vernon township	M. F. Fen Eyck	168	do		
Ogden	Ogdensburgh	Atkin Bros	2,464	do	Neutral foundery pig	
William Wright	Stanhope	Smith & Rusling	2,016	do		All to Chestnut Hill furnace, Columbia county, Pa.
Manganese Iron Ore Co.	Ogdensburgh	Manganese Iron Ore Co.	10,080	do	Bessemer pig	Bethlehem, Johnstown, and Pottsville, Pa.
Brookfield or Waterloo.	Near Waterloo		None.			
Smith or Cascade	2 miles north of Waterloo.		None.			
Gafney	Byron township		None.			
Tar Hill	do		None.			
Williams	Vernon township		None.			
Pochunk	McAfee valley		None.	Limonite		
Wawayanda and Greene.	Vernon township		None.			
Hude or Stanhope	Stanhope	John M. Barns	2,887	Magnetite	Bessemer pig and foundery.	Musconetcong Iron Works, Stanhope and Port Oram furnace, Port Oram.
Green	Vernon township		None.			
Roberts	Sparta township	Allentown Rolling-Mill Co.	16,800	Magnetite		
		New Jersey Zinc Co	2,500	Zinc residues (Franklinite after extraction of zinc).		
	WARREN COUNTY.					
Oxford Iron Co	Oxford furnace	B. G. Clarke	22,359	Magnetite	Nails, foundery, and mill.	
Brown	Beattyestown	Jos. Wharton	435	Limonite	Foundery	All to Hackettstown.
Thomas	do	do	2,051	do	do	Do.
Shields	do	Musconetcong Iron Works.	9,870	do	Neutral forge and foundery.	All to Musconetcong Iron Works, via M. and E. Div. D., L. and W. R. R.
Kishpaugh	Danville	Crane Iron Co	12,711	Magnetite	Bessemer pig	Crane Iron Co., Catasauqua, Pa., via D., L. W. R. R. and L. V. R. R.
Hoagland	Near Free Union church.	Nathan Hoagland	67	do		
Confucius or Creager	Port Murry	Wright & Goulding	None.	do		Coleraine furnace.
New village	New village	Andover Iron Co	375	Limonite	Foundery	All to Andover Iron Co.

Directory of iron-ore mines—Continued.

NEW JERSEY—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	WARREN COUNTY—continued.					
Marble hill	Phillipsburgh	Henry Fulmer	None.		Steel	
Bald Pate	Port Murry	Halsey J. Boardman	165	Magnetite	Foundery pig	Cooper & Hewitt, at Durham furnace.
Rapp	Carpentersville	Andrew Rapp	392	Limonite	No. 1 pig	Andover Iron Works, Phillipsburg.
William Carpenter	do	Cooper & Hewitt	None.	do	Foundery	Pequest furnace, Pequest.
Willener & Godfray	Stewartsville	Willener & Godfray	560	Magnetite	Bessemer	Keystone furnace and Saucon Iron Co.
Davis	Independence township.	Hickok & Callahan	None.	do		
Roseberry	Belvidere	Shaw & Fry	224	do	Bessemer	Durham furnace, Durham.
Hamlen	Near Phillipsburgh	Henry Hamlen	345	Limonite	Foundery pig	Andover Iron Co., Phillipsburg.
Pequest	Pequest	Cooper & Hewitt	560	Magnetite	Foundery	
Hazard	Asbury		None.	Limonite		
Hamlen	Near Phillipsburg		None.			
Swayze	Near Hope		None.			
Marble mountain	Marble mountain		None.			
Thatcher and Stewartsville.	Franklin township		None.			
Redell	Near Oxford		None.			
Potter	Jenny Jump mountain.		None.			
Stinson	do		None.			
Howell	do		None.			
Livesey	Warrenville		None.			
Schaeffer & Gray	Independence township.		None.			
Bryant	Allamuchy township		None.			
Barker or Bulgin	Independence township.		None.			
Day	do		None.			
Wintermutes	Allamuchy township		None.			
Lawless	Byram township		None.			
Schuler	Oxford township	Cooper, Hewitt & Co.	100	Magnetite		
Riegel	Greenwich township		None.			

NEW YORK.

	CLINTON COUNTY.					
Palmer Ore-bed	Black Brook	J. & I. Rogers Iron Co.	28,000	Magnetite	Cast steel	Bethlehem Pa., Crown Point, N. Y.
Chateaugay Ore-bed	Lyon mountain	Chateaugay Ore Co	44,800		Bessemer pig	Pittsford, Vt., and Plattsburg, N. Y.
Arnold	Ferrona	Hussey & Howe M. Co., lim.	1,845	Magnetite	Pig	Clinton county, N. Y., Shenango valley, Pa., and Mahoning valley, Ohio.
Palmer	Black Brook	Penna. Iron and Steel Co.	8,670	do	Cast steel	Forge in Clintonville.
Tremblay Ore-bed	do	Peter Fremblay	1,848	do	do	Jersey City, N. J., and Pittsburgh, Pa.
Redford	Redford	W. C. Wilson	7,004	do		
	COLUMBIA COUNTY.					
Copake	Copake Iron Works.	Frederick Miles	4,480	Limonite	Car-wheel, wrought and steel.	Copake furnace.
Spathic Ore	Near Oak Hill	Thos. Rickert	None.	do	All kinds	Pennsylvania, New Jersey, and New York.
Reynolds	Ancram	Geo. Williams & Co	2,544	do		Albany, Syracuse, Irondale, Manhattanville, Chatham and Millertown, via P. H. and B. R. R. boats, and Harlem R. R.
Weed	Weed mines	do	11,200	do	Car-wheel and charcoal iron.	Albany, Hudson, Manhattanville, Chatham, and Copake Iron Works, via H. R. and C. R. R.
	DUTCHESS COUNTY.					
Fishkill	Sylvan lake	Poughkeepsie Iron Co.	18,347	Limonite	Foundery pig	Poughkeepsie.
Manhattan	Sharon station	Manhattan Min. Co	21,280	do		Manhattan Iron Works, Albany, and Burden's furnace, Troy, via Harlem R. R.
Amenia	Amenia	Amenia Min. Co	12,320	do	Car-wheels and malleable castings.	East Canaan, Conn.; Millerton Iron Co.'s furnaces, N. Y.; Cornwall Bridge, Conn.; Kent, Sharon Valley Iron Co., Lime Rock, Conn.; Manhattan Iron Co., N. Y.
Beekman	Beekmanville	A. Tower	7,364	do		
Clove	Union Vale township	Clove Spring I. Works.	19,404	do	Nos. 1 and 2 foundery and car-wheels.	Own furnaces.
Sylvan Lake	Sylvan lake	Sylvan Lake Ore and Iron Co.	16,607	do	Nos. 1 and 2 foundery and bar and car-wheels.	Troy and Clove valley, N. Y.
Dover	Dover furnace	S. Boston Iron Co	8,960	do	Guns, car-wheels, malleable and foundery.	Dutchess and Columbia counties, N. Y., and Litchfield county, Conn.

Directory of iron-ore mines—Continued.

NEW YORK.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	DUTCHESS COUNTY—continued.					
Clove	Union Vale	Fallkill Iron Co	4,517	Limonite		Poughkeepsie, via Clove Branch and Col. R. R. and Hudson River R. R.
Amenia	Amenia	N. Gridley & Son	6,160	do	Car-wheels and malleable furnace.	Furnaces at Wassaic, N. Y., Local and Hudson furnaces.
	Pawling	National Min. Co	7,280	do	Charcoal	Wassaic, Millerton, Copake, and Albany.
Riga	Mount Riga	Riga Mining Co	4,131	do	Car-wheel pig	Local, via Harlem R. R.
Horton	E. Fishhill township		None.	do		
Dakin	Northeast township		None.	do		
Malthy	Millerton	Caleb S. Malthy	None.	do	Car-wheels	Home.
Valley Pond	Pawling township	Cornelius J. Waight	None.	do		Manhattansville, N. Y.
		Francis Wister	186	do		
		Montgomery Iron Co	609	do		
	ESSEX COUNTY.					
Crown Point	Crown Point	Crown Point Iron Co	112,000	Magnetite	Bessemer, pig, and steel blooms.	Scranton and Bethlehem, Pa.
Smith	Mineville	Geo. B. Stimpson	16,800	do	Foundery, mill, lining puddling furnaces, bar and boiler plates.	Troy and Albany, N. Y., and Philadelphia, Pa.
Cheever Ore-bed	Moriah	Cheever Ore Bed Co	44,800	do	Pig and wrought	Eastern ports, via Canada, Hudson river, Long Island sound, and railroad.
Fisher Hill	do	Port Henry Iron Ore Co.	10,378	do	Bessemer pig	Albany, Hudson, and Fort Edward.
Mine 21	Mineville	do	187,448	do	Foundery castings	New York, Pennsylvania, Massachusetts, Maine, New Jersey, Ohio, Virginia, and Canada.
New Bed	do	Withbees, Sherman & Co.	31,143	do	Bessemer pig	New York and Pennsylvania, via L. C. and N. Y. and C. R. R.
Old Bed	do	do	208,416	do	Foundery, mill, forges, and lining puddling furnaces.	New York, Pennsylvania, and Ohio, via L. C. and N. Y. and C. R. R.
Barton Ore-bed	Moriah	Jas. Thomas	11,559	do	Bessemer pig, mill, and foundery.	
Lee	Port Henry	Milo J. Jermings	6,160	do	Bessemer pig	Albany, N. Y., Saint Louis, and Sharon, Pa.
Burt	Elizabeth township		None.	do		
Negro Hill	do		None.			
Mitchell	do		None.			
Adirondack or Sanford.	Newcomb township		None.			
Paradox Lake No. 1	Schroon township	Smith & Harris	224	Magnetite		Schroon River forge.
Paradox Lake No. 2	do	Horicon Iron Co	336	do		Forge at Ticonderoga.
Minerva		H. Burden	560	do		
Keene	Keene	W. F. & S. H. Weston	1,120	do	Steel, boiler-plates, shafting, locomotives, tires, etc.	Nashua, N. H.
	Spring Hill		363	do		
	JEFFERSON COUNTY.					
White & Ward	Antwerp		None.			
Coburn	do		None.			
Old Stirling	do	Jefferson Iron Co	21,196	Hematite	Cold-blast, charcoal, pig, and car-wheels.	Eastern, western, and ourselves.
Keene	Keene Station	Rossie Iron Works	15,390	do	Foundery	Troy, Port Henry, Elmira, Ontario, and Hudson.
Shurtliff	Philadelphia	Sterling Iron Ore Co	18,991	do		Syracuse, Carthage, Port Leyden, and west.
Dickson	Antwerp	Jefferson Iron Co	8,534	do	Cold-blast, charcoal pig, and car-wheel.	Eastern, western, and ourselves.
	ONEIDA COUNTY.					
Saughlin	Westmoreland	Kirkland Iron Co	5,600	Fossil	Stove-plate	Furnace of company.
Norton & Davis	New Hartford	J. G. Egbert	3,360	do		Utica.
Klein	Verona	John Klein	280	do		Syracuse.
Caglin	do	Remous Caglin	10	do		Do.
Butler, Peck & Elliot.	Clinton	Elliot, Brownson & J. E. Elliot.	11,381	do		Albany, Syracuse, and Kirkland, via D. L., W. and N. Y. C. and H. R. R. R.
Franklin Iron Manufacturing Co.	do	Franklin Iron Manufacturing Co.	10,421	do	Small castings, stove-plate, etc.	Own furnace.
	ORANGE COUNTY.					
Crawford	Sterling	Sterling Iron and Railway Co.	2,240	Magnetite	Forge and foundery pig.	
Redback or Spruce Swamp.	Near Sterling Furnace.	do	3,639	do	do	
Bering	Near Sloatsburgh	do	2,688	do	do	
Ferro Hill	Warwick	M. Standish	305	do	Foundery and forge pig.	Parrott Iron Co., Greenwood.
Forest of Dean	Fort Montgomery	Forest of Dean Iron Co.	26,382	do	No. 1	Poughkeepsie, via Hudson river.

Directory of iron-ore mines—Continued.

NEW YORK—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	ORANGE CO.—cont'd.					
Scott or Oregon	Scott Mine	Sterling Iron and Railway Co.	6,477	Magnetite	Forge and foundery	
Bull	Oxford	Parrott Iron Co	2,570	do	Foundery for hardware	
Warwick	Near Warwick	do	4,464	do	Clove pig	
Hogencamp	Near Greenwood	do	11,599	do	Foundery	
Cornwall	Cornwall	Richard George	672	do	Mixture	Cold Springs, N. Y.
Taylor	Warwick township	Isaac Taylor	896	do		
Sterling, Lake, and Summit.	Lakeville	Sterling Iron and Railway Co.	26,173	do	Forge and foundery pig for lining puddling-furnaces.	Maine to Virginia and Ohio.
Parrot Iron Co			None.			
Augusta	Lorillard	Josiah Patterson	560	Magnetite		
Cunningham	Greenwood	Rich'd M. Cunningham	224	do		Durham.
		Sterling Iron and Railway Co.	1,180	do		
	Long mountain		574	do		
	PUTNAM COUNTY.					
Tilly Foster	Brewster station	Lacka. C. and I. Co	56,000	Magnetite	Bessemer pig	N. J. and Pa., via N. Y. and C. H. R. R., D. L. and W. R. R. and boats.
Brewster	do	Cheever and Durant I. M. Co.	1,944	do	Car-wheels and Bessemer	Pennsylvania, via railroad and canal.
Theall	Southeast (town)	do	2,240	do		New York, New Jersey, and Pennsylvania.
Lake Mahopac	Lake Mahopac	Richard George	896	do	Bessemer pig	Cold Springs, N. Y.
McCollum	Southeast (town)	Cheever and Durant	11,200	do	Bessemer	New York, New Jersey, and Pennsylvania.
Croft	Peekskill	W. H. Campbell	None.	do	Bessemer pig	New York state.
Todd	Campus Hollow	Fallkill Iron Co	4,032	do	Bessemer	Poughkeepsie, via C. M. R. R. and Hudson river.
	Carmel	Mahopac I. Ore Co	None.	do	Bessemer pig	
Sunk	Phillipstown and Putnam Valley.		None.	do		
Denny	Putnam Valley township.	Thomas Iron Co	84	do		
Putnam Valley		Philadelphia and R. R. and I. Co.	650	do		
		Crocker & Bro	16,823	do		
		Coplay Iron Co	72	do		
		Phœnix Iron Co	25	do		
		N. Y. and N. J. Bessemer Ore Co.	196	do		
		H. G. Nichols	285	do		
		J. L. Cunningham	45	do		
		Bethlehem Iron Co	102	do		
		Lucy furnace	123	do		
	RICHMOND COUNTY.					
Jeremiah Towle	Richmond	T. D. O'Brien	6,720	Limonite	Bessemer pig	New Jersey and Pennsylvania.
New Dorp	New Dorp	David Tyson, jr.	None.	do		Hudson river and Pennsylvania furnace.
Tyson's 4 Corners	Castleton Corners	do	224	do	Red short	Hudson river furnaces, Lehigh Valley, and Harrisburgh, Pa.
Staten Island	Ellenwood	Cooper & Hewitt	1,344	do	Bessemer	Own furnaces.
		Warwick Iron Co	24	do		
		H. G. Nichols	1,006	do		
	SAINT LAWRENCE COUNTY.					
Caledonia	Rossie	Rossie Iron Works	21,439	Hematite	Foundery and merchant bar.	Troy, Hudson, Ontario, Buffalo, Port Henry, Elmira, and New York state.
Clifton	Clifton township		None.			
Kearny	Gouverneur	John Webb, jr., & Co.	8,960	Hematite	Car-wheel and foundery.	Buffalo and Port Henry.
		Fullerville Iron Works.	200	do		
		Balmat & Brayton	55	do		
	WASHINGTON COUNTY.					
Potter	Fort Ann	John F. Harris & Son	12,172	Magnetite	Bessemer steel	New York state and Ohio.
Mt. Hope	do	W. P. Ostrander & Co.	6,720	do	do	J. F. Harris & Son, Fort Edward.
	WAYNE COUNTY.					
	Ontario Centre	Bundy & Co	6,944	Fossil	Rolling-mill	Buffalo and Elmira.
Wayne Co. Mining Co.	Ontario	W. S. Bartlett, St. Hill est. of E. Elliot.	29,798	do	Foundery pig	Cleveland, Ohio, Syracuse and Rochester, N. Y., and Youngstown, Ohio.
Le Frois	do	James Le Frois	4,928	do		Geddes.
Bennett Bed	Ontario Centre	Alex. Bennett	6,720	do		Do.

Directory of iron-ore mines—Continued.

NORTH CAROLINA.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	CATAWBA COUNTY.					
Forney Ore-bank	7 miles S. of Newton	Sol. Schrum and H. A. Forney.	50	Magnetite		Local.
Kale	Catawba	Ramsaur's Forge	None.	do	Bar and plow moulds	Do.
	CHATHAM COUNTY.					
Ore Hill	Ore Hill		None.	Limonite		Richmond, Va., and other points.
	CHEROKEE COUNTY.					
Moss, Cooper & Swepson.	Valley River	Heirs of H. Moss, I. W. Cooper, and G. W. Swepson.	112	Limonite	Wrought	
Cooper & Swepson	Valley Town	Fair, Lovegood, and others.	100	do		
Montuth	Brasstown	G. A. Montuth	None.	do	Hammer bar	
Moss	Valley Town	Philip Palmer	80	do	Bar-iron	
Two Mines			224	do		
	GUILFORD COUNTY.					
Danemora	Brown's Summit	Thos. Graham	1,680	Magnetite	Bessemer and fetling	Chester, Balt., Richmond, Harrisburgh, etc.
	HARNETT COUNTY.					
Buckhorn	Buckhorn	A. I. and S. Co.	None.	Specular	Bessemer pig	
	LINCOLN COUNTY.					
Big Ore bank	Iron Station	John Leonard & Co.	250	Magnetite	Car-wheels, bar, and plow moulds.	
	MITCHELL COUNTY.					
Iron Mt., N. C	Rock Creek	Rees & Wilder	680	Magnetite	Cutlery and steel	Neighborhood.
		Cranberry furnace	40	do		
	SURRY COUNTY.					
Burchum & Linvil	Louis Creek	I. M. & W. A. Hiatt	100	Magnetite	Pig and wrought	

OHIO.

	SUMMIT COUNTY.					
		Akron Iron Co	17,000	Limonite		
	COLUMBIANA COUNTY.					
Hasbough	Centre township	H. H. Bowman	11,200	Limonite	Foundery, cold short	Youngstown, Ohio.
New Lisbon Min. Co.	New Lisbon	Peter Welker	3,300	do	Foundery pig	Cherry Valley furnace, Leetonia, and Himrod furnace, Youngstown.
Booth	Logtown	H. G. Booth	3,170	do	Foundery	Cherry Val. I. Works, Leetonia; Himrod furnace, Youngstown; Andrews & Hitchcock, Hubbard; and Ohio Steel Co., Lowellville.
Mathers & Greenlee	New Lisbon	Mathers & Greenlee	3,360	do	Foundery pig	Andrews & Hitchcock, Hubbard; and Himrod furnace, Youngstown.
A. G. Smith	do	A. G. Smith	10,830	do	Foundery for light castings.	Youngstown and Leetonia, Ohio.
Opey	do	John Opey	6,720	do	Foundery pig	Do.
Cairn's farm, McGavions, Shelton, Lea, Jorden, and Present	do	B. F. Lewis	7,450	do	Foundery	Do.
		Sweet & Opey	260	Limonite		
		Booth & Hardinger	1,568	do		
		Wm. H. Schmick & Co.	2,420	do		
		B. F. H. Farm	4,277	do		
		H. H. Bowman	2,315	do		
	CUYAHOGA COUNTY.					
		Glidden Bells	1,224	Limonite		
	GALLIA COUNTY.					
		Gallia furnace	680	Limonite		
	HOCKING COUNTY.					
		Crafts Iron Co	1,605	Limonite		
		Helen & Lee	16,000	do		
		Logan Iron Co	697	do		
		Thomas Iron Works	15,690	Carbonate		
		Union furnace	1,150	Carbonate and limonite.		

Directory of iron-ore mines—Continued.

OHIO—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	HOCKING COUNTY—continued.					
		E. Myres	114	Carbonate		
		Z. Nixon	176	do		
		A. H. Juniper	111	do		
		John Harvey	13	do		
		S. B. England	197	Limonite		
		E. Chute	131	do		
		Wm. Nye	46	Carbonate		
		Geo. Dyson	3	Limonite		
		Thos. Price	28	Carbonate		
		A. J. Dyson	148	Limonite		
		E. Downhorn	7	Carbonate		
		A. Norman	7	do		
		Wm. Lemon	306	do		
		John Green	10	do		
		Blackband Iron Co	4,300	Black Band		
	JACKSON COUNTY.					
		Buckeye furnace	8,000	Carbonate and limonite.		
		Huron furnace	6,900	Limonite		
		Monroe furnace	11,036	Carbonate and limonite.		
		Eliza furnace	1,000	Carbonate		
		Madison furnace	5,641	Carbonate and limonite.		
		Keystone furnace	8,000	Carbonate		
		Jefferson furnace	5,000	do		
		Gallia furnace	680	do		
			7,000	Limonite		
			5,000	Carbonate		
			2,000	do		
		C. Hainsey	200	Carbonate and limonite.		
		J. E. Goddard	175	Carbonate		
		W. J. Kirkendall	700	Limonite		
		Different persons	6,500	Carbonate and limonite.		
		Number of parties	4,031	Carbonate		
		Farmers in vicinity	600	do		
	LAWRENCE COUNTY.					
Etna Iron Works	Ironton	Etna Iron Works	22,132	do	Cold-blast car-wheels	All used at furnace.
Hecla furnace	do	Hecla Iron & Mining Co.	7,366	do	Cold-blast charcoal or any silicious ore.	Do.
Iron & Steel Co	do	Iron & Steel Co	2,169	do	Neutral pig	Do.
Buck Horn furnace	do	Campbell, McGugin & Co.	4,375	do	Cold-blast charcoal or any silicious ore.	Do.
Lawrence furnace	do	George Gray	8,224	do	Cold-blast pig	Do.
Center and Grant furnaces.	do	W. D. Kelly & Sons	12,000	do	No. 1 foundery, and charcoal.	Own furnaces.
Belfont Co	do	Belfont Iron Works Co	6,333	do	Any silicious ore	Do.
		Ohio furnace	3,241	Limonite		
		Bartles Switch	783	Carbonate		
		Sundry parties	109	Limonite		
		Monitor furnace	227	Carbonate		
		Mount Vernon furnace	7,500	Limonite		
		Sarah furnace	22,500	do		
		Pine Grove furnace	8,570	do		
		Olive furnace	5,375	Hematite		
		Alice furnace	10,623	do		
		Washington furnace	5,637	do		
		Bloom furnace	300	Limonite		
	MAHONING COUNTY.					
Ohlton	Austintown	Harris, Maurer & Co	11,200	Blackband	No. 1 gray forge	Hubbard, Niles, and Hazleton.
Austin	Mineral Ridge	Todd, Wells & Co	7,921	do	Foundery	Youngstown, Hubbard, and Hazleton.
Campbell Coal Co	do	Williams & Marshall	507	do	Mixture	Hubbard and Leetonia.
		Ohio Iron and Steel Co	112	do		
		George Church & Co	896	do		
	MUSKINGUM COUNTY.					
		Zanesville furnace	8,654	Carbonate		

Directory of iron-ore mines—Continued.

OHIO—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	PERRY COUNTY.					
Bessie furnace	New Straitsville	Moss & Marshall	5,485	Carbonate	Neutral	Own furnace.
Baird Iron Co	Monday Cr. township	Baird Iron Co	5,282	do		Do.
		Winona Iron Co	1,000	do		
		S. Nummabeer	300	do		
		Horace Wilson	1,000	do		
		Peter Stimmel	500	do		
		Marsh Hillery	200	do		
		Max Hite	500	do		
		Iron Pt. Mining Co	1,134	Blackband		
		Farmers in vicinity	11,240	Carbonate		
		Vilas furnace	16,330	Blackband		
		Furnaces Nos. 1 and 2.	25,000	Blackband and carbonate.		
		Logan Iron Co	1,393	Carbonate		
	SCIOTO COUNTY.					
Howard furnace	Ironton	John Campbell	1,300	Carbonate and limonite.	Hot-blast	
		Sciota furnace	4,731	Limonite		
		do	4,224	Carbonate		
		Bloom furnace	1,100	Carbonate and limonite.		
		Ohio furnace	6,482	Carbonate		
	STARK COUNTY.					
		Volcano furnace	500	Blackband		
	TRUMBULL COUNTY.					
Osborne Coal Co	Mineral Ridge	W. H. Warner	1,680	Blackband	Stove plate, and other small castings.	Youngstown.
John Henry	do	Homer Baldwin	4,312	do	No. 1 foundery	Hazleton.
Cambria	do	Wm. T. Williams & Co.	5,043	do	American Scotch pig for foundery.	Youngstown, Hubbard, and Leetonia.
		H. H. Bowman	1,400	Carbonate		
		Hubbard furnace	300	do		
	TUSCARAWAS COUNTY.					
Blackband Iron Co	Oxford township	A. Wilhelme	1,080	Blackband	Foundery	Dover, Glasgow, and Massillon, Ohio.
Ridgeway, Burton Co.	Blackband	Ridgeway Burton Co	3,920	do	Scotch pig	Glasgow, Port Washington, and Shawnee.
Phillipsburgh	Phillipsburgh	Thos. Cox	672	do		
Catcott & Loockel	do	Ridgeway Burton Co	11,169	do	Scotch pig, foundery	Port Washington furnace, Glasgow, Ohio.
Glasgow Port Washinton Iron C. Co.	Glasgow		8,915	do	No. 1 foundery	
Kelley	Canal Dover	Hugh Kelley	4,032	do		Dover furnace.
		Dover furnace	42,000	do		
	VINTON COUNTY.					
	Line of O. and W. Va. Rwy.	J. R. Buchtel & Co	17,010	Carbonate and limonite.	Strong neutral	Line of Columbus and Hocking Val. R. R.
		Different persons	400	Limonite		
		Hamden furnace	1,090	Carbonate		
		John Frazer	300	Limonite		

OREGON.

	CLACKAMAS COUNTY.					
Prosser	Near Oswego	J. H. Pomeroy	6,972	Limonite	Stove castings and lathes, strong machinery, car-wheels, wrought and bar iron, and stamps and dies.	Oswego Iron Co.'s furnace.

PENNSYLVANIA.

	ADAMS COUNTY.					
Starner	Near Littlestown	Swartz & Beyer	560	Limonite	Foundery	Aurora furnace, Wrightsville, York county.
Guntner	do	John Guntner	None.	do	do	
	ALLEGHENY COUNTY.					
		William B. Neal	350	Carbonate		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	ARMSTRONG COUNTY.					
J. W. Baum	Gobeenville	Mr. Boggs	336	Limonite		Mahoning, Pa.
J. A. Truitt	Oakland	J. A. Truitt	560	do		Kittanning Iron Co.
Mahoning furnace	Mahoning furnace	Wesley Wilson & Co.	5,600	do	Mill	All to Mahoning furnace.
Wolf	Grey's Eddy	William Atchison and Benj. McElravy.	5,040	do	Forge and foundery	Kittanning Iron Co., at Rebecca furnace-Kittanning.
Stewartson furnace	Mahoning	F. B. & A. Laughlin	None.	do	Mill and foundery	Own furnace.
		J. Richey	125	do		
		Joe Anthony	121	do		
		J. C. Rhodes	11	do		
		J. Paul	198	do		
		C. Hick	203	do		
		J. & D. Slagle	41	do		
		T. Hank	317	do		
		C. Rhodes	606	do		
		J. A. Anthony	60	do		
		T. Snelson	117	do		
		S. C. Craigg	15	do		
		Isaac Myrete	55	do		
		William Bell	11	do		
		Jacob Duncan	143	do		
		Joseph McCoy	130	do		
		Company	62	do		
		Sundry parties	57	do		
		A. D. Hetrick	255	do		
		N. Utley	36	do		
		C. Berg	86	do		
		M. McCoy	42	do		
		T. Nestor	37	do		
		A. Kain	121	do		
		D. Connan	17	do		
		Joe Bish	102	do		
		D. Moore	6	do		
		G. Lobaugh	55	do		
		M. Williams	17	do		
		J. Singler	1	do		
		J. Pettigrew	4	do		
		D. Bowser	6	do		
		J. McGuinnis	16	do		
		Jas. Anthony	198	do		
		E. Vickroy	255	do		
		J. Golo	279	do		
		M. Adams	136	do		
		D. Mills	345	do		
		N. M. Truitt	230	do		
		B. Coursen	70	do		
		L. W. Bish	326	do		
		J. Shook	82	do		
		S. Anderson	283	do		
		S. Cassett	8	do		
		Different parties	7,560	Carbonate		
		Number of farmers	2,576	Limonite		
		W. Brice	31	do		
		—— Allen	50	do		
		Alex. Delacoro	615	do		
		R. Sharrow	67	do		
		S. Neyreth	121	do		
		C. Shook	121	do		
		J. Enty	794	do		
		E. Smelser	289	do		
		M. Buggart	553	do		
		Tone Bain	105	do		
		S. H. Craigg	330	do		
		George Neofley	583	do		
		R. T. Anthony	80	do		
		W. Barrett	260	do		
		James Nolder	26	do		
		G. Delacoro	9	do		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	ARMSTRONG COUNTY—continued.					
		P. Bish	2	Limonite		
		T. G. Craigg	243	do		
		A. Forney	261	do		
		B. Bell	398	do		
	BEDFORD COUNTY.					
Cambria	Hopewell	Kemble Coal and Iron Co.	1,120	Fossil		Furnaces at Riddlesburgh.
No. 2	Everett	do	550	do		Do.
Walters, Pierson, Patterson & Naugle.	Bedford and vicinity.	do	8,097	do	Mixture	Furnaces of Kemble Coal and Iron Co., Riddlesburgh.
Tatesville	Tatesville	do	18,544	do	Foundery	Do.
Cumberland	Fossilville	Cumberland Coal and Iron Co.	1,039	do	Foundery and mill pig	Own furnace at Bowery, near Frostburgh, Md.
Cove Ore	Cove station	Robert Hare Powell	5,600	do	Foundery, forge, and rolling-mill pig.	
		Pennsylvania Mining Co.	172			
		Sundry parties	1,347	do		
	BERKS COUNTY.					
Binder	Boyertown	Warwick Iron Co	14,409	Magnetite	Mill	Own furnace.
Boyertown	do	Phœnix Iron Co	8,206	do	Neutral No. 1, mill pig	Local. Own use.
Moselm	Moselm	Librandt-McDowell	5,183	Limonite	Foundery pig	Own use.
Dankles	Red Lion	Bethlehem Iron Co	6,822	Magnetite	Bessemer and spiegeleisen.	All to Bethlehem Iron Co.
Wenbling & Greiss	Long Swamp township.	do	2,465	do	do	Do.
Fredericks	do	do	3,320	do	do	Do.
Weiler	Red Lion	do	2,096	do	do	Do.
Sweinburtz	Seisholtzville	do	375	Limonite	do	Do.
Butz	Topton	do	5,646	Magnetite	Bessemer and spiegeleisen, pig.	Do.
Moll & Geary	Rittenhouse Gap	do	2,425	do	Bessemer and spiegeleisen.	Do.
Fisher's	Topton	Edwin Darman	4,480	Limonite	Foundery	Carbon Iron and Pipe Co., Parryville, and William M. Kaufman, Topton.
Smith	Rhoadrocksville	Schrade & Gackenbach	2,016	do	Foundery and mill	Coplay Iron Company, limited, Coplay.
Wheatfield	Near Fritztown	Eckert & Bro	12,672	Magnetite	do	Used by owners.
Kohl	Durham	R. R. Bachman & Bro	1,344	do	Bessemer steel	Home.
D. Walbert, Wy. Degely, Thomas & Mickley, Sheradin, M. Long, Drexler, Bowers, Derr, Wormkessel, B. Walbert.	Maxatawny and Long Swamp townships.	Thomas Iron Co	33,600	Limonite	Foundery and gray forge for boiler-plates, sheets, bars, car-axles, etc.	Hokendauqua and Lime Ridge furnaces.
Leibensfergen	Maxatawny	Lehigh Iron Co	1,792	do	Foundery	
Fritz Island	Fritz Island	Reading Iron Works	2,501	Magnetite	Foundery and forge	All to Reading Iron Works.
Bushong	Reading	Bushong & Bro	353	Limonite	Foundery	Keystone Furnace Co., Reading.
Levan	Kutztown	William M. Kauffman & Co.	953	do	Foundery pig	Topton and Kutztown furnaces.
Miller	Topton	do	448	do	do	Do.
Fenstamacher	do	do	2,547	do	do	Do.
Bieber	Kutztown	do	335	do	do	Do.
Mount Pleasant	Barto station	William G. Rowe	4,508	Magnetite	Foundery, mill, and Bessemer.	Danville, Pa.
Kline's Corner	Kline's Corner	Allen Schweyer	3,360	Limonite	No. 1 pig	Keystone Furnace Co., Reading.
Jones	Joanna	E. and G. Brooks Iron Co. and Phœnix Iron Co.	5,080	Magnetite	Red, short	Own furnace.
Gabel	Boyertown	Steel Ore Co	14,792	do	Bessemer pig, car-wheels, boiler-plate, bar, and foundery.	Furnaces in Schuylkill valley, from Pottsville to Philadelphia.
Heffner	Rockland township	Frank Brownback	3,406	Limonite	Foundery	Furnaces at Lyons.
Miller	Topton	Leesport Iron Co	3,360	do	do	Leesport furnaces.
Udree	Oley township	Clymer Iron Co	3,002	do	do	Clymer Iron Co., Temple.
Heffner	Richmond township	do	1,300	do	Charcoal, foundery	Do.
Nathan Drosher		H. B. Benfield	504	do	No. 1 foundery	East Pennsylvania furnace, Lyons.
Weaver	Oley township	Clymer Iron Co	1,253	do	Charcoal, foundery	Clymer Iron Co., Temple.
Chas. Falks	Long Swamp	H. B. Benfield	1,120	do	No. 1 foundery	Keystone Furnace Co., Reading.
Trexler	do	Trexler & Benfield	3,360	do	No. 1	Wm. M. Kaufman & Co., Topton.
Do	Mertztown	E. H. Trexler	5,600	do	Foundery	Keystone furnace, Reading; Reading Iron Works, Birdsborough Iron Works, and Warwick Iron Co., Pottstown.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BERKS CO.—cont'd.					
Kutz	Fleetwood	Leiss, De Long & Schweyer.	560	Limonite	Foundery and forge	Wm. M. Kaufman & Co., Topton; T. Garretson, Lyons & Temple Iron Co., Temple.
Mertzes & Kochs	do	Louis Schaefer & Co., and Geo. B. Schaefer & Co.	991	do	Car-wheel and boiler	Auburn, Schuylkill county, Reading, Oley furnace, Friedensburgh, and East Pennsylvania furnace, Lyons.
Moselm and Leesport.	Moselm and Leesport	D. B. Fisher	1,530	do	Car-wheels	Leesport Iron Co., Leesport.
Miller	Topton	L. H. Leiss	2,512	do	Foundery and forge	Keystone furnace, Reading and Topton.
Mesersmith	Fleetwood	Molot & Hill	784	do	Car-wheels	Clymer Iron Co., Temple.
Alburtis	Alburtis	E. De Long	3,565	do	Foundery-pig	T. Garretson, Lyons; Keystone Furnace Co., Leesport Iron Co., and Wm. Kaufman.
Moselem Spring	Moselem Spring	H. D. Markley	1,639	do	Mill, forge, and foundery.	Birdsborough and Keystone furnace, Reading.
Gregory	Near Topton	Jas. Tatham	2,353	Magnetite	Bessemer pig	Neighboring furnaces.
Daukel	Kline's Corner	H. S. Weiler	3,360	Limonite	Foundery	Topton furnace and Reading Iron Co.
Butz	Mertztown	Fitch Bros	5,096	Magnetite	do	Lyons, East Pennsylvania furnace, and Topton furnace.
Long	do	Dr. M. S. Long	8,512	Limonite	No. 1 foundery	Lehigh valley and Reading.
Schweyer & Leiss	Bower's station	Schweyer & Leiss	3,472	do	Foundery pig	East Pennsylvania furnace, Temple and Keystone, Reading, Topton and Kutztown.
Butler	do	Thos. Weaver	None.	Magnetite	Foundery and forge	Pottsville and Pottstown.
Hoches, Heffner, Miller, Gulden, and De Long.	Fleetwood, Kutztown, and Topton.	Temple Iron Co	5,602	Limonite	Foundery	All to Temple Iron Co.
Lewis	Near Mertztown	Sam'l Lewis	11,200	do	No. 1 pig	Topton, Kutztown, and Keystone furnaces, and Pottstown.
Guiterman	Seisholtzville	Morganroth & Hiteman	11,200	Magnetite	Bessemer steel	Bethlehem Iron Co.
Fenstermacher	Long swamp	Fenstermacher & De-Long.	8,960	Limonite	Foundery pig	All to Coplay Iron Works, Lehigh county.
Brownback	Near Hertzog saw-mill.	Frank Brownback	749	Magnetite	Steel	Lyons, E. Pa. furnace, Ringgold, Moselem, Sheridan, and Leesport, but chiefly to Bethlehem furnace.
Wetzel, Schweyer, Sauls, Smoyer, and Meckley.	Near Alburtis	Bethlehem Iron Co	2,502	do	Bessemer	All to Bethlehem Iron Works.
Leibensperger	Long Swamp twp	Trexler & Leibensperger.	None.	Limonite	Foundery pig	
Jones	Joanna	L. H. Smith	1,680	Magnetite	Car-wheels	
Seisholtzville	Seisholtzville	P. and R. C. and I. Co	8,899	do	Foundery	Furnaces of Lehigh and Schuylkill valleys.
Albright	Maxatawny twp	J. G. Albright	3,041	Limonite	do	
		J. M. Reler	260	do		
		Daniel Buck	48	Magnetite		
		James T. Dunn	5	Limonite		
		J. M. Reler	233	do		
		John G. Kauffman	6,192	do		
		Theo. Bentz	42	do		
		Shaeffer & Dunn	68	do		
		L. B. Morganroth	237	Magnetite		
		John B. Fisher	318	Limonite		
		Temple Iron Co	2,382	do		
		Good & Gorin	180	do		
		Alfred Brownback	213	do		
		W. H. R. Smink	185	do		
		G. W. Hess	123	do		
		T. Garretson	151	do		
		James F. Dumm	581	do		
		David Zeigler	373	do		
		—— Morganroth	48	Magnetite		
		Jacob Gilburg	68	do		
			1,620	do		
		Frey Stahlnacker	485	do		
		Jas. F. Dunn	120	Limonite		
		Shaffer & Co	158	do		
		Seisholtzville	1,344	do		
		Molliersville	271	do		
		Bechtelsville	100	do		
		Lyons	87	do		
		J. K. Rothermel	66	do		
		A. G. Bear	10	Magnetite		
		H. Merkel	19	Limonite		
		Clymer Iron Co	114	Magnetite		
		Steel Ore Co	772	do		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BERKS CO.—cont'd.					
.....	.....	Spang & Kauffman	4,700	Limonite	.....	
.....	.....	Pottstown Steel Co	0,162	Magnetite	.....	
.....	.....	Red Lion	957	Limonite	.....	
.....	.....	J. H. Bauer	1,734	do	.....	
.....	.....	Warwick furnace	12,430	Magnetite	.....	
.....	.....	Steel Ore Co	2,121	do	.....	
.....	.....	Different parties	4,036	Limonite	.....	
	BLAIR COUNTY.					
Short mountain	Mount Etna	Samuel Isett	336	Limonite	Foundery, castings, blooms, boiler-plate, flange, steel, and Russian sheet.	Charlotte Furnace Co., Rock Hill Iron Co., and mines.
Alleghany furnace	Logan township	S. C. Baker	6,720	do	.....	Home.
Logan	do	do	1,120	Fossil	.....	Do.
Bloomfield	Ore Hill	J. King, M. Lanahan	35,563	Limonite	Bessemer steel	Cambria Iron Co., Pa., Steel Co., Charlotte Furnace Co., and B. & C. Co.
Frankstown	Frankstown	Blair Iron & Coal Co	33,356	Fossil	.....	Johnstown, Rock Hill furnace, and Frankstown.
Henrietta	Henrietta	D. Dighton Morrell	None.	Limonite	.....	Johnstown and Frankstown.
Ore Hill	Ore Hill	Hollidaysburg & Gap Iron Co.	17,920	do	Bessemer pig	Iron works in Blair and other counties.
McKee's Gap	McKee's Gap	do	6,160	Fossil	Mill	Do.
Springfield No. 1	Mines	Cambria Iron Co	22,352	Limonite	Bessemer pig	All to C. I. Co's works, Hollidaysburg and Johnstown.
Springfield No. 2	do	do	24,159	do	do	Cambria Iron Co., Johnstown.
Springfield No. 3	do	do	7,228	do	do	Do.
	BUCKS COUNTY.					
New Tunnel	Durham	Cooper & Hewitt	4,032	Magnetite	Bessemer, for gray forge and pig.	Company's Durham furnace.
Mine Hill or Surface	do	do	5,600	do	Bessemer, gray forge for rolling-mill.	Do.
Rattle Snake	do	do	4,480	do	Gray forge and Bessemer	Do.
Boyer	do	H. Fulmer	10,080	do	Steel	
	BUTLER COUNTY.					
David M. Christy	Chartonship	Jos. Long	29	Limonite	Soft iron	Sharpsville, Ohio.
Arner Farm	Cherry township	John Spearman	49	do	do	Sharon, Pa.
Christy	Monitcau	.....	None.	.....	Castings	Sharpsville and Hubbard.
Bonard	New Hope	Jos. Long	1,120	Limonite	.....	Sharpsville and Sharon.
Spearman	Near Annandale	Spearman Iron Co	1,120	do	Mill	All to company's furnace, Sharpsville.
	CARBON COUNTY.					
.....	.....	Kristler & Rehria	852	Limonite	.....	
	CENTRE COUNTY.					
Eagle Furnace	Eagle Iron Works	Curtius & Co	4,875	Limonite	Cold-blast charcoal pig, and blooms.	Company's Eagle furnace.
.....	.....	Howard furnace	4,004	do	.....	
.....	.....	John Hoy	56	do	.....	
	CHESTER COUNTY.					
Steitler	Chester Springs	Monocacy Furnace Co.	1,681	Limonite	Foundery	All to Monocacy furnace, Berks county.
French Creek	.....	E. and G. Brooks Iron Co. and Phœnix Iron Co.	4,230	Magnetite	Red short	Company's furnace.
Warwick	Saint Mary's	L. H. Smith	1,882	do	Car-wheels	All to Joanna furnace, Joanna, Berks Co.
Hopewell	Hopewell	Pottstown Iron Co	2,446	do	Foundery, mill, and forge; pig, boiler, ship, and tank plate.	Own furnace.
Warwick Reserve	Saint Mary's	Edward Buckley	448	do	Car-wheel, pig, and boiler plate blooms.	Own use.
.....	.....	J. Jameson	1,524	Limonite	.....	
.....	.....	J. B. Stauffer	336	do	.....	
.....	.....	H. R. Anderson	705	do	.....	
.....	.....	William Weightman	205	do	.....	
.....	.....	Otto Smedely	340	do	.....	
.....	.....	Longaker & Saylor	180	do	.....	
	CLARION COUNTY.					
Sunny Side	Sligo	Lyon & Hodil & Co	186	Limonite	.....	Kittanning Iron Co. and Red Bank.
Vogle	Toby township	George Vogle	280	do	Pig	All to Kittanning Iron Co.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	CLARION CO.—cont'd.					
Elk City	Elk City	Kittanning Iron Co	5,040	Limonite	Forge and foundery	All to Kittanning Iron Co. at Rebecca furnace, Armstrong county.
Sligo	Sligo	....do	5,040	....do	....do	Do.
Himes	New Bethlehem	C. E. & W. M. Andrews	455	....do		Kittanning and Pittsburgh.
Truitt	....do	W. W. Truitt	224	....do	Gray forge and foundery.	
Fairmount	Fairmount City	Fairmount C. Co	2,800	....do		Kittanning Iron Co. and Red Bank furnace.
Maclay	Piny township	D. Maclay	560	....do	Pig	Kittanning Iron Co., Kittanning.
Samuel Wilson	Toby township	Craig & Rutherford	280	....do		All to Kittanning Iron Co.
McGinnis	Salem	J. Bennett Macey & Co.	448	....do		
Morgan	*Licking township*	*John C. Shields*	56	....do		Kittanning and Red Bank.
	Toby township	Philip Henn	None.	....do		Kittanning Iron Co.
	New Bethlehem	J. J. Lamberton	None.	....do		
Best Farm	Edinburg	J. L. Forker	None.	....do	Soft pig	
		W. B. Neal	336	....do		
	COLUMBIA COUNTY.					
	Bloom furnace	Bloom furnace	7,616	Fossil		
	Irondale furnace	Irondale furnace	11,374	....do		
	....do	....do	3,598	....do		
	CUMBERLAND COUNTY.					
Carlisle	Carlisle	C. W. Ahl & Son	2,800	Limonite	Boiler-plate, sheet, pig, and car-wheels.	All to Carlisle Iron Works.
Heck	Allen township	Lewis Heck	1,120	....do	Foundery and neutral	Dauphin and Perry counties.
Locust Grove	Shippensburgh	G. W. and E. Cressler	896	....do	Car-wheels	Chambersburgh, Hunter and Springer; H. C. McCormick & Co., Harrisburg; Long & *Johnson's Shippensburg*; C. W. Ahl & Son, Boiling Springs; and R. M. Shelter's, Carrick Furnace.
Wolf	Monroe township	Em. Wolf	1,008	....do	Cold-short foundery, blooms, sheet, and bar.	Newport, Perry county.
Chestnut	Southampton township.		1,680	....do	Foundery pig	Henry McCormick's, Paxton furnace, Harrisburgh.
Pine Grove No. 1	Pine Grove furnace	South Mt. M. and I. Co.	11,463	....do	Neutral charcoal pig, fire-boxes, flange, and plate.	All to Pine Grove furnace.
Peach Orchard	Near Centreville	Grove Bros	125	....do	Foundery and mill	Own furnace at Danville.
Beltzhoover	Boiling Springs	Phila. and R. C. and I. Co.	5,488	....do	Railroad bridges, boilers, car-wheels, ordnance-rolls and cars, and heavy castings.	Reading, Danville, Harrisburg, and Dauphin.
Egé Ore-bank	....do	....do	23,520	....do	....do	Pottsville, Pottstown, Reading, Danville, and Harrisburg.
Mullin	Mount Holly Springs	Daniel King	1,792	....do	Foundery and forge	Upper and lower Susquehanna.
Big Pond	Big Pond	C. W. Ahl & Son	400	....do	Car-wheels	
Pine Grove No. 2	Pine Grove furnace	South Mt. M. and I. Co.	4,822	....do	Foundery and mill	Harrisburg.
Calico	Near Shippensburgh	McCormick & Co	1,904	....do	Neutral pig	Do.
Springfield	Near Newville	P. A. Ahl & Bro., and F. H. Thomas.	607	....do	Foundery for blooms and boiler-plate.	Harrisburg furnace, Harrisburg.
Cleversburgh and Moner.	Southampton township.	Wise, Garber & Peacock.	254	....do	Foundery and forge pig	Harrisburg and Marrietta.
Goodheart	Fiddler's Green	Alex. Goodheart	168	....do	Foundery and forge	Ahl's furnace, Boiling Springs.
Cleversburgh Nos. 1 and 2.	Cleversburgh	P. A. Ahl & Bro	None.	....do	Foundery and cold-short.	
Old Bank	South Middletown township.	D. V. Ahl	None.	....do	Neutral	
Seyfut, and McManus and Lanigan.	Henry Clay station	J. E. Wynkoop and Judge Ryon.	6,781	....do	Forge and foundery	Dauphin and Marshall furnace, Newport, Perry county; E. and G. Brooks; Birdsborough; Keystone furnace, Reading; and Paxton furnace, Harrisburg.
J. C. Lehman No. 2	Hunter's Run	Eisenhower & Gill	180	....do	....do	Marshall furnace, Newport; Swatara furnace, Denny, Watts & Co., lim., W. L. Saddler & Co., Porter furnace, Harrisburg; *and Maclay, at Whitestown*, Adams county.
Clever		C. W. Ahl & Son	2,832	....do		
Laurel	Cook township	South Mt. M. and I. Co.	None.	....do		
		H. Musselman	3,471	....do		
		—— Wynkoop	198	....do		
		Carlisle Iron Works	4,400	....do		
	DAUPHIN COUNTY.					
Swatara	Derry township	J. & R. Meily	896	Limonite	Neutral	Own furnace.
Hershey	Hummelstown	Christian Hershey	1,120	Specular	Neutral, foundery forge, and Bessemer.	Lebanon, Harrisburg Dauphin, and Juniata.
		Cameron Furnace	1,060	Limonite		
		Christian Hershey	56	Magnetite		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	FAYETTE COUNTY.					
Lemont	Lemont furnace	Hogsett, Hanna & Co.	15,306	Carbonate	Foundery and mill	All at furnace.
Fairchance	Fairchance	Fairchance Furnace Co.	7,248	do	Mill and foundery	Do.
Mount Vernon	Mount Vernon	Charlotte Furnace Co.	12,287	do	Neutral and pig for sheet.	Charlotte furnace, Scottdale.
Dunbar Furnace Co.	Dunbar	Dunbar Furnace Co.	28,950	do	Plates, sheets, and skelps.	Own furnace.
		Farmers and others	5,376	do		
		Sundry parties	1,390	do		
		Perry Mining Co.	5,226	do		
		Sundry operators	356	do		
	FRANKLIN COUNTY.					
Benedict	Mercersburgh	J. S. Whetmer & Co.	2,800	Limonite	No. 1 foundery and Bessemer.	Harrisburg.
Richmond Furnace	Richmond furnace	R. I. Ryan & Co	2,187	do	Foundery and mill	Harrisburg and Schuylkill valley.
Cressler	Near Shippensburgh.	Hunter & Springer	3,000	do	Car-wheels and chilled rolls.	Own use.
Laural Valley	Quincy	George G. Rock	1,232	do	Car-wheels and boiler	Middletown, Chambersburgh, and Harrisburg.
Smith	Mont Alto	Smith, Duncan & Avery.	8,960	do	Neutral for pig	Middletown, Marietta, and Harrisburg.
Neikirk	Near Shippensburgh.	Isaac McHose	2,520	do	Neutral, foundery, and mill pig, hardware, stove-plates, machine-castings, boiler, ship-plates, and steel.	All to Harrisburg.
Henry Good	Quincy	Henry Good	392	do	Steam-boilers, nails, &c.	Middletown and Chambersburgh.
Mont Alto 3, 4, and 5, and Mill Bank.	Mont Alto	Mont Alto Iron Co	7,506	do	Charcoal pig, blooms, car-wheels, plate and rivet rods, and wire.	Own use and Harrisburg.
Webster	Near Mercersburgh.	C. M. Duncan & Co.	2,374	do	Pig	Sheridan, Reading, Harrisburg, Middletown, and Marietta.
Carrick	Metal township	Carrick Furnace Co.	3,360	do	Car-wheels and rolls	
Southampton	Southampton township.	L. Gochnauer	127	do	Foundery, forge pig	Marietta and Harrisburg.
Chambers	Near Scotland	T. W. Ahl	None.	do	Foundery, boiler-plate	
		C. Burkhart & Co	153	do		
		Christian Byers	56	Magnetite		
		G. A. Rock	13	Limonite		
		Henry Singer	12	do		
		R. I. Ryan & Co	1,813	do		
		McFerren Bros	100	do		
	HUNTINGDON COUNTY.					
Huntingdon county	Near McConnellstown.	Grove Bros	1,195	Fossil	Foundery and mill	Own furnace at Danville.
Brush Ridge	Brush ridge	Logan Iron and Steel Co.	6,272	do	Car-wheels and chilled rolls.	Own furnace.
Rock Hill I. and C. Co.'s mine.	Rock hill	Rock Hill I. and C. Co.	7,698	do	Gray forge pig	Do.
Shoenberger	Warrior's Mark township.	Study & Co	10,080	Limonite	Neutral No. 1 foundery and boiler-plate.	Harrisburg, Lewistown, Orbisonia, Laurelton, Scottdale, Tyrone, and Pittsburgh.
		H. Patterson	508	Fossil		
		Wisegarben & Co	22	do		
		O. B. Cram	22	Limonite		
		G. F. Gage	16	do		
		J. H. Patterson	232	Fossil		
		Joseph Minale	67	Limonite		
	JUNIATA COUNTY.					
Yocum	Port Royal	Jacob Semon	560	Fossil	Forge	Paxton furnace, Harrisburg, Cameron Furnace Co., Middletown, Dauphin county.
Keiser Hollow and Mountain.	Four miles northwest of Mifflin.	James D. Williams	3,920	do		Harrisburg, Bloomsburgh, Dauphin, and Glamorgan Iron Co.
H. Suloff	Mifflintown	Duncannon Iron Co.	5,818	do	Foundery	Duncannon, Harrisburg, and Bloomsburgh.
Ulsh & Bro's	Fermanah township.	Francis Jolls	1,792	do	Forge	Neal & Son, Bloomsburgh, Columbia county, Bloomsburgh Iron Co., Glamorgan Iron Co., Mifflin Co., and Marsh & Son, Northumberland county.
Trout Run	Four miles northwest of Patterson.	Richard Naukwell	672	do	No. 1 foundery pig	Paxton furnace, Harrisburg.
Robinson & Pennibeeken.	Mifflin	Mitchell & Naukwell	1,456	do	Mixture	Orbisonia and Harrisburg.
Slim Valley, 3, 5, 10, and 12.	Slim valley	Glamorgan Iron Co	20,160	do	Gray forge	All to furnaces.
		Frances Jowls	683	do		

Directory of iron-ore mines—Continued

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	JUNIATA CO.—cont'd.					
.....	.....	D. S. Mossen	12	Fossil	.....	
.....	.....	Emanuel Wood	75	do	.....	
.....	.....	W. E. Mankivel	30	do	.....	
.....	.....	Henry Host	550	do	.....	
	LANCASTER COUNTY.					
Grubb	Silver Spring	Chickies Iron Co	14,434	Limonite	Blooms, refined bar, hoops, boiler-plate, steel, etc.	All to Chickies Iron Co., via R. and C. R. R. and Pa. R. R.
Rakestraw	Bart	Phœnix Iron Co	1,411	do	Neutral mill, gray forge	Own furnace.
Conestoga	Conestoga township	C. B. Grubb & Son	2,500	do	Foundery, malleable iron, bars, plate, etc.	
Chestnut Hill	Silver Spring	do	7,799	do	Foundery and mill	
Do.	Chestnut Hill	Chestnut Hill Iron Co.	13,440	do	do	Own furnace at Columbia.
Charles	Baumgardner	Keystone Furnace Co.	9	do	Foundery	Keystone Furnace Co., Reading.
Monocacy Furnace Co	Providence township	Monocacy Furnace Co.	7,840	do	Foundery or mill pig	Part to Manocacy Furnace, Berks county.
Beartown	Beartown	E. and G. Brooks I. Co.	6,818	do	Slightly cold-short	Own furnace at Birdsborough.
Mowrer, Reese, Brooks	Providence township	Peacock & Thomas	9,023	do	Foundery, strict neutral.	Own furnace at Lancaster.
Herr & Helen	Pequa and Strasburg					
.....	.....	Reading Iron Works	3,835	do	.....	
.....	.....	Charles Geiger	773	do	.....	
.....	.....	Col. Joseph D. Potts	120	do	.....	
.....	.....	J. Hildebrand	316	do	.....	
.....	.....	H. H. Lefeave	29	do	.....	
.....	.....	Vesta furnace	1,730	do	.....	
.....	.....	Donegal furnace	3,316	do	.....	
.....	.....	Joseph C. Wright	3,295	do	.....	
.....	.....	Prescott (stock ore)	2,161	do	.....	
	LAWRENCE COUNTY.					
Peter Tillia	Wampum	Peter Tillia	2,240	Limonite	.....	All to Wampum.
Ford	do	Kirkland, Fisher & Marshall.	2,800	do	Mill	Youngstown and Lowellville, Ohio.
Grains, Hawk & Co	Chenango township	James Smith & Theo. Hilson.	None.	do	.....	
Mehard	Grand View	Lawrence Ore Co	None.	do	.....	
McClane	McClane Forn	Kirkland, Fisher & Marshall.	308	do	Foundery	Do.
Work	Wayne township	P. T. Caldwell	560	do	.....	Youngstown, Ohio.
Samuel Parker	.....	Dormon & Co	562	do	Malleable, foundery, wrought, and common bar.	Do.
Newton	Wayne township	A. G. Newton	291	do	.....	Youngstown, Ohio, and Wampum, Pa.
Bryan	Neshannock Falls	C. Bryan	10	do	.....	New Castle, Pa.
Drake	do	W. W. Drake	224	do	Common pig and wrought	Do.
Edinburgh	Edinburgh	F. M. Hoover and William Stephens.	258	do	Red-short	New Castle, Pa., and Youngstown, Ohio.
Smith	Wilmington	Wilson Drake	672	do	Common metal	New Castle, Pa.
.....	Hickory township	J. B. Hezlep	224	do	.....	Do.
D Marshall	Wampum	Kirkland, Fisher & Marshall.	84	do	Mill	Do.
Marshall	Near Wampum	Marshall Ore Co	4,480	do	Foundery and mill	Wampum and Youngstown.
Freshkorn	Wayne township	John Freshkorn	8,960	do	Open iron	Lowell, Ohio, and Wampum furnace.
Hope	Rose Point	Hope F'ce Co., lim	10,080	do	Cold-blast charcoal, boiler, bars, and steel.	All to own furnace.
Orchard, D. F. Houk, Broad, Ford & Worke.	Wampum	Lawrence Ore Co., lim.	28,448	do	Foundery and mill	Youngstown, Ohio, used by owners.
.....	.....	Sundry parties	4,500	do	.....	
.....	.....	George Pearson	817	do	.....	
.....	.....	Geo. W. Johnson & Co.	673	do	.....	
.....	.....	Alford & Stickle	211	do	.....	
.....	.....	Sundry parties	2,410	do	.....	
.....	.....	Peter Boyle	252	do	.....	
.....	.....	Sundry parties	1,232	do	.....	
	LEBANON COUNTY.					
Cornwall	Cornwall	Cornwall Ore Bank Co.	280,000	Magnetite	Red-short, Bessemer steel, mill, nails, etc.	Home and a radius of 75 miles.
Bowman	do	Eckert & Bro. and Reading Iron Works.	1,275	Limonite	Foundery and forge	All used by owners.
Strickler	Jackson township	E. & G. Brooks Iron Co	1,672	do	Foundery pig, slightly cold-short.	Own use at Birdsborough.
Bucher	Near Prescott	Temple Iron Co	2,681	do	Foundery and forge	Own use.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	LEHIGH COUNTY.					
Shantz & Christman	Emaus, Macungie	Colleraine Iron Works	2,800	Limonite	Foundery pig	Do.
Jacobs	Alburtis	Bethlehem Iron Co	8,720	Magnetite	Bessemer iron and spiegel-eisen.	All to Bethlehem Iron Co.
E. & G. Brooks	Macungie	do	2,101	do	do	Do.
Foster	Shimerville	do	320	do	do	Do.
Wm. H. Clymer & Co.	Macungie	do	949	do	do	Do.
William Newmoyer	Alburtis	do	945	do	do	Do.
Jacob Newmoyer	do	do	418	do	do	Do.
Hensinger	do	do	1,861	do	do	Do.
Diehls	Emaus	do	853	do	do	Do.
Lawrence	do	do	198	do	do	Do.
Siegers	Siegersville	do	0,028	Limonite	Foundery and forge	L. V. region, principally for own use.
Lauer	Hensingersville	do	3,453	do	do	Do.
Peter Fregely, John Bortz, Hing, Fautz, John Hensinger, H. J. Schmoyer, A. D. Morey, William Fogel & N. Fitch.	Allentown	Boyer & Shaffer	14,560	do	Wrought	Allentown Rolling Mill Co., Thomas Iron Co., Hokendauqua, Carbon Pipe and Iron Works, Parryville, W. M. Kaufman & Co., Topton & Macungie Iron Co., Millerstown.
Albright, Krames, Bortz, Acker, Roans, and Christmans.	About Allentown	do	13,657	do	Foundery and mill	Company's furnace, Allentown.
No. 1 and Kennel	Ironton	Ironton R. R. Co	4,465	do	Foundery	Coplay.
Laros	Upper Macungie	Jesse Laros	5,094	do	Foundery, anthracite pig	Catasauqua.
Shimers	Shimerville	H. H. Hartzell	1,080	Magnetite	Bessemer and foundery	Macungie and Catasauqua.
Wenner's, Wieand's, Swartz & Kemmerer, Dankel, Glicks, Dech & Romich, Roth, Keck, Merkel, Kline, Wickert, Lichtenwallner, Warmkessel, Fritch, Herzog, Beck, Shulers, Danner, and Fisher Bros.	Near Allentown	Allentown Iron Co	43,616	Limonite	No. 1 foundery	Allentown Iron Co.
Marks	Upper Macungie	Falstich Sell Co	4,480	do	Foundery	Crane Iron Co., Catasauqua.
Swartz	Wescosville	J. H. Hall	1,633	do	Pig	Allentown, Catasauqua, Hokendauqua, and Macungie.
Smith	Near Fogelsville	W. Shanksweiller	442	do	Foundery pig	Own furnace.
Levi Lichtenwalner	Upper Macungie township.	Crane Iron Co	4,630	do	Foundery pig, anthracite.	Own furnace at Catasauqua.
Ritter	North Whitehall	do	11,473	do	Anthracite	Do.
Woch	Hanover	do	2,288	do	Anthracite pig	Do.
Ruch	North Whitehall	do	4,010	do	do	Do.
Gachenbach	Lower Macungie	do	5,105	do	do	Do.
Lichtenwalner	Upper Macungie	do	3,290	do	do	Do.
Ziegler	Lower Macungie	do	5,132	do	do	Do.
Butz	do	do	1,142	do	do	Do.
Neumeyers	Near Macungie	W. Shanksweiller	84	do	Foundery	Own furnace.
Steininger, Getz, Abra. Schmoyer, Singmaster, R. Butz, M. & D. Butz, Meitzler, Mosser, Lorish, Bastian, Levans, Kline, Hensinger, Balliet, Shaadis, Guths, Wenner, Bahls & Steine.	Upper and Lower Macungie, and Whitehall twps.	Thomas Iron Co	33,600	do	Foundery, gray forge, boiler-flues, plates, sheets, bars, car-axles, etc.	Hokendauqua and Lock Ridge furnaces.
Schmoyer	Emaus	Lehigh Iron Co	3,584	do		Own works at Allentown.
Butz	Alburtis	Lehigh Iron Co	2,464	do	Foundery	Lehigh Iron Co.
Setzel	Shoreville	Thos. Rutt	1,714	do	do	Lehigh Iron Co., Allentown.
Maistellar	Alburtis	Bethlehem Iron Co	None.	Magnetite	Bessemer and spiegel-eisen.	
Greenawalt	Centre Valley	Woodring & Musselman.	1,792	Limonite	Foundery and forge	Carbon Iron Co.
Lichtenwallner	Upper Macungie	E. P. Lichtenwallner	7,840	do	Foundery	Crane Iron Co., Catasauqua.
Jonas Schmoyer	do	O. J. Schmoyer	3,900	do	do	Thomas Iron Co., Lock Ridge and Carbon Iron and Pipe Co., Parryville.
Schwartz	Wescosville	I. H. Kalb	4,480	do	do	Crane Iron Co., Catasauqua, Thomas Iron Co., Hokendauqua, Macungie Iron Co., Macungie.
Wind	Centre Valley	—— Miller	560	do	No. 1 gray pig	Saucon furnace, Carbon Iron and Pipe Co., limited, and Colerraine Iron Works, Redington.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	LEHIGH CO.—cont'd.					
Jordon	Guth's station	Carbon Iron and Pipe Co.	3,862	Limonite	Nos. 1 and 2 foundery	All to Carbon Iron and Pipe Co., Parryville.
Meitzler	Alburtis	John G. Kauffman	903	do	No. 1 foundery, anthracite, and charcoal pig.	Alburtis.
Barner & Garmer	Macungie	Leesport Iron Co	3,360	do	No. 1 foundery	All to Leesport furnace.
Kurtz	Upper Saucon	Saucon Iron Co	280	do	Foundery and forge	
Adams & Pascoe	Spring Valley	Adams & Pascoe	1,080	Magnetite	Bessemer steel	Bethlehem Iron Co., Bethlehem.
Klein	Hoffmansville	John Klein	3,024	Limonite	Foundery	Thomas Iron Co., Hokendauqua.
Balliet, heirs	Ironton	Horace Balliet & Son	5,600	do	Foundery pig	Coplay Iron Co.
Wickert, Shuler & Bandert.	Near Vera Cruz	Pascoe, Lewis & Co	6,720	Magnetite	Bessemer steel and railroad.	Bethlehem Iron Co., Coleraine Iron Co., and others on Lehigh river.
Pascoe & Webb	Upper Milford	Pascoe & Webb	1,344	do	Bessemer steel	All to Bethlehem Iron Works, Bethlehem.
Jobst	Macungie	F. T. Jobst	3,360	Limonite	Foundery	Macungie and Thomas Iron Co.'s. Furnace at Lock Ridge.
Belton & Steiningen	Upper Macungie	Thos. Breining	5,600	do	do	Thomas Iron Co., Hokendauqua.
Fry, Keely & Finks	Near Vera Cruz	Pascoe, Schwartz & Bauden.	10,080	Magnetite	Bessemer pig	Bethlehem and Coleraine Iron Works, and Dauphin and Moselem furnaces.
Newmeyer	Lymport	Edwin & Isaac Newmeyer.	3,360	Limonite	No. 1 Foundery	Carbon Iron Co., Parryville, Topton, and Lyons, East Pennsylvania furnace, and Schuylkill valley furnaces.
Meekley	Alburtis	C. A. Gernerd	1,606	do	Foundery	Crane Iron Co., Catasauqua.
Fry & Stahlnecker	Vera Cruz	Fry & Stahlnecker	4,320	Magnetite	Bessemer pig	Coleraine Iron Co., James Hoover & Son, Morristown, and others.
Henry	Near Siegersville	Danl. Henry	616	Limonite	Foundery pig	Coplay Iron Co., limited.
Hensinger & Saul	Hensinger's hill	P. N. Hensinger	1,680	do	No. 1 pig and steel	Reading and Hokendauqua, Thomas Iron Co., Keystone Furnace Co., Reading, and Coleraine Iron Co.
Stephen Butz	Alburtis	Butz & Lichtenwallner.	1,344	do	Foundery pig	Crane Iron Co., Catasauqua and Thomas Iron Co., Hokendauqua.
Brown Bros	Near Ironton	Brown Bros	11,716	do	do	Thomas Iron Co., Hokendauqua.
Erdman & Cooper	Upper Saucon township.	Enos Erdman	2,617	do	do	Carbon Iron Co., Parryville.
Knauss	Emaus	Coleraine Iron Works	784	do	do	Coleraine Iron Works.
Ziegler	Near Topton	Temple Iron Co	5,831	do	do	All to Temple Iron Works.
Kiefer	Near Whitehall township.	Jos. Kiefer	8,960	do	do	All to Coplay Iron Works, Coplay.
Hiram Balliet	Saegerville	Hiram Balliet	5,370	do	Foundry	Thomas Iron Co., Hokendauqua,
Andrews & Shuler	Lower Macungie	Andrews & Shuler	4,480	do	do	Macungie furnace, Thomas Iron Co.
Balliet Bros	Ballietsville	Balliet Bros	6,720	do	do	Coplay Iron Works and East Pennsylvania Charcoal furnace near Parryville.
Mickley	Whitehall township.	Coplay I. Co., limited	None.	do	Foundry pig	
Eisenhart	Lower Macungie	do	None.	do		
Singmaster & Greiss and John Wetzel.	Near Alburtis	Bethlehem Iron Co	742	Magnetite	Bessemer	Bethlehem Iron Works.
		Kratzer & Weir	436	Limonite		
		Sam'l Fluck	294	do		
		Wm. B. Shaeffer	206	do		
		Sims & Wagner	214	do		
		Wm. Clader	24	do		
		Chas. Maddern	41	do		
		Beidler & Smayer	43	do		
		Jacob Fluck	58	do		
		Frantz Kemerer	9	do		
		Tilghman Stetler	9	do		
		Sol. Steidinger	2	do		
		Benj. Schmoyer	1,199	do		
		Stephens & Ritter	3,216	do		
		C. A. Gunera	1,463	do		
		H. K. Hartzell	1,223	do		
		Simon Schmoyer	1,407	do		
		R. W. Pascoe	4,673	Magnetite		
		Lewis, Schwartz & Co.	618	do		
		Dan'l Guth's heirs	930	Limonite		
		Guth & Litzenbergen	384	do		
		B. P. Schomoyer & Bro	3,952	do		
		W. A. Ricker	2,294	do		
		Lawer & Shuler	2,227	do		
		John Johaning	1,011	do		
		G. G. Greiss	2,300	do		
		Henry Stine	1,054	do		
		Ritter & Seam	407	do		
		Miller & Mickley	501	do		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	LEHIGH CO.—cont'd.					
.....	.....	Chas. Lichtenwallner..	550	Limonite	.....	
.....	.....	Ritten & Shankweiler.	548	....do	.....	
.....	.....	J. J. Woodring	105	....do	.....	
.....	.....	L. Fisher.....	8	....do	.....	
.....	.....	Sol. Boyer.....	11,554	....do	.....	
.....	.....	S. Smoyer	600	....do	.....	
.....	.....	H. Shankweiler	370	....do	.....	
.....	.....	S. Laudenslayer.....	480	....do	.....	
.....	.....	Allentown rolling-mill.	20,893	Magnetite	.....	
.....	.....	D. E. Lewis	507	....do	.....	
.....	.....	Wm. Hubeastump	23	....do	.....	
.....	.....	Chas. Neiver	2,038	Limonite.....	.....	
.....	.....	Sam'l Culver.....	1,994	....do	.....	
.....	.....	Sol. Dorney	599	....do	.....	
.....	.....	Jno. K. Beiler	602	....do	.....	
.....	.....	Sylvester Beiber	392	....do	.....	
.....	.....	Bernhardt E. Fernow .	56	... do	.....	
.....	.....	Jesse Straub	99	....do	.....	
.....	.....	Weiler & Breinig	213	....do	.....	
.....	.....	Geo. W. Ruth	200	....do	.....	
.....	.....	Tatham Bros.....	11	Limonite.....	.....	
.....	.....	Long & Swoyer	22	....do	.....	
.....	.....	Trexlertown wharf ...	11,831	....do	.....	
.....	.....	Weilen & Shaeffer ...	957	....do	.....	
.....	.....	Center Valley.....	7,423	....do	.....	
.....	.....	Weckel & Spogen.....	902	....do	.....	
.....	.....	Tegeley & Weaver ...	112	....do	.....	
.....	.....	David Thomas	307	Magnetite.....	.....	
.....	.....	N. Hunter.....	446	....do	.....	
.....	.....	Different parties	4,923	Limonite.....	.....	
	LYCOMING COUNTY.					
Quiggle.....	Quiggleville.....	Wm. Bowers	112	Fossil.....	Merchant iron.....	Columbia and Montour.
Bald Eagle.....	Near Jersey Shore ..	Grove Bros.....	356	... do	Foundery pig	Own furnace at Danville.
Bald Eagle and Lycoming.	Jersey Shore.....	J. Humes	4,480	....do	Rolling mill and foundery.	Danville, Bloomsburg, and Northumberland.
Red Run Coal Co.....	Near Roaring Branch	Atlas Iron Co., (lim.)..	None.	Carbonate.....	Car-axles and wheels....	
.....	.....	Creveling, Miles & Co.	202	Fossil.....	.....	
.....	.....	Hayes & Bowen.....	113	....do	.....	
.....	.....	John Knight	111	....do	.....	
	MERCER COUNTY.					
.....	.....	Cheshire Iron Co	1,008	Carbonate	.....	
	MIFFLIN COUNTY.					
Shehen	Oliver township.....	George Shehen.....	903	Limonite.....	.....	Orbisonia Iron and Coal Co., William Neal & Sons, Bloomsburgh.
Jack No. 2.....	McVeytown	William P. Stevenson .	1,400	Fossil.....	Foundery	
Hancock & Bright...	....do	....do	1,366	Limonite.....	Foundery and tough castings.	
Joe	....do	....do	672	....do	.....	
.....	Matilda furnace.....	Peacock & Thomas ...	1,120	Fossil.....	Foundery and forge.....	All to own furnace.
McKee	Strode's mills	Fred. Hanke	3,360	....do	.....	Bloomsburgh, Lewistown, Orbisonia, and Harrisburg.
Rupert	Oliver township.....	Samuel Brewer.....	262	....do	Gray forge pig	Rock Hill furnaces, Orbisonia.
Harsbarger	Bratton township...	David Harsbarger	92	....do	....do	Orbisonia.
George Strode and G. A. Leopold.	Near Three locks....	Howard Lewis	1,456	....do	....do	Rock Hill and Harrisburg.
Miller	Mattawana	William Miller & Bro.	336	....do	....do	Orbisonia and Harrisburg.
Settle	Strode's mills	George Settle	1,120	... do	Gray forge	Mr. Simms, Orbisonia.
O'Connor	McVeytown	Mrs. S. F. O'Connor ...	728	Limonite.....	Foundery pig	Bloomsburg, Lewistown, and Mount Union.
Cavenaugh 1 and 2 ..	Cavenaugh.....	Glamorgan Iron Co	7,840	Fossil.....	Gray forge	Own furnaces at Lewistown.
Squaw Hollow 1 and 2	Squaw Hollow	....do	12,320	Limonite.....	....do	Do.
Shehen	Oliver township.....	George Shehen.....	1,177	....do	Cold-short.....	All to Orbisonia Iron and Coal Co.
.....	.....	Glamorgan Nos. 1 and 2	7,073	....do	.....	
.....	.....	... do	10,787	Fossil.....	.....	
.....	.....	J. G. McCoy.....	50	Limonite.....	.....	
.....	.....	John Rupert.....	1,060	Fossil.....	.....	
.....	.....	Bradly & Dule	77	Limonite.....	.....	
.....	.....	J. G. McCud	500	Fossil.....	.....	

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	MONTGOMERY COUNTY.					
Geo. Keys	White Marsh township.	Geo. Keys	672	Limonite	Foundery pig	Marion and Elizabeth f'ces, Conshohocken.
Yeakle	Five Points	Lukens & Yeakle	5,600	do	No. 1 foundery	Schuylkill valley.
Hallman	Plymouth township.	Wm. A. Hallman	672	do	Foundery pig	Marion and Elizabeth f'ces, Conshohocken.
McGuirk	Flourtown	Richard McGuirk	1,120	do	do	Pottstown Iron Co.
Yeakle Farm I. Ore Co.	do	Robt. McGuire	5,600	do	do	Pottstown, Port Kennedy, Monocacy, and Schuylkill valley furnaces.
Heydrick	do	Wm. H. H. Heydrick	2,800	do	do	Schuylkill valley furnaces, Plymouth, Port Kennedy, and Warwick.
Wilson	Edge Hill	S. M. Wilson & Bro	8,400	do	do	Edge Hill Iron Co. and Plymouth furnace, Conshohocken.
Edw. McAttee	Flourtown	Edw. McAttee	784	do	do	Marion and Elizabeth f'ces, Conshohocken.
Aiman	Edge Hill	Jas. Harvey	672	do	Gray forge	Ege Hill furnaces, Schuylkill valley.
McClusky & Sweeny	Flourtown	McClusky & Sweeny	1,120	do	No. 1 foundery	Conshohocken and Norristown.
Kane & Engle	Barren Hill	Kane & Engle	2,352	do	do	D. O. Hitner, Wm. Penn f'ces, Spring Mill.
D. O. Hitner	Spring Mill		8,841	do	Forge and foundery	All to D. O. Hitner's furnace, Spring Mill.
Hitner	Marble Hall	Dan'l Bitner	448	do	do	Do.
Orbison	Plymouth	Thos. J. Hayden	784	do	Gray forge	S. Fulton, Conshohocken.
Tracy	Near Conshohocken	John Tracy	2,016	do	No. 1 foundery	Marion and Elizabeth f'ces, Conshohocken.
		Hayden & Davis	500	do		
		J. Murphy	21	do		
		P. Fritz	11	do		
		Broderick & Kennedy	592	do		
		——McFadden	665	do		
		Chas. Streeper	156	do		
		Brown & Staley	1,006	do		
		Dutturer & Bickings	150	do		
		G. W. Hacker	162	do		
		D. Staley	41	do		
		Geo. Thornton	12	do		
		Geo. Dutturer	43	do		
		J. C. Dutturer	36	do		
		Linley Staley	37	do		
		G. W. Forcas	628	do		
		Kline & Baker	242	do		
		Meeney & McGraus	441	do		
		Chas. Staley	44	do		
		Engle & Rex	96	do		
		Hitner Bros	160	do		
		James Sampson	490	do		
		Geo. Hullman	203	do		
		J. Engle	270	do		
		Carn & Dutturer	329	do		
		Carn & Bros	566	do		
		J. Hiltner	11	do		
		E. Staley & Co	375	do		
		Bowman & McLean	78	do		
		Staley & Hiltner	376	do		
		Foster & Kephart	69	do		
		P. W. Morris	234	do		
		do	1,504	do		
		Norristown furnace	4,504	do		
		Phœnix Iron Co	7,500	do		
		H. Hydrick	2,000	do		
		Sundry persons	4,000	do		
		James Hoover & Son	4,504	do		
		——McGuillan	900	do		
		Sundry Persons	1,562	do		
		Patrick Kelly	1,020	do		
		Patrick Campbell	310	do		
		John Jacoby	3,018	do		
		J. O. Richardson	910	do		
		Jas. Beatty	74	do		
		Jerome Keeley & Co	111	do		
		W. W. Robbs	85	do		
		Sam'l C. Rover	54	do		
		Sam'l Heston	143	do		
		Various parties	5,824	do		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	MONTGOMERY COUNTY—continued.					
		Chas. Sweeny	900	Limonite		
		Steel Ore Co	355	do		
		Different operators	2,550	do		
		Sundry parties	2,000	do		
	MONTOUR COUNTY.					
Welch Hill No. 3	Danville	Montour I. and Steel Co.	7,370	Fossil	All grades of pig for rails.	Own furnaces.
Giger	Near Danville	Grove Bros	93	do	Foundery and mill pig	Own furnaces at Danville.
Reich	do	do	None.	do	Foundery pig, and mill	Do.
Block	Danville	Montour I. and Steel Co.	None.	do	All grades of pig	Own furnaces.
Drift No. 5	Valley township	do	39	do	do	Do.
Pursel	do	do	12,100	do	do	Do.
Frosty Valley	do	do	5,013	do	All grades of pig and rails.	Furnaces at Danville except small lots.
Moore	West Hemlock	do	None.	do	All grades	Own furnaces.
Welch Hill No. 13	Danville	do	3,250	do	All grades of pig for rails.	Do.
Magill	do	Grove Bros	2,736	do	Foundery and mill pig	Own furnaces at Danville.
Liberty	Near Moorcsburg	R. M. Cummings	140	do	Mixture	Northumberland, Danville, and Bloomsburgh.
		Wm. Painter	22	do		
		Datesman Son, Williams.	300	do		
		Cole Brothers	308	do		
		Joseph Hubbs	147	do		
		John S. Hartzell	2	do		
		Samuel Samesberry	202	do		
		William Amesberry	71	do		
		Henry Schram	22	do		
		George Leighow	3	do		
		J. Lazarus	3	do		
		William Gething	11	do		
		Joseph Marr	64	do		
		G. W. Rishel	8	do		
		Sylvester Sandus	1	do		
		F. E. Mons	82	do		
		F. Sloch	53	do		
		P. Stell	1	do		
		E. Jones	56	do		
		G. W. West	10	do		
		James Jeffras	1	do		
		Lawrence Marr	10	do		
		Andrew Homer	2	do		
		Waterman Co	1,680	do		
	NORTHAMPTON COUNTY.					
Brotzman	Williams township	Glendon Iron Co	5,040	Limonite		
McKeen, Diehe and Notting Mill.	do	do	2,016	do		
Mary Wotting, Naef & Peifer.	do	do	2,968	do		
D. Runkle & Co	do	D. Runkle & Co	416	do	Foundery and forge	Company's furnace.
Hahn	do	Stephen Ackerman	672	do		Glendon Iron Co., Moselem.
Shortz & Coleman	Nazareth	Schleicher & Bro	8,004	do	Foundery and mill	Own use and Carbon I. and Pipe Co.
Shortz	Hanover	Crane Iron Co	1,757	do	Anthracite, foundery, and pig.	Company's furnace, Catasauqua.
Hahn	Williams township	Hahn & Bro	7,075	do		Glendon Iron Works.
Lorch	East Allen	Crane Iron Co	7,200	do	Foundery and anthracite pig.	Company's furnaces, Catasauqua.
Walter, Aton & Hess.	Williams township	Glendon Iron Co	672	do		
Jones & Kœnig	Palmer township	do	4,592	do		
Sampson	Cedarville	Sampson & Bro	2,336	do	Soft, tough iron	Glendon Company's furnace, Glendon and South Easton, Pa.
Richards	Glendon	Thomas Richards & Son.	9,748	do	No. 1 foundery	Keystone Furnace Co., Glendon.
Walters Hematite	Williams township	Cooper & Hewitt	1,680	do	Foundery and gray forge.	Durham furnace.
Vacht	do	R. B. Bachman & Bro	411	do	Ordinary pig	Do.
Ivey	Coffeetown	Isaac Ivey	5,852	do	No. 1	Glendon and Durham.
Smith & Kleinhan	Cedarville	Charles Sheets	1,344	do	All kinds	Glendon Co. and Thomas Iron Co.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	NORTHAMPTON CO.—Continued.					
Kichlein	Glendon	Charles Kichlein	3,696	Limonite	No. 1 foundery	Keystone furnace and Glendon Iron Co.
Brotzman	Near Glendon	Peter Peifer	2,240	do	Foundery	Glendon Iron Co.
Thomas Yeisley	Glendon	Thomas Yeisley	1,008	do	No. 1 foundery	Glendon Iron Co., and Keystone furnace near Easton.
Eckman	Cedarville	Henry Peard	1,008	do	Foundery pig	Glendon Iron Co.
George W. Unangst	Glendon	George W. Unangst	1,008	do	No. 1 foundery	Do.
Lewis	South Easton	Sidney Sandt	672	do	Foundery	Lucy and Keystone furnaces and Glendon Iron Works.
Wharton	Lower Saucon tw'p	Saucon Iron Co	8,053	do	Foundery and forge	
Bingen	Bingen	do	2,270	do	do	
Gangivere, Reigel & Bro.	Saucon township	Coleraine Iron Works	7,840	do	Foundery pig for stoves and machinery castings.	Own furnaces.
J. P. Keohler	East Allen township	C. & H. Slade	3,010	do	Foundery	Thomas Iron Co., Hokendauqua.
Engler	Bethlehem tw'p	Peter Engler	448	do	Foundery and forge	Carbon Iron Co., limited, Parryville.
B. C. Walters	do	Dr. B. C. Walters	1,244	do	do	Do.
Jacob Beck	Nazareth	Schleicher & Ecker	1,680	do	do	Do.
Lawall	Lower Nazareth	Ritter & Love	2,016	do	do	Carbon Iron Co., limited, and Lucy furnace, near Easton.
Unangst	Coffeetown	William Taylor & Son and Adam Deal.	148	do	Foundery and forge pig	Cooper, Hewitt & Co., Durham Iron Works.
Hoover	do	Jacob Lest	704	do	do	Durham Iron Co. and Glendon Iron Co.
Koekler	Hanover township	Saucon Iron Co	4,542	do	do	Saucon Iron Co.
Hummel	Near Nazareth	Dennis & Weaver	224	do	do	Carbon Iron Co.
		William Chapman	2,974	do		
		John Wetzel	732	do		
		Syl. Merwurth	182	do		
		John Best & Co	214	do		
		Adam Hahn	1,113	do		
		Mrs. Richards, jr	461	do		
		Peter Moser	321	do		
		Leidick & Derr	55	do		
		Bushkill Iron Co	360	do		
		Samuel Heller	195	do		
		C. A. Mauch	2,371	do		
		Ivey & Transue	352	do		
		Henry Brinfield	1,014	do		
		Brodhead wharf	7,395	do		
	NORTHUMBERLAND COUNTY.					
Chulasky	Chulasky	Creveling, Miles & Co.	896	Fossil	Foundery and forge pig for rails.	Chulasky furnace.
Montandon	Near Montandon	R. M. Cummings	1,120	do	Mixture	*Northumberland, Danville, and Bloomsburgh.*
		Chulasky	1,471	do		
		Frances furnace	1,978	Limonite		
		M. C. Tate	168	Fossil		
		Butler & Cumings	196	do		
		James Beacham	314	do		
	PERRY COUNTY.					
	Centre	Valentine & Co	11,200	Limonite	Car-wheels, boiler-plate, wire billets, rods, tools, scythes, hoes, and shovels.	Own furnace, and Elmira, N. Y.
Beaver, Marsh & Co. and Levi Rooke & Co.	Millerstown	James Rounsley	11,200	Fossil	Foundery and gray forge.	Harrisburg, Bloomsburgh, Union furnace, Lewisburg.
Clouser	Lime Ridge	Elias Fisher	1,344	Limonite	Foundery	Marshall furnace, Newport, Pa.
Cochran Mining Co.	Millerstown	Robert P. Cochran	3,584	Fossil	Sheet-iron	Reading, Pa.
Patton Iron Works	do	J. D. Williams	3,752	do	Foundery and forge pig	Lochiel furnace, Harrisburg.
Jones & Co	do	Rinehart & Jones	2,240	do	Mill and forge	McCormick & Co., Harrisburg, and Marshall Brothers, Newport, Pa.
Mochonay & Jones	Mochonay Valley	Henry Stites	67	do	Foundery pig	Bloomsburgh Iron Co. and Dauphin furnace.
Kremer	Tuscarora township	Coombs & Kepner	2,208	do	Forge and foundery pig	Denny Watts & Co., lim., and Swatara furnace.
Rice	Donally's Mills	Nankirell & Pellow	3,474	do	Foundery and forge	All to McCormick & Co.'s Paxton furnace, Harrisburg.
Mahanoy	Mahanoy valley	John B. Hartzell	84	do	Mixture	
		Williams & Navhide	41	do		
		D. K. Reeder	190	Limonite		

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	SNYDER COUNTY.					
Beavertown	Beavertown	Moses Spicht	4,869	Fossil	Forge	Bloomsburgh, Glamorgan Iron Co., Lewistown and Fredonia furnace.
Three mines	Vicinity of Adamsburgh.	Dr. A. M. Smith	8,960	do	Mixture	Bloomsburgh Iron Co., Bloomsburgh, and Glamorgan Iron Co., Lewistown.
Mengel	Middleburgh	John Mengel	1,344	do	Foundery	Bloomsburgh and Danville.
Weller	Washington township.	Peter Weller	1,344	do	Pig	Bloomsburgh and Danville, etc.
Ore Mine	Kreamer	Andrew Bickel	1,232	do	Wrought or pig	Mostly to Bloomsburgh.
Dreesis Boys, Ruben Dreesis, Mrs. Shirey, Abner Middlesworth, Rooke & Swengle, Bucher & Swengle, Felker & Mitchell.	Adamsburgh and Beavertown.	Charles P. Swengle and Rooke & Bucher.	4,032	do	No. 1	Union furnace, Winfield, Danville, Bloomsburgh, and Lewistown.
J. D. Conrad, Bowersox, Hook and Bloomsburgh Iron Co.	Beaver and Franklin townships.	J. D. Conrad	5,600	do	Iron for machine-shops	Bloomsburgh, Creveling, Miles & Co.; Danville, Painter of Danville; and Glamorgan Iron Co., Lewistown.
		Simon Kubs	1,012	do		
		S. H. Yoder	13	do		
		J. J. Mitchell	96	do		
		A. G. Eisenhart	26	do		
		Yoder & Meisser	14	do		
		D. L. & W. R. R	148	Magnetite		
		R. G. Eisenhart	12	Fossil		
		Creveling, Miles & Co., lim.	907	do		
		N. W. Smith	104	do		
		Simon Krebs	104	do		
		Mitchell & Field	22	do		
		Wm. Y. Cruikshank	679	do		
		Roush & Bickel	505	do		
		Samuel Weller	111	do		
		Elim Specht	30	do		
		J. G. Moyer & Co	60	do		
		Specht & Greenboe	51	do		
		J. R. Keeler	90	do		
	TIOGA COUNTY.					
Mansfield	Mansfield		None.	Fossil	Foundery	
		Mansfield furnace	100	do		
	UNION COUNTY.					
	Lawson Switch	M. C. Tate	520	Fossil	Foundery pig	Bloomsburgh, Danville, and Northumberland.
		Jas. S. Marsh	140	Limonite		
		G. W. Walls & Co	13	Fossil		
		Smith, Blair & Co	120	do		
	WESTMORELAND COUNTY.					
Shaffer	Laurelville		None.			
	YORK COUNTY.					
Underwood	Carroll township	Wm. Letcher	6,720	Magnetite	No. 1 pig, boiler-, plate-, and sheet-iron.	Newport, Perry Co., and small lots.
Hanover	Near Hanover	Chickies Iron Co	6,323	Limonite	Foundery and mill	
Bell	Dillsburgh	Henry McCormick	4,480	Magnetite	Red-short	
Mouls	Pigeon Hills	Ashland Iron Co	5,600	Limonite	Foundery	All to Ashland.
Longenecher	Dillsburgh	G. A. Longenecher	4,480	Magnetite	No. 1 foundery	Wrightsville and Middletown.
Logan	Carroll township	McCormick & Co	None.	do	All kinds	Harrisburg.
McClure & Smyser	do	D. L. Jauss	8,960	do	Neutral foundery, red-short pig, nails, plates, merchant bar, Bessemer steel, and rails.	Harrisburg, Marietta, Middletown, and Northumberland.
Fritz	Spring Garden township.	Benson Hottutt	2,882	Limonite	Bar, plate, foundery, and neutral pig.	Donegal furnace, Marietta, Lancaster county.
Roth	Spring Grove	Henry J. Rahe	1,004	Specular	Anthracite pig	Benson and Catrill, Columbia, and Wrightsville Iron Co., Wrightsville.
Lichty	Washington township.	Amos Rupert	422	do	Neutral	Donegal furnace, Lancaster county; Vesta furnace, Lancaster county; Cameron furnace, Middletown, Dauphin county; Dock furnace, Dauphin county.
Menges	Jackson	George Menges	1,344	do	Foundery forge pig	Marietta, Donegal furnace, Wattses, and Wrightsville.

Directory of iron-ore mines—Continued.

PENNSYLVANIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	YORK CO.—cont'd.					
Codorus or Strickhouser.	North Codorus township.	Codorus Min. Co	8,329	Specular and magnetite.	Strong pig and foundery.	Pittsburgh, Reading, and vicinity, and Wrightsville.
Feigley	Near Logansville	Cordelia Iron Co	3,248	Limonite	Neutral foundery, mill pig, hardware, stove-plate, machine castings, and boiler- and ship-plate.	Cordelia, Lancaster county.
Springfield	Springfield township	Charles M. Nes	224	do	Foundery pig No. 1 and wrought.	Columbia and Marietta, Lancaster county.
Grove	Dillsburg	Shelby & Hoffer	1,008	Magnetite	Red-short for Bessemer.	Harrisburg and Marietta.
Miller	Jacob's mills	John Kaufman	3,390	Limonite	No. 1 foundery	Ashland Iron Co., Ashland.
J. and D. Bollinger	Iron ridge	Leesport Iron Co	2,800	do	do	Leesport.
Fuller	Carroll township	J. C. Fuller	560	Magnetite	Bessemer	Pine Grove, Boiling Springs, and parties on Susquehanna.
Keeny	Near Glen Rock	Watts, Twells & Co., limited.	1,736	Limonite	Foundery, stove-plate, and light castings.	All for own use.
		E. B. Myers	442	do		
		Menges & Paull	131	Specular		
		Rahe & Martin	757	do		
		Emanuel Wolf	1,350	Limonite		
		A. L. Hursh	50	Magnetite		
		Shelby & Hoffer	279	do		
		L. B. Morgenroth	130	do		
		Jauss & King	144	do		
		John Wynhoop	784	do		
		Henry Kraber	2,509	Specular		
		G. W. Sprenkle	170	Limonite		
		E. B. Sprenkle	156	Specular		

RHODE ISLAND.

	PROVIDENCE COUNTY.					
Cumberland Hill	Cumberland		None.	Magnetite		

SOUTH CAROLINA.

	UNION COUNTY.					
Magnetic Iron Co	Cherokee ford		None.	Specular		

TENNESSEE.

	BLOUNT COUNTY.					
Maryville	Maryville	Roane Iron Co	2,342	Limonite	Pig for steel	Rockwood furnace.
	BRADLEY COUNTY.					
Hinch	White Oak ridge	T. R. Hinch & Bro	2,818	Fossil	Foundery pig	Chattanooga and South Pittsburgh.
Hoskins' Hinch	Hinch	S. B. Lowe	7,000	do	do	Do.
Vaughn	McDonald	Jefferson Vaughn	113	do		Do.
	CARTER COUNTY.					
Taylor	Carter's furnace	Knoxville Car-Wheel Co.	1,635	Limonite	Car-wheel	All at furnace.
Lipps	do	do	224	do	Car-wheel pig	Maxwell furnace.
Hodge	Stony Creek valley	do	1,130	do	do	All at Carter and Maxwell's furnaces.
Honeycomb	Carter's furnace	do	1,120	do	do	
Liver Ore	do	do	336	do	do	Carter furnace.
	DICKSON COUNTY.					
Cumberland furnace	Cumberland furnace	J. P. Dromillard & Co.	7,938	Limonite		All to own furnace.
Worley	Worley furnace	Warner Bros	2,835	do	Strong mill	Do.
	HAMBLEN COUNTY.					
Hamblen	Witt's foundery	Roane Iron Co	5,600	Limonite	Open-hearth steel furnaces.	Own furnace.
	JAMES COUNTY.					
Sanders & Whiteside	Near Ooltewah	J. P. Bond	7,030	Fossil	Foundery	Chattanooga Iron Co., S. B. Lowe, South Pittsburgh, for Southern States, C., I. and L. Co.

Directory of iron-ore mines—Continued.

TENNESSEE—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	JAMES CO.—cont'd.					
Tallant	Near Ooltewah	C. C. Vest	1,127	Fossil	Foundery pig	Chattanooga Iron Co. and Pittsburgh.
Lee	do	T. J. Lee	1,701	do		South Pittsburgh and Chattanooga.
White Oak Ridge	Ooltewah	J. S. Ragan	560	do		Do.
White Oak mountain	Near Ooltewah	J. A. Greene	2,817	do	do	South Pittsburgh, Chattanooga, and Knoxville.
	JOHNSON COUNTY.					
Keller	Dryrum	A. M. Dougherty & Co	1,112	Limonite		Forges in this county.
Little Mountain	Fourth Civ. Dist	Dan'l Slimp	112	do	No. 1 wrought and pig	
Washplace	Pandora	Wm. A. Morley	546	do	All kinds of pig and wrought.	All to own blacksmith shops.
Hodge	Roane's creek	Mr. Hodge	175	do	Bar, blooms, plow-points, and wagon-tires.	Forges.
Taylor	Dugger's ford	Taylor & Baker	400	do	Blooms and bar	
Tompkins	Little Doe	M. M. Wagner & Son	300	do	Bar	Forge.
Laurel Bloomery	Laurel bloomery	Fred. Slimp	90	do	Wagon-tires, horse-shoes, hoops, chains, wagon-bands, plates, hoes, mattocks, harrow-teeth, hammers, sledges, tongs, R. R. spikes, etc.	Abingdon, Va., and Bristol, Tenn.
Near and Far Mt	Walker forge	Geo. J. Walker	112	do	Foundery pig and bar	Neighborhood.
Gentry	Potter's forge	J. O. Potter & Son	202	do	Foundery pig, bar, and blooms.	Do.
Rhea	Near Rhea's forge	R. C. Rhea	None.	do	Hammered bar	Own forge.
Razor Rock on Gentry mountain.	Shoun's Cross-roads	H. C. Donnelly	12	do	Hammered bar and pig	Home.
	LAWRENCE COUNTY.					
Napier	Napier furnace	Napier Iron Co	641	Limonite	Cold-blast car-wheels, wrought, boiler-heads, and plate.	All at furnace.
	MEIGS COUNTY.					
Red Cloud	Euchee	Hill & Tarwater	10,206	Fossil	Foundery, mill, and wrought.	Chattanooga and South Pittsburgh.
	PERRY COUNTY.					
Cedar Grove	Near Linden		None.	Limonite		
	RHEA COUNTY.					
Iron Hill	Iron Hill	Hill & Tarwater	13,608	Fossil	Foundery, mill, and wrought.	Do.
Enterprise	Lorraine	Helow Roberts	None.	do	Pig and bar	Do.
	ROANE COUNTY.					
Welcker's Ridge	Welcher's	J. D. Roberts	4,480	Fossil	Pig, stove, and castings	Rockwood and Chattanooga.
Hinckes	Eagle furnace	Jerry Gibson	3,136	do		Southern States C., I. and L. Co., South Pittsburgh, Vulcan works, Chattanooga and Roane I. Co.
Ironton	Kings Landing	Thos. Brown	7,433	do	Foundery pig and car-wheels.	Rockwood furnace.
	Webster	Oak Dale Iron Works.	None.		Foundery and mill	All to furnace.
		Rockwood, Nos. 1 and 2.	13,732	do		
Oak Dale Iron Works.		Watson & Ballou	800	do		
	STEWART COUNTY.					
Bear Spring	Cumberland Iron Works.	Cumberland Iron Works Co.	1,043	Limonite		
La Grange Iron Co	La Grange furnace	La Grange Iron Co	None.			

TEXAS.

	MARION COUNTY.					
		Kelly furnace	3,600	Limonite		

UTAH TERRITORY (see p. 227).

	BEAVER COUNTY.					
Cave	Bradshaw district	Frisco Min. and Smelting Co.	1,833	Limonite	Flux	Own furnace.

Directory of iron-ore mines—Continued.

VERMONT.

Name of mine.	Location.	Name of operation.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	FRANKLIN COUNTY.					
Brainerd	Fairfield	A. O. Brainerd	560	Specular	Steel	Saint Albans.
	WINDSOR AND RUTLAND COUNTIES.					
White River Iron Co.	Pittsfield and Bethel		None.	Magnetite		

VIRGINIA.

	ALBEMARLE COUNTY.					
		Wm. Betts	53	Limonite		
	ALLEGHANY COUNTY.					
Moyer	McDowell's switch	S. L. McDowell and L. T. Dickey.	896	Limonite	Mill and foundery	Quinnimont furnace, W. Va.; Lowmoor and Buffalo Gap furnaces, Va.
Peters mountain	Callaghan's	Lewis & Gay	112	do	Foundery and mill	Pennsylvania and Virginia Iron and Coal Co., Quinnimont, W. Va.
Lowmoor	Lowmoor	Lowmoor Iron Co	26,880	do	do	Ohio river markets.
Australia	Long Dale	Long Dale Iron Co	19,666	do	Foundery and forge	Own furnace.
Stacks	Dickson's switch	W. W. Sadler	4,480	do	Mill	Lowmoor Iron Co. and Pennsylvania and Virginia Iron and Coal Co.
Excelsior	Kean farm	Timoleon G. Trice	560	do	Car-wheel, mill, and foundery.	Furnaces on C. and O. R. R. and Ohio river.
Huddleston	East slope of Peters mountain.	A. E. Huddleston	448	do		Quinnimont, W. Va., and on Ohio river.
Clifton forge	Clifton forge	Henry Body	8,064	do	Mixture	Quinnimont, W. Va.
	AMHERST COUNTY.					
Riversville	Riversville	Commonwealth M'f'g Co.	3,360	Specular	Bessemer pig	Bessemer Steel Co., east of Alleghanies.
Stapleton	Stapleton mills	do	6,720	do	Bessemer pig, foundery, car-wheels, spiegel-eisen, and ferro-manganese.	Pittsburgh and Bessemer Steel Works, east of Pittsburgh.
	Mundy est	Lynchburg Iron, Steel, and Mining Co.	560	Limonite	Common foundery	Baltimore, New York.
	AUGUSTA COUNTY.					
Ferrol	Ferrol	Pennsylvania and Virginia Iron and C. Co.	16,036	Limonite	Foundery, mill, and machinery.	Ohio R. R., Pittsburgh furnaces, and Quinnimont furnace, W. Va.
Davidia	Rockfish Gap	Davidia L and Steel Co	616	do	Neutral, for steel	Buffalo Gap furnace.
		Eureka Mining Co	66	do		
		H. G. Brooks	44	do		
	BEDFORD COUNTY.					
		Bedford Iron Mining and Manuf'g Co.	500	Limonite		
	BOTETOURT COUNTY.					
Arcadia	Buchanan	Arcadia Iron Works.	28,000	Hematite		
Callie furnace	Callie furnace	Hillman, Cook & Co	225	Limonite	Foundery, mill, and bessemer.	Quinnimont.
	CAMPBELL COUNTY.					
Otter river	Otter River	Harry G. Blackwell	84	Magnetite	Bessemer pig	Pennsylvania.
		Lynchburg I. and S. Co.	224	Limonite		
	LOUISA COUNTY.					
Victoria	Victoria furnace	Ira F. Jordan & Co	None.			
		T. S. Leaks	14	Limonite		
	NELSON COUNTY.					
Greenway	North Greenway	Commonwealth M. Co.	3,360	Specular	Bessemer pig	Bessemer Steel Co., east of Pittsburgh.
	PITTSYLVANIA COUNTY.					
		R. F. Mason	11,292	Magnetite		
		Edward Samuels & Co.	363	do		
		P. and R. C. and I. Co.	71	do		
	ROCKBRIDGE COUNTY.					
Buena Vista	Green Forest	Buena Vista Iron Mine	None.	Limonite	Car-wheels	Own furnace.
	ROCKINGHAM COUNTY.					
Raines & Weaver	Mt. Vernon I. Works.	Harnsberger, Hawkins & Co.	22,400	Limonite	Boiler	Abbott Iron Company.
Fox Mountain	Furnace No. 2	William Milnes, jr	8,960	do	Charcoal pig, boiler-plate, and flange.	

Directory of iron-ore mines—Continued.

VIRGINIA—Continued.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	SHENANDOAH COUNTY.					
Old & Hollow	Liberty furnace	Wissler, Armstrong & Stone.	5,040	Limonite	Car-wheels, boiler-plate, rivets, wire, malleable castings, and hammered iron.	Own, Liberty, and Columbia furnaces.
3-mile and 5-mile	Columbia furnace	John Wissler & Son	2,800	do	Cold-blast charcoal, car-wheel.	
		N. Stephens	16	do		
	WYTHE COUNTY.					
Foster	Pierce furnace	New River Iron and Manufacturing Co.	336	Limonite	All kinds	
King & Johnson	Barren Spring	J. W. McGavock & Co.	2,240	do	Pig, car-wheels, and bar.	Own furnace.
Parter & Black Ore	Raven Cliff and Beverly furnace.	Crockett & Co	3,920	do	Cold-blast charcoal, car-wheel pig, horseshoes, tires, boiler-plates, etc.	
Carter	Cedar Run furnace	Graham & Robinson	1,120	do	Car-wheel pig, ordnance, and wire, tires, bars, horseshoes, etc.	Do.
Noble	Browne Hill	New River Mineral Co.	2,800	do	Cold-blast charcoal for car-wheels.	
Gray Eagle	Gray Eagle furnace.		None.	do	Car-wheels	

WEST VIRGINIA.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	BRAXTON COUNTY.					
Elk River Iron Co		Elk River Iron Co	2,500	Carbonate		Own furnace.
	HAMPSHIRE COUNTY.					
Postley, Open Cut, and Minnesota.		Bloomery Furnace Co.	7,000	Fossil		Bloomery furnace.
	HARDY COUNTY.					
North Mountain and Half Moon.	Capon Iron Works	Bunting & Keesler	448	do	Car-wheels and boiler-plate.	Lobdell Car-Wheel Co., Wilmington, Del.
	KANAWHA COUNTY.					
		From Kanawha	680	Carbonate		
		Jesse S. Savage	105	do		
	MORGAN COUNTY.					
Mendenhall	Sir John's Run	A. B. Desaules	2,800	Limonite		Dunbar Iron Works, Pa.
	PRESTON COUNTY.					
Kinger & Fitchenell	Pleasant township	S. B. Patterson	225	do	Cold-blast charcoal	Own use.
Irondale furnace	Irondale	Felix Nemegyer	29,120	Carbonate	Cold-short pig, merchant, plates, and rails.	Owen furnace.
Gladesville	Gladesville	Gladesville Iron Co	4,480	Limonite	Charcoal pig	Do.
	TAYLOR COUNTY.					
Rossett	Irontown	C. S. Hurd	13,798	Carbonate	Pig	All to Waldorf furnace, Irontown.

WISCONSIN.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	DODGE COUNTY.					
Iron Ridge	Iron ridge	North Chicago rolling-mill and others.	39,200	Fossil	Cold-short	Chicago, Milwaukee, and own furnace.
Mayville	Iron mountain	Northwestern Iron Co	None.		do	
	MARINETTE COUNTY.					
Florence	Florence	Menominee Mining Co.	None.	Specular	Pig	Chicago, Milwaukee, and Ohio furnaces.
	SAUK COUNTY.					
Sauk	Ironton	M. K. Doyan	2,240	Limonite	Foundry	

WYOMING TERRITORY.

Name of mine.	Location.	Name of operator.	Product (tons of 2,000 pounds).	Kind.	Uses.	Where used.
	CARBON COUNTY.					
Rawlins	Rawlins		None.	Hematite	Flux and paint	Mostly to Salt Lake City.

Colorado and Utah iron not used for manufacture of iron, and therefore not counted in totals.

Directory of copper mines.

State or territory.	County.	Locality.	Name of mine.	Name of operator.	Ingots
					Pounds.
Alaska					3,933
Arizona	Apache		Longfellow Copper	Longfellow Cu. Mining Co	3,112,500
Do	do		Metcalf		None.
Do	do		Globe		None.
Do	do	8 miles northwest of Clifton	Coronado Group	Longfellow Mining Co	71,250
Do	Pima	22 miles southeast of Charleston	Copper Queen	Cu. Queen Mining and Smelting Co	None.
Do	do		Copper King	do	None.
Do	do		Ajo Copper Mines		None.
California	Amador	2½ miles east of Ioning	Newton	Newton Copper Mining Co	720,000
Colorado	Arapahoe				980
Do	Jefferson				598
Georgia	Rockdale				922
Maine	Hancock	Blue Hill	Young Hecla	Young Hecla Cu. Mining Co	None.
Do	do	do	Atlantic Copper Mining Co	Atlantic Copper Mining Co	None.
Do	do	West Brooksville	Tapley	E. B. Smith & Co	None.
Do	do	Blue Hill	Granger Copper Mining Co	Granger Copper Mining Co	None.
Do	do	Winter Port	Gardner Mountain Copper Min. Co	Gardner Mountain Copper Mining Co	None.
Do	do	Blue Hill	Excelsior	Excelsior Co	None.
Do	do	do	Blue Hill Central	Blue Hill Central Copper Mining Co	None.
Do	do	do	Douglass Copper Mining Co	Douglass Copper Mining Co	22,500
Do	do	do	Blue Hill Copper Min. and Sm'l'g Co.	Blue Hill Copper Mining Co	20,000
Do	do	do	Twin Lead Copper Mining Co	Twin Lead Copper Mining Co	60,000
Idaho	Lemhi				150,000
Maryland	Baltimore				1,275
Do	Carroll	7 miles from Finksburgh	Mineral Hill	Mineral Mill Mining Co	104,040
Do	Frederick		Liberty	Maryland Copper Mining Co	None.
Michigan	Houghton	Atlantic	Atlantic	Atlantic Mining Co	2,580,000
Do	do	Hancock	Franklin	Franklin Co	2,829,585
Do	do	do	Quincy Mining Co	Quincy Mining Co	2,784,821
Do	do	do	Pewabic	Pewabic Co	336,475
Do	do	Calumet township	Osceola	Osceola Consolidated Mining Co	3,231,581
Do	do	Calumet	Calumet and Hecla	Calumet and Hecla Mining Co	28,620,750
Do	Isle Royale	Minong Mine Landing	Minong	Minong Mining Co	80,000
Do	Keweenaw	Phœnix	Phœnix Copper Co	Stock Co	483,431
Do	do	Delaware	Delaware	Delaware Copper Co	143,900
Do	do	Allouez	Allouez	Allouez Tribute Co	1,337,897
Do	do	Central Mine	Central Mine	Central Mining Co	1,799,495
Do	Ontonagon	Greenland	Ridge	Ridge Copper Co	300,000
Do	do	do	Mass Mining Co	Mass Mining Co	484,000
Do	do		Flint Steel River Copper Co	Flint Steel River Cu. Co	34,992
Do	do		Evergreen		711,480
Do	do		Ogima		27,270
Do	do		Adventure		25,520
Do	do		Hilton		1,545
Do	do		Astec		11,520
Do	do		National		None.
Missouri	Sainte Genevieve	10 miles southwest of Saint Genevieve.	Cornwall	O. D. Harris	101,273
Do	do	8 miles west of Sainte Genevieve	Swansea	John and Leon Bogg and Leon Jackerst.	31,364
Do	do	do	Herzog	Jakers & Fogga	8,080
Montana			Hetty Harvey and Mountain	New York and Montana Copper Co	306,112
Do	do				7,050
Do	do				898,738
Nevada	White Pine	Robinson district	Fairview		41,600
Do	do	do	IXL		31,190
Do	do	do	Lone Star, Brooks, Argenta, Last Chance, Southern Cross, and Watson.		47,120
Do	do	do	Star of the West and Blue Bird		14,820
New Hampshire	Grafton	Littleton	White Mountain	Dole Brothers	None.
Do	do	Lyman	Hairland Copper M. Co	Hairland Copper Mining Co	None.
Do	do	do	Paddock	J. H. Paddock	34,050
New Mexico					4,055
North Carolina	Ashe	Ore Knob	Ore Knob Copper Co	Ore Knob Copper Co	1,600,000
Do	do	Gap creek	Copper Knob	Copper Knob Mining Co	40,000
Pennsylvania	Montgomery	Pottstown	Gilbert	Samuel Milligan	40,460
Do	do				38,556
Do	Lancaster				135,720
Tennessee	Polk	Ducktown	Old Tennessee	McLeod & Co	153,880
Texas					5,084
Vermont	Orange	Ely	Vermont Copper Mining Co	Vermont Copper Mining Co	2,047,804
Virginia	Loudoun				678
Wisconsin	Iowa	Mineral Point	Old Beach Lead	Wm. T. Henry	18,087

Directory of lead and zinc mines.

State or territory.	County.	Locality.	Name of mine.	Name of operator.	Lead.	Zinc.
					Pounds	*Pounds.*
Illinois	Jo Daviess	East Galena	Ortscheid	Ortscheid, Melville, and Kuckman	119,000	
Do	do	do	Spratt	Spratt & Co	500,000	
Do	do	Council Hill	W. Oxman & Son	W. Oxman & Son	20,000	
Do	do	Rice township	Kipp	Keiser, Myer, Beasman, and Kipp	54,000	
Do	do	Kamphouse Hollow	Kamphouse	Burrichter & Harris	240,230	
Do	do	Near Buncombe	Manuell & Raine	Manuell & Raine	10,000	
Do	do	Ren Town	Marsden	Aug. Pein	600,000	6,000,000
Iowa	Clayton	Guttenberg	Goodrich		3,000	
Do	Dubuque	Dubuque township	Owens	James Rooney and Jacob Collins	None.	None.
Do	do	do	Sink Hole Crevice	Leathers, Horner, and McLane	1,300	
Do	do	do		Spensley and A. Cop	5,000	
Do	do	Maquoketa	Baker Range	Spensley & Works	4,000	
Do	do	Dubuque	Bowen	Dumgan & McBride	90,000	
Do	do	do	Moser	F. E. Moser	600,000	
Do	do	Centre Grove	Pike's Peak	R. O. Anderson	10,000	
Do	do	Julian township	Stewart, Cobb & Eighnig	Stewart, Cobb & Eighnig	None.	None.
Do	do	West Dubuque	B. Bassler	B. Bassler	None.	None.
Do	do	Dubuque	Keneday	Tingel Bros	3,000	
Do	do	do	Dubuque	John Goldthorp	50,000	
Do	do		Burton	Fred Hass	2,200	
Do	do	Maquoketa	Longworthy Range	John Spensley	None.	None.
Kansas	Cherokee	Empire City	Empire Mining Co	Picher L. & Z. Co., and W. N. Barrow	160,000	897,391
Do	do	Near Galena	South Side Town Mining Co	South Side Town Mining Co	619,000	640,000
Do	do	do	Galena Mining and Smelting Co	Galena Mining and Smelting Co	3,248,167	150,000
Do	do	One-half mile east of Galena	Folmer Tract	Williamson, Grove, Stone & Co	280,000	64,000
Do	do	Galena	Rosenthal & Teetle	Rosenthal & Teetle	575,900	136,000
Do	do	Empire City	West Joplin Lead and Zinc Co	W. Joplin L. & Z. Co., and S. Cheney	910,769	1,300,000
Do	do	One-half mile south of Galena	Baker's Diggings	Connor, McClellan, and S. L. Cheney	2,500,000	1,300,000
Do	do	One-half mile west of Galena	Bloomington	Galena Crusher Co	52,000	56,800
Do	do	Empire City	Empire City Town Co	Empire City Town Co	233,548	200,000
Do	do	Galena	Cornwall Mining and S. Co	John M. Ritter, Tamblyn, White, and others.	164,400	16,000
Do	do	Bonanza	Bonanza	Bonanza Mining and Smelting Co	820,240	930,000
Do	do	Three-fourths mile east of Galena	Byers, Murphy & Connor	Wm. Byers, Patrick Murphy, and Thos. Connor.	218,624	2,400
Maryland	Frederick	Unionville	Unionville	Wm. A. Ingham and Gen. Wm. Lilly		1,344,000
Missouri	Christian	Swan Creek	Swan Creek	W. J. Roberts, H. Burkhardt, and J. R. Patton.	604,000	
Do	Cole	Three miles north of Elston	Durham	J. A. Elston	700	
Do	do	Two and one-half miles west of Decatur.	Van Sandt	Geo. Van Sandt	42,000	
Do	Dade	Corry	Corry	Dade County Mining and Smelting Co	67,200	82,000
Do	do	Four miles south of Pemberton	Overall	do		23,000
Do	do	Pemberton	Pemberton	Pemberton heirs		60,000
Do	Franklin	5 miles southeast of Saint Clair	Mo. M. and S. Co., lim	Mo. M. and S. Co., lim	140,000	
Do	do	1 mile east of Saint Clair	Northumberland	J. C. Richardson, W. C. Ford, W. F. Reder, and F. H. Carpenter.	21,000	
Do	Greene	Ash Grove and Pickerel	Swinney, Wilson & Co	Swinney, Wilson & Co	70,000	2,000
Do	do	Brookline	Oliver	J. B. Sherman	31,000	
Do	do	Ash Grove	Ash Grove	Walker & Perriman	810,000	
Do	Jasper	Joplin	Granby	Granby M. and S. Co	2,080,265	500,400
Do	do	Joplin and vicinity	Lone Elm M. and S. Co	Maffet & Sergeant	3,180,000	
Do	do	6 miles southeast of Joplin	Burch diggings	Lone Elm M. and S. Co	200,000	
Do	do	Joplin	Lone Elm	do	1,343,000	
Do	do	do	McKee	do	8,000	
Do	do	do	Paxton	do	1,343,000	
Do	do	do	Picher L. and Z. Co	Picher L. and Z. Co	2,459,228	1,351,932
Do	do	2 miles southeast of Joplin	Thousand Acres	Picher L. and Z. Co., and Granby M. and S. Co.	2,810	2,184
Do	do	Joplin	Picher Field	Picher L. and Z. Co	1,441,148	1,351,932
Do	do	2 miles northeast of Joplin	Turkey Creek	do	12,226	21,120
Do	do	Joplin	W. Joplin L. and Z. Co	W. Joplin L. and Z. Co		
Do	do	do	Joplin diggings	do		
Do	do	5 miles west of Joplin	Steven's diggings	do		
Do	do	1½ miles southwest of Joplin	Carney diggings	do	1,000,000	2,000,000
Do	do	5 miles northwest of Joplin	Sherwood diggings	do		
Do	do	2½ miles northwest of Joplin	Leadville diggings	W. Joplin L. and Z. Co., and C. H. Brewster.		
Do	do	Carterville	Carterville M. and S. Co	Daugherty & Wilson	825,500	5,082,592
Do	do	Webb City	Center Cr. M. and S. Co	Center Cr. M. and S. Co	427,973	2,001,609
Do	do	South Carterville	Webb City M. and S. Co	Webb City M. and S. Co	2,100	600
Do	do	Webb City	McCorkle & Ayler	McCorkle & Ayler	134,014	74,408
Do	do	do	Walker & Elliott	Walker & Elliott	210,000	16,000

Directory of lead and zinc mines—Continued.

State or territory.	County.	Locality.	Name of mine.	Name of operator.	Lead.	Zinc.
					Pounds.	*Pounds.*
Missouri	Jasper	Oronogo	Granby M. and S. Co	Granby M. and S. Co	389, 533	241, 446
Do	do	Belville City	Belville	Belville L. and Z. Co	340	910, 400
Do	do	2½ miles southwest of Carthage.	Pleasant Valley M. and S. Co	Pleasant Valley M. and S. Co	14, 160	484, 178
Do	do	4 miles west of Joplin	Neutral of Stevens Diggings	John Shorten and J. J. Stearns	2, 800	48, 000
Do	do	Joplin	Porter and Dorsey Tract	Porter and Dorsey	224, 000	192, 000
Do	do	do	North Joplin M. and S. Co	North Joplin M. and S. Co	75, 460	20, 000
Do	do	1 mile north of Joplin	Clauser Tract	New York and Joplin M. and S. Co	532, 895	15, 000
Do	do	Joplin	Joplin M. and S. Co	Joplin M. and S. Co	679, 714	112, 870
Do	Jefferson	Frumet	Frumet	North Saint Louis and German Savings Bank.	35, 000	
Do	do	Old Ditch	Hart Lands	N. M. Christian	5, 000	
Do	do	Frumet	Sixteenth Section	S. Myer and Wyman	33, 000	
Do	do	Old Ditch	Vallé Diggings	J. M. Douglas	3, 250	
Do	Madison	Einstine Silver Mine	Einstine Silver Mine	Silver Mt. Min. Co	32, 639	
Do	do	Mine LaMotte	La Motte	Rowland Hazard	3, 965, 760	
Do	Moniteau	8 miles northeast of California	Boyde English	B. English and Kinworthy	4, 200	
Do	Morgan	8 miles southwest of Versailles	Potter	Silvie & Rowe	38, 500	
Do	do	10 miles north of Line Creek	Johnson	J. Johnson	15, 400	
Do	do	12 miles southeast of Versailles.	Indian Creek		7, 000	
Do	do	20 miles northwest of Versailles.	Berry	Wm. Berry	29, 400	
Do	Newton	Granby	Granby	Granby M. and S. Co	1, 804, 950	7, 044, 000
Do	St. François	Bonne Terre	St. Joe Lead Mine	Saint Joe Lead Co	8, 465, 680	
Do	do	do	Desloge	Desloge Lead Co	4, 000, 000	
Do	do	Vallé Mines	Vallé Mines	Vallé Mining Co	204, 115	1, 094, 475
Do	Washington	Mineral Point	Boas	F. M. Boas	20, 552	
Do	do	4 miles N. of Potosi	Cole Land	Capt. Geo. B. Cole	42, 000	
Do	do	Richwoods	Burnham Land	C. B. Burnham	63, 165	
Do	do	Potosi	Dean Tract	Heirs of John Dean and S. Richeson	357, 700	517, 202
Do	do	Near Hopewell	Evans	Robert H. Evans	27, 829	
Do	do	Concord township	Perrine	F. Blackman	7, 000	35, 000
Do	do	Kingston Furnace	Saint Louis Lead Mining Co	Saint Louis Lead Mining Co	23, 927	
Do	do	3 miles NW. of Potosi	Perry	J. P. & R. M. Bugg	370, 893	
Do	do	Old mines and vicinity	Thos. S. White	T. S. White	112, 554	
Do	do	Mineral Point	Mesplay	V. B. Mesplay	15, 000	
Do	do	Richwoods	Moran Claim	J. W. Wilder	97, 140	
Do	do	1½ miles from Mineral Point	Ohio Lead Co	Ohio Lead Co	87, 000	18, 000
Do	do	Old Mines	Old Mines Lead Co	Old Mines Lead Co	195, 844	
Do	do	Palmer and vicinity	Palmer Lead Co	Palmer Lead Co	310, 113	
Do	Wright	7 miles from Hartville	McMullen & Berry	John B. Sherman		240, 000
Do	do	10 miles from Hartville	Davis	—— Davis	72, 000	
New Jersey	Sussex	Ogdensburg	Franklinite and Zinc	Manganese Iron Ore Co		2, 241, 000
Do	do	Franklin Furnace	Mine Hill Zinc and Sterling Hill.	N. J. Zinc Co		11, 070, 514
Do	do	do	Trotter's Mine	Chas. W. Trotter		a$12, 937
Do	do	Ogdensburgh	Passaic Zinc Mine	Passaic Zinc Co		a$62, 496
Do	do	Franklin	Taylor	Moses Taylor		a$65, 035
New York	Ulster	Ellenville	Wawarsing	W. W. Evans	None.	None.
Do	do	One-quarter mile S. of Ellenville.	Ellenville		None.	None.
Do	do	Shawangunk mountains	Erie		None.	None.
Do	do	Red Bridge			None.	None.
Pennsylvania	Lehigh	Friedensville	Correll	F. Osgood & Co		3, 000, 000
Do	do	do	Lehigh Zinc Mine	Lehigh Zinc Co		1, 553, 746
Tennessee	Claiborne	Straight Creek	Richberg	Jno. Richberg		428, 571
Do	Jefferson	Leadvale	Leadvale	A. H. Gregg	50, 000	a$250
Do	do	Mossy Creek	Church Lot	J. B. Barrett		a$95
Do	Knox	McMillan	Ten Mile	Ill. and Tennessee M. and S. Works		a$2, 000
Do	McMinn	Near Riceville	Lead and Silver	Hamilton Pearce	None.	None.
Do	Union	New Prospect	Union Co. Zinc Mine	Manning & Squier		a$10, 000
Virginia	Wythe	Near Barren Spring Furnace	Falling Cliff Zinc	D. S. Forney	None.	None.
Do	do	Austinville	Wythe Lead and Zinc	Wythe Lead and Zinc Mine Co	836, 868	
Do	do	Near Barren Springs	Bertha Zinc Mine	Bertha Zinc Co		284, 838
Wisconsin	Grant	Platteville	Boots Range	John M. Gardner & Bros	30, 000	
Do	do	do	Murphy & Hennings	Murphy & Hennings	300, 000	
Do	do	British Hollow		Honeycomb & Basing	2, 000	
Do	do	Platteville	Phenix & Strong	Phenix & Strong	6, 000	
Do	do	do		Ben. Cane & Co	6, 000	60, 000
Do	do	Beetown		M. Walker and Wm. C Moody	11, 000	
Do	do	Lindens Ground	A. Sans & Co	Adam Sans and H. Voss	30, 000	
Do	do	Platteville	Lane Range		(a)	(a)
Do	do	Muscalange	Hutchcroft & Thomas		None.	None.
Do	do	Platteville	Messersmith	Messersmith Bros	None.	None.

a Value.

Directory of lead and zinc mines—Continued.

State or territory.	County.	Locality.	Name of mine.	Name of operator.	Lead.	Zinc.
					Pounds.	*Pounds.*
Wisconsin	Grant	Platteville	Messersmith & Rowe		None.	None.
Do	do	do		Messersmith & Griffin	None.	None.
Do	do	do	Waters Range	Wm. Waters	4,000	
Do	do	do	Bellmire Range	Fred. and Dennis Bellmire and Henry Sanders.	4,630	
Do	do	Platterville	Hammons & Davison	Hammons, Davison & Jones	15,000	
Do	do	Potosi		Henry Warnenhurs & Co	8,000	
Do	do	Platterville	Teller		20,000	
Do	do	Potosi	Maynes	Maynes & Kern	10,000	
Do	do	Platteville	Platteville	Murphy & Henning	400,000	100,000
Do	do	do	City Mine		21,000	
Do	do	Beetown	Beetown	Ross, Gundry, Foay & Henry		240,000
Do	do	Big Patch	Todd Range		10,000	
Do	do	Platteville	Lane Range	H. C. Lane & Carlile	(a)	(a)
Do	do	do	Riley	John & Jas. Riley	8,000	
Do	do	do	Dixon	W. Williams	10,000	
Do	do	Hazel Green	Gens	Conrad Gens	130,000	
Do	do	Teadville				40,000
Do	do	Beetown	Mass, Rogers & Co		25,000	
Do	do	Platteville	Connelly & Burns	Howe, Blader & Co	*32,000	
Do	do	Beetown	Muscalunger	O. C. Hathaway	56,790	
Do	do	do	Burns Bros. & Rogers	T. Burns	100,000	
Do	do	Hazel Green	Meaker & Hardy	J. M. Chandler	None.	None.
Do	do	Menomonee	Hoffman & Tultz	Hoffman & Tultz	None.	None.
Do	do	Potosi	McGuire	Morris & McGuire	21,000	
Do	do	do	Stuar	A. Geller, Stuar & Co	40,000	
Do	do	do	Gerhard	Gerhard & Co	1,000	
Do	do	do	Sand Range	Zeigg & Raiser	6,000	
Do	do	do	Rairdon	S. & W. Wilmarth & Co	4,000	
Do	do	Muscalange			20,000	
Do	do	British Hollow	Syphon Hollow		None.	None
Do	do	Beetown	Lead	G. Ewing	None.	None.
Do	Iowa	Mifflin	J. B. Huse & Co		20,000	
Do	do	do	Mifflin Min. Co		10,000	1,000,000
Do	do	do	Black Jack		6,000	300,000
Do	do	Linden	Diamond Grove	David Brown	12,000	360,000
Do	do	Mifflin	Black Jack		5,000	16,000
Do	do	Mineral Point	Hutchison & Co	John Hutchison	50,000	400,000
Do	do	Mineral Point	Riddle	Riddle & Paynter	1,000	90,000
Do	do	do	Mineral Point Hill	James Dunn		80,000
Do	do	do			3,000	130,000
Do	do	do	Poverty Ridge	Sleep & Vivian	1,030	80,000
Do	do	do	Terrill Lot	John Collins & Co	4,000	40,000
Do	do	do	Irish Diggings	William Coad & Co	2,000	14,000
Do	do	do	Perry, Boyn & Spenseley	Perry, Boyn, Spenseley & Arker	10,000	60,000
Do	do	Dodgeville		D. George & Co	50,000	
Do	do	do			10,120	
Do	do	do	Dodgeville			150,000
Do	do	Highland	Ohlerking	Charles Ohlerking	8,000	
Do	do	do	Flynn, Woodward & Co	Michael Flynn	50,000	3[illegible]0,000
Do	do	do			25,000	100,000
Do	do	do	Pechan & Zeman	Joseph Pechan		50,000
Do	do	Ridgeway	Union	Bennett, Munsly, Paull & Morris	100,000	
Do	do	do		Thomas Paull & Co	25,000	
Do	do	do	Ridgeway	Munday, Moon & Co	40,000	
Do	do	Dodgeville			30,000	
Do	do	Near Dodgeville	Holyhead	Thomas Williams		10,000
Do	do	"Survey" Dodgeville	Van Meter	Frank Vivian, Elisha Turre, John Simons, and Joseph Edwards.	120,000	
Do	do	Welch Hollow		Jones, Faraghar & Co	60,000	100,000
Do	do	Linden	Thomas & Falls	Thomas, Falls & E. George	4,000	500,000
Do	do	Dodgeville	Sobey & Co	J. Sobey, G. F., J. D. & J. Darey	100,000	1,400,000
Do	do	Linden	Blue Jacket		800	20,000
Do	do	Welch Hollow	Williams	Evan Williams	20,000	120,000
Do	do	Dodgeville		Thomas Parry	6,000	
Do	do	Linden	Faul	Henry Faul	20,000	150,000
Do	do	do	Morrison	David Morrison	10,000	80,000
Do	do	do	Lamblin	Thomas Lamblin	8,000	150,000
Do	do	do	Glanville	Glanville Bros	50,000	150,000
Do	do	do	Linden	Ross & Henry	100,000	2,080,000

a Not returned.

Directory of lead and zinc mines—Continued.

State or territory.	County.	Locality.	Name of mine.	Name of operator.	Lead.	Zinc.
					Pounds.	*Pounds.*
Wisconsin	La Fayette	Argyle	Mudd Branch	John Alderson	10,000	
Do	do	do	Mattas	William Knewstubb	10,000	
Do	do	Belmont	E. Thomas & Co	E. Thomas & Co	200,000	
Do	do	Benton	J. McMunn & McGuire	J. McMunn & McGuire	80,000	
Do	do	do	Williams & Alexander	Williams & Alexander	4,800	30,000
Do	do	Buncombe	Dry Bone	Henry Carpenter & Co	10,000	12,000
Do	do	Elk Grove	Coats & Barker	Coats, Barker & Stevens	25,000	
Do	do	Fayette	Loafborough	William Loafborough	72,000	
Do	do	Meeker's Grove	Dixon & Co	Dixon & Co	20,000	
Do	do	Shullsburgh	Excelsior	Samuel Rickert	528,168	
Do	do	Yellow Stone		James H. Campton	2,000	
Do	do	Elk Grove	Rablin	Goodman & Webster	None.	None.
Do	do	Meeker's Grove	Kitto & Co	Kitto & Co	6,000	100,000
Do	do	Shullsburgh	Elevator	Weatherby & Beebe	146,245	
Do	do	Meeker's Grove	Shirwin & Koner	Shirwin & Koner		160,000
Do	do	Shullsburgh	Dry Bone	William Deppe	*4,000*	*12,000*
Do	do	Meeker's Grove	Kasting & Hyns	Kasting & Hyns	3,000	200,000
Do	do	do	Hynes & Co	Hynes & Co		50,000
Do	do	do	Winn & Co	Winn & Co	4,000	100,000
Do	do	Near Hazel Green	Dry Bone	Wallace, Nash & Co	30,000	60,000
Do	do	Shullsburgh	Fraiser & Co	Fraiser & Co	5,000	

Directory of Smelting and Reduction Works.

State or territory.	County.	Locality.	Name of company.	Name of operator.	Production.	Amount.
Illinois	Cook	Chicago	Horn Silver Mining Co	Horn Silver Mining Co	Lead ... pounds	5,242,263
					Silver ... ounces	338,744
					Gold ... dollars	780
Do	Jo Daviess	East Galena	Galena Furnace	Richard Bowden	Lead ... pounds	278,894
Do	do	Sand Prairie	Stevens Lead Furnace	T. G. Stevens	do ... do	114,228
Do	do	Elizabeth	Green's Furnace	H. Green	do ... do	84,000
Do	do	Galena	Hughlett's Furnace	Thomas B. Hughlett	do ... do	838,225
Do	do	Sinsinawa	Lead Furnace	R. M. & W. Spenseley	do ... do	48,750
Do	La Salle	Peru	Illinois Zinc Co	(Stock Co.) A. Means, mgr	do ... do	476,780
					Slag lead ... do	80,000
					Spelter ... do	*8,286,264*
Do	do	La Salle	Kinsman Zinc Co	Kinsman Zinc Co	do ... do	792,000
Do	do	do	Matthewson & Higbee Zinc Co	Matthewson & Highbee Zinc Co	do ... do	12,016,794
Do	Madison	Collinsville	Lumaghi Zinc Works	Octavus Lumaghi	do ... do	711,980
Iowa	Dubuque	Centre Grove	Brunshill's Furnace	David brunshill	Lead ... do	210,000
Do	do	Asbury district	Simpson's Furnace	N. Simpson	do ... do	471,168
Do	do	Rock Dale	Furnace	William G. Watters	do ... do	713,636
Kansas	Cherokee	Galena	Picher Lead and Zinc Co	Picher Lead and Zinc Co	do ... do	462,948
Do	do	Weir City	Chicago Zinc and Min. Co	J. H. C. Gross	Spelter ... do	1,873,703
Do	do	Galena	South Side Min. and Mfg. Co	Stone, Grove & Price	Lead ... do	2,460,551
Do	do	do	Galena M. and S. Co	Galena M. and S. Co	do ... do	3,442,052
Do	Crawford	Pittsburgh	Lanyon & Co	Robert Lanyon	Spelter ... do	3,029,250
Maryland	Baltimore	Baltimore		Pope, Cole & Co	Copper ... do	179,051
Massachusetts	Bristol	Taunton	Crocker Bros.' Works	Crocker Bros		
Do	Suffolk	Boston	Revere Copper Works	Revere Copper Co		
Michigan	Wayne	Detroit	Detroit and Lake Superior Cu. Co.	(Stock Co.) J. R. Grout, agent	Copper ... *pounds*	*44,642,675*
Missouri	Cole	Decatur	Decatur Furnace	Lessenbard & Steffens	Lead ... do	42,000
Do	do	Russellville	Van Zandt's Lead Furnace	George Van Zandt	do ... do	32,160
Do	Franklin	Saint Clair	Northumberland Lead Co	W. C. Ford	do ... do	900,000
Do	Greene	Ash Grove	Walker's Lead Furnace	Ralph Walker	do ... do	*952,000*
Do	Jasper	Joplin	Granby Furnace	Granby Mining and Smelting Co		
Do	do	do	Joplin	Joplin Mining and Smelting Co	Lead ... pounds	247,024
					Slag ... do	67,150
Do	do	do	Lone Elm Mining and Smelting Co.	Lone Elm Mining and Smelting Co.	Lead ... do	17,055,238
Do	do	do	W. Joplin Lead and Zinc Co	W. Joplin Lead and Zinc Co	do ... do	4,648,780
Do	do	do	Picher Lead and Zinc Co	Picher Lead and Zinc Co	do ... do	4,441,796
					Slag ... do	985,005
					Carbonate lead ... do	23,911
Do	Jefferson	Antonia	Lerger's Lead Furnace	Jos. Lerger	Lead ... do	34,323
					Slag ... do	18,000
Do	do	Vallé's Mines	Vallé's Mines	Rozier & F. Le Vallé	Lead ... do	272,605
Do	Madison	Mine La Motte	Mine La Motte Smelting Works	R. Hazard	do ... do	3,965,760
					Nickel matte ... do	38,290

Directory of smelting and reduction works—Continued.

State or territory.	County.	Locality.	Name of company.	Name of operator.	Production.	Amount.
Missouri	Morgan	Rock Ford	Star Furnace	G. P. Clark	Lead ... pounds	120,000
Do	Newton	Granby	Granby Furnace	Granby Mining and Smelting Co	... do	.....
Do	Saint François	Bonne Terre	Desloge Lead Furnace	Desloge Lead Co	... do ... pounds	3,943,440
					Nickel and cobalt matte, pounds.	1,400,000
Do	... do	... do	Saint Joe Lead Co	Saint Joe Lead Co	Lead ... pounds	8,507,754
Do	... do	Vallé's Mines	Silver Springs Furnace	Chadbourne & Foster	... do ... do	43,200
Do	Saint Louis	South St. Louis	Glendale Zinc Works	Weyman & Co	Spelter ... do	2,502,427
Do	... do	Carondelet	Carondelet Zinc Works	Carondelet Zinc Co	... do ... do	1,056,000
Do	... do	South St. Louis	Missouri Zinc Co	Missouri Zinc Co	... do ... do	14,365,500
Do	... do	Saint Louis	Saint Louis Chemical and Zinc Works.	Page & Krausse	Spelter and zinc oxide	.....
Do	... do	... do	Saint Louis S. and Ref. Co	Saint Louis S. and Ref. Co	Silver ... ounces	2,814,802
					Gold ... do	7,897
					Lead ... pounds	11,355,392
Do	Washington	Potosi	Perry Furnace	J. P. & R. M. Bugg	... do ... do	471,380
Do	... do	Old Mines	Old Mines Lead Co	Old Mines Lead Co	... do ... do	495,545
Do	... do	Fourche à Renault.	Long's Furnace	Wm. Long	... do ... do	117,110
Do	... do	Kingston township.	McGready's Furnace	F. E. McGready	... do ... do	473,544
Do	... do	Higginbothams' lead mines.	Davis' Lead Furnace	A. D. Davis	... do ... do	43,200
Do	... do	Kingston Furnace.	Higginbothams' Lead Furnace	Z. F. Higginbothams	... do ... do	662,714
					Slag ... do	57,000
Do	... do	... do	Saint Louis Lead Mining Co	Saint Louis Lead Mining Co	Lead ... do	14,035
					Slag ... do	4,716
Do	... do	Old Mines	White's Lead Furnace	T. S. White	Lead ... do	125,000
Do	... do	Shibboleth	Shibboleth	John Latty	... do ... do	307,441
Do	... do	Palmer	Palmer Lead Co	Palmer Lead Co	... do ... do	363,462
					Slag ... do	14,800
Do	... do	Richwoods	Wilder's Lead Furnace	J. W. Wilder	Lead ... do	151,343
					Slag ... do	112,000
Do	... do	Hopewell Furnace.	Hopewell Furnace	Heirs of John Evans	Lead ... do	313,000
Do	... do	Richwoods	Flynn	T. Flynn	... do ... do	171,720
Nebraska	Douglas	Omaha	Omaha Smelting and Refining Works.	Omaha Smelting and Refining Co	Lead, silver, and gold	.....
New Jersey	Camden	Camden	American Nickel Works	Joseph Wharton	Nickel	.....
Do	Essex	Newark	New Jersey Zinc Works	New Jersey Zinc Co	Zinc oxide	.....
Do	... do	... do	Newark Smelting and Refining Works.	E. Balbach & Son	Lead, silver, and gold	.....
Do	Hudson	Jersey City	Passaic Zinc Works	Passaic Zinc Co	Spelter and zinc oxide	.....
Do	... do	Constable Hook	Bergen Point Zinc Works	F. Osgood & Co	... do	.....
North Carolina	Ashe	Ore Knob	Ore Knob	Ore Knob Copper Co	Copper	.....
Pennsylvania	Allegheny	Mansfield valley	Pennsylvania Lead Co	Pennsylvania Lead Co	Refined pig-lead ... pounds	23,800,000
					Antimonial lead ... do	300,000
					Gold ... ounces	2,030
					Silver ... do	1,710,000
					Cu. matte ... pounds	220,000
Do	... do	Pittsburgh	C. G. Hussey & Co	C. G. Hussey & Co	Cu. ingots ... do	387,458
Do	Chester	Phœnixville	Chemical Copper Co	Chemical Copper Co	.....	475,336
Do	Northampton	Bethlehem	Lehigh Zinc Works	Lehigh Zinc Co	Spelter and zinc oxide	.....
Tennessee	Jefferson	Leadvale	Leadvale Furnace	A. H. Gregg (receiver)	Lead	.....
Virginia	Pulaski	Martin's station	Bertha Zinc Works	Bertha Zinc Co	Spelter and zinc oxide	.....
Do	Wythe	Austinville	Austinville Furnace	Wytho Lead and Zinc Co	Lead	.....
Do	... do	Reed island	Bertha Furnace	Bertha Zinc Co	Spelter and zinc oxide	.....
Vermont	Orange	Ely	Vermont Copper Mining Co	Vermont Copper Mining Co	Copper	.....
Wisconsin	Grant	New Diggings	New Diggings Furnace	Thomas G. Stevens & Co	Lead ... pounds	491,521
					Slag ... do	100,800
Do	... do	... do	Democrat or George Lerkley	Thomas and George Lerkley	Lead ... do	605,270
					Slag ... do	35,169
Do	... do	Bectown	Hutchinson's Lead Furnace	Chris. Hutchinson	Lead ... do	340,811
Do	... do	Potosi	Lightfoot Furnace	... do	... do ... do	483,323
Do	... do	Platteville	Spensley & Straws	Spensley & Straws	... do ... do	368,582
Do	... do	Rockville	Ewing's Lead Furnace	A. W. Ewing	... do ... do	105,000
Do	Iowa	Mineral Point	J. & C. Spenseley	J. & C. Spenseley	... do ... do	242,739
Do	... do	... do	James Spenseley	James Spenseley	... do ... do	300,000
Do	... do	Dodgeville	Mundy, Pearce & Co	Mundy, Pearce & Co	... do ... do	219,037
Do	... do	Highland	Bennett, George & Co	Bennett, George & Co	... do ... do	226,872
Do	... do	Dodgeville	... do	... do	... do ... do	480,680
Do	La Fayette	Shullsburg	Estey Furnace	B. Spenseley	... do ... do	584,000
					Slag ... do	43,800
Do	... do	Shullsburg Br'ch	Hutchinson	T. Hutchison	Lead ... do	151,104
Do	... do	Hazel Green	Crawford, Mills & Co	John Fern	... do ... do	420,504

Directory of mines of the minor minerals.

ASBESTUS.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
Georgia	Fulton	Atlanta		Georgia Asbestos Mining Co	25
Maryland	Baltimore	Near Elysville		Gerald Emmart	2
Do	do	do		T. M. Hay	8
Do	do	do		Anthony Salmon	10
Do	Harford	Pylesville		H. C. Jenkins	20
New York	Richmond	Near Tompkinsville	Fielders Park	William Moffatt	50
North Carolina	Caldwell	8 miles west of Lenoir		W. M. Puett	None.
Do	Mitchell	Bakersville	Asbestos mine	Heap & Irby	None.
South Carolina	Pickens	Near Walhalla	Mickler mine	J. C. Mickler	35

ASPHALTUM.

					Tons.
California	Los Angeles	Eight miles west of Los Angeles	Rancho La Brea		300
Do	Santa Barbara	One mile south of Goleta	Moore Bros. Asphaltum		144

BARYTES.

					Tons.
Georgia	Bartow	Stogall's station		Woodward's barytes	200
Missouri	Washington	Mineral point	Boas		420
Do	do	Kingston furnace	Saint Louis Lead Mining Co		239
North Carolina	Gaston	Chowder's mountain	Chowder's Mountain Barytes		None.
Pennsylvania	Franklin	Mont Alto	Stamey	Mont Alto Iron Co	285
Virginia	Pittsylvania	Pullen's store	Morris	John S. Morris	1,904
Do	do	Berger's store	George H. Bliss & Co	George H. Bliss & Co	560

CHROMIC IRON.

					Tons.
California	San Luis Obispo	San Luis Obispo	London Iron mine	London Chrome Iron Mining Co	809
Do	do	4½ miles northeast of San Luis Obispo	Flores Iron mine		1,344
Maryland	Baltimore			Lake Chrome Mineral Co	100
Do	Harford	Jarrettsville	Jarrettsville	Tyson Mining Co	10
Pennsylvania	Lancaster	Wood mine	Wood mine	do	300

COBALT.

					Pounds.
Pennsylvania	Lancaster	Bart township	Gap Nickel mine	Joseph Wharton	10,337

CORUNDUM (EMERY).

					Tons.
Massachusetts	Hampden	Chester	Chester Emery mine	James T. Ames	600
North Carolina	Clay	Near Haysville	Buck Creek		None.
Do	Macon	Near Franklin	Corundum Hill	Hamden Emery Co	414
Do	Madison	Democrat	Carter mine	William H. Carter	None.
Do	do	Newlin	North Mine Co	North Mine Co	30

GARNET.

					Tons.
Pennsylvania	Delaware	Bethel township		Herman Behr & Co	60

GLASS SAND.

					Tons.
Illinois	La Salle	9 miles east of La Salle		De Steiger Glass Co	360
Indiana	Harrison	Posey township		Samuel Lawson	1,500
Do	do	do		W. De Pauw	2,000
Do	Washington	Jackson township		De Pauw American Plate Glass Co	2,924
Maryland	Anne Arundel	Near Waterbury		S. P. Spears	8,000
Do	do	do		Waite & Kerr	5,000
Do	do	Fork Creek		Edward Kerr	4,125

Directory of mines of the minor minerals—Continued.

GLASS SAND—Continued.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
Massachusetts	Berkshire	Cheshire		Cheshire White Quartz Sand Co	2,000
Do	do	do	Gordon mine	Berkshire Glass Sand Co	5,000
Do	do	do		L. L. Brown	1,000
New Jersey	Camden	Near Winslow		Hay & Co	2,275
Do	Cumberland	Maurice river, below Millville		Samuel Hilliard	9,000
Do	do	South Vineland		J. Burns	1,500
Do	do	Near Bridgeton		Benjamin Lupton	3,000
Do	do	South Vineland		Osborn Bidwell	3,000
Do	Gloucester	Near Sicklestown		S. P. Spears	3,000
Do	do	do		Joseph Tonrelson	700
Do	do	do		J. C. Semmerman	1,000
Do	do	do		Jacob Sickler	3,000
Do	do	Glassborough		Arthur Downer	3,000
Do	Salem			William Garrison	3,120
New York	Oneida	Near Durhamville		William Williams	600
Do	do	do		John Iles	1,500
Do	do	do		Andrew Durkee	2,000
Do	do	Dunbarton		Michael Butler	425
Do	Oswego	Cleveland		Charles Whitney	800
Do	do	Burnhard's Bay		J. B. Sicklés	2,000
Do	do	do		S. P. Winn	800
Pennsylvania	Huntingdon			Samuel Hatfield, jr	5,000
Do	do			B. R. Faust & Son	12,000
Do	do			J. M. Maguire & Co	12,000
Do	Mifflin	McVeytown		Bradley & Dull	10,000
Do	do	Lewistown		Juniata Sand Co	12,523

GRAPHITE.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
New York	Essex	Ticonderoga		Dixon Crucible Company	300
North Carolina	Wake	Near Raleigh	Heron mine	Carter, Pullen & Tucker	200
Pennsylvania				Graphite Mining and Manufacturing Co.	440

HYDRAULIC CEMENT.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Barrels.
Georgia	Bartow	Cement	Waring Cement Works		10,000
Illinois	La Salle	Utica		James Clark	60,000
Do	do	do		John O. Pierson	60,000
Maryland	Alleghany	Cumberland		Cumberland Hydraulic Cement and Manufacturing Co.	4,000
Do	Washington			Bridges & Henderson	21,794
Michigan	Kalamazoo	Kalamazoo		Eagle Portland Cement Co	7,500
New York	Erie			Akron Cement Works	76,200
Do	do			Buffalo Cement Co., limited	103,367
Do	do			J. E. Newman & Co	82,517
Do	Onondaga	Fayetteville		Bangs & Gaynor	40,000
Do	Ulster			Newark Lime and Cement Co	220,530
Do	do			Connelly & Schafer	102,000
Do	do			New York and Rosendale	122,231
Do	do			Lawrenceville Cement Co	114,000
Do	do			James H. Oandenark	40,000
Do	do			Sherman Bros	55,000
Do	do			F. O. Norton	None.
Do	do	Binnewater			200,000
Do	do			Rosendale Cement Co	None.
Do	do			James Cement Co	53,564
Do	do			Hudson River Cement Co	80,000
Do	do			New York Cement Co	34,000
Do	do			Newark and Rosendale	137,000
Do	do			Cement Co	
Do	do			Warren Ackerman	63,000
Do	do			Lawrence Cement Co	132,000
Pennsylvania	Lawrence	Wampum		Wampum Cement and Lime Co. (lim.)	25,000
Do	Lehigh	Coplay		Coplay Cement Co	55,000
Virginia	Rockbridge			H. O. Locher & Co	4,050
West Virginia	Jefferson	Near Shepherdstown		Harry W. Blunt	4,500
Wisconsin	Milwaukee	Milwaukee	Milwaukee Cement Co.'s Works	Milwaukee Cement Co	100,000

Directory of mines of the minor minerals—Continued.

HYDRAULIC LIME.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Bushels.
New York	Onondaga			M. Britton & Son	50,000
Do	do			E. B. Alvord & Co	149,932
Do	do			Robert Dunlap	60,000
Do	do			Bangs & Gaynor	300,000
Do	do			J. Sheedy & Son	90,000
Do	do			Behan & Co	100,000

INFUSORIAL EARTH.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
Maryland	Calvert	Opposite Nottingham		Popplein Silicated Phosphate Co	1,800
New Jersey	Morris	Near Drakesville	Infusorial Earth	D. J. Cook	33

KAOLIN.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
Delaware	New Castle			Israel Locy	3,010
Do	do			Hamilton Graham, jr	2,500
Do	do			Diamond State Kaolin Co	2,000
Do	do			Golding & Graham	7,000
Indiana	Lawrence	Spice Valley township	Lawrence County Kaolin	Pennsylvania Salt Manufacturing Co	1,000
Maryland	Cecil	Broad creek		William Hunna	250
New York	Dutchess	East Fishkill	American Kaolin	S. P. Wright	125
South Carolina	Aiken	Bath	Excelsior	R. McNamee & Co	5,000
Do	do	Beech Island	Beech Island Clay Works	Thomas J. Davis	1,792

MANGANESE.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Tons.
Georgia	Bartow	Cartersville	Pyrolusite Manganese Mining Co	B. Woodward and W. H. Hackett	6,720
Virginia	Augusta	Turks gap	Turks Gap	Crimora Mining Co	3,050
Do	Campbell	Near Combined locks		W. H. Barclay	101
Do	do	Near Six-Mile Bridge		do	134
Do	Shenandoah	Paddy creek		Jos. M. Trask	84
Do	do	Johnson township		Powell's Fort Mining Co	624

MAGNESIAN LIMESTONE.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Barrels.
Georgia	Bartow	Four miles from Cartersville		Ladd's Lime Works	15,000
Do	Catoosa	Graysville		Catoosa Lime Works	48,000

MICA.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Pounds.
Maine	Oxford	Gilead	Peaked Hill	Maine Mica Mining Co	2,000
Massachusetts	Hampden	Chester		Chester Mica and Porcelain Co	1,000
New Hampshire	Grafton	Groton		American Mica Mining Co	2,000
Do	do	Grafton	Ruggles Mica Establishment	do	9,000
Do	do	Groton township		Hartford Mica Mining Co	25,000
Do	do	do		Crystal Mica Co	None.
New Jersey	Warren	Broadway	Broadway Mica	J. C. Merrill	None.
North Carolina	Buncombe		Yates Knob	Kelsey, Ray & Co	None.
Do	do		Busher	do	None.
Do	do	Near Cooper's station	Brushy Mountain	do	None.
Do	do	do	Balsam Gap	do	None.
Do	Haywood	Waynesville	Big and Spruce Ridge	W. F. Gleason	1,000
Do	Jackson	Cullowhee	Davies or Forest Hill	D. D. Davies & Co	700
Do	do	do	Pressly		300
Do	do	Near Webster	Buchanan		500
Do	do	do	Trady	J. S. Bowers & Son	None.
Do	do	do	Shelton		None.
Do	do		Pine Mountain		None.
Do	do		Lesp. Mountain		None.
Do	do		Shell Ridge		None.

Directory of mines of the minor minerals—Continued.

MICA—Continued.

State or territory.	County.	Locality.	Name of mine or company.	Name of operator.	Production.
					Pounds.
North Carolina	Jackson	Near Webster	Stillwell	J. S. Bowers & Son	None.
Do	McDowell	Tom's creek	Tom's Creek	John Hymns & Bro	500
Do	Macon	Franklin	Iotla & Iola	Reid & Siler	2,000
Do	do	Burningtown	Burningtown	J. S. Bowers & Son	4,000
Do	do	Franklin	Abernethy	do	None.
Do	do	do	Saunders	do	None.
Do	do	do	Higdon	Higdon & McLean	None.
Do	do	do	Lyle's Mill	Dr. J. M. Lyle	None.
Do	do	do	Gayer	J. F. Ray & Bro	None.
Do	do	do	Lyle's Knob	A. S. Bryson	None.
Do	do	do	Smith	Rev. C. D. Smith	None.
Do	do	do	Allmond	N. G. Allmond	None.
Do	do	do	Raby	H. H. Raby	None.
Do	do	do	Moore	Col. T. B. Siler	None.
Do	do	do	Bald Mountain		None.
Do	do	do	Hall & Welch	Brooks & Co	None.
Do	do	do	Thorn Mountain	A. S. Bryson	None.
Do	do	do	Beasley, Bradley, Butte, and Mien City.		None.
Do	do	Franklin	Roaring Fork	C. D. Smith	None.
Do	do	do	Rocky Face	Ewing & Reid	None.
Do	Mitchell	Spruce Pine	Deake	J. K. Irby & Co	4,000
Do	do	Bakersville	Sink Hole	J. C. Phillips	175
Do	do	Hawk Mine	Hawk Mine	Miller & Green	600
Do	do	do	Spread Eagle	T. C. Green	2,667
Do	do		Young	D. M. Young	3,700
Do	do	Penland	Black Rock	J. K. Irby & J. M. Buchanan	1,200
Do	do	Hawk Mine	Clarissa	Thomas C. Green	18,000
Do	do	Spruce Pine	Childer	Gore, Gregory & Co	600
Do	do	Plumtree	Fenson Creek	Samuel Lander	None.
Do	do	Spruce Pine	Chestnut Flat	J. D. English	None.
Do	do	Bakersville	Point Pizzle		None.
Do	do	Spruce Pine	Chalk Mountain	Cox & Autrey	None.
Do	do	Hawk Mine	Hawk Mine No. 2		None
Do	do	Bakersville	Randolph	J. K. Irby	None.
Do	do		Reed	Samuel Lander	None.
Do	do	Spruce Pine	McHone		None.
Do	do	Plumtree	Lander	Samuel Lander	None.
Do	do		Blalock	J. K. Irby	None.
Do	do		Hollifield		None.
Do	do		Rebel's Creek		None.
Do	do	Spruce Pine	Knob	J. D. English	None.
Do	do	Plumtree	Buch Hill	J. G. Wiseman and others	None.
Do	do	Spruce Pine	Crabtree Mountain	Cox & McNeil	None.
Do	do		Double Head	Samuel Lander	None.
Do	do	Plumtree	Franklin	do	None.
Do	do	Spruce Pine	Martin Wiseman		None.
Do	do		Lich Ridge	James McKinney	None.
Do	do		Westall	Gore, Gregory & Co	None.
Do	do	Spruce Pine	Grassy Creek		None.
Do	do	do	Rich Isaac		None.
Do	Yancey	Burnsville	Ray	Young & Proffitt	2,727
Do	do	Selo	James Gibbs	Moore & Bergen	200
Do	do		Zeff. Young	do	None.
Do	do		John Gibbs		None.
Do	do		Josh. Young		None.
Do	do		Seven-Mile Ridge		None.
Do	do		Black Mt. Westall	J. K. Irby	None.
Do	do		Poll. Robinson	Harry Moore	None.

MINERAL SOAP.

					Tons.
California	Ventura	9 miles west of San Buena Ventura.	Ventura Rock Soap		None.
Nevada	Elko	16 miles south of Elko	Elko Mineral Soap Deposit		50

Directory of mines of the minor minerals—Continued.

NICKEL.

State or territory.	County.	Locality.	Name of mine or capacity.	Name of operator.	Production.
					Pounds.
Massachusetts	Middlesex	Dracut	Dracut Nickel M. Co		13,440
					Matte, pounds.
Missouri	Madison	Mine Lamotte			38,203
Do	Saint François	Bonne Terre	St. Joe Lead Mine		20,000
New Jersey	Warren	Brass Castle	Witty	C. F. Staates	None.
					Pounds.
Pennsylvania	Lancaster	Bart township	Gap Nickel Mine	Jos. Wharton	200,780

NICKEL AND COBALT.

					Pounds.
Missouri	Saint François	Bonne Terre	Doslogo		11,532

OCHER.

					Tons.
New Jersey	Monmouth	Near Englishtown		McGee, Clayton, Brighton & Van Winkle.	300
Vermont	Rutland			Crown Point Mineral Paint Co	100
Do	do			Brandon Mining Co	1,000
Do	do			Brandon Kaolin and Paint Co	450
Virginia	Page			Oxford Ocher Co	875
Do	Rockingham	Near Kerzletown	Hamilton	A. M. Hamilton	112

OIL-STONE.

					Pounds.
Indiana	Orange			A. Wolfington	20,000
Do	do	French Lick township		T. W. Braxton & Sons	150,000
Do	do				30,000

PYRITES.

					Tons.
New York	Saint Lawrence	De Kalb Junction	Bellings	G. H. Bellings	2,240

QUARTZ AND FELDSPAR.

					Tons.
Maryland	Cecil	Conowingo		B. G. & J. C. Smith	1,475
Do	Harford	Castleton		Trenton Flint and Spar Co	600
Do	do			J. & William P. Husband	1,400
Do	do			James T. Knight	351
Do	do			Jacob Supper	200
Massachusetts	Hampden			N. E. Judd	400
Do	do			Chester Mica and Porcelain Co	3,000
Michigan	Marquette	Goose lake		D. McVichie	5,000
Do	do	Carp river	Carp River Iron Co	Powell Bros	3,138
New Hampshire	Sullivan	Springfield		Globe Mica Mining Co	3,500
New York	Washington	Fort Ann		Bridgeport Wood Finishing Co	672
Do	do	do		A. Stevens	896
Do	do	do		R. N. Palmer	118
Do	do	do		F. M. Owen	221

SCYTHE-STONE.

					Gross.
New Hampshire	Grafton			A. E. Pike	5,000
Vermont	Washington			Hone and Scythe-Stone Co	100
Do	do			J. Wood & Son	75
Do	Windsor			A. B. Freeman & Son	500

Directory of mines of the minor minerals—Continued.

SHOEMAKERS' SANDSTONE.

State or territory.	County.	Locality.	Name of mine or capacity.	Name of operator.	Production.
					Pounds.
Indiana	Orange	French Lick township		T. W. Braxton & Sons	100,000
Do	do				50,000

SOAPSTONE.

State or territory.	County.	Locality.	Name of mine or capacity.	Name of operator.	Production.
					Tons.
Georgia	Cherokee	Holly Springs	Soapstone Quarry	Kerr & Ladd	200
Do	Murray	Near Dalton		William C. Tilton	120
Maryland	Baltimore	14 miles from Baltimore		Baltimore and North Branch Quarry Co.	300
New Hampshire	Hillsborough	Francestown	Soapstone Quarry	Williams & Co	2,000
North Carolina	Cherokee	Nottala	Brown	W. R. Johnston	450
Do	do	do	Hughes	J. Hughes	None.
Do	Swain	Nantehala river	Jones' Quarry	Beal & Hughes	60
Do	Franklin	Marion	Z. A. Ryder and D. O. Hitner	Z. A. Ryder & D. O. Hitner	11
Do	Montgomery	La Fayette station		Samuel F. Prince	4,000
Do	Windham			Butterfield & Smith	400
Do	do	Chester		Ira Holden	500
Do	Windsor			A. B. Freeman & Son	400

TALC.

State or territory.	County.	Locality.	Name of mine or capacity.	Name of operator.	Production.
					Tons.
New York	Saint Lawrence	Gouverneur township		Agolite Fiber Co	1,800
Do	do	do		Gouverneur Pulp Co	2,400
Do	do	do		Gouverneur Talc Co	10

WHETSTONE.

State or territory.	County.	Locality.	Name of mine or capacity.	Name of operator.	Production.
					Gross.
Vermont	Orleans		Willoughby Lake Quarry	J. C. Orne	1,400
Do	do	Near Evansville	Lamoville Quarry	A. F. Pike	1,500

Schedules were sent to Howe's Cave Lime and Cement Co., and to Howe's Cave Association, New York, both in active business, but no answers were received.