

Chapter VI.—COAL CONSUMED

Statistics in regard to the consumption of coal in manufacturing industries are presented in this chapter. Data on the consumption of coal were collected at the censuses for 1927, 1923, and 1919, but not for those for 1925 and 1921.

The total for 1927, 216,442,337 tons, represents a decrease of approximately 23,000,000 tons, or 9.7 per cent, as compared with 239,706,753 tons reported for 1923. Part of the decrease shown for the 4-year period is accounted for by declines of about 7,000,000 tons in the consumption by establishments in the iron and steel industry and about 8,000,000 tons in the consumption by coke plants.

This decrease in coal consumption during the 4-year period in question is not due to any decrease in the use of steam power in manufacturing establishments. In fact, the combined rated capacity of steam engines and turbines in manufacturing establishments increased slightly between 1923 and 1927. This rather considerable decrease in coal consumption, accompanied by a slight increase in the use of steam power, has been influenced in varying degrees by several factors, of which the following are the most important: (1) The increase in the use of the efficient steam turbine, accompanied by a decrease in the use of the inefficient reciprocating engine; (2) the increased efficiency of coal-burning power plants; (3) the substitution of fuel oil for coal in many plants.

Moreover, it must be remembered that coal is used in some manufacturing industries for purposes other than the generation of steam—for example, in the manufacture of steel, gas and coke, clay products, and bakery products—and that the proportions which the amounts thus consumed form of the total consumption vary somewhat from census to census.

For these reasons no attempt should be made to estimate, from the census figures, the coal consumption per horsepower of steam engines and turbines.

TABLE 1.—COAL CONSUMED, FOR THE UNITED STATES, 1927, 1923, AND 1919, AND FOR GEOGRAPHIC DIVISIONS AND STATES, 1927

UNITED STATES		COAL CONSUMED		
		Total ¹ (tons, 2,000 pounds)	Anthracite (tons, 2,240 pounds)	Bituminous (tons, 2,000 pounds)
1927	.....	216, 442, 337	10, 423, 500	204, 768, 017
1923	.....	239, 708, 753	13, 103, 619	² 225, 030, 700
1919	.....	219, 332, 078	14, 299, 951	203, 316, 133

DIVISION AND STATE	Coal consumed ¹ (tons, 2,000 pounds)	DIVISION AND STATE	Coal consumed ¹ (tons, 2,000 pounds)
GEOGRAPHIC DIVISIONS, 1927:		SOUTH ATLANTIC:	
New England	10, 818, 230	Delaware	452, 157
Middle Atlantic	77, 835, 382	Maryland	3, 160, 249
East North Central	81, 414, 095	District of Columbia	79, 094
West North Central	10, 264, 473	Virginia	2, 489, 605
South Atlantic	15, 758, 382	West Virginia	5, 956, 798
East South Central	13, 237, 264	North Carolina	1, 359, 612
West South Central	1, 424, 142	South Carolina	1, 841, 250
Mountain	4, 926, 428	Georgia	1, 277, 846
Pacific	763, 941	Florida	141, 771
NEW ENGLAND:		EAST SOUTH CENTRAL:	
Maine	1, 047, 749	Kentucky	2, 227, 436
New Hampshire	862, 051	Tennessee	2, 504, 531
Vermont	207, 552	Alabama	8, 038, 554
Massachusetts	5, 478, 838	Mississippi	468, 743
Rhode Island	887, 972	WEST SOUTH CENTRAL:	
Connecticut	2, 334, 068	Arkansas	128, 193
MIDDLE ATLANTIC:		Louisiana	571, 661
New York	17, 412, 576	Oklahoma	312, 844
New Jersey	8, 746, 880	Texas	411, 444
Pennsylvania	51, 675, 926	MOUNTAIN:	
EAST NORTH CENTRAL:		Montana	449, 455
Ohio	28, 507, 532	Idaho	141, 026
Indiana	16, 740, 185	Wyoming	115, 580
Illinois	18, 053, 799	Colorado	2, 757, 337
Michigan	12, 981, 765	New Mexico	97, 753
Wisconsin	5, 130, 814	Arizona	205, 326
WEST NORTH CENTRAL:		Utah	946, 274
Minnesota	2, 653, 235	Nevada	213, 677
Iowa	2, 226, 595	PACIFIC:	
Missouri	3, 537, 194	Washington	666, 451
North Dakota	156, 949	Oregon	59, 537
South Dakota	140, 079	California	37, 953
Nebraska	678, 715		
Kansas	871, 706		

¹ Calculated by adding the number of tons of bituminous coal and the number of tons of anthracite reduced to a 2,000-pound basis.

² Revised.

TABLE 2.—COAL CONSUMED, BY INDUSTRY GROUPS AND BY INDUSTRIES, FOR THE UNITED STATES: 1927

GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)	GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)
All industries, total	216, 442, 337	INDUSTRY—continued	
INDUSTRY GROUP		Bread and other bakery products	1, 090, 975
1. Food and kindred products.....	14, 535, 897	Brooms	10, 734
2. Textiles and their production.....	9, 458, 358	Brushes, other than rubber	23, 181
3. Forest products.....	3, 354, 034	Butter	444, 169
4. Paper and paper products.....	10, 202, 495	Buttons	41, 560
5. Printing, publishing, and allied industries.....	440, 510	Candles	10, 697
6. Chemicals and allied products.....	10, 966, 115	Canning and preserving: Fish, crabs, shrimps, oysters, and clams	35, 679
7. Products of petroleum and coal.....	88, 877, 041	Canning and preserving: Fruits and vegetables; pickles, jellies, preserves, and sauces	483, 377
8. Rubber products.....	2, 390, 894	Car and general construction and repairs, electric-railroad repair shops	71, 845
9. Leather and its manufactures.....	1, 586, 761	Car and general construction and repairs, steam-railroad repair shops	7, 260, 814
10. Stone, clay, and glass products.....	24, 803, 226	Card cutting and designing	6, 807
11. Iron and steel and their products, not including machinery.....	25, 788, 530	Cardboard, not made in paper mills	5, 170
12. Nonferrous metals and their products.....	4, 762, 282	Carpets and rugs, rag	7, 779
13. Machinery, not including transportation equipment.....	5, 913, 872	Carpets and rugs, wool, other than rag	350, 714
14. Transportation equipment, air, land, and water.....	3, 594, 546	Carrriage, wagon, sleigh, and sled materials	2, 375
15. Railroad repair shops.....	7, 332, 659	Carriages and sleds, children's	18, 547
16. Miscellaneous industries.....	2, 435, 117	Carriages, wagons, sleighs, and sleds	40, 080
INDUSTRY		Cars, electric and steam-railroad, not built in railroad repair shops	526, 761
Agricultural implements	391, 334	Cash registers, adding machines, and calculating machines	52, 814
Aircraft and parts	6, 129	Caskets, coffins, burial cases, and morticians' goods	91, 462
Alcohol, ethyl	125, 960	Cast-iron pipe	149, 789
Aluminum manufactures	136, 756	Cereal preparations	10, 043, 224
Ammunition and related products	162, 661	Cheese	139, 896
Artificial and preserved flowers and plants	2, 026	Chemicals, not elsewhere classified	4, 830, 852
Artificial leather	59, 845	China firing and decorating, not done in potteries	1, 647
Artificial limbs	467	Chocolate and cocoa products, not including confectionery	94, 915
Artists' and draftsmen's materials	14, 712	Cigars and cigarettes	135, 099
Asbestos products, other than steam packing or pipe and boiler covering	110, 933	Clay products (other than pottery) and nonclay refractories	9, 148, 780
Asphalted-felt-base floor coverings	70, 517	Cleaning and polishing preparations	15, 718
Awnings, tents, sails, and canvas covers	9, 820	Clocks, time-recording devices, and clock movements	39, 795
Babbitt metal, white metal, type metal, and solder	19, 280	Cloth sponging and refinishing	1, 030
Bags, other than paper, not made in textile mills	28, 642	Clothing (except work clothing), men's, youths' and boys', not elsewhere classified	194, 391
Bags, paper, exclusive of those made in paper mills	16, 614	Clothing, women's, not elsewhere classified	18, 445
Baking powders, yeast, and other leavening compounds	199, 285	Clothing and spice, roasting and grinding	18, 662
Baskets and rattan and willow ware, not including furniture	13, 166	Coke, not including gas-house coke	74, 426, 591
Belting, other than leather and rubber, made from purchased fabrics	10, 431	Collars, men's	16, 424
Belting, leather	18, 898	Combs and hairpins, not made from metal or rubber	4, 607
Beverages	555, 694	Compressed and liquefied gases	115, 689
Billiard and pool tables, bowling alleys, and accessories	10, 054	Concrete products	74, 542
Blacking, stains, and dressings	10, 886	Condensed and evaporated milk	608, 639
Bluing	1, 394	Confectionery	326, 275
Bolts, nuts, washers, and rivets, not made in rolling mills	96, 049	Cooperage	53, 287
Bone black, carbon black, and lamp-black	5, 846	Copper, tin, and sheet-iron work, including galvanized-iron work, not elsewhere classified	7, 854
Bookbinding and blank-book making	21, 035	Cordage and twine	99, 923
Boot and shoe cut stock, not made in boot and shoe factories	33, 133	Cork products	45, 456
Boot and shoe findings, not made in boot and shoe factories	23, 040	Corn sirup, corn oil, and starch	1, 378, 536
Boots and shoes, other than rubber	321, 123	Corsets and allied garments	19, 212
Boots and shoes, rubber	94, 889	Cotton goods	2, 982, 024
Boxes, cigar, wooden	8, 167	Cotton small wares	52, 396
Boxes, paper and other, not elsewhere classified	101, 508	Crucibles	6, 558
Boxes, wooden, except cigar boxes	32, 032	Cutlery (not including silver and plated cutlery) and edge tools	73, 937
Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper, not specifically classified	615, 609		

TABLE 2.—COAL CONSUMED, BY INDUSTRY GROUPS AND BY INDUSTRIES, FOR THE UNITED STATES: 1927—Continued

GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)	GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)
INDUSTRY—continued		INDUSTRY—continued	
Dairymen's supplies; creamery, cheese-factory, and butter-factory equipment; and poultrymen's and apiarists' supplies	42,384	Grease and tallow, not including lubricating greases	339,879
Dental goods, including dental-laboratory work	9,772	Grindstones, pulpstones, and millstones	7,061
Doors, shutters, and window sash and frames, metal	21,510	Haircloth	3,684
Drug grinding	37,868	Hair work	81
Druggists' preparations	77,813	Hand stamps and stencils and brands	2,728
Dyeing and finishing textiles	1,834,627	Handkerchiefs	4,380
Electrical machinery, apparatus, and supplies	1,524,219	Hardware, not elsewhere classified	202,358
Electroplating	6,687	Hat and cap materials, men's	20,200
Embroideries	13,573	Hats and caps, except felt and straw	6,261
Emery wheels and other abrasive and polishing appliances	51,752	Hats, fur-felt	109,367
Enameling and japanning	8,560	Hats, men's, straw	12,430
Engines, turbines, and water wheels	425,235	Hats, wool-felt	17,553
Engravers' materials	169	Hones, whetstones, and similar products	2,720
Engraving (other than steel, copper-plate, or wood), chasing, etching, and die-sinking	1,386	Horse blankets, fly nets, and related products	4,704
Engraving, steel and copperplate, and plate printing	6,820	Horseshoes, not made in rolling mills	2,135
Engraving, wood		House-furnishing goods, not elsewhere classified	40,046
Envelopes	26,844	Ice cream	289,031
Excelsior	3,875	Ice, manufactured	1,706,142
Explosives	269,829	Ink, printing	37,846
Fancy and miscellaneous articles, not elsewhere classified	18,495	Ink, writing	2,214
Feathers, plumes, and manufactures thereof		Instruments, professional and scientific	32,573
Feeds, prepared, for animals and fowls	75,129	Iron and steel: Blast furnaces	
Felt goods, wool or hair	85,706	Iron and steel: Steel works and rolling mills	22,609,470
Fertilizers	147,406	Iron and steel, processed	189
Files	19,223	Ivory, shell, and bone work, not including buttons, combs, or hairpins	1,378
Firearms	26,071	Jewelry	10,940
Fire extinguishers, chemical	1,581	Jewelry and instrument cases	2,001
Fireworks	9,260	Jute goods	25,724
Flags and banners	2,272	Knit goods	737,144
Flavoring extracts and flavoring sirups	140,584	Labels and tags	15,721
Flax and hemp, dressed	2	Lace goods	62,658
Flour and other grain-mill products	668,855	Lapidary work	87
Food preparations, not elsewhere classified	131,185	Lard substitutes and vegetable cooking oils	151,150
Forgings, iron and steel, not made in steel works or rolling mills	371,460	Lasts and related products	11,798
Foundry and machine-shop products, not elsewhere classified	2,855,823	Lead: Bar, pipe, and sheet	8,113
Foundry supplies	39,246	Leather goods, not elsewhere classified	3,964
Fuel, manufactured	12,882	Leather: Tanned, curried, and finished	1,140,719
Fur goods	2,938	Lime	1,017,320
Furnishing goods, men's, not elsewhere classified	17,720	Linen goods	29,321
Furniture, including store and office fixtures	1,078,253	Linoleum	201,596
Furs, dressed	26,638	Liquors, vinous	39,262
Galvanizing and other coating, not done in rolling mills	2,821	Lithographing	38,893
Gas and electric fixtures; lamps, lanterns, and reflectors	60,613	Locomotives, not made in railroad repair shops	240,521
Gas machines and gas and water meters	10,238	Lubricating greases, not made in petroleum refineries	10,941
Gas, manufactured, illuminating and heating	9,348,488	Lumber and timber products, not elsewhere classified	1,013,680
Glass	2,613,103	Macaroni, spaghetti, vermicelli, and noodles	33,791
Glass cutting, staining, and ornamenting	8,536	Machine tools	164,655
Gloves and mittens, cloth or chiefly cloth, made from purchased fabrics	8,600	Malt	94,945
Gloves and mittens, leather	7,382	Marble, granite, slate, and other stone products	246,672
Glue and gelatin	426,799	Matches	55,330
Gold and silver, leaf and foil	442	Mats and matting, grass and coir	3,417
Gold, silver, and platinum, reducing and refining, not from the ore	4,856	Mattresses and bed springs, not elsewhere classified	39,755
Graphite, ground and refined	7,340	Metal-working machinery, other than machine tools	24,283
		Millinery	20,470
		Minerals and earths, ground or otherwise treated	331,866
		Mirror and picture frames	15,492
		Mirrors, framed and unframed	26,767
		Models and patterns, not including paper patterns	5,533

TABLE 2.—COAL CONSUMED, BY INDUSTRY GROUPS AND BY INDUSTRIES, FOR THE UNITED STATES: 1927—Continued

GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)	GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)
INDUSTRY—continued		INDUSTRY—continued	
Motion pictures, not including projection in theaters.....	5, 202	Roofing materials, not including wood, slate, burnt tile, asbestos, or metal other than metal shingles and ceilings.....	240, 860
Motor-vehicle bodies and motor-vehicle parts.....	1, 082, 621	Rubber goods, other than tires, inner tubes, and boots and shoes.....	653, 783
Motor vehicles, not including motor cycles.....	1, 439, 965	Rubber tires and inner tubes.....	1, 042, 222
Motor cycles, bicycles, and parts.....	15, 590	Saddlery and harness.....	9, 627
Mucilage, paste, and other adhesives, not elsewhere classified.....	7, 561	Safes and vaults.....	27, 483
Musical-instrument materials: Piano and organ.....	39, 095	Salt.....	710, 511
Musical instruments and parts and materials, not elsewhere classified.....	9, 190	Sand-lime brick.....	28, 779
Musical instruments: Organs.....	11, 237	Sandpaper, emery paper, and other abrasive paper and cloth.....	11, 904
Musical instruments: Pianos.....	149, 791	Sausage, meat puddings, headcheese, etc., and sausage casings, not made in slaughtering and meat-packing establishments.....	26, 631
Nails, spikes, etc., not made in rolling mills.....	17, 068	Saws.....	33, 838
Needles, pins, hooks and eyes, and snap fasteners.....	18, 167	Scales and balances.....	18, 952
Nets and seines.....	3, 571	Screw-machine products.....	30, 496
Oil, cake, and meal, cottonseed.....	608, 269	Screws, wood.....	15, 480
Oil, cake, and meal, linseed.....	74, 869	Sewing machines, cases, and attachments.....	101, 182
Oils, essential.....	10, 458	Ship and boat building, steel and wooden, including repair work.....	221, 957
Oils, not elsewhere classified.....	89, 316	Shirts.....	45, 112
Oleomargarine and other butter substitutes, not made in slaughtering and meat-packing establishments.....	27, 388	Signs and advertising novelties.....	47, 468
Optical goods.....	4, 234	Silk manufactures.....	502, 596
Paints and varnishes.....	737, 240	Silversmithing and silverware.....	13, 134
Paper.....	9, 759, 699	Slaughtering and meat packing, wholesale.....	3, 516, 729
Pulp (wood and other fiber).....	120, 365	Smelting and refining, copper.....	1, 069, 544
Paper goods, not elsewhere classified.....	59	Smelting, and refining, lead.....	197, 233
Paper patterns.....	151, 377	Smelting and refining, metals other than gold, silver, or platinum, not from the ore.....	91, 687
Patent and proprietary medicines and compounds.....	584, 950	Smelting and refining, zinc.....	2, 100, 028
Paving materials, other than brick or granite.....	8, 901	Soap.....	1, 069, 544
Peanuts, walnuts, and other nuts, processed.....	23, 965	Soda-water apparatus.....	734, 152
Pencils, lead.....	4, 937	Sporting and athletic goods, not including firearms or ammunition.....	13, 719
Pens, fountain and stylographic.....	34	Springs, steel: Railway, vehicle, heavy machine, etc., not made in rolling mills.....	25, 388
Pens, gold.....	1, 862	Stamped and enameled ware, not elsewhere classified.....	28, 855
Pens, steel and brass.....	16, 805	Stationery goods, not elsewhere classified.....	227, 106
Perfumes, cosmetics, and other toilet preparations.....	5, 078, 139	Statuary and art goods, factory product.....	23, 715
Petroleum refining.....	155, 012	Steam and other packing, pipe and boiler covering, and gaskets, not made in textile mills.....	3, 701
Photographs.....	1, 893	Steam fittings and steam and hot-water heating apparatus.....	198, 757
Photo-engraving, not done in printing establishments.....	171, 166	Steel barrels, kegs, and drums.....	257, 851
Photographic apparatus and materials.....	3, 859	Stereotyping and electrotyping, not done in printing establishments.....	14, 033
Pipes (tobacco).....	359, 736	Stoves and ranges (other than electric) and warm-air furnaces.....	5, 786
Planing-mill products, not made in planing mills connected with saw-mills.....	52, 478	Structural and ornamental iron and steel work, not made in rolling mills.....	198, 200
Plated ware.....	180, 240	Sugar, beet.....	216, 903
Plumbers' supplies, not including pipe or vitreous-china sanitary ware.....	3, 414	Sugar, cane, not including products of refineries.....	977, 095
Pocketbooks, purses, and cardcases.....	758, 950	Sugar refining, cane.....	3, 694
Pottery, including porcelain ware.....	171, 561	Sulphuric, nitric, and mixed acids.....	1, 252, 173
Printing and publishing, book and job.....	1, 816	Surgical appliances.....	86, 918
Printing and publishing, music.....	184, 660	Suspenders, garters, and other elastic woven goods, made from purchased webbing.....	22, 186
Printing and publishing, newspaper and periodical.....	3, 511	Tanning materials, natural dyestuffs, mordants and assistants, and sizes.....	1, 117
Printing materials, not including type or printing ink.....	140, 922	Textile machinery and parts.....	193, 625
Pulp goods.....	120, 956	Theatrical scenery and stage equipment.....	106, 145
Pumps (hand and power) and pumping equipment.....	412, 660		5, 553
Rayon.....	57, 238		
Refrigerators and refrigerator cabinets, exclusive of mechanical refrigerating equipment.....	19, 110		
Refrigerators, mechanical.....	4, 309		
Regalia, badges, and emblems.....	4, 140		
Rice cleaning and polishing.....			

TABLE 2.—COAL CONSUMED, BY INDUSTRY GROUPS AND BY INDUSTRIES, FOR THE UNITED STATES: 1927—Continued

GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)	GROUP AND INDUSTRY	Coal consumed (tons, 2,000 pounds)
INDUSTRY—continued		INDUSTRY—continued	
Tin and other foils, not including gold and silver; collapsible tubes.....	12, 252	Waste.....	20, 599
Tin cans and other tinware, not elsewhere classified.....	123, 123	Watch and clock materials and parts, except watchcases.....	307
Tobacco, chewing and smoking, and snuff.....	132, 157	Watchcases.....	18, 736
Tools, not including edge tools, machine tools, files, or saws.....	102, 663	Watches and watch movements.....	40, 044
Toys (not including children's wheel goods or sleds), games, and playground equipment.....	30, 470	Whips.....	326
Trimmings (not made in textile mills) and lace-trimmed articles, not elsewhere classified.....	2, 127	Windmills and windmill towers.....	9, 158
Trunks, suitcases, and bags.....	25, 461	Window and door screens and weather strip.....	9, 552
Turpentine and rosin.....	2, 981	Window shades and fixtures.....	37, 663
Type founding.....	47, 076	Wire, drawn from purchased bars or rods.....	460, 000
Typewriters and supplies.....	5, 237	Wirework, not elsewhere classified.....	76, 477
Umbrellas, parasols, and canes.....	12, 112	Wood distillation and charcoal manufacture.....	306, 160
Upholstering materials, not elsewhere classified.....	23, 607	Wood preserving.....	325, 498
Vinegar and cider.....	59, 708	Wood, turned and shaped, not elsewhere classified.....	23, 287
Wall paper.....	309, 976	Wooden goods, not elsewhere classified.....	9, 749
Wall plaster, wall board, and floor composition.....	44, 592	Wool pulling.....	11, 578
Washing machines, wringers, driers, and ironing machines, for household use.....		Wool scouring.....	41, 887
		Wool shoddy.....	44, 149
		Woolen goods.....	705, 655
		Worsted goods.....	892, 074
		Wrought pipe, welded and heavy riveted, not made in rolling mills.....	308, 350