

CARPETS.

The report on wages in this industry would have been more satisfactory if a larger number of the schedules sent out had been returned with the information asked for. Of 53 schedules sent, but 7 were returned, of which but 3 were tabulated. Two of these, however, one from Massachusetts and one from Philadelphia, are quite complete in their statement of wages for a number of years, and are from establishments that may be regarded as fairly representing this great industry in New England and in eastern Pennsylvania.

It will be noted that the changes in rates of wages in this industry are neither rapid nor marked, though it will be seen by an inspection of the Massachusetts return that there has been a decided increase in wages since 1861, the rates in 1880 being very much in excess of those paid at the earlier date. In the Philadelphia schedule, however, there has been in some cases a decline since 1869 in the money wages received.

The general statements need but little comment. At the establishments reporting there are few opportunities for over-time, and no allowances or deductions worthy of mention.

The payments are all in cash. At one works they have been monthly since 1830, at another weekly since 1860, and at a third every two weeks since 1868. The hours of labor at present at all works are 10, and have been since 1870 at all but one. At the Massachusetts works from 1860 to 1874, 11 hours a day was the rule. The establishments reporting may be said to run constantly.

In addition to the figures on labor cost given in connection with the tabulations, one schedule, not tabulated, from a mill in New York gives the selling price, labor cost, and percentage of wages to cost in 1880 as follows:

1880.	Carpets, per yard.	Yarns, per pound.	Worsted, per pound.
Selling price	\$0 80	\$0 32	\$0 55
Labor cost.....	20	5	12
Percentage of wages to cost..	25	16	22

There has been but little change in the efficiency of labor.

In this industry in the time covered by the schedule the change from hand-weaving to power-weaving has taken place, and has had a marked effect upon the amount of production and labor cost. This change was made at Philadelphia in 1873. Prior to that time carpets were made on hand-loom worked by men; the change was to power-loom operated by women. The result has been an increase of 100 per cent. in production, and a decrease of over 50 per cent. in the cost of labor. While the earnings of the power-loom operators are not so great as those of the hand-loom operators, the table shows an increase from 1873 to 1880 in the earnings of the power-loom operators.

It is interesting to note in this connection that in 1872 some 6,000,000 yards of carpeting were imported into this country. Now, as appears from a statement made by Mr. James Dobson, of Philadelphia, the importation of foreign carpets has almost ceased, those made in this country taking their place. The few that are imported are chiefly Oriental carpets. Mr. Dobson remarks that the United States is the great carpet producing and consuming country of the world.

STATISTICS OF WAGES—CARPETS.

Wages in Great Britain.—The following table from the *Miscellaneous Statistics of Great Britain*, Part XI, gives the rates of wages paid in Kidderminster, England, and vicinity in 1880, and is inserted here for the purpose of comparison with our own tables :

Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.	Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.
	TAPESTRY CARPET WEAVING.				21.8				
1.2	Foreman	Men	\$10 80	50½	12.5	Alterers	Lads and boys	\$2 72	50½
20.9	Weavers	Men	a 7 26	50½	2.1	Winders	Women	a 2 78	50½
23.3	Printers	Men	a 7 26	50½		Winders	Girls	a 2 00	50½
	Printers	Lads and boys	a 1 69	50½	2.7	Packers	Men	4 36	50½
18.8	Printers	Women	a 3 87	50½		Stampers	Women	a 4 47½	50½
	Setters	Women	a 4 23½	50½	5.6	Stampers	Girls	a 1 57	50½
Setters	Girls	a 2 00	50½	Dyers		Men	3 87	50½	
29.8	Miscellaneous hands	Men	5 08	50½	2.7	Dyers	Lads and boys	a 2 06	50½
	Miscellaneous hands	Lads and boys	1 04	50½		Starchers	Men	a 7 50	50½
	Miscellaneous hands	Women	3 15	50½	0.8	Starchers	Lads and boys	a 2 12	50½
	Miscellaneous hands	Girls	2 00	50½		Mechanics	Men	6 00	50½
100.0	BRUSSELS CARPET MAKING.				4.8	Mechanics	Lads and boys	1 87	50½
2.2	Foreman	Men	12 10	50½	6.2	Artists	Men	7 86	50½
20.0	Weavers	Men	a 8 35	50½		Artists	Lads and boys	2 18	50½
					100.0	Miscellaneous hands	Men	5 08	50½
						Miscellaneous hands	Lads and boys	3 02	50½

a For piece-work.

WAGES TABLES, WITH SUPPLEMENTARY AND EXPLANATORY REMARKS.

An establishment in Massachusetts.

Classes of employés.	Unit of pay-ment.	DATES.																				
		1880.	1870.	1873.	1877.	1870.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.	1855.	1864.	1863.	1862.	1861.	1860.
Wool-sorter	Day ..	\$1 85	\$1 50	\$1 50	\$1 70	\$1 70	\$2 10	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$1 85	\$1 46	\$1 25	\$1 15	\$1 10
Pickerman	do ..	1 05	98	98	1 06	1 17	1 26	1 35	1 50	1 50	1 50	1 50	1 50	1 42	1 50	1 50	1 42	1 34	85	75	83	83
Carder	do ..	60	54	55	58	57	60	66	74	75	74	74	74	70	75	73	69	52	41	40	30	.....
Reeler	do ..	85	79	73	92	95	91	94	1 07	1 03	90	94	91	80	96	97	91	70	49	44	45	.....
Twister	do ..	67	62	63	61	60	70	78	80	88	80	80	88	92	1 04	95	90	62	49	50	46	.....
Spooler	do ..	80	70	70	73	70	77	88	95	96	98	95	95	88	97	97	1 02	60	44	38	43	.....
Winder	do ..	76	64	65	66	68	64	73	80	80	77	76	78	74	84	85	83	49	38	37	37	.....
Warper	do ..	90	80	86	99	1 05	1 06	1 22	1 22	1 30	1 30	1 29	1 16	1 20	1 25	1 27	1 23	83	62	65	51	.....
Spinner, jack	do ..	1 19	1 02	1 10	1 16	1 08	1 17	1 21	1 38	1 37	1 30	1 26	1 21	1 22	1 23	1 16	1 17	1 05	80	73	73	.....
Spinner	do ..	71	68	67	67	68	77	82	95	94	95	98	94	93	1 03	1 00	97	62	48	40	40	.....
Weaver	do ..	90	85	80	84	87	90	1 02	1 24	1 17	1 14	1 13	1 12	1 10	1 30	1 19	1 19	86	65	60	52	.....
Dyer	do ..	1 75	1 70	1 70	1 75	1 86	2 00	2 00	2 00	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 58	1 50	1 20	1 38	1 38
Loom-fixer	do ..	1 75	1 68	1 68	1 68	1 86	1 88	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	1 92	1 75	1 38	1 25	1 38	1 38
Machinist	do ..	1 75	1 66	1 66	1 75	1 92	2 02	2 17	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 00	1 63	1 50	1 33	1 50
Teamster	do ..	1 75	1 67	1 67	1 75	1 94	1 94	2 00	2 00	2 00	2 00	2 00	2 00	1 75	1 75	1 67	1 67	1 60	1 33	1 25	1 25	1 25
Carpenter	do ..	1 75	1 66	1 66	1 75	1 92	2 02	2 17	2 25	2 25	2 25	2 25	2 25	2 00	2 00	2 00	2 00	1 75	1 50	1 50	1 33	1 50
Laborer	do ..	1 10	1 00	1 00	1 12	1 26	1 35	1 35	1 50	1 50	1 50	1 50	1 50	1 42	1 50	1 50	1 50	1 42	92	75	83	83
Finisher	do ..	91	82	77	80	81	82	86	98	98	95	95	98	97	1 04	1 03	1 00	70	58	57	57	.....

REMARKS.—The products of this mill are ingrain, Brussels, and Wilton carpets.

The above rates are the average earnings of the classes named for December of each year.

There are few opportunities for over-time among the factory operatives. Mechanics often work over-time in making repairs.

Carpenters are the only employés who are required to furnish their own tools.

Payments have been monthly since 1828.

The hours of labor per day were 11 until October, 1874, when they were reduced to 10.

The factory has run 12 months a year since 1828, except during the rebellion, when about three months were lost.

There have been no strikes.

The changes in machinery at this establishment have been very great, many new machines having been introduced. The first looms used were hand-looms, and the steam-engines and water-wheels of to-day are very different from the early ones. The effect of these improvements has been a reduction in the number of employés in proportion to product, but an indirect increase in the total number of employés.

The trade is considered safe and healthful.

STATISTICS OF WAGES—CARPETS.

325

Bromley Brothers, Philadelphia, Pennsylvania.

Classes of employes.	Unit of payment.	DATES.											
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1878.	1872.	1871.	1870.	1869.
Overseer	Month ..	\$69 10	\$69 10	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00
Clerk	do	72 00	72 00	72 00	72 00	72 00	72 00	72 00	72 00	72 00	72 00	72 00	72 00
Designer	Day	5 00	5 00	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16
Wool-sorter	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Pickermen	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Boss carder	do	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Carder	do	1 66	1 66	1 66	1 00	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66
Card-boy	do	83	83	88	83	88	83	88	83	88	83	88	83
Reeler	do	1 00	1 00	1 00	1 16	1 16	1 16	1 16	1 16	1 16	1 16	1 16	1 16
Twister	do	1 00	1 00	1 00	1 16	1 16	1 16	1 16	1 16	1 16	1 16	1 16	1 16
Spooler	do	1 16	1 16	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Winder	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Warper	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Spinner	do	2 00	2 00	2 16	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Male weaver (hand)	do	2 00	2 00	2 00	2 50	2 50	2 50	3 33	3 33	3 33	4 00	4 00	4 16
Female weaver (power)	do	1 41	1 41	1 08	1 08	1 08	1 08	1 33	1 33	1 33	1 33	1 33	1 33
Boss dyer	do	4 00	4 00	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16
Dyer	do	2 00	2 00	2 00	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Loom-fixer	do	2 00	2 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Machinist	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Engineer	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Tonnater	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Carpenter	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00

REMARKS.—These works were established in 1869, and manufacture ingrain and Venetian carpets.

Up to 1873 the carpets made in and about Philadelphia were on hand-loom, the weavers, who were men, earning the wages given in the table. In 1873 power-loom, with female help, were introduced. The wages of these power-loom weavers are about one-half those earned by the hand-weavers, though doing twice the work.

The only allowance is to foremen and "bosses", who are paid full wages whether they work or not.

Payments are in cash and weekly.

All classes work 10 hours a day, which the employers consider a reasonable day's labor, stating that the men would not be benefited either in health or in pocket by a shortening of the hours.

The works are usually operated about 11½ months a year, the half month of idleness being one week in July and one in January for repairs and overhauling.

But two strikes have occurred in 12 years. One of these was among the hand-loom weavers and the other among the power-loom weavers, who are girls. Thirteen weeks and \$20,000 in wages were lost. The strikers finally came back at the old rates.

The following statement is made regarding selling price, labor cost, and percentage of wages to cost:

Year.	SELLING PRICE.		LABOR COST.		PERCENTAGE OF WAGES TO COST.	
	Extra-super carpet, per yard.	Venetian carpet, per yard.	Extra-super carpet, per yard.	Venetian carpet, per yard.	Extra-super carpet, per yard.	Venetian carpet, per yard.
1870...	\$1 15	\$1 20	\$0 23	\$0 24	Per cent. 20	Per cent. 20
1875..	1 00	1 00	15	20	15	20
1880...	85	75	15	20	18	20

Since 1873 the extra supers of the above table have been made on power-loom; prior to that time they were made on hand-loom, Venetians are made on hand-loom.

There has been no change in the efficiency of labor.

The occupations in carpet manufacture are neither dangerous nor unhealthful.

STATISTICS OF WAGES—CARPETS.

An establishment in Pennsylvania.

Classes of employés.	Unit of payment.	DATES.												
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.
Overseer.....	Month..	\$100 00	\$100 00	\$80 00	\$100 00	\$100 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00
Clerk.....	do	50 00	100 00	100 00	100 00	100 00	00 00	00 00	40 00	40 00	40 00	24 00	24 00	24 00
Spooler.....	Day											1 00	1 00	1 00
Winder.....	do											90	90	90
Warper.....	do	2 50	2 50	2 50	2 50	2 50	2 00	2 00	2 00	1 50	1 50	1 50	1 50	1 50
Male weaver.....	do									1 83½	1 83½	1 83½	1 83½	1 83½
Female weaver.....	do	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50	1 41½- 1 50					
Boss dyer.....	do	4 00	4 00	4 00	4 00	3 50	3 50	3 50	3 00	3 00	3 00			
Dyer.....	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00			
Loom-fixor.....	do	2 50- 2 75	2 50- 2 75	2 50- 2 75										
Machinist.....	do	1 75	1 50	1 50	1 50									
Engineer.....	do	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00			
Carpenter.....	do	2 00	2 00	2 00										

REMARKS.—These works manufacture extra-super ingrain carpets, and have been running continuously since 1868.

Weavers earn about \$5 a week extra when over-time is made, which has not been included in the above table.

Employés are paid in cash every two weeks.

All classes work 10 hours a day, and this is considered sufficiently long for the health and advancement of the employés.

Very few strikes have occurred since the introduction of the steam-power looms.

The selling price of the carpet manufactured at these works was 82½ cents in 1880, and the labor cost 12 cents. It is stated that it

costs from 3 to 4 cents a yard less to make carpeting on power-looms than it does to make it on hand-looms.

There has been but a slight increase in the efficiency of labor at this establishment.

The only mechanical improvement noted is the substitution of power for hand-looms, the effect of which has been an increase in production and a decrease in the cost of labor, but no change in rates of wages.

This manufacturer remarks that the record of health at these works is very good, as he studies ventilation and makes every endeavor to keep his employés steadily at work.

COTTON MANUFACTURE.

The returns of rates of wages in this industry are very satisfactory. Several schedules give rates for a large number of classes of employes from 1850, others from 1840, and even from 1830. Among these returns are some from the oldest and best-known mills in the country.

Under this classification is included the manufacture of a large variety of cotton goods, such as sheetings, shirtings, ginghams, dress goods, cretonnes, jeans, tickings, sacks, quilts, thread, yarn, etc. Many changes have occurred in methods of work during the time covered by some of the tabulations. It would have added to the value of the tables could a statement of these changes and their effects have been given, but unfortunately it has been impossible to secure a concise general statement. Several of the schedules give information on this subject which will be found in the remarks accompanying the tabulations. The improvements have come step by step, and have been more in matters of detail than in important changes in methods. There has been one marked change, however, in the department of sizing warp. This change and its effect is mentioned in several of the schedules, and will be referred to more at length hereafter.

There were sent out 148 schedules, of which 39 were returned and 35 tabulated. Those tabulated are divided according to states as follows:

Connecticut	6	Maine	3	New York	3
Delaware	1	Maryland	2	Pennsylvania	1
Georgia	1	Massachusetts	6	Rhode Island	1
Indiana	1	Missouri	1	Tennessee	1
Kentucky	1	New Hampshire	6	Wisconsin	1

In addition to those tabulated, one schedule was received from Fayetteville, Cumberland county, North Carolina, and contains some interesting information; an epitome of it is given as follows:

Table showing average daily wages at Beaver Creek and Bluff factories, Fayetteville, N. C., for 1880.

Classes of employes.	Beaver Creek factory.	Bluff factory.
Superintendent (a)	\$2 00	\$2 00
Employé in picking-room	47½	52
Employé in carding-room	56	55
Employé in spinning and spooling	80½	37½
Employé in mule-spinning room	45	55
Employé in drawing in warps	40	40
Employé in warping and dressing	86	98
Employé in weaving-room	66	74
Roller-coverer (a)	45	45
Employé in machine-shop (a)	56½	50½
Watchman (a)	90	90
Teamster (a)	67½	67½

a The wages of these classes are divided equally between the two mills.

The wages at these works, it is stated, have varied but little for the past 7 or 8 years; previous to that time they were probably 10 or 20 per cent. higher.

Extra earnings or deductions.—There are but few opportunities for extra earnings among the strictly cotton-mill operatives. The mills are so arranged relative to power as often to make it inconvenient and expensive to operate only a portion of the mill. This does not apply to the departments where little power is used, as in the cloth room, and in such branches, and among the workmen engaged in repairs, as carpenters, machinists, etc., overtime is often made. When there is a demand for seasonable goods other operatives have opportunities for overtime work.

Many factories have found it necessary for their own protection and that of their operatives, and also to secure a better class of workmen, to provide houses, which are generally equal or superior in their character and appointments to those in the towns or villages in which the mills are situated. These houses are usually let only to the operatives, or to those who board operatives, and the rent is placed at a figure much below the ruling rates in the neighborhood. The proprietors of the mills also frequently make arrangements for board for their operatives at reduced rates. During some of the years covered by the tabulations not only were the persons who kept the factory boarding-houses furnished their tenements or houses at very low rates, but it was customary for the mill, in consideration of the low rates of board, to pay a certain sum per boarder per week. This has not prevailed to so great an extent latterly as it did formerly. At a number of works it will be noticed that the operatives have land for gardens free, with pasturage for cows.

Cotton-mill operatives are under no expense for tools or under-hands. Those classes of labor, however, which are common to this and other industries, such as carpenters, machinists, etc., furnish some of their small tools.

Payments.—It will be noticed that payment in "truck" is very rare in this industry. There are occasional instances of it, and in some cases the rent of houses belonging to the proprietors is taken from the wages earned; but it is true that payment in merchandise or store-orders is very rare at present, though formerly several of the mills paid only part in cash. The reason for the abandonment of merchandise payment seems to have been that cash was more satisfactory and that a better class of help could be secured.

The usual interval of payment is monthly, though in some instances it is weekly or every two weeks. It has been the custom of the great-cotton mills of New England to pay monthly from the first, and, as many of the works through the country have been started by persons who have been connected with these older corporations, they have carried this custom with them. The following table shows the interval at the works reporting:

Interval of pay- ment.	1880.	1875.	1870.	1865.	1860.	1855.	1850.	1845.	1840.	1835.	1830.
Weekly	3	2	2	1	1	1	1	1	1	1	.....
Semi-monthly	3	4	3	3	2	.....	.....	.....	.....	.....	.....
Monthly	31	31	30	26	23	22	18	13	10	10	10
Every 3 months .....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....

Hours of labor.—The usual hours of labor at present are from 10 to 11 a day. Quite marked reductions are noted in those schedules that cover a series of years. The following table shows the hours of labor for the different years covered by the schedule:

Year.	10 hours.	10½ hours.	11 hours.	11½ hours.	12 hours.	12½ hours.	13 hours.	13½ hours.	14 hours.	14½ hours.
1880.....	.....	.....	.....	.....	2	1	1	1	.....	1
1835.....	.....	.....	.....	1	2	1	1	1	1	.....
1840.....	.....	.....	.....	1	2	1	2	1	1	.....
1845.....	.....	.....	2	1	5	1	3	2	.....	.....
1850.....	.....	.....	4	1	9	3	1	.....	.....	.....
1855.....	2	.....	9	1	9	2	.....	.....	.....	.....
1860.....	2	.....	16	3	4	.....	.....	.....	.....	.....
1865.....	2	.....	22	3	1	.....	.....	.....	.....	.....
1870.....	6	1	23	3	1	.....	.....	.....	.....	.....
1875.....	9	1	23	1	1	.....	.....	.....	.....	.....
1880.....	9	2	22	1	1	.....	.....	.....	.....	.....

The figures in the above table are for all classes of labor in most instances, though at a few establishments there are some classes whose time of working is different from that of the majority of classes at the works. In such cases the numbers of hours worked by the majority of classes are taken and those of the others are ignored.

Some very interesting statements are made in connection with the several tabulations as to the effect of reduced hours. The general impression seems to be that the reduction that has taken place, from 12 or more hours to 10 or 11, has not materially reduced production. In some cases, however, it is stated that decrease in the hours of labor has brought about a corresponding decrease in production, which has been compensated for only by increased speed in machinery. The Willimantic Thread Company gives a very interesting statement as to the effect of a reduction from 11 to 10 hours in its mill. It states that the production in the 6 months after the reduction was only 1,500 pounds less than in the previous 6 months, and the quality was improved.

Regularity of employment.—From the following table it will be seen that the mills reporting have been run quite regularly :

Years.	5 months, or less than 6.	7 months, or less than 8.	8 months, or less than 9.	9 months, or less than 10.	10 months, or less than 11.	11 months, or less than 12.	12 months.
1830						1	6
1831-1835						1	6
1836-1840						1	6
1841-1845						1	8
1846-1850						1	12
1851-1855						3	14
1856-1860					2	5	11
1861-1865	2	1	1	1	3	7	6
1866-1870						6	23
1871-1875						9	22
1876-1880			2	1	2	8	13
Year ending June 1, 1880					1	6	19

Strikes seem to have been quite rare in this industry. Low water frequently causes stoppage, but the chief cause of irregularity was the lack of cotton during the war. It is interesting to notice in the different schedules the effect of this upon the regularity of employment, as well as upon the relation of labor cost to cost of product.

Relation of wages and labor to selling price and cost.—The schedules cover so many varieties of goods that it is impossible to arrive at any general statement regarding labor cost and percentage of wages to cost, though some very interesting statements are given. It seems that in shirtings the labor cost per yard in 1880 was from 1½ to 2½ cents, and the percentage of wages to cost from 23 to 33 per cent. The effect of the high price of cotton during the years of the war in reducing the percentage of wages to cost was very marked. At a Maryland mill, for example, the percentage of wages to cost drops from 23.43 per cent. in 1860 to 5 per cent. in 1865, and increases to 15.24 per cent. in 1870, though from 1860 to 1865 the labor cost per yard advanced from 2.40 to 3.36 cents. Two schedules which are not tabulated give some interesting statements under this head, which are as follows :

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Forty-inch shirting, per yard.	Seventy-seven inch sheeting, per yard.	Twenty-seven inch satinot jeans, per yard.	Sixteen-ounce two-bushel bags, each.	Forty-inch shirting, per yard.	Seventy-seven inch sheeting, per yard.	Twenty-seven inch satinot jeans, per yard.	Sixteen-ounce two-bushel bags, each.	Forty-inch shirting.	Seventy-seven inch sheeting.	Twenty-seven inch satinot jeans.	Sixteen-ounce two-bushel bags.
1870.....	\$0 15	\$0 37	\$0 12½	\$0 81	\$0 03,40¢	\$0 06,10¢	\$0 02,40¢	\$0 00,70¢	Per cent. 20	Per cent. 24	Per cent. 25	Per cent. 20
1875.....	12	27	10	26	3,40¢	5,70¢	2,30¢	5	35	31	33	25
1880.....	9	23	8	20	2,10¢	3,40¢	1,60¢	3,10¢	32	25	30	19

The following table gives figures per yard-wide sheeting :

Year.	Selling price.	Labor cost.	Percentage of wages to cost.
1875.....	\$0 00½	\$0 01,80¢	Per cent. 21,70
1880.....			

Efficiency of labor and labor-saving machinery.—There has been but little change in the efficiency of labor; indeed, several returns note a decrease in efficiency, which is ascribed to the inferior grades of labor employed. The character of the operatives in the Lowell mills, for example, 40 to 50 years ago, and even later, has been a subject of comment and remark for many years, but the laborers then in the mills have been supplanted by operatives of an inferior grade.

As will be seen from an inspection of the explanatory statements accompanying the tabulations, marked improvements in the machinery used have been made, though, as above indicated, these have involved details rather than any marked changes. There has been one marked change, however, and that is in the method of sizing warp, or the employment of what is called the "slasher" in the place of the dresser. Mr. Edward Atkinson writes to me concerning this:

"I myself imported the first slasher, so called, by the use of which the old-fashioned dresser was displaced. In the new machine one man and a boy did the work in a clean and well-ventilated room at a moderate temperature, which had previously required eight men working in a temperature of 110° to 120° in an atmosphere saturated with sour starch."

Wages in Great Britain.—The following statement from the *Miscellaneous Statistics of the United Kingdom*, Part XI, shows the wages paid in cotton manufacture in Great Britain, and is introduced here for the purpose of comparison with our own tables:

Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.
GLASGOW AND NEIGHBORHOOD.				MANCHESTER AND NEIGHBORHOOD—continued.			
Calico printing:				Calico printing—continued:			
Sketch-makers.....	Men.....	\$8 85	56	Machine printers.....	Lads.....	\$2 20	.....
Sketch-makers.....	Lads and boys	2 14	56	Machine printers.....	Women.....	2 00	.....
Die-cutters.....	Men.....	9 48	56	Machine printers (short-timers).....	Boys.....	85	28½
Die-cutters.....	Lads and boys	2 06	56	Machine printers' apprentices.....	Men.....	5 08	.....
Block-cutters.....	Men.....	0 05	56	Dyers.....	Men.....	4 96	.....
Machine engravers.....	Men.....	0 05	56	Dyers.....	Lads.....	2 18	.....
Pentagraphers.....	Men.....	5 20	56	Finishers.....	Men.....	6 29	58
Color-mixers.....	Men.....	4 11	56	Finishers.....	Lads.....	2 00	58
Color-mixers.....	Lads and boys	1 04	56	Finishers.....	Women.....	3 03	54
Machine printers.....	Men.....	8 05	56	Hookers.....	Lads.....	2 78	55½
Machine printers.....	Lads and boys	2 17½	56	Hookers (short-timers).....	Girls.....	73	28½
Dyers.....	Men.....	3 87	56	Sewers.....	Women.....	3 34	.....
Hookers.....	Women.....	2 18	56	Sewers.....	Girls.....	1 61	.....
Sowers.....	Women.....	2 06	56	Foremen.....	Men.....	\$9 08-16 04	.....
Cotton-yarn dyers.....	Men.....	5 57	56	Persons employed in bleaching, boiling, mangling, stoving, callendering, &c.	Men.....	6 03-7 74	56
Cloth dyeing:					Lads.....	3 03	56
Stovenen and firemen.....	Men.....	0 29	00		Women.....	3 02	56
Cleaners.....	Men.....	4 84	00	Engine tenters.....	Men.....	0 78	.....
Dyers.....	Men.....	5 32	54	Stokers.....	Men.....	5 32	.....
Fustian dyeing:				Engineers.....	Men.....	8 47	.....
Dressers.....	Men.....	7 26	56	Millwrights and mechanics.....	Men.....	7 74	.....
Dyers.....	Men.....	6 26	56	Masons.....	Men.....	7 74	.....
Finishers.....	Men.....	5 81	56	Joiners.....	Men.....	7 80	.....
Bleaching:				Laborers.....	Men.....	4 00	.....
Beetlers.....	Men.....	5 32	56	Warehouse hands.....	Men.....	7 26-8 47	.....
Beetlers.....	Lads and boys	2 30	56	Warehouse hands.....	Lads and boys	2 00-3 03	.....
Cloth lappers.....	Men.....	5 57	56	Warehouse hands.....	Women.....	3 02	.....
Cloth lappers.....	Women.....	2 06	56	Warehouse hands.....	Girls.....	1 81	.....
Bleachers.....	Men.....	7 74	56	Carding:			
Bleachers.....	Lads and boys	1 81	56	Scutchers.....	Men.....	5 44	.....
Bleachers.....	Women.....	2 00	56	Scutchers.....	Girls.....	2 00	.....
Wash wheelmen.....	Men.....	4 36	56	Strippers.....	Men.....	5 44	.....
Persons employed in firing, boiling, mangling, etc.	Men.....	6 05	56	Strippers.....	Lads.....	3 40	.....
Stokers.....	Men.....	3 87	56	Grinders.....	Men.....	5 20	.....
Engineers.....	Men.....	9 68	56	Grinders.....	Lads.....	3 40	.....
Millwrights and mechanics.....	Men.....	6 78	56	Lap and can tenters.....	Lads and boys	2 18	.....
Masons.....	Men.....	7 99	56	Drawing-frame tenters.....	Women.....	3 34-3 71	.....
Joiners.....	Men.....	6 41	56	Roving and slubbing.....	Women.....	3 08	.....
Laborers.....	Men.....	3 87	56	Bobbin and fly tenters.....	Girls.....	1 75	.....
Warehouse hands.....	Men.....	4 84	56	Sweepers.....	Girls.....	1 45	.....
MANCHESTER AND NEIGHBORHOOD.				Card-minders and undercarders.....	Men.....	5 98	.....
Calico printing:				Card-minders and undercarders.....	Women.....	2 00	.....
Sketch-makers.....	Men.....	\$10 16-12 58	58	Overlookers.....	Men.....	9 32	.....
Sketch-makers.....	Lads.....	2 42	58	Spinning:			
Sketch-makers (short-timers).....	Boys.....	73	28½	Upon self-acting mules—			
Die-cutters.....	Men.....	9 08-12 58	58	Minders.....	Men.....	6 90	.....
Die-cutters.....	Lads.....	2 54	58	Creelers.....	Lads and boys	1 45	.....
Block-cutters.....	Men.....	7 30	58	Piecers.....	Lads and boys	2 00-3 02	.....
Block-cutters.....	Lads.....	3 87	58	Overlookers.....	Men.....	8 47-10 89	.....
Block-cutters (short-timers).....	Boys.....	60	28½	Throstle-spinning—			
Machine engravers.....	Men.....	8 71	58	Spinners.....	Women.....	3 34	.....
Machine engravers.....	Lads.....	2 78	58	Spinners (short-timers).....	Girls.....	79	.....
Pentagraphers.....	Men.....	5 20	58	Doffers to spinners.....	Lads and boys	2 18	.....
Pentagraphers.....	Lads.....	2 54	58	Overlookers.....	Men.....	6 05	.....
Pentagraphers (short-timers).....	Lads.....	73	28½	Overlookers' assistants.....	Men.....	4 30	.....
Color-mixers.....	Men.....	5 08	.....	NOTTINGHAM AND NEIGHBORHOOD.			
Color-mixers.....	Lads.....	2 78	.....	Doublers.....	Women.....	2 18-2 90	56½
Block printers.....	Men.....	4 96	.....	Doublers.....	Girls.....	1 60-2 18	56
Block printers (short-timers).....	Boys.....	60	.....	Reelers.....	Women.....	1 60-2 18	56
Block printers (short-timers).....	Girls.....	60	.....	Reelers.....	Girls.....	1 45-1 94	56
Machine printers.....	Men.....	12 10	.....	Doffers.....	Girls.....	97-1 45	56

WAGES TABLES, WITH SUPPLEMENTARY AND EXPLANATORY REMARKS.

Union Manufacturing Company, North Manchester, Connecticut.

Classes of employes.	Unit of payment.	DATES.																
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.
Carding overseer	Month	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$50 80	\$06 30	\$78 00	\$71 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50
Spinning overseer	do	52 00	52 00	52 00	58 50	58 50	50 80	00 30	01 10	01 02	58 00	58 50	58 50	58 50	58 50	58 50	58 50	58 50
Weaving overseer	do	71 50	71 50	71 50	71 50	71 50	71 50	78 00	78 00	78 00	05 00	05 00	05 00	05 00	05 00	05 00	05 00	05 00
Picker	Day	80	80	80	80	80	80	90	1 00	1 00	90	90	90	90	83	83	83	83
Card-stripper	do	70	80	80	80	90	1 07	1 07	1 11	1 03	1 11	1 03	1 00	90	92	88	76	80
Grinder	do	1 25	1 31	1 31	1 45	1 45	1 53	1 70	2 00	2 10	1 50	1 50	1 50	1 50	1 25	1 20	1 20	1 00
Drawer	do	81	81	81	00	90	90	1 00	1 00	1 00	75	75	75	75	75	05	50	50
Speeder	do	77	77	77	85	85	81	90	1 00	1 00	85	70	70	67	70	70	06	50
Frame-spinner	do	70	70	70	70	70	77	85	1 00	1 00	80	70	72	72	78	78	78	72
Doffer	do	45	45	45	45	45	45	50	50	50	50	50	45	45	50	50	50	50
Spooler	do	90	90	90	90	90	00	1 00	1 00	1 00	1 00	90	75	75	75	75	60	00
Warper	do	1 75	1 75	1 75	1 75	1 75	1 75	2 00	2 25	2 25	2 00	2 00	1 50	1 50	1 50	1 50	1 50	1 32
Mule-spinner	do	84	80	70	73	70	80	06	06	06	80	70	80	80	60	67	50	53
Back-boy	do	48	48	48	48	48	50	57	07	07	50	50	40	40	40	40	40	40
Spinning-section hand	do	00	00	00	00	00	1 00	1 10	1 50	1 50	1 25	1 00						
Dresser	do	1 40	1 53	1 01	1 69	1 53	1 88	1 90	1 92	1 80	1 80	1 92	1 92	1 00	1 80	1 73	1 73	1 01
Web-drawer	do	90	90	90	00	90	00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Weaver	do	1 07	92	1 11	88	1 15	1 10	1 15	1 34	1 07	1 07	1 07	1 07	1 11	1 07	92	92	92
Weaving-section hand	do	1 85	1 85	1 85	1 85	1 85	1 85	2 00	2 25	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 50
Cloth-trimmer	do	90	90	90	90	90	00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	85	75	06
Winder	do	69	57	01	57	57	60	73	88	73	73	84	84	84	88	73	53	65
Finisher	do	88	92	90	90	1 11	1 11	1 15	1 23	1 19	1 30	1 23	1 23	1 38	1 53	1 30	1 10	1 19
Dryer	do	1 30	1 23	1 15	1 15	1 23	1 88	1 42	1 57	1 57	1 40	1 01	1 57	1 40	1 42	1 34	1 10	1 16
Machinist	do	2 22	1 84	1 88	1 92	2 00	1 96	2 11	2 50	2 88	2 03	1 05	1 84	1 92	1 73	1 92	1 40	1 73
Common laborer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 25	1 00

REMARKS.—This factory was established in 1824, and makes gingham and cotton dress goods.

There are no opportunities for over-time work by any classes of employes except machinists in making repairs. These have not been included in the table.

The allowances are cheap rents, land for garden, and the privilege of keeping cows or horses. These would increase wages about 10 per cent., and have not been considered in the table.

Payments have always been monthly and in cash since 1860, when store-orders were abandoned, as cash was more satisfactory to all concerned.

From 1830 to 1855 all classes worked 12 hours a day; from 1855 to 1865, 11½ hours, and since 1865, 11 hours. The opinion is expressed that 11 hours is a fair day's labor, and that any decrease in the number of hours would not be to the advantage of either employer or employed. A decrease in hours experience shows to result in an almost exactly proportionate loss in production.

The factory has always run 12 months a year, except between 1860 and 1865, when it averaged but 10 months, the interruptions being caused by the war. There have been no strikes of any importance.

There has been no change in the efficiency of labor.

The Wehlman self-stripper for cards and the modern spinning-frames have been introduced. The effect of the former has been to reduce the number employed in carding about one-half, and the

latter has effected a still greater reduction in the mule-room. The improved machinery introduced has enabled the operative to produce 25 per cent. more than was possible 30 years ago.

The selling prices of gingham per yard since 1845, and of dress goods since 1875, are given as follows:

Year.	SELLING PRICE.	
	Gingham, per yard.	Dress goods, per yard.
1845	\$0 12	
1850	12	
1855	12	
1860	14	
1865	20	
1870	11	
1875	0	\$0 12½
1880	10	12½

It is stated that the labor cost of gingham for 1877 was 3.44 cents per yard, and of dress goods 3.78 cents, and that wages were 44 per cent. of the total cost of gingham for the same year.

The business is neither dangerous nor unhealthful.

STATISTICS OF WAGES—COTTON MANUFACTURE.

Granite Mill Company, Stafford, Connecticut.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1873.	1872.	1871.	1870. ^b	1860.	1868.	1867.	1866.
Carding, spinning, and weaving overseers.	Day	\$1 37- 2 00					\$1 62- 2 70						\$1 50- 2 00			
Card-stripper	do	1 00					1 17						1 33			
Spooler, girl	do	37½					37½						39½			
Mule-spinner	do	1 37					1 65						1 75			
Dresser	do	1 42					2 50						2 30			
Weaver	do	33½					1 08½						1 00			
Machinist	do	1 75					2 00						2 25			

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1850.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1850.	1845.
Carding, spinning, and weaving overseers.	Day	\$1 33- 2 25					\$1 00- 1 58					\$1 00- 1 58				\$1 00- 1 50	\$1 00- 1 50
Card-stripper	do	1 17					80					80				80	75
Spooler, girl	do	33½					30					29				20	20½
Mule-spinner	do	2 00					1 50					1 35				1 35	1 20
Dresser	do	2 00					1 50					1 33				1 26½	1 23
Weaver	do	70					60½					65				65	60
Machinist	do	1 83					1 83					1 75				1 75	1 50

REMARKS.—This mill has been operated since 1843, and made print cloths up to 1860, and brown sheetings and shirtings since.

The employes receive in the way of allowances tenement-houses at low rents, with privilege of keeping a cow, but the proprietors are unable to say to what extent these considerations would increase regular wages.

From 1845 to 1855 payments were made every three months, when the interval was changed to one month; all cash is paid.

From 1845 to 1850 all classes worked from 12 to 13 hours a day; from 1850 to 1860, 12 hours five days in the week, and 9 on Saturday. It is stated, however, that while the factory runs nominally 69 hours a week it does not really make more than 56. The proprietors consider 12 hours a proper day's work, and state that a reduction would mean decreased output to the employer, and would not benefit the majority of the employes. Spooler girls work only 9 to 10 hours a day.

The only irregularity of employment, except for repairs and holidays, occurred between 1861 and 1865, when the factory averaged 11½ months a year, and between 1876 and 1880, when but 10½ months were made. The causes of irregularity were a three months' stoppage owing to the high price of cotton in 1864, and 8 months' stoppage in 1877 for the purpose of rebuilding the dam. No general

strike has taken place. Several times a few men have quit for a day or two, usually from some misunderstanding, but soon returned to work.

The following statement shows the marvellous fluctuation which has taken place in the prices of one article since the war rates of 1864, the labor cost and percentage of wages to cost being also given:

Year.	Selling price per yard of brown sheeting.	Labor cost per yard of brown sheeting.	Percentage of wages to cost of brown sheeting.
1864-'65	\$0 54	\$0 02½	Per cent. 48
1870	11	2½	33
1875	8	1½	25
1880	6	1½	27

There has been no increase in the efficiency of labor.

Some labor-saving machinery has been introduced, the effect of which has been to increase production and wages and to lessen labor and reduce the number of employes.

The trade is considered healthful.

Willimantic Linen Company, Willimantic, Connecticut.

Classes of employes.	Unit of payment.	DATES.											
		1860.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.
Carding overseer.....	Month..	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$100 00	\$100 00	\$100 00	\$80 00
Spinning overseer.....	do	125 00	125 00	125 00	125 00	125 00	125 00	125 00	125 00	100 00	100 00	100 00	100 00
Second hand	Day	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 41 $\frac{1}{2}$	2 10 $\frac{1}{2}$	2 10 $\frac{1}{2}$	2 00	2 00
Picker	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Card-stripper	do	1 25	1 25	1 25	1 25	1 25	1 25	1 30 $\frac{1}{2}$	1 30 $\frac{1}{2}$	1 25	1 25	1 25	1 25
Grinder	do	1 50	1 50	1 50	1 50	1 50	1 50	1 58 $\frac{1}{2}$	1 58 $\frac{1}{2}$	1 50	1 50	1 50	1 50
Drawer	do	83 $\frac{1}{2}$	83 $\frac{1}{2}$	88 $\frac{1}{2}$	88 $\frac{1}{2}$	89 $\frac{1}{2}$	89 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	88 $\frac{1}{2}$	88 $\frac{1}{2}$	89 $\frac{1}{2}$	83 $\frac{1}{2}$
Speeder	do	1 33 $\frac{1}{2}$	1 33 $\frac{1}{2}$	1 33 $\frac{1}{2}$	1 33 $\frac{1}{2}$	1 53 $\frac{1}{2}$	1 33 $\frac{1}{2}$	1 08 $\frac{1}{2}$	1 41 $\frac{1}{2}$	1 08 $\frac{1}{2}$	1 08 $\frac{1}{2}$	1 08 $\frac{1}{2}$	1 08 $\frac{1}{2}$
Frame-spinner	do	70 $\frac{1}{2}$	79 $\frac{1}{2}$	70 $\frac{1}{2}$	70 $\frac{1}{2}$	79 $\frac{1}{2}$	79 $\frac{1}{2}$	83 $\frac{1}{2}$	89 $\frac{1}{2}$	89 $\frac{1}{2}$	72 $\frac{1}{2}$	72 $\frac{1}{2}$	.....
Doffer	do	79 $\frac{1}{2}$	79 $\frac{1}{2}$	70 $\frac{1}{2}$	75	60 $\frac{1}{2}$	60 $\frac{1}{2}$	60 $\frac{1}{2}$	60 $\frac{1}{2}$	58 $\frac{1}{2}$	55 $\frac{1}{2}$	55 $\frac{1}{2}$	.....
Mule-spinner.....	do	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	1 00 $\frac{1}{2}$	1 00 $\frac{1}{2}$	1 00 $\frac{1}{2}$	1 50
Back boy.....	do	50	50	50	50	50	50	50	50	50	50	50	50
Carpenter	do	2 50	2 50	2 50	2 50	2 50	2 50	2 75	2 75	2 75	2 75	2 75	2 75
Machinist	do	2 50	2 50	2 50	2 50	2 50	2 50	2 75	2 75	2 75	2 75	2 75	2 75
Painter	do	2 00	2 00	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 00
Yard-hand	do	1 50	1 50	1 50	1 50	1 50	1 50	1 75	1 75	1 75	1 75	1 75	1 50
Common laborer	do	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 75	1 50	1 50	1 50	1 75

Classes of employes.	Unit of payment.	DATES.											
		1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.
Carding overseer.....	Month..	\$80 00	\$133 00	\$133 00	\$133 00	\$65 00	\$60 00	\$60 00	\$50 00	\$50 00	\$50 00	\$50 00	.....
Spinning overseer.....	do	100 00	91 00	91 00	78 00	65 00	55 00	50 00	50 00	50 00	50 00	50 00	.....
Second hand	Day	2 00	2 00	1 83 $\frac{1}{2}$	1 83 $\frac{1}{2}$	1 75	1 75	1 50	1 39 $\frac{1}{2}$	1 25	1 25	1 25	.....
Picker	do	1 25	1 25	1 25	1 16 $\frac{1}{2}$	1 16 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	.....
Card-stripper	do	1 25	1 25	1 25	1 25	1 25	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	.....
Grinder	do	1 50	1 50	1 50	1 41 $\frac{1}{2}$	1 25	1 25	1 25	1 25	1 25	1 25	1 25	.....
Drawer	do	83 $\frac{1}{2}$	83 $\frac{1}{2}$	89 $\frac{1}{2}$	89 $\frac{1}{2}$	72 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	.....
Speeder	do	1 08 $\frac{1}{2}$	1 00	80	72 $\frac{1}{2}$	60 $\frac{1}{2}$	50	50	50	50	50	50	.....
Frame-spinner	do .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Doffer	do .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mule-spinner.....	do	1 50	1 58 $\frac{1}{2}$	1 39 $\frac{1}{2}$	1 25	1 25	83 $\frac{1}{2}$	80 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$	80 $\frac{1}{2}$	83 $\frac{1}{2}$	.....
Back boy.....	do	50	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	58 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	.....
Carpenter	do	2 50	2 50	2 50	2 50	2 00	1 50	1 50	1 50	1 50	1 50	1 50	.....
Machinist	do	2 50	2 75	2 75	2 50	2 25	2 00	1 50	1 50	1 50	1 50	1 50	.....
Painter	do	2 00	2 00	2 00	1 75	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Yard-hand	do	1 50	1 50	1 50	1 50	1 50	1 25	1 00	1 00	1 00	1 00	1 00	.....
Common laborer	do	1 50	1 50	1 50	1 50	1 50	1 25	1 00	1 00	1 00	1 00	1 00	.....

REMARKS.—This firm was established in 1854, and manufactures spool cotton in 2,600 varieties.

There have been no opportunities for extra earnings worthy of consideration, and the only allowance noted is house-rent at 25 per cent. less than the ruling rates in the town.

Payments are monthly and all in cash, though the company has a store at which employes are privileged to purchase on account.

The works have been operated 12 months every year, and have never had a strike or a lockout.

All classes worked 11 hours a day in the time covered by the report. It is stated, however, that in 1881 the hours were reduced from 66 per week to 60. The matter was explained to the overseers, and their co-operation asked to make the change a financial success. The speed of machinery was increased somewhat and more

careful attention was given to work. The plan resulted in but a slight decrease in production—1,500 pounds in 6 months—and a decided improvement in the quality of goods.

The selling prices of spool cotton per dozen are given as follows:

1860.....	\$0 40 to \$1 75
1865.....	80 to 1 10
1870.....	72 to 80
1875.....	55 to 72
1880.....	55

There has been a decided increase in the efficiency of labor, arising from more liberal education, shorter hours, and endeavors by the company to improve the condition of the employes.

The usual improved cotton machinery has been introduced.

The trade is neither dangerous nor unhealthful.

An establishment in Connecticut.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.											
		1881.	1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Carding overseer	Month	\$60 00			\$60 00	\$60 00	\$60 00	\$60 00	\$60 00	\$60 00	\$60 00	\$64 00	\$64 00
Spinning overseer	do	60 00			60 00	60 00	60 00	60 00	60 00	60 00	60 00	64 00	64 00
Weaving overseer	do	66 00			60 00	66 00	66 00	60 00	60 00	72 00	72 00	72 00	72 00
Second hand	Day	50- 1 50			58½- 1 41½	1 10½- 1 25	1 25- 1 50	1 58½- 1 00½	1 00½- 1 89½	1 60½	1 58½- 1 00½	1 50- 1 00½	1 50- 1 00½
Card-stripper	do	91½			75	83½	91½	1 08½	1 25	1 25	1 25	1 25	1 25
Grinder	do	1 33½			1 08½	1 04	1 08½	1 25	1 06½	1 25	1 25	1 25	1 25
Drawer	do	79			60½	60½	71	91½	1 00	1 00	83½	75	75
Speeder	Set	11½- 15½			8- 15	8- 11½	9- 14	11- 22	12- 22	12½- 30	14- 30	14- 30	14- 30
Frame-spinner	Side	40			30	45	54						
Doffer	Day	46			41½	46	46						
Spooler	Side	36			32	36	36						
Warper	Day	a 50			a 45	60½	60½						
Mule-spinner	Pound	0.855- 1.0			0.700- 0.800	1- 1½	1½- 1½	1½- 1½	1½- 1½	1½- 1½	1½- 1½	1½- 1½	1½- 1½
Back boy	Day	41½			30½	33½	41½	50	50	50	41½	41½	
Weaver	Out	22			10	21	21	28	32	32	32	32	
Cloth-trimmer	Day	60½			60½	60½	75	89½	75	75	75	89½	
Baler	do	1 41½			1 58½	1 66½	1 83½	2 10½	2 06½	2 00	2 00	2 33½	
Baler boy	do	83½			83½								
Carpenter	do	1 75			1 83½	2 00	2 25	2 50					

a Beam.

REMARKS.—Cotton cloth is the article manufactured at this establishment. The schedule makes a more complete division of employment than is usual, which is as follows:

Card room.

Classes of employes.	Unit of payment.	DATES.									
		1881.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Overseer	Week	\$16 50	\$16 00	\$16 50	\$16 50	\$16 50	\$16 50	\$16 50	\$16 50	\$16 00	\$16 00
Second hand	do	9 00	7 50	7 50	8 50	10 00	11 00	10 00	10 00	10 00	10 00
Grinder	do	8 00	6 50	6 25	6 50	7 50	10 00	7 50	7 50	7 50	7 50
Lapperman	do	5 02	4 50	4 75	5 50	6 00	7 00	7 00	7 00	7 00	7 00
Stripper	do	5 50	4 50	5 00	5 50	6 50	7 50	7 50	7 50	7 50	7 50
Roving carrier	do	5 25	4 00	4 50	5 00	6 00	7 00	7 00	7 00	7 00	7 00
Drawing tender	do	4 75	4 00	4 00	4 25	5 50	6 00	6 00	5 00	4 50	4 50
Course speeder	Set	a 11½	8	8	9	11	12½	12	14	14	14
Intermediate speeder	do	a 11½	10½	10½	12	15	16	18	20	20	20
Fine speeder	do	a 15½	15	11½	14	22	22	30	30	30	30
Sparo hand	Week	4 00	4 00	4 00	4 00	4 00		5 00	5 00	5 00	5 00

a Hank.

Ring-spinning.

Classes of employes.	Unit of payment.	DATES.			
		1881.	1878.	1877.	1876.
Overseer	Week	\$16 50	\$15 00	\$16 50	
Second hand	do	5 25	6 00	7 50	\$7 50
Doffer	do	2 75	2 50	2 75	2 75
Spinner	Side	40	30	45	54

Spooling.

Classes of employes.	Unit of payment.	DATES.			
		1881.	1878.	1877.	1876.
Overseer	Week	\$12 00	\$12 00		
Second hand	do	3 00	3 50	\$7 00	\$7 50
Spooling	Side	36	32	36	36
Warping	Week	a 50	a 45	4 00	4 00
Cop-spooling	Box	10	9	10	10

a Beam.

An establishment in Connecticut—Continued.

* Mule-spinning.

Classes of employes.	Unit of payment.	DATES.									
		1881.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Overseer	Week...	\$10 50	\$15 00	\$16 50	\$16 50	\$16 50	\$16 50	\$16 50	\$16 50	\$16 00	\$16 00
Second hand.....	do	9 00	7 50	7 50	9 50	9 50	10 00	10 00	9 50	9 00	9 00
Back boy.....	do	2 50	2 00	2 00	2 50	2 50	3 00	3 00	3 00	2 50	2 50
Spinners:											
No. 36.....	Pound ..	1 $\frac{1}{2}$	0 $\frac{1}{10}$	1	1 $\frac{1}{2}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
No. 40.....	do			1 $\frac{1}{2}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
No. 28.....	do	0 $\frac{1}{10}$	0 $\frac{1}{10}$								

Weaving.

Classes of employes.	Unit of payment.	DATES.									
		1881.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Overseer	Week...	\$16 50	\$15 00	\$16 50	\$16 50	\$15 00	\$15 00	\$18 00	\$18 00	\$18 00	\$18 00
Second hand.....	do	8 50	8 50	7 50	8 50	10 00	11 00	10 00	10 00	10 00	10 00
Scrubber.....	do	5 00		8 75	8 75	4 00	4 50	4 50	4 50	4 50	4 50
Baler.....	do	8 50	9 50	10 00	11 00	13 00	16 00	12 00	12 00	14 00	14 00
Baler, boy.....	do	5 00	5 00								
Cloth-trimmers.....	do	4 00	4 00	4 00	4 50	5 00	4 50	4 50	4 50	4 50	5 00
Weaver.....	Cut.....	22	19	21	21	28	32	32	32	32	32
Drawer-in.....	Beam...	21	10 $\frac{1}{2}$	18	18	22	25	25	25	25	25
Chore-hand.....	Week...	5 50	5 50	4 50	6 00	7 00	7 50	7 50	7 50		

Miscellaneous labor.

Classes of employes.	Unit of payment.	DATES.					
		1881.	1878.	1877.	1876.	1875.	1870.
First mechanic.....	Week...	\$16 50	\$18 50	\$15 00	\$15 00	\$15 00	\$15 00
Second mechanic.....	do	10 50	9 00	9 75	12 00	13 50	13 50
Third mechanic.....	do	7 50	8 00	9 00	9 50	12 00	12 00
Carpenter.....	do	10 50	11 00	12 00	13 50	15 00	
Engineer.....	do	15 00	11 00	12 00	13 50	15 00	
Watchman.....	7 days ..	8 00	8 00	7 50	8 50	10 50	
Yard boss.....	do	7 00	8 00	7 50	8 50	9 00	

Payments are wholly in cash, and were monthly prior to 1880, since which date the interval has been every four weeks.

The hours of labor have been 11 a day, except occasionally

when for a short time the factory has run 2 or 3 hours a day extra for five days per week. The effect of running extra time is reported to be unsatisfactory, as the employes become wearied, and can not increase production proportionately to extra time run and extra wages paid.

Twelve months a year have been worked except in 1861, when for a few months operations were suspended by the war; in 1876, 6 months, when the factory stopped for repairs; and the whole of 1879, when the works were idle on account of financial embarrassment.

There has been no change in the efficiency of labor.

Improved machinery has been introduced as follows: Light fast-running frame spindlers, a slasher to take the place of dressers, and wider cards with self-strippers, besides other improvements of the same general character. The effect of these additions has been largely to increase production in proportion to number of employes and to decrease labor cost.

The business is healthful and safe.

An establishment in Connecticut.

[Continued on next two pages.]

Classes of employés.	Unit of payment.	DATES.													
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1858.	1857.
Carding, spinning, and weaving overseers.	Month	\$72 00-90 00	\$72 00-90 00	\$72 00-90 00	\$72 00-90 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00-84 00	\$72 00
Second hand	Day	1 33½	1 25	1 25	1 37½	1 37½	1 37½	1 50	1 50	1 54	1 50	1 50	1 50	1 50	1 50
Picker	do	1 00	1 00	1 00	92	92	1 08½	1 10½	1 25	1 25	1 10½	1 08½	1 08½	1 10½	1 10½
Card-stripper	do	91½	87½	87½	87½	87½	1 00	1 00	1 00	1 10½	1 08½	1 08½	1 08½	1 10½	1 10½
Grinder	do	1 41½	1 20	1 20	1 25	1 25	1 33½	1 58	1 58	1 58	1 50	1 50	1 50	1 58	1 58
Drawer	do	79	75	75	60½	60½	83½	75	75	75	60½	60½	60½	60½	60½
Speeder	do	95	83½	83½	87½	87½	91½	1 04	1 04	1 04	90½	90½	90½	1 00	1 00
Frame-spinner	do	48	45½	45½	48	48	50½	50½	50½	50½	53½	53½	53½	60	60
Doffer	do	62½-75	57-70	57-70	60-63	60-63	63-66½	63-75	66-75	66-75	63-66½	62-66½	62-66½	60-63	66-75
Spooler	do	62½	54	54	58	58	62½	60½	60½	60½	50	50	50	55	55
Warper	do	61½	83½	83½	87½	87½	95	95	95	1 00	91½	91½	91½	75	75
Mule-spinner	do	1 25	1 16½	1 16½	1 12½	1 12½	1 25	1 50	1 75	1 75	1 00	1 50	1 50	1 54	1 75
Back boy	do	87½	83½	83½	83½	83½	37½	37½	37½	37½	33½	33½	33½	33½	33½
Spinning section-hand	do	1 70	1 58½	1 58½	1 75	1 75	1 91½	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Dresser	do											2 25	2 25	2 25	2 25
Slasher	do	2 00	1 91½	1 91½	1 91½	1 91½	2 08½	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25
Web-drawer	do	1 08½	1 00	1 00	1 03	1 03	1 08½	1 08½	1 08½	1 08½	1 12½	1 12½	1 12½	1 04	1 04
Weaver	do	1 22½	1 06	1 06	1 18	1 18	1 25	1 25	1 25	1 21½	1 29	1 29	1 29	1 25	1 25
Weaving section-hand	do	1 75	1 58½	1 58½	1 66	1 66	1 75	1 83	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Cloth-trimmer	do	91½	75	75	83½	83½	83½	83½	83½	83½	75	75	75	66½	62½
Folder	do	1 50	1 41½	1 41½	1 41½	1 41½	1 50	1 50	1 50	1 33½	1 33½	1 33½	1 33½	1 50	1 50
Baler	do	1 33½	1 25	1 25	1 17	1 17	1 33½	1 16½	1 10½	1 10½	1 10½	1 10½	1 10½	1 10½	1 16½
Carpenter	do	1 58½	1 50	1 50	1 66	1 66	1 80	2 00	2 20	2 20	2 07	2 07	2 07	2 25	2 25
Machinist	do	2 08½	1 91½	1 91½	1 95	1 95	2 10½	2 25	2 53	2 53	2 45	2 45	2 45	2 50	2 50
Painter	do	1 58½	1 50	1 50	1 50	1 50	1 58½	1 58½	1 58½	1 58½	1 58½	1 58½	1 58½	1 50	1 00½
Yard-hand	do	1 08½	1 00	1 00	1 00	1 00	1 12½	1 12½	1 20	1 20	1 00	1 00	1 00	1 00	1 33½
Common laborer	do	1 00	91½	91½	1 00	1 00	1 12½	1 12½	1 25	1 25	1 00	1 00	1 00	1 00	1 33½

Classes of employés.	Unit of payment.	DATES.													
		1860.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.
Carding, spinning, and weaving overseers.	Month	\$66 00-72 00	\$60 00	\$54 00-60 00	\$54 00-60 00	\$48 00-60 00	\$48 00-60 00	\$48 00-60 00	\$38 00-54 00	\$42 00-54 00	\$42 00-54 00	\$48 00-54 00	\$48 00-61 00	\$48 00-64 00	.....
Second hand	Day	1 50	1 25	1 00	1 00	1 00	1 00	1 00	83½	83½	83½	91½	91½	91½	.....
Picker	do	1 16½	90½	60½	60½	75	75	75	60½	60½	60½	62½	60½	60½	.....
Card-stripper	do	1 10½	75	75	75	75	75	75	75	75	75	75	75	75	.....
Grinder	do	1 58	1 10½	1 16½	1 10½	1 10½	1 10½	1 10½	1 16½	1 10½	1 10½	1 04	1 04	1 04	.....
Drawer	do	60½	50	50	50	45	41½	41½	41½	41½	41½	45	45	41½	.....
Speeder	do	1 00	75	60	50	50	50	50	50	50	50	50	50	50	.....
Frame-spinner	do	60	44½	44½	44½	35	33½	33½	33½	33½	35	42	42	34½	.....
Doffer	do	60½-75	50-60½	50-60½	50-60½	42-58	45-50	45-50	41½-50	41½-50	41½-50	41½-50	41½-50	41½-50	.....
Spooler	do	55	45	45	45	45	45	45	33½	33½	33½	41½	41½	33½	.....
Warper	do	75	58½	58½	58½	54	54	54	54	54	54	58½	58½	50	.....
Mule-spinner	do	1 75	1 33	1 15	98	88	88	1 05	1 05	1 05	93	1 00	1 00	1 00	.....
Back boy	do	83½	27	27	27	25	25	25	25	25	25	25	25	25	.....
Spinning section-hand	do	2 00	1 75	1 50	1 25	1 08½	1 08½	1 08½	1 00	1 00	1 00	1 10½	1 10½	1 10½	.....
Dresser	do	2 25	1 75	1 50	1 12½	1 29	1 29	1 29	1 28	1 28	1 28	1 25	1 25	1 25	.....
Slasher	do														.....
Web-drawer	do	1 04	92	75	66½	70	75	80	80	80	83½	83½	83½	83½	.....
Weaver	do	1 25	1 00	92	70	75	77	77	77	77	38½	83½	83½	83½	.....
Weaving section-hand	do	2 00	1 75	1 50	1 10½	1 10½	1 25	1 33½	1 33½	1 33½	1 33½	1 33½	1 10½	1 10½	.....
Cloth-trimmer	do	62½	55	50	45	41½	41½	41½	41½	41½	41½	41½	41½	41½	.....
Folder	do	1 50	1 33½	1 16½	1 10½	87½	87½	87½	85½	85½	85½	83½	83½	83½	.....
Baler	do	1 16½	1 00	1 00	1 00	83½	83½	83½	89½	89½	89½	83½	83½	83½	.....
Carpenter	do	2 25	1 75	1 50	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 25-1 50	.....
Machinist	do	2 50	2 25	1 75	1 41½	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Painter	do	1 66½	1 41½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	.....
Yard-hand	do	1 33½	1 25	1 00	88½	83½	83½	83½	83½	83½	83½	83½	83½	1 00	.....
Common laborer	do	1 33½	1 25	1 00	88½	1 00	1 00	1 00	91½-1 00	91½-1 00	91½-1 00	1 00	1 00	1 00	.....

REMARKS.—This establishment employed no slasher until 1870, and no dresser after 1870. The mill did not begin running until 1854.

Mechanics and outside hands sometimes work over-time in making repairs, and their extra earnings have not been included in the above table.

STATISTICS OF WAGES—COTTON MANUFACTURE.

337

An establishment in Connecticut—Continued.

The employes have the use of land for gardens and houses at low rents; these privileges also are ignored in the table.

This mill produces sheetings, shirtings, cretonnes, and fancy cotton goods.

The only classes under any expense for implements, etc., are mechanics, who furnish their own tools.

The following table gives rates of wages by groups of employes arranged in accordance with the different branches of this industry:

Carding.

Classes of employes.	Unit of payment.	DATES.									
		1850.	1878.	1875.	1872.	1869.	1866.	1863.	1860.	1857.	1854.
Picker	Week ..	\$0 00	\$0 00	\$0 50	\$7 50	\$0 50	\$7 00	\$4 00	\$4 50	\$4 00	\$4 00
Card-stripper.....	do	5 50	5 25	6 00	7 00	6 50	7 00	4 50	4 50	4 50	4 50
Grinder	do	8 50	7 25	8 00	9 50	9 00	9 50	7 00	7 00	7 00	6 25
Drawer.....	do	4 75	4 50	5 00	4 50	4 00	4 00	3 00	2 50	2 50	2 50
Speeder, girl	do	5 75	5 00	5 50	6 25	5 50	6 00	3 00	3 00	3 00	3 00

Ring-spinning.

Frame-spinner	Week ..	\$2 88	\$2 72	\$3 04	\$3 04	\$3 20	\$3 60	\$2 66	\$2 00	\$2 10	\$2 08
Doffer	do	3 75	3 42	3 80	4 00	3 75	4 50	3 00	2 75	2 50	2 50
Spooler-hand	do	3 75	3 25	3 75	4 00	3 00	3 30	2 75	2 75	2 00	2 00
Warper tender	do	5 50	5 00	5 75	6 00	5 50	4 50	3 50	3 25	3 25	3 00
Second hand.....	do	8 00	7 50	8 25	9 25	9 00	9 00	6 00	6 00	5 60	5 50

Cloth room.

Overseer	Week ..	\$15 00- 22 50	\$15 00- 19 50	\$15 00- 22 50	\$15 00- 21 00	\$18 00- 21 00	\$15 00- 21 00	\$8 00- 15 00	\$8 00- 16 00	\$8 00- 14 00	\$12 00- 18 50
Cloth-trimmer.....	do	5 50	4 50	5 00	5 00	4 50	3 75	2 75	2 50	2 50	2 50
Baling-hand	do	8 00	7 50	8 00	7 00	7 00	7 00	6 00	5 00	5 00	5 00
Folder.....	do	9 00	8 50	9 00	9 00	8 00	9 00	7 00	5 25	5 14	5 00

Miscellaneous labor.

Carpenter	Week ..	\$9 50	\$0 00	\$10 80	\$13 20	\$12 42	\$13 50	\$7 50	\$9 00	\$9 00	\$7 50- 9 00
Machinist.....	do	12 50	11 50	13 00	15 18	14 75	15 00	8 50	9 00	9 00	9 00
Painter.....	do	9 50	9 00	9 50	9 50	9 50	10 00	8 00	8 00	8 00	8 00
Yard-hand	do	6 50	6 00	6 75	7 25	6 60	8 00	5 00	5 00	5 00	6 00
Common laborer	do	6 00	5 50	6 75	7 50	6 00	8 00	5 00	6 00	5 50- 6 60	6 00

Mule-spinning.

Section-hand	Week ..	\$10 25	\$9 50	\$11 50	\$12 00	\$12 00	\$12 00	\$7 50	\$6 50	\$6 00	\$7 00
Mule-spinner.....	do	7 50	7 00	7 50	10 50	9 00	10 50	5 58	6 30	5 58	6 00
Doffer	do	4 50	4 25	4 00	4 50	4 00	4 00	4 00	3 00	3 00	3 00
Back boy on mule.....	do	2 25	2 00	2 25	2 25	2 00	2 00	1 02	1 50	1 50	1 50

Dressing.

Dresser tender.....	Week ..					\$13 50	\$13 50	\$6 75	\$7 75	\$7 68	\$7 50
Slasher.....	do	\$12 00	\$11 50	\$12 50	\$12 00						

Weaving.

Web-drawer	Week ..	\$6 50	\$6 00	\$6 50	\$6 50	\$6 75	\$6 25	\$4 00	\$4 80	\$5 00	\$5 00
Weaver.....	do	7 35	6 30	7 50	7 25	7 75	7 50	4 25	4 68	5 00	5 00
Section-hand.....	do	10 50	9 50	10 50	12 00	12 00	12 00	7 00	8 00	8 00	7 00

The following statement is given as to the number of working days in each year since 1854 that the mill has not run:

Year.	Days.	Hours.	Year.	Days.	Hours.	Year.	Days.	Hours.
1854.....	2		1864.....	23	4	1873.....	24	1
1855.....	10	1	1865.....	18	3	1874.....	23	
1856.....	6	11	1866.....	4	8½	1875.....	12	10½
1857.....	98	8	1867.....	11	5½	1876.....	40	9½
1858.....	30	11	1868.....	25	8	1877.....	9	6½
1859.....	7	4	1869.....	5	2½	1878.....	9	2
1860.....	5	½	1870.....	22	8	1879.....	9	2
1861.....	74	6	1871.....	7	1	1880.....	9	8½
1862.....	77	6	1872.....	4	10	1881.....	18	4
1863.....	18							

The following table gives the labor cost per pound and the percentage of wages to cost of cotton cloth since 1855:

Year.	Labor cost of cotton cloth, per pound.	Percentage of number of yarn used.	Percentage of wages to cost of cotton cloth.
1855.....	\$0 12 ³³ / ₁₀₀	Per cent. 30 +	Per cent. 42.70
1860.....	0 ¹⁰ / ₁₀₀	25.30	30.20
1865.....	12 ²⁵ / ₁₀₀	34.72	15.45
1870.....	22 ³⁵ / ₁₀₀	42.83	40.10
1875.....	13 ²⁵ / ₁₀₀	35.21	38.70
1880.....	9 ⁸⁵ / ₁₀₀	25.37	36.70

All payments are monthly and in cash.

An establishment in Connecticut—Continued.

Cloth of different degrees of fineness was made during the above years.

The following statement of improved machinery introduced into this mill is given:

“Improved pickers have been made heavier, so as to make heavier laps of cotton, and self-acting evening arrangement for making uniform weight of laps. Improvements in cards, by adding self-stripping arrangement. Improvements in doubler winder for making finished card-laps. Improvements in railway heads, by adding evener and automatic stop-motion. Improvements in drawing-frames, stop-motion, etc. Improvements in speeders, by putting in

centrifugal flyers and improved bolster arrangement. Improvements in spinning-frames, in spindles, etc. Improvements in mules, making them stronger and better. Improvements in spoolers, by change of bobbin-holders. Improvements in warpers, creels, and large cylinders, so as to wind larger beams. Improvements in dressing or sizing department, by using slashers instead of dressers. Improvements in looms, enabling us to run them at higher speed. Improvements in machinists' tools, etc., enabling us to do the repairs cheaper and better.”

The causes of idleness have been low water, repairs, and holidays. There has been no change in the efficiency of labor.

An establishment in Connecticut.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Carding, spinning, and weaving overseers.	Month..	\$48 00- 84 00	\$48 00- 78 00	\$48 00- 84 00	\$48 00- 72 00	\$48 00- 72 00	\$48 00- 72 00	\$44 00- 72 00				
Picker	Day	1 08½	1 08½	1 08½	1 08½	1 08½	1 08½	1 10½	1 08½	1 08½	1 08½	1 08½
Card-stripper	do	1 08½	1 08½	1 08½	1 12½	1 12½	1 12½	1 25	1 33½	1 33½	1 25	1 25
Drawer	do	71	66½	66½	66½	66½	67½	75	83½	83½	83½	83½
Speeder	do	96	87	87½	87½	87½	87½	1 00	1 08½	1 08½	1 00	1 00
Doffer	do	58½- 54	50	50	50	50	50	50	50- 54	50- 54	50- 54	50- 54
Spooler	do	60½	64½	64½	64½	64½	64½	60½	66½	66½	66½	66½
Warper	do	1 60	91½	91½	1 00	1 00	1 00	1 10½	1 20	1 20	1 10½	1 21
Back boy	do	37½	33½	33½	33½	33½	33½	37½	37½	37½	37½	37½
Spinning section-hand	do	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 75
Web-drawer	do	1 12½	1 08½	1 08½	1 08½	1 08½	1 12½	1 10½	1 10½	1 10½	1 25	1 25
Weaver	do	1 10½	1 10½	1 10½	1 10½	1 12½	1 12½	1 10½	1 10½	1 10½	1 25	1 21
Weaving section-hand	do	1 75	1 58½	1 75	1 75	1 75	1 75	1 75	1 83½	1 83½	1 83½	1 75
Cloth-trimmer	do	71	66½	75	75	75	75	1 00	1 00	1 00	1 00	1 00
Folder	do	1 33½	1 33½	1 50	1 50	1 35	1 35	1 50	1 50	1 50	1 33½	1 23½
Baler	do	1 33½	1 33½	1 50	1 50	1 35	1 35	1 50	1 50	1 50	1 33½	1 33½
Carpenter	do	2 00	1 75	1 75	2 12½	2 12½	2 10½	2 50	2 25	2 33½	2 33½	2 50
Machinist	do	1 75- 3 00	1 50- 2 70	1 50- 2 70	1 80- 2 70	1 80- 2 70	1 80- 2 70	2 00- 3 00	1 75- 2 60½	1 50- 2 50	1 50- 2 50	1 25- 2 50
Painter	do	2 00	2 00	2 00	2 00	2 25	2 25	2 50	2 50	2 50	2 50	2 00
Common laborer	do	1 08½	1 00	1 00	1 04½	1 04½	1 12½	1 25	1 25	1 25	1 25	1 25
Spinner	do	58½- 1 41½	54- 1 33½	54- 1 33½	58½- 1 37½	58½- 1 37½	58½- 1 37½	62½- 1 50	75- 1 54	75- 1 54	75- 1 50	75- 1 50

Classes of employes.	Unit of payment.	DATES.										
		1869.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.
Carding, spinning, and weaving overseers.	Month..	\$44 00- 72 00	\$44 00- 72 00	\$44 00- 72 00	\$44 00- 60 00	\$36 00- 60 00	\$36 00- 48 00	\$36 00- 42 00	\$36 00- 40 00	\$38 00- 44 00	\$38 00- 44 00	.....
Picker	Day	1 08½	1 08½	1 10½	1 16½	1 08½	1 00	83½	83½	83½	83½	.....
Card-stripper	do	1 12½	1 10½	1 25	1 10½	1 08½	1 08½	83½	83½	83½	83½	.....
Drawer	do	83½	75	75	75	66½	58½	50	50	41½	41½	.....
Speeder	do	1 00	1 00	1 00	91½	75	75	66½	66½	66½	66½	.....
Doffer	do	58½- 54	58½	58½	58½- 50	50- 41½	41½- 37½	41½- 33½	41½- 33½	40½- 33½	40½- 33½	.....
Spooler	do	66½	66½	66½	66½	66½	50	45+	45+	45+	45	.....
Warper	do	1 33½	1 50	1 50	1 25	1 00	91½	75	75	75	75	.....
Back boy	do	37½	37½	37½	20	28	25	25	25	25	25	.....
Spinning section-hand	do	1 75	1 60½	1 60½	1 50	1 25	1 00	83½	75	66½	66½	.....
Web-drawer	do	1 25	1 25	1 25	1 16½	1 00	83½	83½	83½	83½	83½	.....
Weaver	do	1 21	1 21	1 16½	1 05½	1 00	91½	91½	91½	91½	91½	.....
Weaving section-hand	do	1 75	1 75	1 62½	1 66½	1 33½	1 25	1 25	1 60½	1 10½	1 10½	.....
Cloth-trimmer	do	1 00	83½	83½	83½	58½	50	50	50	40	40	.....
Folder	do	1 33½	1 33½	1 33½	1 25	1 25	1 08½	1 08½	1 08½	1 08½	1 08½	.....
Baler	do	1 33½	1 25	1 33½	1 33½	1 25	1 16½	1 10½	1 08½	1 08½	1 08½	.....
Carpenter	do	2 33½	2 10½	2 16½	2 16½	2 60	1 41½	1 33½	1 33½	1 10½	1 16½	.....
Machinist	do	1 25- 1 50	1 50- 2 50	1 50- 2 50	1 00½- 2 50	1 60½- 2 50	1 33½- 1 83½	1 33½- 1 83½	1 33½- 1 83½	1 33½- 2 00	1 33½- 2 00	.....
Painter	do	2 00	1 75	1 66½	1 58½	1 41½	1 25	1 25	1 25	1 10½	1 10½	.....
Common laborer	do	1 25	1 10½	1 10½	1 25	1 25	1 08½	1 00	1 00	1 00	1 00	.....
Spinner	do	75- 1 50	75- 1 50	75- 1 58½	60½- 1 50	60- 1 50	58½- 1 10½	58½- 1 00	58½- 91½	58½- 83½	58½- 83½	.....

STATISTICS OF WAGES—COTTON MANUFACTURE.

339

An establishment in Connecticut—Continued.

REMARKS.—This firm manufactures a variety of articles, among which are chevots, tickings, denims, shirting, stripes, and plaids. Wages for a large number of classes are given from 1860. The ar-

range in the schedule returned by this establishment is somewhat different from that in the foregoing table, and is as follows, the rates being per week:

Carding.

Classes of employes.	DATES.																			
	1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1860, 1861.
Picker.....	\$0 50	\$0 50	\$0 50	\$0 50	\$0 50	\$0 50	\$0 70	\$0 50	\$0 50	\$0 50	\$0 50	\$0 50	\$0 50	\$0 70	\$0 70	\$0 50	\$0 00	\$5 00	\$5 00	\$5 00
Card stripper.....	6 50	6 50	6 50	6 75	6 75	6 75	7 50	8 00	8 00	7 50	7 50	6 75	7 00	7 50	7 00	6 50	6 50	5 00	5 00	5 00
Drawer.....	4 25	4 00	4 00	4 00	4 00	4 05	4 50	5 00	5 00	5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Speeder.....	5 75	5 25	5 25	5 25	5 25	5 25	6 00	6 50	6 50	6 00	6 00	6 00	6 00	6 00	5 50	4 50	4 50	4 00	4 00	4 00

Warp-spinning, etc.

Spinner.....	\$3 50	\$3 25	\$3 25	\$3 50	\$3 50	\$3 50	\$3 75	\$4 50	\$4 50	\$4 50	\$4 50	\$4 50	\$4 50	\$4 50	\$4 00	\$3 00	\$3 50	\$3 50	\$3 50	\$3 50
Spooler.....	4 00	3 87	3 87	3 87	3 87	3 87	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	3 00	2 75	2 75	2 70
Warper.....	6 00	5 50	5 50	6 00	6 00	6 00	7 00	7 25	7 25	7 00	7 25	8 00	9 00	9 00	7 50	6 00	5 50	4 50	4 50	4 50
Doffer.....	3 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 50	3 50	3 50	3 00	2 50	2 50	2 50	2 50	2 44
Second hand.....	11 00	11 00	11 00	11 00	11 00	11 00	11 00	11 00	11 00	11 00	10 50	10 50	10 00	10 00	9 00	7 50	6 00	5 00	4 50	4 00

Filling and spinning.

Spinner.....	\$8 00	\$8 00	\$8 00	\$8 25	\$8 25	\$8 25	\$9 00	\$9 25	\$9 25	\$9 00	\$9 00	\$9 00	\$9 00	\$9 00	\$9 50	\$9 00	\$7 00	\$9 00	\$5 50	\$5 00
Doffer.....	3 25	3 00	3 00	3 00	3 00	3 00	3 00	3 25	3 25	3 25	3 25	3 25	3 50	3 50	3 00	2 50	2 25	2 00	2 00	2 00
Back boy.....	2 25	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	1 75	1 07	1 50	1 50	1 50	1 50
Warp-sizer.....	8 00	8 00	8 00	8 00	7 50	8 00	8 50	8 50	8 50	8 00	7 50	7 00	7 00	7 00	7 50	7 50	6 50	6 00	6 00	6 00

Weaving and wobs.

Web-drawer.....	\$6 75	\$6 50	\$6 50	\$6 50	\$6 50	\$6 50	\$6 75	\$7 00	\$7 00	\$7 50	\$7 50	\$7 50	\$7 50	\$7 50	\$7 00	\$6 00	\$5 00	\$5 00	\$5 00	\$5 00
Weaver.....	7 00	7 00	7 00	7 00	6 75	6 75	7 00	7 00	7 00	7 50	7 25	7 25	7 25	7 00	6 50	6 00	5 50	5 50	5 50	5 50
Second hand.....	10 50	9 50	10 50	10 50	10 50	10 50	10 50	11 00	11 00	11 00	10 50	10 50	10 50	9 75	10 00	8 00	7 50	7 50	7 00	7 00

Cloth room.

Baler.....	\$8 00	\$8 00	\$9 00	\$9 00	\$8 10	\$8 10	\$9 00	\$9 00	\$9 00	\$8 00	\$8 00	\$8 00	\$7 50	\$8 00	\$8 00	\$7 50	\$7 00	\$7 00	\$6 50	\$6 50
Trimmer.....	4 25	4 00	4 50	4 50	4 50	4 50	6 00	6 00	6 00	6 00	6 00	6 00	5 00	5 00	5 00	3 50	3 00	3 00	3 00	2 75
Folder.....	8 00	8 00	9 00	9 00	8 10	8 10	9 00	9 00	9 00	8 00	8 00	8 00	8 00	8 00	7 50	7 50	6 50	6 50	6 50	6 50

Miscellaneous labor.

Overseer.....	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$12 00	\$11 00	\$11 00	\$11 00	\$11 00	\$11 00	\$9 00	\$9 00	\$9 75	\$9 75	\$9 50
Carpenter.....	12 00	10 50	10 50	12 75	12 75	13 00	15 00	13 50	14 00	14 00	15 00	14 00	13 00	13 00	13 00	12 00	8 50	8 00	8 00	7 00
Machinist.....	10 50	9 00	9 00	10 80	10 80	10 80	12 00	10 50	9 00	9 00	7 50	7 50	9 00	9 00	10 00	10 00	8 00	8 00	8 00	8 00
Painter.....	12 00	12 00	12 00	12 00	13 50	13 50	15 00	15 00	15 00	15 00	12 00	12 00	10 50	10 00	9 50	8 50	7 50	7 50	7 50	7 00
Common laborer, chore hand.	6 50	6 00	6 00	6 00	6 25	6 75	7 50	7 50	7 50	7 50	7 50	7 50	7 00	7 00	7 50	7 50	6 50	6 00	6 00	6 00

The only extra earnings are for over-time in making repairs, and have not been included in the table.

Employés receive, in addition to the above rates, allowances in the way of gardens and houses at low rents, with pasturage and barn and stable room for cows.

Some of the wood and iron workmen furnish their own tools.

The payments are part in cash and part in merchandise. The company owns a store at which employés buy what they wish and receive the balance of their wages in cash.

From 1860 to 1875 all classes worked on an average 11½ hours a day; from 1875 to 1880, 11 hours.

The number of days worked each year from 1860 is given in the schedule as follows:

Year.	Number of days.						
1860.....	292	1866.....	290	1871.....	303	1876.....	299
1861.....	105	1867.....	293	1872.....	307	1877.....	295
1862.....	105	1868.....	310	1873.....	261	1878.....	302
1863.....	76	1869.....	304	1874.....	265	1879.....	301
1864.....	62	1870.....	298	1875.....	302	1880.....	304
1865.....	180						

Aside from the war, holidays and repairs have accounted for the idleness. There have been no strikes.

Regarding selling price and cost of labor to unit of product, the statement is made that the variety of goods manufactured, and the changes of style, render the satisfactory filling out of the tables impossible. Wages have averaged about 25 per cent. of the total cost, the items of cost being divided as follows:

Raw material.....	per cent..	65
Labor.....	do.....	25
Coloring, etc.....	do.....	10

There has been no change in the efficiency of labor. The following statement is made as to labor-saving machinery:

"Have put in new improved pickers, increasing weight of lap or rolls, requiring less labor in handling. Improved in carding by putting in some self-strippers, adding evener and automatic stop-motion on railway head. Added new triple drawing-frames, saving one process or handling. Improved flyers on speeders, also improvement on spinning-frames, on spindles and separators, thereby running faster. Mules are better, stronger head, and can run better speed. Improvements on spoolers by new bobbin-holders and guides; warpers so as to get more cuts on a beam; looms so as to run greater speed, producing more cloth per day per loom."

The trade is believed to be as healthful as any indoor work, and care is taken with regard to sanitary precautions, ventilation, etc

STATISTICS OF WAGES—COTTON MANUFACTURE.

Joseph Bancroft and Sons, Christiana Hundred, Delaware.

Classes of employes.	Unit of payment.	DATES.																				
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.
Picker.....	Day ..	\$1 25	\$1 13½	\$1 20	1 20	\$1 20	\$1 35	\$1 35	\$1 50	\$1 50	\$1 50	\$1 50	\$1 32½	\$1 32½	\$1 50	\$1 40	\$1 40					
Card-stripper	do ..	1 40	1 25	1 40	1 40	1 40	1 35	1 35	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50					\$0 82½
Speeder	do ..	70½	70	75	72	72	72	72	80½	80½	80½	80	80	80	80	80	80					50
Spooler	do ..	64	73	81	81	90	75	75	80	80	80	80	80	80	80	80	80					41½
Mule-spinner	do ..	1 41½	1 35	1 35	1 46	1 46	1 50	1 50	1 57½	1 57½	1 55	1 55	1 55	1 55	1 70	1 50					96½	
Back boy	do ..	25	20	20	22½	22½	25	25	30	30	30	30	30	30	30	30					22	
Dresser.....	do ..	2 11½	1 80	2 10	2 10	2 10	2 34	2 34	2 58½	2 58½	2 58½	2 58½	2 58½	2 58½	2 10							1 32
Weaver (a)	do ..	1 00	97	1 08	1 08	1 08	1 20	1 20	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 46	1 33½	1 17					91½
Carpenter.....	do ..	2 25	2 00	2 10	2 10	2 15	2 30	2 30	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50		\$1 85	\$1 50	\$1 50	\$1 50	1 50
Common laborer.....	do ..	1 20½	1 20	1 15	1 15	1 15	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50						80

a Attending four looms.

REMARKS.—This firm manufactures cotton cloth, and bleaches and dyes the same for its own use and for other manufacturers and dealers.

Some opportunities for extra earnings from working over-time are afforded to bleach- and dye-house hands and mechanics, which have not been considered in the above table. Few allowances are given.

Carpenters furnish their own tools, at an expense which they estimate at about 4 per cent. of their earnings.

Employés receive 91.2 per cent. of their wages in cash, 4.6 per cent. in merchandise, and 4.2 per cent. in house-rent. Store-orders were never used. Payments have always been weekly.

From 1831 to 1855 all classes worked 11½ hours a day; from 1855 to 1860, 10 hours; 1860 to 1870, 11 hours; 1870 to 1880, 10 hours.

The proprietor gives it as his belief that the shortening of the hours from 70 to 60 per week has reduced the production almost in that proportion, but that, on the whole, it tends to the improvement of the character, habits, and healthfulness of the employés.

The works have been in almost constant operation during the 49 years of their existence, except a stoppage of 10 weeks in the autumn

of 1864, owing to a scarcity of cotton and the derangement in business consequent upon the war. No strikes worthy of notice have taken place.

The selling prices for cotton cloth in the gray, 39 inches wide, counting 52 by 50, and weighing 6½ yards to a pound, which is bleached and starched for window-shade makers' use, were as follows:

Year.	Cotton cloth, per yard.
1860.....	\$0 08
1865.....	25½
1870.....	9½
1875.....	6½
1880.....	6½

No labor-saving machinery has been introduced; that in the works is "out of date".

The trade is not considered dangerous or unhealthy.

Eagle & Phenix Manufacturing Company, Columbus, Georgia.

Classes of employes.	Unit of payment.	DATES.					Classes of employes.	Unit of payment.	DATES.				
		1880.	1870.	1878.	1877.	1870.			1880.	1870.	1878.	1877.	1870.
Carding, spinning, and weaving overseers.	Month..	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	Back boy.....	Day ..	\$0 40	\$0 40	\$0 40	\$0 40	\$0 40
Second hand	Day ..	1 50	1 50	1 50	1 50	1 50	Spinning section-hand.....	do ..	1 50	1 50	1 50	1 50	1 50
Picker	do ..	90	90	90	90	90	Dresser	do ..	1 50	1 50	1 50	1 50	1 50
Card-stripper.....	do ..	80	80	80	80	80	Slasher	do ..	1 50	1 50	1 50	1 50	1 50
Grinder	do ..	1 10	1 10	1 10	1 10	1 10	Web-drawer.....	do ..	80	80	80	80	80
Drawer.....	do ..	70	70	70	70	70	Weaver	do ..	1 00	1 00	1 00	1 00	1 00
Speeder.....	do ..	1 00	1 00	1 00	1 00	1 00	Weaving section-hand	do ..	1 30	1 30	1 30	1 30	1 30
Frame-spinner	do ..	50	50	50	50	50	Cloth-trimmer	do ..	60	60	60	60	60
Doffer	do ..	35	35	35	35	35	Folder	do ..	90	90	90	90	90
Spooler	do ..	60	60	60	60	60	Machinist.....	do ..	1 68	1 68	1 68	1 68	1 68
Warper	do ..	75	75	75	75	75	Yard-hand	do ..	68	68	68	68	68
Mule-spinner	do ..	75	75	75	75	75	Common laborer.....	do ..	68	68	68	68	68
							Spinner	do ..	50	50	50	50	50

REMARKS.—The opportunities for over-time work would increase wages but slightly, and have not been considered in the table.

This firm manufactures colored cotton goods, plaids, gingham, tickings, cottonades, chevots, cotton blankets, rope, sewing thread, etc.

Employés are furnished with houses at a nominal rent. This would increase the regular wages, and has not been included in the rates given above.

Payments are wholly in cash, and were fortnightly up to 1878, since which they have been monthly.

The hours of labor have always been 11 a day for all classes.

The works, which were established in 1866, have run without interruption ever since. There has never been a strike or a lockout.

There are about a hundred varieties of brown and colored cotton

goods manufactured at this factory, the prices of three of which are given below:

Year.	4-4 sheeting, per yard.	Standard plaids, per yard.	Ball thread.
1870.....	\$0 14	\$0 19	\$0 65½
1875.....	9	10½	40
1880.....	7½	9½	28

There has been an increase in the efficiency of labor through experience in operating machinery.

The trade is healthful, and accidents are rare.

STATISTICS OF WAGES—COTTON MANUFACTURE.

Evansville Cotton Manufacturing Company, Evansville, Indiana.

Classes of employes.	Unit of payment.	DATES.															
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	
Carding overseer	Month	\$100 00	\$90 00	\$90 00	\$90 00	\$90 00	\$90 00	\$90 00	\$90 00	\$90 00	\$90 00	\$100 00	\$100 00	\$100 00	\$75 00	\$75 00	
Spinning overseer	do	100 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	95 00	95 00	95 00	70 00	70 00	
Weaving overseer	do	100 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	75 00	75 00	70 00	70 00	70 00	
Second hand	Day	2 25	2 25	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 00	2 00	1 50	1 50
Picker	do	2 25	2 25	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 25	1 25	1 25	1 00	1 00	
Card-stripper	do	1 45	1 45	1 35	1 35	1 35	1 35	1 35	1 35	1 35	1 35	1 25	1 25	1 25	1 00	1 00	
Grinder	do	1 45	1 45	1 35	1 35	1 35	1 35	1 35	1 35	1 35	1 35	1 45	1 45	1 35	1 35	1 35	
Drawer	do	1 45	1 45	1 35	1 35	1 35	1 35	1 35	1 35	1 35	1 35	75	70	70	70	70	
Speeder	do	90	90	88	88	88	85	85	85	80	80	90	90	90	80	80	
Frame-spinner	do	90	90	88	88	88	85	85	85	80	80	90	90	90	80	80	
Doffer	do	90	90	88	88	88	85	85	85	80	80	90	90	90	80	80	
Spooler	do	90	90	88	88	88	85	85	85	80	80	90	90	90	80	80	
Warper	do	90	90	88	88	88	85	85	85	80	80	90	90	90	80	80	
Mule-spinner	do	1 75	1 75	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 25	1 25	
Back boy	do	40	40	35	35	35	35	35	35	35	35	35	35	35	30	30	
Spinning section-hand	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 00	1 75	1 75	
Dresser	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 75	1 75	
Slasher	do	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	2 00	2 00	1 75	1 75	1 75	
Web-drawer	do	75-90	75-90	75-90	75-90	75-90	75-90	75-90	75-90	75-90	75-90	00	00	00	80	80	
Weaver (a)	do	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	75-1 00	4 00	3 00	3 00	3 00	3 00	
Weaving section-hand	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	2 00	2 00	2 00	1 50	1 50	
Cloth-trimmer	do	75	75	75	75	85	85	85	85	85	85	90	90	90	90	90	
Folder	do	75	75	75	75	85	85	85	85	85	85	90	90	90	90	90	
Daler	do	1 25	1 25	1 25	1 35	1 35	1 35	1 50	1 50	1 50	1 50	1 75	1 75	1 75	1 75	1 75	
Carpenter	do	1 75	1 75	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 00	2 00	2 00	
Machinist	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 00	2 00	2 00	
Painter	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	3 00	2 25	2 00	2 00	2 00	
Yard-hand	do	1 00	1 00	1 00	1 00	1 25	1 25	1 25	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	
Common laborer	do	1 00-1 25	1 00-1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 00	1 00	1 00	1 00	1 00	

a Since 1870 girl weavers have been employed.

REMARKS.—This factory produces sheeting, drilling, ticking, batting, etc.

In addition to the rates in the foregoing table, the following are given :

Classes of employes.	Unit of payment.	DATES.																
		1880.	1879.	1878.	1877.	1876.	1875.	1872.	1870.	1869.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.
Carder:																		
Female	Day	\$0 05-75	\$0 05-75	\$0 70-75	\$0 70-80	\$0 70-80												
Male	do	1 00-1 40	1 00-1 40	1 20-1 50	1 20-1 50	1 25-1 60												
Weaver:																		
Female	do	80-1 00	80-1 00	90-1 00	75-90	75-90	a\$0 22	\$1 05	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 05	\$1 05	\$1 05	\$1 05
In cloth-room:																		
Female	do	75-85	75-85	75-85	80-90	80-90		1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Male	do	1 00-1 25	1 10-1 25	1 10-1 80	1 10-1 30	1 25-1 50		1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Repairer	do	2 00-2 50	2 00-2 50	2 25-2 60	2 50-2 60	2 50-3 00		1 75	1 80	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75

a Per cut.

There have been some chances for over-time work by repair-hands, the earnings for which have not been included in the table.

Employés also have the advantage of houses at a reduction of 50 per cent. below the ordinary rates for rent, which is not considered in the rates named.

Payments are in cash and monthly. Store-orders have never been used at this establishment.

The hours of labor average 10½ per day.

The works have been operated 12 months a year.

The firm makes the following statement regarding strikes and lockouts: "We have had no strikes of any importance; a few have occurred when reductions of wages were made, but never lasted over two or three days, and resulted in the acceptance of the prices offered."

The selling prices of three of the articles produced are given as follows for 1875 and 1880:

Year.	Sheeting, per yard.	Drilling, per yard.	Batting, per pound.
1875.....	\$0 00	\$0 00½	\$0 12
1880.....	7½	8	10

There has been no change in the efficiency of labor, except, possibly, a slight increase from experience.

New machinery with the latest improvements was introduced in 1875, since which time but few additions have been made.

The trade is neither dangerous nor unhealthful.

STATISTICS OF WAGES—COTTON MANUFACTURE.

W. G. Anderson & Co., Grahamton, Kentucky.

Classes of employes.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Overseer.....	Week...	\$11 00		\$11 00	\$12 00	\$12 00	\$12 00	\$15 00	\$15 00	\$15 00	\$15 00	\$15 00
Second hand.....	Day ...	93½		93½	1 00	1 00	1 00	1 25	1 25	1 10½	1 10½	1 10½
Drawer.....	do	50		50	58½	50	50	58½	58½	58½	58½	58½
Speeder.....	do	55		55	58½	58½	58½	60½	60½	60½	60½	60½
Weaver.....	do	58½		58½	58½	58½	60½	58½	58½	58½	58½	58½
Carpenter.....	do	1 50		1 50	1 60½	1 60½	1 60½	2 00	2 00	2 00	2 00	2 00
Common laborer.....	do	70		83½	1 00	1 08½	1 08½	1 08½	1 00	1 00	1 00	1 00
Spinner.....	Week...	2 75		2 75	2 75	2 75	3 00	3 00	3 00	3 00	3 00	3 00
Children.....	do	1 75		1 75	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00

REMARKS.—This factory makes seamless grain bags, and seamless bags into which to pick cotton.

The firm states that the wages of children were 33½ cents per day from 1870 to 1875, and 29 cents from 1876 to 1880.

Some over-time is made at night, the extra earnings for which would increase the regular wages for the days when over-time is made about 25 per cent., and have not been included in the table.

Employés have the use of houses at nominal rents, with gardens free and wood and fuel very low. These would increase wages, and have not been considered in the rates given.

Payments are weekly and wholly in cash. Store-orders have never been used.

All classes work 11½ hours a day. This has been the rule for many years, and, all things considered, is believed to be the best for employés as well as for employers. It is remarked that in the country habits are simple, and all seem to regard the hours as satisfactory, preferring to work that time rather than to submit to a reduction of wages corresponding to shortened hours.

The factory is worked every month in the year, and has never had a strike.

The selling prices and labor cost of product are given as follows:

Year.	SELLING PRICE.		LABOR COST.	
	Grain sacks, per 100.	Picking sacks, per 100.	Grain sacks, per 100.	Picking sacks, per 100.
1870.....	\$33 00		\$6 50	
1875.....	25 00	\$40 00	6 00	\$9 00
1880.....	20 00	35 00	5 50	8 00

No increase has been remarked in the efficiency of labor at this establishment.

Improved machinery has been introduced, consisting of pickers, carders, and twistors.

The effect of this machinery has been to increase production about 25 per cent. with the same number of employés.

The statement is made that there is as little danger in this as in any other occupation. The works are run mainly by water power, using steam for heating boilers under separate sheds or out of the main building. There has never been a serious accident, and the health of the employés is very good.

Farwell Mills, Lisbon, Maine.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.					
		1880.	1879.	1878.	1877.	1876.	1875.
Carding overseer.....	Month...	\$78 00		\$78 00	\$78 00	\$78 00	\$78 00
Spinning overseer.....	do	71 50		71 50	71 50	71 50	71 50
Weaving overseer.....	do	78 00		78 00	78 00	78 00	78 00
Second hand.....	Day	2 20		2 10	2 00	2 00	2 25
Picker.....	do	78		72	78	80	85
Card-stripper.....	do	76		70	72	81	83
Grinder.....	do	1 48		1 35	1 42	1 48	1 42
Drawer.....	do	54		50	50	52	58
Speeder.....	do	1 13		1 03	1 10	1 24	1 29
Frame-spinner.....	do	60		55	53	60	62
Doffer.....	do	35		30	32	35	35
Spooler.....	do	73		71	80	83	73
Warper.....	do	1 12		1 00	1 08	1 15	1 22
Mule-spinner.....	do	1 62		1 49	1 59	1 67	1 78
Back boy.....	do	35		30	32	35	35
Slasher.....	do	1 50		1 25	1 28	1 33	1 32
Web-drawer.....	do	97		94	99	1 05	1 00
Weaver.....	do	1 00		91	95	1 00	1 00
Weaving section-hand.....	do	1 60		1 50	1 50	1 50	1 55
Cloth-trimmer.....	do	78		73	78	78	80
Folder.....	do	70		60	50	55	55
Baler.....	do	50		50	50	50	55
Carpenter.....	do	1 62		1 62	1 87	2 00	2 00
Machinist.....	do	1 87		1 87	1 90	2 06	2 12½
Yard-hand.....	do	1 25		1 25	1 25	1 25	1 25
Common laborer.....	do	1 00		1 00	1 00	1 00	1 00

Farrell Mills, Lisbon, Maine—Continued.

REMARKS.—Fine sheetings and shirtings for bleaching are made at this factory.

The above wages are net, and are paid monthly or weekly if desired.

The hours of labor are 10, and the works run 12 months a year. There have been some short stoppages in the past for want of water, but the factory is now furnished with auxiliary steam-power, and this cause of irregularity is permanently removed.

There have been no strikes or lockouts.

There has been a marked increase in the efficiency of labor, arising from the careful selection and training of the employes.

No labor-saving machinery has been introduced.

The trade is considered as healthful as factory work usually is.

The following table gives the selling prices, labor cost, and percentage of wages to cost of cloth:

Year.	Selling price per yard.	Labor cost per yard.	Percentage of wages to cost.
1875.....	\$0 30 ³ / ₈	\$0 02 ⁹ / ₁₆	Per cent. 42
1876.....	.....	2 ³ / ₁₆	34
1877.....	.....	2 ¹ / ₁₆	33
1878.....	.....	1 ⁵ / ₁₆	32
1879.....	.....	1 ³ / ₁₆	32
1880.....	5 ⁷ / ₁₆	1 ⁵ / ₁₆	30

An establishment in Maine.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.													
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.
Carding, spinning, and weaving overseers.	Month..	\$82 42	\$84 50	\$88 81	\$87 96	\$86 58	\$91 00	\$91 00	\$78 00	\$78 00	\$81 00	\$78 00	\$78 00	\$78 00	\$78 00
Second hand	Day	2 00	2 08	2 17	2 17	2 41	2 17	2 17	2 25	2 25	2 17	2 10	2 00	2 00	2 00
Picker	do	75	75	97	1 00	1 12	1 00	1 00	1 10	1 11	1 04	1 17	1 25	1 25	1 25
Card-stripper	do	82	80	82	84	1 00	1 17	1 17	1 17	1 17	1 17	1 17	1 25	1 25	1 25
Grinder	do	1 50	1 47	1 05	1 03	1 75	1 75	1 75	1 75	1 75	1 75	1 83	1 07	1 75	1 07
Drawer	do	.....	50	62	62	.....	.....	.....	96	89	89	.....	71	71	71
Frame-spinner	do	68	68	72	72	80	82	82	.....	.....	80	80	70	76	76
Doffer	do	.....	35	38	38	35	35	35	.....	42	30	.....	49	37 ¹ / ₂	49
Spooler	do	77	81	85	80	82	85	85	95	95	82	85	70	70	76
Warper	do	1 16	1 10	1 21	1 09	1 08	1 28	1 28	1 40	1 30	1 26	1 29	92	90	92
Mule-spinner	do	1 50	1 50	1 51	1 05	1 84	1 79	1 79	1 98	1 75	1 84	1 73	2 00	1 73	2 00
Back boy	do	32	32	35	35	35	35	35	35	35	35	35	38	35	38
Dresser	do	1 52	1 04	1 07	1 27	1 60	1 74	1 74	2 00	1 02	1 72	1 55	1 07	1 74	1 07
Slasher	do	1 51	1 51	1 66	1 66	1 66	1 50	1 50	1 80	.....	.....	.....	90	92	90
Web-drawer	do	.....	90	86	83	1 20	1 11	1 11	1 13	1 10	92	.....	90	92	90
Weaver	do	1 25	1 21	1 15	1 31	1 32	1 30	1 30	1 40	1 31	1 31	1 15	1 00	90	1 00
Weaving section-hand	do	.....	1 70	1 75	1 75	2 00	.....	.....	2 25	2 25	2 25	.....	1 75	1 91	1 75
Carpenter	do	1 80	1 83	2 00	2 00	2 00	2 25	2 25	2 50	2 50	2 50	2 50	2 12	2 22	2 12
Machinist	do	1 83	1 83	2 00	2 00	2 13	2 17	2 17	2 32	2 25	2 25	2 25	2 33	2 22	2 33
Painter	do	1 00	1 50	1 91	1 01	2 00	2 00	2 00	2 24	2 25	2 37	2 00	2 13	2 13	2 13
Yard-hand	do	1 17	1 00	1 08	1 17	1 25	1 33	1 33	1 33	1 33	1 42	1 50	1 50	1 25	1 50

Classes of employes.	Unit of payment.	DATES.													
		1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.
Carding, spinning, and weaving overseers.	Month..	\$78 00	\$78 00	\$71 50	\$66 17	\$66 17	\$65 00	\$65 00	\$66 00	\$66 00	\$66 00	\$64 17	\$66 00	\$66 00	.....
Second hand	Day	2 00	2 00	1 68	1 10	1 16	1 50	1 50	1 01	1 42	1 42	1 33	1 33	1 33	.....
Picker	do	1 25	1 25	1 00	75	75	75	75	77	83	83	83	.....	.....	.....
Card-stripper	do	1 25	1 25	1 00	75	75	75	75	75	70	70	70	.....	.....	.....
Grinder	do	1 58	1 56	1 17	1 00	1 00	1 08	1 08	1 00	1 09	1 09	1 00	.....	.....	.....
Drawer	do	.....	.....	.....	44	44	50	.....	46	50	50	.....	.....	.....	.....
Frame-spinner	do	73	73	58	52	52	58	54	54	56	50	50	.....	.....	.....
Doffer	do	.....	.....	33	30	30	34	.....	33	33	33	.....	.....	.....	.....
Spooler	do	77	77	50	54	54	52	54	52	64	64	55	.....	.....	.....
Warper	do	70	70	64	60	60	70	65	66	71	71	70	.....	.....	.....
Mule-spinner	do	1 41	1 41	1 45	1 00	1 00	1 21	1 22	1 08	1 12	1 12	1 11	1 00	1 00	.....
Back boy	do	33	33	33	25	25	25	30	25	.....	.....	33	25	25	.....
Dresser	do	1 15	1 15	88	83	83	1 00	1 00	83	95	95	93	.....	.....	.....
Slasher	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Web-drawer	do	68	68	70	64	64	68	.....	62	59	59	56	.....	.....	.....
Weaver	do	90	90	80	63	63	60	75	70	87	87	68	68	68	.....
Weaving section-hand	do	.....	.....	1 40	1 12 ¹ / ₂	1 12 ¹ / ₂	1 17	.....	1 25	1 17	1 17	1 20	1 17	1 17	.....
Carpenter	do	2 12	2 12	1 58	1 35	1 35	1 66	1 33	1 33	1 33	1 33	1 30	.....	.....	.....
Machinist	do	2 33	2 33	1 65	1 35	1 35	1 50	1 50	1 39	1 53	1 53	1 50	.....	.....	.....
Painter	do	2 08	2 08	.....	87	87	.....	1 50	1 75	1 75	1 75	1 54	.....	.....	.....
Yard-hand	do	1 40	1 40	1 06	80	80	1 00	1 00	91	1 60	1 60	1 00	.....	.....	.....

An establishment in Maine—Continued.

REMARKS.—This return gives wages back to 1854 for a large number of classes of employes engaged in the manufacture of gingham, dress goods, shirtings, towels, and quilts.

The extra earnings from over-time are so slight as not to be worthy of consideration, and have not been included in the table.

There are some allowances to employes in the way of low rent and board, which would increase wages, and have not been considered in the rates given.

Store-orders have never been used at this factory, and wages are paid in cash every month.

The hours of labor were 12 a day up to 1860, when they were reduced to 11. The change reduced output, but the advantage to the company from improved health among employes and steady work has more than balanced this loss.

Employment has been uninterrupted, the works running 12 months a year, and no strikes have occurred.

The selling price of various products is given as follows:

Selling price.

Year.	Ginghams, per yard.	Crochet quilts, each.	Marseilles quilts, each.	Basket cheviots, per yard.
1860.....	\$0 17			
1865.....				
1870.....	14	\$2 00		
1875.....	10	1 05	\$3 00	\$0 12½
1880.....	10	1 12	2 50	10½

The prices given are those received by selling agents. No goods are sold at the mill.

The labor cost is stated to be as follows:

Labor cost.

Year.	Ginghams, per yard.	Dress goods, per yard.	Basket shirting, per yard.	Fancy duck, per yard.	Cottonade, per yard.	Seersucker, per yard.	Crochet quilts, each.	Marseilles quilts, each.
1870.....	\$0 04 ³³ / ₁₀₀				\$0 05 ¹⁰ / ₁₀₀	\$0 07 ³³ / ₁₀₀	\$0 82 ⁴⁵ / ₁₀₀	
1875.....	4 ¹⁰ / ₁₀₀		\$0 04 ³³ / ₁₀₀		0 ¹⁰ / ₁₀₀		37 ¹⁰ / ₁₀₀	\$1 40 ⁷⁵ / ₁₀₀
1880.....	3 ¹⁰ / ₁₀₀	\$0 04 ³³ / ₁₀₀	8 ¹⁰ / ₁₀₀	\$0 03 ³³ / ₁₀₀	4 ¹⁰ / ₁₀₀	4 ¹⁰ / ₁₀₀	20 ¹⁰ / ₁₀₀	1 03 ¹⁰ / ₁₀₀

In 1880 labor constituted about 66½ per cent. of the cost of gingham and dress goods, and 50 per cent. of the cost of shirting.

Improved pickers, self-stopping cards, fly and scrubber frames, and improved ring-spinners and looms have been introduced, the

effect of which has been to increase production 20 per cent. and to decrease employes 25 per cent. in proportion to number of spindles.

These manufacturers consider cotton-manufacturing among the most healthful of trades.

An establishment in Maine.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1830.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.
Carding overseer	Month	\$104 00	\$104 00	\$104 00	\$104 00	\$104 00	\$104 00	\$104 00	\$08 00	\$03 00	\$03 00	\$03 00	\$00 00	\$00 00	\$00 00	\$00 00
Spinning overseer	do	104 00	104 00	104 00	104 00	104 00	104 00	104 00	01 00	01 00	01 00	01 00	84 00	84 00	84 00	84 00
Weaving overseer	do	104 00	104 00	104 00	104 00	104 00	104 00	104 00	01 00	01 00	01 00	01 00	84 00	84 00	84 00	84 00
Second hand	Day	2 00	2 00	2 00	2 08	2 25	2 50	2 50	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 00
Picker	do	85	92	1 00	1 00	1 17	1 17	1 25	1 25	1 25	1 25	1 17	1 17	1 17	1 25	1 25
Card-stripper	do	85	92	1 00	1 00	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Grinder	do	1 50	1 50	1 50	1 02	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 83	1 83
Drawer	do	58	50	58	75	75	75	75	75	75	75	75	08	03	03	71
Speeder	do	1 00	1 00	1 00	1 05	1 20	1 15	1 15	1 00	1 00	1 00	1 00	08	1 00	1 00	1 00
Frame-spinner	do	1 12	1 17	1 17	1 25	1 25	1 25	1 25	1 25	1 25	1 25	75	75	75	83	83
Doffer	do	87	87	87	42	42	42	42	42	42	42	42	42	42	42	42
Spooler	do	75	75	75	75	75	75	75	75	75	75	75	87	87	87	83
Warper	do	1 17	1 17	1 17	1 17	1 20	1 20	1 00	1 00	1 00	1 00	1 00	95	80	1 08	1 00
Mule-spinner	do	1 00	1 50	1 75	1 75	1 75	1 75	1 86	1 86	1 00	1 00	1 75	1 75	1 75	2 00	1 04
Back boy	do	37	35	40	40	40	40	40	87	87	87	85	85	85	88	38
Spinning section-hand	do	1 58	1 50	1 75	1 75	1 75	1 75	2 60	2 00	2 00	2 00	1 33	2 00	2 00	2 00	1 50
Dresser	do														2 40	2 15
Slasher	do	1 50	1 50	1 50	1 50	1 60	1 80	2 00	2 00	2 00	2 00	2 00	2 00	1 50	1 50	
Web-drawer	do	90	95	95	1 00	1 00	1 10	1 12	1 12	1 12	1 12	1 12	1 00	92	85	91
Weaver	do	1 05	1 10	1 10	1 12	1 17	1 17	1 17	1 17	1 17	1 17	1 17	1 25	1 32	1 25	1 33
Weaving section-hand	do	1 58	1 50	1 50	1 81	1 06	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 83	1 83
Cloth-trimmer	do	80		75	83	83	83	83	80			80	75	75	71	71
Folder	do	1 48	1 04	1 50	1 58	1 58	1 83	1 83	1 02	1 92	1 92	1 75	1 75	1 50	1 50	1 50
Baler	do	1 83	1 25	1 25	1 42	1 42	1 50	1 50	1 50	1 50	1 50	1 75	1 75	1 50	1 50	1 50
Carpenter	do	1 83	1 75	1 75	2 00	2 00	2 50	2 50	2 50	2 50	2 50	2 50		2 50	2 50	2 50
Machinist	do	1 92	1 80	1 80	2 00	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 17	2 17	2 17	2 25
Painter	do	1 06	1 00	1 00	1 33	1 33	2 00	2 00	2 25	2 25	2 17	2 08	2 08	2 08	2 08	2 08
Yard-hand	do	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 33	1 33	1 33	1 33	1 33
Common laborer	do	1 17- 1 25	1 17- 1 25	1 17- 1 25	1 17- 1 25	1 17- 1 33	1 17- 1 50	1 25- 1 50	1 25- 1 50	1 25- 1 50	1 25- 1 33	1 33- 1 33	1 33- 1 33	1 33- 1 33	1 33- 1 33	1 33- 1 33

An establishment in Maine—Continued.

REMARKS—This mill produces sheetings and shirtings.

There have been no opportunities for over-time except in the case of mechanics making repairs at night. These would increase the regular wages of the classes working, and have been included in the table.

No employes are under any expense for tools, etc., except wood-workers and carpenters, who furnish their ordinary tools.

Payments are monthly in cash. The hours of labor are 11 for all classes.

The factory is operated 12 months a year, and strikes and lock-outs have been very rare.

The table below gives the wholesale selling prices of shirting and sheeting in several varieties, also the labor cost and percentage of wages to cost of the same:

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Shirting, per yard.	Sheeting, per yard.			Shirting, per yard.	Sheeting, per yard.			Shirting.		Sheeting.	
		30-inch.	40-in.	42-in.		48-in.	30-inch.	40-inch.	42-inch.	48-inch.	Per cent.	Per cent.
1870.....	\$0 14	\$0 15	.....	.....	\$0 02 ⁷ / ₁₀	\$0 03 ¹ / ₁₀	.....	.....	Per cent. 22	Per cent. 22	.....	.....
1875.....	11 ³ / ₄	12	\$0 14	\$0 15	2 ³ / ₁₀	2 ⁵ / ₁₀	\$0 02 ⁷ / ₁₀	\$0 03 ¹ / ₁₀	20	20	20	20
1880.....	8	9	11	13	1 ⁵ / ₁₀	1 ⁹ / ₁₀	1 ⁷ / ₁₀	2 ¹ / ₁₀	25	25	25	25

The firm states that they have the most improved machinery in use, though little change has been made within the last 10 years.

The trade is regarded as no more dangerous than other kinds of labor and compares favorably with other industries as to healthfulness.

The Gray Manufacturing Company, Baltimore, Maryland.

Classes of employes.	Unit of payment.	DATES.												
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.
Carding, spinning, and weaving overseers.	Month..	\$52 00	\$46 80	\$52 00	\$52 00	\$52 00	\$58 50	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00
Second hand.....	Day....	1 25	1 12 ¹ / ₂	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Picker.....	do....	1 20	1 00	1 20	1 20	1 20	1 30	1 50	1 60	1 50	1 50	1 50	1 50	1 50
Card-stripper.....	do....	1 33 ¹ / ₂	1 20	1 33 ¹ / ₂	1 33 ¹ / ₂	1 33 ¹ / ₂	1 50	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00 ³ / ₄
Grinder.....	do....	1 40	1 25	1 40	1 40	1 40	1 57	1 75	1 75	1 75	1 75	1 75	1 75	1 75
Drawer.....	do....	55	50	55	55	55	62	69	69	69	69	69	69	69
Spreader.....	do....	55	50	55	55	55	62	69	69	69	69	69	69	69
Frame-spliner.....	do....	50	45	50	50	50	55	61	61	61	61	61	61	61
Doffer.....	do....	25	22	25	25	25	27	30	30	30	30	30	30	30
Spooler.....	do....	50	45	50	50	50	55	61	61	61	61	61	61	61
Warper.....	do....	1 33 ¹ / ₂	1 20	1 33 ¹ / ₂	1 33 ¹ / ₂	1 33 ¹ / ₂	1 50	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00 ³ / ₄
Spinning section-hand.....	do....	1 40	1 25	1 40	1 40	1 40	1 57	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Dresser.....	do....	1 40	1 25	1 40	1 40	1 40	1 57	1 75	1 75	1 75	1 75	1 75	1 75	1 75
Web-drawer.....	do....	50	45	50	50	50	55	61	61	61	61	61	61	61
Weaver.....	do....	73	60	73	73	73	81	90	90	90	90	90	90	90
Weaving section-hand.....	do....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 50	1 50
Folder.....	do....	50	45	50	50	50	55	60	60	60	60	60	60	60
Baler.....	do....	1 33 ¹ / ₂	1 20	1 33 ¹ / ₂	1 33 ¹ / ₂	1 33 ¹ / ₂	1 50	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00 ³ / ₄
Carpenter.....	do....	2 00	1 80	2 00	2 00	2 00	2 25	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Machinist.....	do....	2 00	1 80	2 00	2 00	2 00	2 70	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Yard-hand.....	do....	1 00	90	1 00	1 00	1 00	1 12 ¹ / ₂	1 25	1 25	1 25	1 25	1 25	1 25	1 25

REMARKS.—Though this company was incorporated in 1845, wages are given from 1868 only, accompanied by the statement that the record books were all swept away in the great flood in July of that year. Shirting and drilling are manufactured at this mill.

It is stated that payments have always been monthly and in cash at this establishment.

The hours of labor are 10 a day, in conformity to the laws of the state.

An establishment in Maryland.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Carding, spinning, and weaving overseers.	Month	\$67 50					\$67 50					\$71 50				
Second hand	Day	1 42					1 46					1 75				
Picker	do	1 00					1 08					1 33				
Card-stripper	do	48					50					67				
Grinder	do	1 00					1 00					1 20				
Drawer	do	54					54					61				
Speeder	do	69					58½					65½				
Frame-spinner	do	53					53					64				
Doffer	do	17½					17½					23				
Spooler	do	50					52									
Warper	do	66½					57½					61½				
Mule-spinner	do															
Spinning section-hand	do															
Weaver	do	75					67					90				
Weaving section-hand	do															
Carpenter	do	1 54					1 80					2 00				
Machinist	do	2 00					2 70					2 88				
Yard-hand	do	1 00					1 12					1 37				
Common laborer	do	1 00					1 12½					1 37½				

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1850.	1845.	1840.	1835.	1830.
Carding, spinning, and weaving overseers.	Month	\$67 50					\$47 50					\$41 50	\$37 50				
Second hand	Day	1 75					83					83	77				
Picker	do	1 10					71					62	60				
Card-stripper	do	54					33					33	30				
Grinder	do	1 00					69					66½	77	\$0 77	\$0 69½	\$0 46½	\$0 41½
Drawer	do	40					42					42	42				
Speeder	do	58					42½					42½	41½	40½	43½	29	23½
Frame-spinner	do	52					35					33	46				
Doffer	do	24					15					15	15	15	16½	16½	12½
Spooler	do											37½	30				
Warper	do	54½					44					42½	53½	50	42½	37½	35½
Mule-spinner	do	1 71					1 36					1 23	1 40				
Spinning section-hand	do	1 75					83					83	77				
Weaver	do	67					60					72	47				
Weaving section-hand	do											63	77				
Carpenter	do	2 00					1 50					2 00	1 33				
Machinist	do	2 50					1 06					1 06	1 50				
Yard-hand	do											1 88	75				
Common laborer	do	1 37½					75					1 38	75				

REMARKS.—The products of this factory, which has been in existence since 1808, are shirting, twills, and light duck.

Some over-time has been made which is not included in the wages given above.

The only allowance mentioned is house and garden at low rent.

Payments are all cash and monthly, though employes are privileged to purchase on account at the company's store.

The hours of labor have been reduced three times since 1830, being 13 up to 1850, 12½ to 1855, 11 up to 1870, and 10 since that date.

The works have run on an average 11½ months a year, with the exception of a few stoppages at long intervals, arising from providential causes. There have been no strikes.

There has been a slight decrease in the efficiency of labor arising from the heavy draft upon the available male help made by the war, and from the introduction of machinery which requires less skill on the part of the operatives, and from the fact that the work-people have by education become fitted for other employments, and leave the trade for better-paying occupations.

In 1830 there were 350,000 pounds produced, and 343 operatives were employed at an average of 31 cents a day. The production now is about 900,000 pounds, with about 240 hands at 60 cents per day, and cost reduced accordingly.

The following table gives the selling prices, labor cost, and percentage of wages to cost of several varieties of product:

Year.	SELLING PRICE.				Cost of labor per yard of cotton cloth weighing three yards to a pound.	Percentage of wages to cost of cotton cloth.
	Four-yard sheeting, per yard.	Standard sheeting, per yard.	Three-yard drillings, per yard.	Dyed duck, per yard.		
1830	\$0 08	\$0 10½			\$0 8.25	28.50
1835		12			2.55	26.10
1840		9			2.75	22.75
1845		6			1.88	27.05
1850		8			1.75	
1855		5½			2.75	29.00
1860		6½			2.35	23.48
1865	45	6			3.25	5.00
1870					3.75	15.24
1875			\$0 07½		2.25	26.72
1880		8		\$0 11½	1.75	23.46

Various kinds of new machinery have been introduced, and changes have been made every year from 1830 to the present time. The trade is neither dangerous nor unhealthful.

Chicopee Manufacturing Company, Chicopee Falls, Massachusetts.

Classes of employes.	Unit of payment.	DATES.									
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Carding, spinning, and weaving overseers.	Month..	\$04 48	\$01 04½	\$72 80½	\$70 03½	\$03 44	\$07 08	\$01 30	\$07 34	\$04 48	\$03 44
Picker	Day ...	84½	84½	08½	90	05	95	1 08½	1 25	1 10	1 00
Card-stripper	do ...	00½	85	85½	86	02½	01½	1 08½	1 25	1 12½	1 11
Grinder	do ...	1 30½	1 22½	1 20½	1 20½	1 30	1 50	1 33½	1 54	1 50	1 54
Drawer	do ...	02	56	58½	60	60	50	00	00½	00½	05½
Doffer, boy	do ...	52½	30½	49½	45½	43	42	47	55	42	48
Spooler, girl	do ...	57	52	54½	60½	55	50½	03	72	05	04
Warper, girl	do ...	75½	73	75	77½	76½	81½	70	97	97½	90
Spinning section-hand	do ...	1 36	1 34½	1 37	1 43	1 60	1 65	1 75	1 79	1 00	1 00½
Slasher	do ...	1 47	1 35	1 42	1 42	1 54	1 62½	1 01½	2 25	2 25	1 85
Weaver, girl	do ...	98½	85½	00	02½	08½	1 06½	1 10½	1 37½	1 28	1 25
Spinner, male	do ...	1 47	1 32½	1 40	1 42	1 40½	1 54½	1 08	1 80	1 72½	1 36
Spinner, female	do ...	05	50½	04½	04½	60½	73½	78½	08	83½	81½

Classes of employes.	Unit of payment.	DATES.									
		1870.	1860.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.
Carding, spinning, and weaving overseers.	Month..	\$06 04	\$03 70	\$04 22	\$06 82	\$01 88	\$04 08	\$05 18	\$10 04	\$12 08½	\$12 81
Picker	Day ...	1 00½	1 00	1 07	1 20	1 20	1 20	1 04	75	65	72
Card-stripper	do ...	1 12½	1 12½	1 10	1 25	1 25	1 14½	1 12½	75	64	64
Grinder	do ...	1 50	1 50	1 51	1 70	1 64	1 44	132	1 11	90	97
Drawer	do ...	66½	66	00½	70½	73	53	49½	40½	40	41
Doffer, boy	do ...	45	48	49½	55	61½	66	40	33½	.....	.....
Spooler, girl	do ...	64	61½	57	69	60	61	54	41½	33	.....
Warper, girl	do ...	87	82½	82½	92½	92½	70	65½	59½	59½	52
Spinning section-hand	do ...	1 63	1 73	1 69	1 83½	1 74	1 54	1 46	1 15½	89½	82
Slasher	do ...	1 86	1 96	1 90	2 00	1 96	1 60	1 55½	1 37½	1 04	1 08
Weaver, girl	do ...	1 21	1 16	1 19	1 37½	1 24	87½	77	58½	48½	56½
Spinner, male	do ...	1 40	1 02½	1 50	1 80	1 57½	1 50½	1 46	1 30	.....	.....
Spinner, female	do ...	83	86½	84	93	1 00½	09½	65	59	51½	51½

REMARKS.—These works were established in 1823, though wages are given only from 1861, the date at which they were reorganized.

Occasional over-time has been made by the employes.

Employes are paid wholly in cash and monthly.

All classes worked 12 hours a day from 1845 to 1859; 11 hours from 1859 to 1874, and 10 hours from 1874 to 1880. Regarding the hours of labor, the remark is made that any change in them changes the production in the same ratio, other considerations remaining the same.

The factory has been in constant operation, stopping only for repairs, and no labor difficulties have occurred.

There has been an increase in the efficiency of labor, arising from the competition with machinery.

Various kinds of machinery have been introduced, the effect of which has been to increase output, reduce cost from 12 to 15 per cent., and diminish the number of employes in proportion to product from 10 to 12 per cent.

Some figures regarding selling prices and labor cost of product are given as follows:

Year.	SELLING PRICE OF WHITE COTTON GOODS.		LABOR COST OF WHITE COTTON GOODS.	
	Per yard.	Per pound.	Per yard.	Per pound.
1845.....	.....	.....	\$0 01.517	\$0 05.388
1850.....	.....	.....	1.66½	0.33½
1855.....	\$0 07.33	\$0 25.58	1.66½	5.10
1860.....	8.88	20.75	1.33½	4.33½
1865.....	25.75	1 12	2.66½	8.88
1870.....	14.88	50	2.66½	4.66½
1875.....	11	88	2.66½	7.10
1880.....	9.58	28.75	1.66½	4.33½

STATISTICS OF WAGES—COTTON MANUFACTURE.

Pocasset Manufacturing Company, Fall River, Massachusetts.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Carding, spinning, and weaving overseers.	Month	\$83 72	\$73 58	\$73 58	\$68 00	\$65 00	\$70 72	\$70 98	\$70 20	\$71 50	\$68 64	\$67 00	\$65 00	\$63 70	\$65 00	\$64 23
Second hand	Day	1 75	1 42	1 52	1 45	1 41	1 03	1 71	1 71	1 75	1 72	1 82	1 78	1 70	1 80	1 74
Card-stripper	do	1 15	1 00	1 06	1 20	1 20	1 30	1 43	1 58	1 43	1 37	1 35	1 37	1 37	1 42	1 42
Grinder	do	1 30	1 17	1 28	1 25	1 25	1 39	1 45	1 70	1 70	1 07	1 58	1 62	1 62	1 62	1 54
Drawer	do	75	67	77	77	75	88	83	1 00	1 00	98	90	75	75	80	83
Frame-spinner	do	85	60	70	74	70	84	95	1 00							
Spooler	do	81	68	67	90	83	96	1 00	1 05	98	1 00	1 04	1 05	90	87	93
Warper	do	1 33	1 16	95	1 25	1 28	1 56	1 30	1 12	1 28	1 27	1 21	1 10	1 00	1 07	98
Mule-spinner	do	1 50	1 35	1 20	1 40	1 30	1 64	1 88	2 15	2 10	2 00	1 85	1 92	1 98	1 85	2 10
Dresser	do							2 21	2 25	3 00	2 08	3 00	2 90	2 83	2 70	2 80
Slasher	do	1 78	1 50	1 05	1 80	1 77	2 00	1 44								
Carpenter	do	1 04	1 02	1 75	2 50	2 00	2 25	2 82	2 88	2 83	2 62	2 67	2 67	2 67	2 67	2 00
Machinist	do	1 87	1 57	1 07	1 83	1 02	1 80	2 28	2 36	2 34	2 17	2 17	2 17	2 17	2 15	2 10
Common laborer	do	1 17	1 00	1 00	1 12	1 00	1 19	1 39	1 50	1 50	1 42	1 42	1 38	1 40	1 42	1 40

REMARKS.—These works were established in 1821, but rates of wages are given only from 1866. They make print cloths, sheetings, and drills.

The repair-hands occasionally make extra earnings by working over-hours, but these have been considered in making up the tables.

Carpenters, weavers, and drawing-in hands furnish a part of their

own tools. The expense for these, however, is very slight, and has not been considered in the table.

All cash is paid every month. It is stated that at one time the company had a store at which employes traded, but the date of this is not given. It is stated that it was abandoned, as cash was more convenient.

Inyan Mills, Holyoke, Massachusetts.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Carding, spinning, and weaving overseers.	Month	\$80 88	\$80 32	\$80 20	\$80 24	\$80 32	\$80 08	\$80 48	\$80 20	\$80 88	\$80 00	\$80 24	\$88 08	\$86 04	\$72 00	
Second hand	Day	1 90	1 00	1 00	2 00	1 84½	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 00	
Picker	do	80	85	85	90	91½	1 00	1 25	1 20½	1 10½	1 25	1 25	1 25	1 25	1 25	
Card-stripper	do	80	85	85	90	91½	1 00	1 25	1 00	1 00	1 12	1 25	1 25	1 25	1 25	
Grinder	do	1 05	1 10	1 10	1 17½	1 31	1 42½	1 08½	1 60½	1 54	1 63	1 60	1 73½	1 00½	1 63½	
Doffer	do	37	34½	35	28	30	40	60	50½	49½	47	00	58½	71	65	
Spooler, boy or girl	do	44½	49	49½	50	61	65	75½	68	72	72	75	76	84	73	
Spinning section-hand	do	1 35	1 42½	1 42½	1 50	1 57	1 70	1 95	1 90	1 65	1 60½	1 71	1 73	1 75	1 61	
Weaver, girl	do	87	95½	95½	1 02	1 05½	1 21½	1 34	1 31	1 31	1 25	1 31	1 25½	1 10½	1 12	
Spinner	do	65	74	76½	83	95½	1 01½	1 10½	1 05½	1 00	1 05	1 11½	1 12	1 18	87½	
Common laborer	do	1 25	1 25	1 25	1 25	1 25	1 28	1 50	1 39½	1 38½	1 39½	1 39½	1 39½	1 25	1 25	

Classes of employes.	Unit of payment.	DATES.														
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Carding, spinning, and weaving overseers.	Month				\$72 00	\$72 00	\$72 00	\$69 00		\$66 00	\$66 00	\$66 00	\$66 00	\$66 00	\$66 00	\$66 00
Second hand	Day				1 50	1 50	1 50	1 50		1 50	1 50	1 50	1 50	1 50	1 50	1 50
Picker	do				83	83	83	75		75	75	75	75	75	75	75
Card-stripper	do				67	65½	65	62		70	70	70	66½	64	64	64
Grinder	do				1 05	97	91	85		1 22	1 19½	1 20	1 08½	1 00	1 00	1 00
Doffer	do				37	38										
Spooler, boy or girl	do				58	61	57½	50		58	55	59	55	50	51½	47
Spinning section-hand	do				1 13½	1 12½	1 12	1 10		1 16	1 14½	1 18	1 14½	1 00½	1 00	83½
Weaver, girl	do				71	80	80½	75		80	74	72½	72	67	66	60
Spinner	do				58	57	58	54		1 00	55	56	55	56	53	50
Common laborer	do				85	85	83½	83½		58	1 00	1 00	1 00	1 00	90	1 00

REMARKS.—These works were established in 1848; make china drills, heavy sheetings, canton flannel, and fine shirtings and twills.

Repair-hands, by working Sundays and holidays, add about \$2 per month to the rates given in the table.

The only allowance mentioned is cheap house-rent, which would increase but slightly the value of the wages given in the table.

Wages are paid monthly and in cash.

During the panic of 1857 and 1858 the mill was stopped 6 months,

and only two-thirds time was made in March, April, and May, and one-half time in June, 1862, when the mill stopped until September, 1865.

There has been no decrease in the efficiency of labor.

Various kinds of labor-saving machinery have been introduced, the most important being a self-stripper for cards, stop-motions, ring-warp spindles, and slashers.

These have improved the quality of product, increased output, lessened cost, and reduced the number of employes.

Merrimack Manufacturing Company, Lowell, Massachusetts.

[Continued on next page.]

REMARKS.—Some difficulty was experienced in recasting this return into the form adopted in the tabulations. No tabulation similar to the others of the series has therefore been made, but the details of the schedule are given below.

The works were established in 1823, and manufacture cotton cloth and prints.

The rates of wages in the mill, bleaching- and print-works have been as follows:

Card room.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Men:							
Overseer	Day ...	\$3 70	\$3 40	\$3 00	\$2 00	\$2 00	\$3 00
Second hand	do ...	2 00	2 10	1 50	1 25	1 25	1 25
Grinder	do ...	1 45	1 75	1 10	1 00	1 00	1 00
Strippers, etc	do ...	1 00	1 42	75	80	80	75
Girls:							
Drawers-in	do ...	62	77	50	52	58	37½
Speeders	do ...	78	95	61	51	58	37½

Spinning.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Men:							
Overseer	Day ...	\$3 50	\$3 25	\$2 75	\$2 00	\$2 00	\$1 75
Second hand	do ...	2 00	2 16	1 33	1 33	1 25	1 25
Girls, spinning	do ...	74	95	53	56	55	50
Men, mule-spinners	do ...	1 58					
Girls, doffers	do ...	71	90	42	46	46	37

Dressing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Men:							
Overseer (a)	Day ...	\$3 70	\$4 00	\$2 50	\$2 00	\$2 00	\$1 50
Second hand	do ...	1 90	2 25	1 30	1 25	1 10	1 00
Girls, dressers	do ...		1 50	70	77	67	37½
Men, dressers (b)	do ...	1 55					
Girls:							
Drawers-in	do ...	93	90	53	54	52	50
Warpers	do ...	92	1 10	68	65	57	
Spoolers	do ...	81	1 10				

a Between 1860 and 1870 the dressing for 4 mills was put under one overseer.
b Between 1870 and 1880, slashers were introduced.

Weaving.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Men:							
Overseer	Day ...	\$3 70	\$3 50	\$2 50	\$2 00	\$2 00	\$2 00
Second hand	do ...	2 00	2 25	1 07	1 25	1 25	1 25
Girls, weavers	do ...	80	93	65	66	50	67
Men:							
Wood-workers	do ...	1 55	2 30	1 33	1 28	1 23	
Iron-workers	do ...	1 64	2 10	1 33	1 17	1 23	
Blacksmiths	do ...	1 64	2 05	1 35	1 23	1 17	
Painters	do ...	1 64	2 05	1 13	1 03	1 17	

Engineering.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$7 00	\$8 07	\$5 10	\$6 05	\$6 05	
Skotcher	do ...	4 60	3 75	3 00	4 16	4 16	\$0 23
Apprentices	do ...	1 64	1 00				
Dio-maker	do ...	4 25	3 33	3 00	3 33	3 33	
Hand engineer	do ...	4 25	3 00	2 67	3 00	2 67	1 00
Machine engineer	do ...	4 00	3 33	2 67	2 50	2 83	1 00
Plate-cutter	do ...	4 16	2 50	2 00	2 50	2 33	
Helper	do ...	1 20	1 50	83	1 17	92	

Shearing and singeing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$3 00	\$3 00	\$2 50	\$1 75	(a)	\$1 00
Men	do ...	1 17	1 50	1 00	1 00	(a)	88
Boys	do ...	50	67	54	54	(a)	

a Included in bleaching.

Bleaching.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$3 00	\$3 00	\$2 50	\$2 50	\$2 00	\$1 50
Second hand	do ...	1 30	1 67	1 35	1 75	1 50	92
Men	do ...	1 08	1 33	92	1 00	1 10	92
Boys	do ...	76	75				

Color-making.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$5 25	\$3 00	\$2 33	\$2 00	\$2 00	
Second hand	do ...	1 50	1 50	1 33			
Men	do ...	1 25	1 33	92	1 00	93	

Printing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...		\$4 50	\$4 00	\$3 00	\$2 25	
Clerk	do ...	\$2 00					
Printers	do ...	4 07	4 00	1 33	1 31	1 77	\$0 22
Apprentices	do ...	2 55	2 10	75	92	83	
Back-tenders	do ...	1 25	1 33	75	92	83	
Helpers	do ...	1 19	90	75	92	83	
Boys	do ...	65	58				

Ageing and steaming.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$3 00	\$3 00				
Men	do ...	1 15	1 33		(a)	(a)	(a)
Boys	do ...	58	58		(a)	(a)	(a)

a As print-room.

Dyeing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$3 00	\$2 33	\$2 00	\$2 50	\$2 50	\$2 00
Dyers	do ...	1 00	1 16	1 12	67	56	96
Men	do ...	1 17	1 25	1 12	67	56	
Boys	do ...	65	83	1 12	67	56	

Finishing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	\$4 20	(a)	(a)	(a)	(a)	\$1 12
Second hand	do ...	1 80	(a)	(a)	(a)	(a)	
Men	do ...	1 56	(a)	(a)	(a)	(a)	
Boys	do ...	71	(a)	(a)	(a)	(a)	

a Contract.

Packing.

Classes of employes.	Unit of payment.	1880.	1870.	1860.	1850.	1840.	1824.
Overseer	Day ...	5 00	(a)	(a)	(a)	(a)	
Men	do ...	1 25	(a)	(a)	(a)	(a)	
Boys	do ...	68	(a)	(a)	(a)	(a)	

a Contract.

STATISTICS OF WAGES—COTTON MANUFACTURE.

An establishment in Massachusetts—Continued.

Classes of employes.	Unit of payment.	DATES.															
		1805.	1804.	1803.	1802.	1801.	1800.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Carding overseer.....	Day	\$3 00- 3 25	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$2 75	\$2 50	\$2 50	\$2 50
Spinning overseer.....	do	3 00- 3 25	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	2 75	2 50	2 50	2 50
Weaving overseer.....	do	3 00- 3 25	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Second hand.....	do	2 00- 2 50	1 75- 2 00	1 50	1 50- 1 75	1 50- 1 75	1 50- 1 75	1 50- 1 75	1 50- 1 75								
Picker.....	do	1 40- 1 50	1 30- 1 35	1 00- 1 12	92- 1 00	92- 1 00	1 00- 1 17	1 00- 1 17	1 00- 1 17	1 00- 1 17	1 00	83	83	83	83	1 17	1 17
Card stripper.....	do	1 35	1 12	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Grinder.....	do	1 60	1 40	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Drawer.....	do	65- 70	60	50- 52	50- 52	50- 52	40- 57	40- 57	40- 57	40- 57	40- 57	45- 47	45- 47	45- 47	45- 47	45- 47	42- 47
Spreader.....	do	75- 80	65- 70	57- 60	57- 60	57- 60	60	60	54- 57	54- 57	52- 55	52- 55	52- 55	52- 55	52- 55	52- 55	60
Frame-spinner.....	do	60	50	58	55	57	53	56	50- 56	50	50	57	50	55	50- 55	50- 55	45
Doffer.....	do	60- 65	50	33- 50	30- 50	45- 50	45- 50	45- 50	40- 50	45- 50	45- 50	45- 50	40- 45	25- 40	25- 40	25- 40	38- 40
Warper.....	do	1 03½	74	70	95	98	73	73	80	66	64	61	83	83	64	64	75- 90
Mule-spinner.....	do	61	58	47	52	50	40	40	40	48	42	41	42	46	46	46	43
Back boy.....	do	87- 42	30- 35	30- 33	30- 33	30- 33	28- 30	28- 30	25- 30	25- 30	28- 30	28- 30	30- 33	30- 33	30- 33	30- 33	30- 33
Dresser.....	do	2 15	1 83	1 70	1 90	1 84	1 74	1 74	1 60	1 88	1 66	1 73	1 50- 1 05	1 50	1 70	1 63	1 63
Slasher.....	do																
Drawer-in.....	do	80	82	83	80	92	80	80	85	88	82	80	75	80	80	80	80
Weaver.....	do	1 11	01½	08	00	1 00	94	87	88	88	88	74	60- 76	67	08- 1 04	72½	72½- 88½
Weaving section-hand.....	do	1 20- 2 30½	1 08	1 40	1 45	1 06	1 52	1 52	1 70	1 83	1 75	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50
Cloth-trimmer.....	do	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	52
Folder.....	do																
Baler.....	do																
Carpenter.....	do	2 25	2 00	1 75	1 50	1 50	1 75	1 75	1 75	1 75	1 75	1 75	1 02½	1 75	1 50	1 60	1 50
Machinist.....	do	1 90	1 60	1 55	1 43	1 54	1 40	1 57½	1 50	1 58	1 55	1 40	1 47½- 1 50	1 53- 1 02½	1 40	1 40	1 40
Painter.....	do	2 00	1 80	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 50	1 50	1 50	1 50
Yard-hand.....	do	1 50	1 25	1 00	1 00	1 00	1 00	1 00	92	1 00	1 00	92- 1 00	83½- 1 00	92- 1 00	83½- 92	83½- 92	83½- 92
Common laborer.....	do	1 50	1 25	1 00	1 00	1 00	1 00	1 00	92	1 00	1 00	92- 1 00	83½- 1 00	92- 1 00	83½- 92	83½- 92	83½- 92

a Average.

REMARKS.—This factory was established in 1844, and makes gingham. In addition to the rates in the table the following are given :

Classes of employes.	Unit of payment.	DATES.															
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Lap-head tender.....	Day	\$1 15	\$1 15	\$1 27	\$1 27	\$1 30	\$1 36	\$1 43	\$1 43	\$1 43	\$1 43	\$1 43	\$1 43	\$1 43	\$1 50	\$1 50	\$1 25
R. W. head tender.....	do	1 15	1 00- 1 15	1 15- 1 25	1 13- 1 25	1 22- 1 34	1 22- 1 34	1 34	1 34	1 34	1 34	1 34	1 34	1 34	1 40	1 40	1 25
Reeler.....	do	1 01	97	1 05	1 03	1 03	1 11	1 30	1 45	1 41	1 52	1 12	1 11	1 05	1 06	98	85
Quiller.....	do	1 04	90	1 02	1 01	1 01	1 06.	1 21	1 00	1 07	1 03	1 07	98	97	1 00	91	74½
Drawer-in.....	do	1 23	1 43	1 32	1 27	1 25	1 51	1 55	1 51	1 47	1 44½	1 41	1 23	1 25	1 37	1 20	1 80
Scrubber.....	do	72- 75	70- 72	72	72	72- 77	72- 77	80- 85	75- 85	80- 85	72½	70- 72½	72½	72½	72½	83½	60
Sweeper.....	do	72	70- 72	72	72	72- 77	72- 77	80- 85	75- 85	80- 85	72½	70- 72½	72½	72½	72½	83½	60
Dyer.....	do	1 25- 1 45	1 25- 1 45	1 40- 1 00	1 40- 1 00	1 50- 1 70	1 70	1 70	1 70	1 70	1 70	1 70	1 63	1 63	1 75	1 75	1 00
Yardman.....	do	1 00- 1 60	1 00- 1 60	1 40- 1 60	1 60- 1 75	1 60- 1 75	1 75	1 03- 1 75	1 50- 1 63	1 63	1 63	1 50					
Watchman.....	do	1 00	1 43- 1 60	1 70	1 70	1 70	1 70	1 70	1 63	1 63	1 63	1 63	1 63	1 63	1 63	1 50- 1 63	1 83½
Winder.....	do	1 05	98	1 02	98	1 00	1 15	1 20	1 35	1 35	1 28	1 08	1 13	1 08	1 56	1 04	94

STATISTICS OF WAGES—COTTON MANUFACTURE.

An establishment in Massachusetts—Continued.

Classes of employes.	Unit of payment.	DATES.														
		1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Lap-head tender	Day	\$1 00	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75	\$0 75
R. W. head tender	do	00	75	75	75	75	75	75	00	00	00	07	07	07	07	07
Reeler	do	86	87	96	79	06	06	76½	08	06	08	01	01	01	01	01
Quillor	do	73	57	50	55	57	57	55	55	60	47	47	42	42	39	39
Drawer-in	do	82	83	80	92	80										
Scrubber	do	03	58	58	52	52	50	50	50	50	50	30	58	58	50	50
Sweeper	do	03	58	58	52	52	50	50	50	50	50	30				
Dyer	do	1 32	1 00	1 00	1 00	1 00	1 00	1 02	1 15	1 19	1 00	1 00	1 00	80	1 00	1 00
Yardman	do	1 25	1 00	1 00	1 00	1 00					1 12	1 12		1 00	1 16½	1 16½
Watchman	do	1 25	1 16½	1 16	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½	1 16½
Winder	do	79	68	80	68	50	50	02	54	55	50	47	57½	51	42	42

NOTE.—Although the hands are paid by the bundle, cut, beam, etc., all the wages given are the average earnings per day.

REMARKS.—There are some opportunities for extra earnings by employes making repairs on Saturday afternoons and holidays when works are stopped. These have not been considered in the wages tables. Price and a half is paid for Saturday-afternoon work, and double price for night and holiday work.

Carpenters furnish a part of their own tools.

Payments are monthly and in cash.

The hours of labor were 12½ prior to 1855, when they were reduced to 11, and in 1875 to 10 a day. The report expresses the opinion that the reduction from 12 to 11 was a benefit to the employes, but from 11 to 10 not so; it decreases production in greater proportion than hours of labor, and does not benefit the employes either financially, physically, or morally.

The works were operated constantly from 1844 to 1855; 10½ months from 1855 to 1860; 9½ months from 1860 to 1865; 12 months from 1865 to 1879, and 11 months in the year ending June 1, 1880. The causes of idleness were "hard times" and no demand for goods in 1857 and 1858, the war in 1861, 1862, and 1863, and a strike of a month in 1880.

March 23, 1854, the weavers struck against continuing to light up after March 20. The hours had been reduced from 12 to 11, and under the old system the mill shut down at sunset after March

20, till days were long enough to work regular hours. Many hands left and the mill was obliged to bring in new help. In March, 1880, the weavers struck for an increase of from 10 to 25 per cent. in wages. They were at the time receiving higher wages than were paid elsewhere, and their only claim was that the mill made too much money and stockholders got too large a share. After being out 27 days they all returned at old prices.

Labor has decreased in efficiency from the opening of avenues to more attractive forms of labor. These have drawn away the more intelligent class of American operatives, and they have been replaced by foreigners.

Improved machinery has been introduced. This has permitted of the employment of a less intelligent and less skillful class of help, and at the same time has increased the product per operative, this being in 1880, 130 per cent. greater than in 1850. Average earnings have also increased, those of women in all departments having increased an average of 50 per cent., while hours of labor have been decreased from 74½ hours to 60 hours per week. The manufacturer further remarks that the cost of manufacture has been greatly reduced, but the introduction of improved labor-saving machinery almost invariably increases the earnings of the operative.

The trade is healthful and free from accidents.

An establishment in Massachusetts.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	
Spinning overseer	Month	\$60 00	\$60 00	\$60 00	\$60 00	\$60 00	\$60 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$55 00	\$55 00	\$55 00	
Spooler	Day	81	81	81	81	81	81	96	96	96	96	96	05½	05½	05½	
Warper	do	81	81	81	81	81	81	96	96	96	96	96	05½	05½	05½	
Dresser	do	1 02½	1 02½	1 02½	1 02½	1 02½	1 02½	2 00	2 00	2 00	2 00	2 00	1 02½	1 02½	1 02½	
Weaver	do															
Machinist	do	1 54	1 54	1 54	1 54	1 54	1 54	2 50	2 50	2 50	2 50	2 50	2 11½	2 11½	2 11½	
Yard-hand	do	1 16½	1 16½	1 16½	1 15½	1 15½	1 15½	1 38½	1 38½	1 38½	1 38½	1 38½	1 16½	1 16½	1 16½	
Spinner	do	81	81	81	81	81	81	96	96	96	96	96	05½	05½	05½	

An establishment in Massachusetts—Continued.

Classes of employes.	Unit of payment.	DATES.													
		1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.
Spinning overseer.....	Month..	\$55 00	\$55 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00	\$45 00
Spooler.....	Day....	65½	65½	61½	61½	61½	61½	50-01½	50	50	50	50	50	50	50
Warper.....	do....	65½	65½	61½	61½	61½	61½	50-01½	50	50	50	50	50	50	50
Dresser.....	do....	1 92½	1 92½	1 61½	1 61½	1 61½	1 61½	1 50-1 01½	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Weaver.....	do....							57	57	57	57	57	57	57	57
Machinist.....	do....	2 11½	2 11½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½	1 73½
Yard-hand.....	do....	1 15½	1 15½	1 15½	1 15½	1 15½	1 15½	1 15½	96	96	96	96	96	96	96
Spinner.....	do....	65½	65½	65½	61½	61½	61½	61½	50-01½	50	50	50	50	50	50

REMARKS.—This factory was built in part about 1814, but the present proprietors have operated it only since 1853, from which date wages are given above.

Very few opportunities are given to employes to work over-time, and the only allowances mentioned are cheap rent and the use of land for gardens.

A majority of the hands live in the company's houses, and the rent is deducted from their wages, the balance of which is paid to them monthly in cash.

The hours of labor for all classes average from 10 to 11 a day. Reduction in the hours of labor decreases production in the same proportion, but does not seem to benefit the physical condition of the operatives.

No labor difficulties have arisen.

The factory has been operated 11½ months per year, except in

1864, when it was idle from March to July, during the rebuilding of a dam.

In 1855 and 1856 print cloth was manufactured and sold at 5½ cents per yard the first year, and 4½ cents the next. The labor cost was from 1½ to 1½ cent per yard, and was about 40 per cent. of the total cost. Since 1856 nothing has been made except yarns, the price depending upon the number of threads and color of yarn. Since making yarns the labor cost has varied from 1½ cent to 5 and 6 cents, and in some cases as high as 8 cents, and the cost of labor has been about 25 per cent. of the cost of manufacture.

There has been no increase in the efficiency of labor worthy of mention.

Some improved machinery has been introduced, the effect of which has been to improve the quality, though it has lessened the cost of production but slightly.

An establishment in Massachusetts.

Classes of employes.	Unit of payment.	DATES.									
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Card-room.....	Day....	\$1 10	\$1 00	\$1 00	\$1 00	\$1 00	\$1 12	\$1 26	\$1 89	\$1 29	\$1 23
Spinning-room.....	do....	1 10	1 00	1 00	1 00	1 00	1 10	1 21	1 80	1 15	1 20
Spooling-room.....	do....	82	75	75	75	74	80	89	98	88	90
Warping-room.....	do....	1 15	1 05	1 05	1 05	1 08	1 12	1 26	1 40	1 87	1 20
Dressing-room.....	do....	1 70	1 70	1 70	1 70	1 74	1 90	2 25	2 50	2 28	2 93
Web drawing room.....	do....	1 25	1 10	1 10	1 10	1 08	1 20	1 80	1 40	1 87	1 27
Weaving room.....	do....	1 40	1 25	1 25	1 25	1 28	1 40	1 55	1 70	1 60	1 89
Cloth-room.....	do....	1 00	90	90	90	90	1 00	1 05	1 15	1 15	1 15
Engine-room.....	do....	1 55	1 45	1 45	1 45	1 45	1 60	1 77	1 97	1 90	1 45
Outside room.....	do....	1 00	1 00	1 00	1 00	1 00	1 25	1 50	1 75	1 75	1 75
Repair room.....	do....	1 75	1 65	1 65	1 65	1 05	1 80	1 90	2 15	2 15	2 15

REMARKS.—This factory was established in 1866, wages being given from 1871. Print cloths 64 by 64 are made.

Payments, which are wholly in cash, were monthly in 1870 and 1875, and weekly in 1880.

All classes work 10 hours a day.

The mill has been in constant operation. The most frequent cause of idleness has been strikes, because of dissatisfaction regarding wages, generally inaugurated by the spinners. In 1875 a strike occurred which lasted two months, and in 1879 one which lasted three months. The loss in wages to the employes was \$60,000 in 1875 and \$80,000 in 1879. There have been other minor strikes which have lasted from one to four weeks.

The following table gives selling prices, labor cost, and percentage of wages to cost of print cloth, the product of this factory:

Year.	Selling price per yard.	Labor cost per yard.	Percentage of wages to cost.
1870.....	\$0 06½	\$0 01½	27.5
1875.....	5½	1½	28.5
1880.....	4½	1½	32.5

There has been a slight increase in the efficiency of labor, the result of placing children in the mill as soon as they are large enough to learn to work.

No improved machinery has been introduced.

The trade is not dangerous or unhealthful.

STATISTICS OF WAGES—COTTON MANUFACTURE.

Saint Louis Cotton Factory, Saint Louis, Missouri.

Classes of employes.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Carding overseer	Month	\$47 00	\$58 50	\$82 33	\$91 00	\$104 00	\$117 00	\$58 50	\$58 50	\$65 00	\$52 00	\$52 00
Spinning overseer	do	50 33	50 33	50 70	50 33	65 00	70 20	70 20	70 20	78 00	71 50	71 50
Weaving overseer	do	52 00	52 00	50 70	50 33	65 00	70 20	70 20	70 20	78 00	78 00	78 00
Picker	Day	1 12	1 08	1 12	1 12	1 33	1 50	1 50	1 50	1 50	1 50	1 50
Card-stripper	do	1 33	1 10	1 08	1 33	1 33						
Grinder	do	1 45	1 41	1 25	1 33	1 45	1 50	1 58	1 58	1 58	1 58	1 58
Drawer	do	58	58	55	62	60	72	75	75	75	75	70
Speeder	do	58	62	60	72	70	70	79	79	60	60	60
Frame-spinner	do	60	60	60	75	75	75	80	80	80	90	90
Doffer	do	25	25	22	25	20	30	33	33	35	37	37
Spooler	do	54	58	54	65	75	75	80	80	80	80	75
Warper	do	60	60	70	80	80						
Spinning section-hand	do	1 05	08	1 00	1 08	1 08						
Dresser	do	2 00	2 08	2 10	2 33	2 41	2 41	2 50	2 60	2 80	3 00	3 00
Web-drawer	do	72	72	72	90	90						
Weaving section-hand	do	1 50	1 50	1 33	1 41	1 00	1 80	1 80	1 80	1 80	2 00	2 00
Folder	do	75	75	60	75	75						
Baler	do	1 50	1 50	1 33	1 50	1 00	1 00	1 00	1 80	1 80	2 00	2 00
Carpenter	do	2 25	1 05	1 05	2 25	2 25						
Machinist	do	2 75	2 25	2 00	2 50	2 50						
Common laborer	do	1 25	1 12	1 12	1 20	1 41	1 50	1 50	1 50	1 58	1 60	1 60

REMARKS.—Sheeting, yarn, twine, and bags are made at these works. In addition to rates in table, the following are given:

Table showing average daily earnings of certain classes of labor from 1870 to 1880.

Classes of employes.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Engineer	Day	\$3 10	\$3 10	\$3 10	\$3 50	\$3 50	\$3 75	\$3 75	\$4 00	\$4 00	\$4 00	\$3 50
Fireman	do	1 33	1 33	1 33	1 50	2 00	2 08	2 00	2 25	2 00	2 00	2 33
Mechanic	do	2 20	2 20	2 00	2 25	2 41	2 75	2 91	3 00	3 00	3 00	3 00
Carder	do	1 80	1 00	1 58	1 75	2 00	2 25					
Lap boy	do	60	60	54	60	70	60	60	60	60	60	70
Assistant spinning overseer	do	91	91	95	1 00	01	1 00	1 00	1 00	1 00	1 00	1 00
Oilier boy	do	37	37	37	41	50	50	50	58	62	62	62
Bobbin-carrier	do	50	50	45	54	58	62	62	62	60	60	60
Reeler	do	75	75	70	83	83	83	87	87	91	95	97
Twister	do	62	58	50	62	60	60	60	60	70	75	80

The hours of labor are 10 a day for mechanics and dressers, and were 12 for all other classes up to 1865, since which they have been 11. The mill has been operated as follows for the periods named:

Years.	Average number of months in operation per year.
1860 to 1865	5
1866 to 1870	12
1871 to 1875	11
1876 to 1880	8
Year ending June 1, 1880	10

The causes of irregularity from 1872 to 1880 were changes in machinery and dull trade. No strikes have occurred.

The following statement of selling prices is given:

Years.	Sheeting, per yard.	Yarns, per pound.	Twine, per pound.	Batts, per pound.	Batts, per pound.	Bags, each.
1860	\$0 00	\$0 22	\$0 10	\$0 10	\$0 12	\$0 20
1865	30	90		40	45	65
1870	16	40	85	20	25	30
1875	8	21	20	12	14	21
1880	8	20	10	9	11	20

There has been a decrease in the efficiency of labor arising from the facilities for farming and the preference of the mill employes for that business.

Some labor-saving machinery has been introduced. Payments are every two weeks, and in cash. The trade is safe and favorable to health.

Cochecho Manufacturing Company, Dover, New Hampshire—Continued.

Classes of employes.	Unit of payment.	DATES.											
		1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.
Carding overseer.....	Month..	\$84 00	\$84 00	\$84 00	\$72 00	\$60 00	.....	\$48 00	\$58 56	\$66 00	\$66 00	\$66 00	.....
Spinning overseer.....	do ..	84 00	84 00	84 00	72 00	60 00	.....	48 00	48 00	60 00	60 00	60 00	.....
Weaving overseer.....	do ..	84 00	84 00	78 00	72 00	60 00	.....	48 00	42 48	48 00	48 00	48 00	.....
Second hand.....	Day ..	2 00	2 00	2 00	1 50	1 50	.....	1 25	1 12	1 25	1 25	1 25	.....
Picker.....	do ..	1 33	1 33	1 33	1 25	1 25	.....	75	67	75	75	75	.....
Card-stripper.....	do ..	1 00	1 33	1 33	1 25	1 25	.....	75	67	69	83	83	.....
Grinder.....	do ..	1 67	1 67	1 67	1 50	1 50	.....	1 00	89	1 08	1 08	1 00	.....
Drawer.....	do ..	33	33	30	28	25	.....	21	21	24	20	21	.....
Speeder.....	do ..	54	56	51	30	40	.....	33	37	39	37	37	.....
Frame-spinner.....	do ..	50	53	50	33	33	.....	25	31	35	30	30	.....
Doffer.....	do ..	45	55	55	30	33	.....	25	27	32	30	28	.....
Spooler.....	do ..	43	43	47	48	20	.....	16	23	19	21	20	.....
Warper.....	do ..	54	52	58	45	34	.....	29	40	42	35	33	.....
Mule-spinner.....	do ..	1 60	1 63	1 50	1 05	80	.....	74	85	85	84	1 60	.....
Back boy.....	do ..	50	50	50	38	30	.....	27	27	20	26	26	.....
Spinning section-hand.....	do ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dresser.....	do ..	1 00	1 00	1 00	58	53	.....	45	50	56	50	48	.....
Slasher.....	do ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Web-drawer.....	do ..	73	83	64	44	34	.....	34	36	36	33	36	.....
Weaver.....	do ..	67	1 05	93	30	34	.....	27	31	36	36	31	.....
Weaving section-hand.....	do ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenter.....	do ..	2 50	2 50	2 37	2 00	2 00	\$1 75	1 40	1 33	1 50	1 50	1 30	.....
Machinist.....	do ..	2 50	2 50	2 37	2 00	2 00	1 75	1 40	1 33	1 50	1 50	1 30	.....
Painter.....	do ..	2 25	2 00	2 00	2 00	2 00	1 33	1 33	1 33	1 42	1 42	1 25	.....
Yard-hand.....	do ..	1 50	1 50	1 50	1 25	1 25	1 00	83	83	83	83	88	.....

REMARKS.—Payments at the above works are monthly and in cash. All classes are required to work 11 hours 5 days in the week, and 9½ hours on Saturday.

Employment is constant, and no strikes have occurred. It is stated that the trade is not considered dangerous or unfavorable to health.

Hooksett Manufacturing Company, Hooksett, New Hampshire.

Classes of employes.	Unit of payment.	DATES.										
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Spinning overseer.....	Month..	.....	\$60 58	\$67 08	\$62 40	\$65 00	\$68 12	\$67 08	\$68 12	\$58 50	\$55 38	\$53 56
Second hand.....	Day ..	.....	1 41	1 00	1 00	1 00	1 54	1 48	1 78	1 71	1 65	1 72
Card-stripper.....	do ..	.....	61	61	1 00	1 04	1 06	1 00	1 25	1 10	1 25	1 25.
Grinder.....	do ..	.....	1 37	1 37	1 41	1 50	1 41	1 27	1 53	1 43	1 41	1 33
Speeder.....	do ..	.....	75	75	91	88	80	88	1 08	83	88	79
Doffer.....	do ..	.....	37	41	41	54	60	60	07	67	67	67
Mule-spinner.....	do ..	.....	1 00	1 06	1 20	1 18	1 33	1 37	1 66	1 58	1 37	1 37
Back boy.....	do ..	.....	32	37	41	37	40	66	50	50	41	41
Weaver.....	Piece ..	.....	18- 20	20- 22	23- 25	23- 25	24- 20	20- 31	20- 32	20- 32	20- 32	20- 32
Carpenter.....	Day ..	.....	2 00	2 25	2 25	2 50	2 50	2 50	2 50	2 50	2 25	2 25
Machinist.....	do ..	.....	1 75	2 00	2 00	2 25	1 80	1 80	2 25	2 25	2 25	2 25

REMARKS.—This cotton-mill was established in 1865, and manufactures print and cambric cloths.

The employes have a few opportunities for over-time, the earnings for which have been included in the wages given above. They also have the use of gardens without charge and houses at low rents. The value of these allowances has been estimated as amounting to 5 per cent. of wages, and has not been included in the above rates. Payments are in cash and monthly.

The hours of labor are 11 a day for all classes, and the works are never idle.

The labor cost of print cloth is given as 1.14 cent for 1890, which is 33½ per cent. of the total cost.

There has been a slight decrease in the efficiency of labor, resulting from the substitution of foreign for native operatives.

A slasher for dressing yarn has been introduced, which has effected a saving of about 80 per cent. in labor.

An establishment in New Hampshire.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.															
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Carding, spinning, and weaving overseers.	Month	\$91 60	\$91 00	\$91 00	\$91 00	\$91 00	\$91 00	\$82 16	\$82 10	\$82 10	\$82 16	\$82 16	\$78 00	\$78 00	\$78 00	\$78 00	\$78 00
Second hand	Day	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Picker	do	1 10	1 15	1 15	1 15	1 15	1 15	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33
Card-stripper	do	1 10	1 15	1 15	1 15	1 15	1 15	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 33
Grinder	do	1 40	1 40	1 40	1 40	1 40	1 50	1 50	1 50	1 58	1 58	1 58	1 58	1 58	1 58	1 58	1 50
Drawer	do	87	87	87	87	87	87	87	92	92	92	92	92	92	92	92	75
Speeder	do	75	75	83	1 00	1 00	1 00	1 00	1 17	1 17	1 17	1 17	1 17	1 17	1 17	1 10	1 00
Frame-spinner	do	82	1 00	1 00	1 00	1 00	1 00	1 17	1 17	1 17	1 17	1 17	1 00	1 00	1 00	1 00	1 00
Doffer	do	80	83	83	83	93	95	1 10	1 10	1 10	1 00	1 10	1 10	1 10	1 10	1 00	85
Spooler	do	90	85	85	85	85	85	92	92	92	92	92	92	92	92	92	92
Warper	do	92	1 00	1 00	1 00	1 00	1 00	1 17	1 17	1 17	1 17	1 17	1 12	1 12	1 12	1 12	1 12
Mule-spinner	do	1 55	1 65	1 65	1 65	1 65	1 65	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42
Back boy	do	45	45	45	45	45	45	50	50	50	50	50	41	41	41	41	41
Spinning section-hand	do	1 50	1 60	1 60	1 60	1 60	1 60	1 60	1 67	1 67	1 67	1 67	1 60	1 50	1 42	1 42	1 42
Dresser	do	1 50	1 30	1 12	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 45	1 45	1 50	1 60	1 00
Slasher	do	1 70	1 75	1 75	1 75	1 75	1 75	1 83	1 83	1 83	1 83	1 83					
Web-drawer	do	1 10	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 00
Weaver	do	1 10	1 10	1 10	1 10	1 10	1 10	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Weaving section-hand	do	1 55	1 60	1 60	1 60	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 58
Cloth-trimmer	do	70	70	70	75	80	85	85	92	92	92	92	92	92	92	70	75
Folder	do	1 20	1 20	1 20	1 25	1 30	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 33	1 25
Baler	do	1 20	1 20	1 20	1 25	1 30	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 37	1 33
Carpenter	do	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75
Machinist	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Painter	do	1 70	1 70	1 70	1 70	1 70	1 70	1 70	1 83	1 83	1 83	1 67	1 67	1 67	1 67	1 67	1 67
Common laborer	do	1 15	1 15	1 15	1 15	1 15	1 15	1 33	1 33	1 33	1 33	1 33	1 25	1 25	1 25	1 25	1 25

Classes of employes.	Unit of payment.	DATES.																
		1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.	1845.	1840.
Carding, spinning, and weaving overseers.	Month	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$50 10	\$52 00
Second hand	Day	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 33	1 33	1 33	1 33	1 33	1 25	1 50
Picker	do	1 12	95	95	90	87	87	87	87	87	87	83	83	83	83	83	83	92
Card-stripper	do	83	80	80	80	83	83	83	83	83	83	75	75	75	75	75	75	80
Grinder	do	1 25	1 10 ^{1/2}	1 25	1 25	1 12	1 12	1 12	1 12	1 12	1 12	1 12						
Drawer	do	54	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Speeder	do	80	60	60	55	83	83	60	60	60	60	55	55	55	55	55		
Frame-spinner	do	54	54	54	54	54	54	54	54	54	54	63	63	63	63	63	63	54
Doffer	do	60	50	50	50	50	45	45	45	45	45	45	45	45	45	45		
Spooler	do	70	70	70	70	54	67	67	67	67	67	67	67	67	67	67		
Warper	do	60	60	60	54	54	67	67	67	67	67	75	75	75	75	75	67	63
Mule-spinner	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00		
Back boy	do	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35		
Spinning section-hand	do	1 25	1 12 ^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}	1 12^{1/2}		
Dresser	do	1 00	83	83	83	83	83	83	83	83	83	83	83	83	83	83		
Slasher	do																	
Web-drawer	do	75	70	70	70	83	83	83	83	83	83	83	83	83	83	83		
Weaver	do	1 05	82	82	92	92	80	77	77	92	92	75	75	75	75	75	75	67
Weaving section-hand	do	1 33	1 33	1 33	1 33	1 33	1 33	1 33	1 17	1 17	1 17	1 17	1 17	1 00	1 00	1 00		
Cloth-trimmer	do	67	56	56	50	50	50	50	50	50	50	50	50	50	50	50		
Folder	do	1 17	1 00	1 00	1 00	1 00	1 00	1 00	1 00	56	56	56	56	50	50	50		
Baler	do	1 17	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00		
Carpenter	do	1 58	1 58	1 58	1 58	1 58	1 58	1 58	1 58	1 58	1 58	1 33	1 33	1 33	1 33	1 33	1 33	1 25
Machinist	do	2 25	2 25	2 25	2 25	2 25	1 67	1 67	1 67	1 67	1 67	1 42	1 42	1 42	1 42	1 42	1 42	1 33
Painter	do	1 67	1 50	1 33	1 33	1 33	1 33	1 25	1 12 ^{1/2}	1 25	1 25	1 25	1 25	1 25	1 25	1 25		
Common laborer	do	1 68	1 08	1 08	1 08	1 08	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—This firm manufactures tickings, denims, cotton flannel, shirting, stripes, and gingham. The works were established in 1826, and wages are given for a large number of classes of employes from 1840. These rates, it is remarked, are those paid to good workmen.

Occasionally 2 or 3 hours extra have been made by operating the mill at noon and after hours at night, but these cases have been infrequent. Weavers paid by the cut were able to increase their regular earnings by weaving an extra number of outs.

The mill has been run continuously except during the winter of 1857-'58, when the product was decreased, owing to the general depression in business, and during the war period, from 1860 to 1865, when the product equalled only from 40 to 50 per cent. of the full capacity.

There has been only one strike worthy of notice. This occurred in 1855, and arose from a refusal of the corporation to reduce the hours of labor, and resulted unsuccessfully to the strikers. This strike was general in all the mills in the city.

An establishment in New Hampshire—Continued.

The chief allowances are the use of the tenements and boarding-houses owned by the corporation, as follows: The corporation maintains houses, which it lets at low rates to landlords upon condition that board and lodging shall be furnished to the employes of the corporation at fixed low rates. It also maintains a large number of tenements, which it lets to employes at low rental. It is estimated that the saving thus afforded to employes will average 75 cents per man per week. The above considerations apply to only a portion of the operatives, say from one-fourth to one-third, and have not been considered in the table.

No deductions from wages for tools, etc., in connection with the work are required.

Payments have always been monthly and all in cash.

In 1830 the working-hours of all classes were 14½ per day; in 1835 and 1840, 14 hours; in 1845, 13½ hours, and in 1850 and 1855, 12½ hours. From 1860 to 1880 machine-shop hands, dye-house hands, picker hands, and dresser hands worked 10 hours, and all other classes 10½ hours.

There has been a decrease in the efficiency of labor. This is ascribed to the substitution of Irish, and more recently French Canadian, operatives for Americans.

The records of the establishment show on A. C. A. ticking, an article which has been manufactured without change for 40 years,

that in 1855, with wages at least 25 per cent. below present rates, the cost of labor per yard was 2.78 cents, while in 1880 it was 2.42 cents per yard. This would show an increased effectiveness of labor of from 40 to 50 per cent. since 1855, which is considered as entirely due to improved machinery.

Below is given a statement of selling prices, labor cost and percentage of wages to cost:

Year.	SELLING PRICE.		LABOR COST.		Percentage of wages to cost of ticking.
	Ticking, per yard.	Gingham, per yard.	Ticking, per yard.	Gingham, per yard.	
1845	\$0 14½		\$0 03 25		28
1850	14½		2 25		25
1855	14½		2 10		25
1860	15½		2 10		20
1865	77		2 25		10
1870	31½	\$0 17	4 10	\$0 04 50	19
1875	21 10	10 10	4	3 25	22
1880	10	8	2 10	2 10	28

The trade is believed to be healthful.

Henry S. Hovey, Pittsfield, New Hampshire.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.																	
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.	1865.	1864.	
Carding overseer	Month	\$58 50				\$58 50				\$58 50						\$58 50			\$47 58
Spinning overseer	do	55 25				70 20				78 00						52 00			47 32
Weaving overseer	do	58 50				78 00				78 00						49 92			49 92
Second hand	Day	1 85 1 75				1 30 1 00				1 33 1 50						1 25 1 50			08- 1 33
Picker	do	1 00				1 00				1 17						1 25			75
Card-stripper	do	1 00				1 00				1 00						1 10			75
Grinder	do	1 35				1 35				1 33						1 30			1 25
Drawer, girl	do	85				75				1 00						85			50
Speeder, girl	do	75				1 00				08						85			59
Doffer	do	70				70				90						90			92
Spooler	do	90																	
Warper	do	90				80				90						90			50
Dresser, girl	do					1 33				1 25						1 08			54
Slasher	do	1 75																	
Weaver	do	92				90				1 10						95			60
Baler	do	1 35				1 25				1 25						1 00			1 00

Classes of employes.	Unit of payment.	DATES.																	
		1863.	1862.	1861.	1860.	1850.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.	1847.	1842.	1837.	
Carding overseer	Month				\$52 00					\$52 00						\$52 00	\$40 92		\$52 00
Spinning overseer	do				52 00					52 00						52 00	49 92		52 00
Weaving overseer	do				30 00					52 00						52 00	52 00		52 00
Second hand	Day				1 00- 1 25					1 25						1 08- 1 25	1 15- 1 25		75- 1 25
Picker	do				75					72							50		58
Card-stripper	do				76					50							71		62½
Grinder	do				75					1 25						1 00	1 08		1 00
Drawer, girl	do				52					57							50		49
Speeder, girl	do				57					57							52		04
Doffer	do				57					50							58		56
Spooler	do																		
Warper	do				60					50							52		60
Dresser, girl	do				87½					58							07		60
Slasher	do																		
Weaver	do				82					60							55		53
Baler	do				75					62½							62½		62

Henry S. Hovey, Pittsfield, New Hampshire—Continued.

REMARKS.—This establishment has been in existence since 1847, and manufactures sheetings and shirtings.

The wages given above would be slightly increased for some classes by the extra earnings for which opportunity is given in making repairs.

The allowances reported are free houses to some employes, low rents, and facilities in many instances for keeping cows and horses, which should be added to the above rates.

All payments are in cash and monthly.

From 1840 to 1855, 13 hours constituted a day's labor for all classes; since 1855 the hours have been 11.

This company has never had a strike or a lockout at its factory. The mill has been in continuous operation, with the exception of stoppages for repairs and for putting in new machinery, with only one exception of two years' stoppage from 1875 to June, 1877. There has sometimes been a lack of water in the past, but the reservoir capacity has been so enlarged as to prevent further irregularity from this cause.

The usual improved machinery has been introduced, effecting a reduction in the cost of labor; a slasher, for instance, was introduced which reduced the cost of drawing a warp from \$5 25 to \$2 60.

The trade is not considered dangerous or unhealthful.

Great Falls Manufacturing Company, Somersworth, New Hampshire.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.
Drawer.....	Day	\$0 63					\$0 93					\$0 97				
Speeder.....	do	82					1 07					93				
Spooler.....	do	51					78					80				
Warper.....	do	78					1 10					1 02				
Dresser.....	do	1 50					1 80					1 50				
Weaver.....	do	78					1 14					1 00				
Spinner.....	do	52					96					88				
Carpenter.....	do	1 00					2 25					2 25				
Machinist.....	do	2 00					2 25					2 25				
Painter.....	do	1 65					2 00					2 00				
Common laborer.....	do	1 12					1 25					1 84				

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1850.	1845.	1830.
Drawer.....	Day	\$0 70					\$0 53					\$0 56			\$0 55	\$0 50	\$0 53
Speeder.....	do	75					59					56			57	47	40
Spooler.....	do	55					90					48			40	50	43
Warper.....	do	71					50					69			60	48	55
Dresser.....	do	1 00					1 59					77			66	80	70
Weaver.....	do	73					61					63			59	51	51
Spinner.....	do	61					56					61			52	47	44
Carpenter.....	do	1 84					1 50					1 58			1 40	1 32	1 33
Machinist.....	do	1 84					1 50					1 58			1 50	1 50	1 33
Painter.....	do	1 67					1 33					1 25			1 25	1 17	1 25
Common laborer.....	do	1 25					1 00					1 00			83	75	75

REMARKS.—This mill, which has been in operation since 1820, manufactures all styles of cotton goods, as sheetings, shirtings, drills, duck, satens, checks, and piqués, and also yarn.

There have been numerous opportunities for extra earnings from over-time by mechanics, laborers, etc., in making repairs which are more conveniently done when the machinery is not in operation. These would increase the regular wages, and have not been included in the table.

Houses are furnished to a large number of the workmen at a very low rent, a consideration which would increase the wages given above.

Payments have always been monthly. When the mill was first started there was no population in the vicinity except the operatives of the mill, and the company's store had the entire trade; but about 1840, when the population had increased, the store was discontinued, and all-cash payments were made to the employes.

The hours of labor were 13½ from the establishment of the mill to 1850, when they were reduced to 11. The officer reporting gives it as his opinion that these hours are not excessive, as the work required to

be done is in most cases not continuous, and the real working hours are not over 10. It is further remarked that when 10 hours constitute a day's work, hands are paid by the hour, and fractional parts of hours are deducted for absence from work, while this company does not note any absence less than one-fourth of a day. This avoids that friction which necessarily arises from the strict rules when 10 hours are a day's work. It is thought, as the result of many years' observation, that, with the present taste of the average operative, the leisure time afforded if but 10 hours per day were worked would not be spent in self-improvement, but would be wasted in practices not conducive to moral or physical improvement.

The company furnishes its operatives free reading-rooms for men and women, in which are placed several daily newspapers, all the leading illustrated papers, and the best of American magazines. The rooms are opened at 7 o'clock each evening, and closed at 9 o'clock. All persons in the employ of the corporation are freely admitted to the rooms, the only obligation being an observance of the ordinary rules of decorum.

STATISTICS OF WAGES—COTTON MANUFACTURE.

Harmony Mills, Cohoes, New York—Continued.

Classes of employes.	Unit of payment.	DATES.																
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.	
Carding overseer.....	Month	\$78 00	\$71 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$52 00	\$52 00	\$52 00	\$43 16	\$43 16	\$43 10	\$43 10	\$43 16	\$43 16	
Spinning overseer.....	do	58 50- 65 00	58 50- 65 00	52 00- 58 50	52 00- 58 50	52 00- 58 50	52 00- 58 50	52 00- 58 50	40 30- 52 00	45 50- 52 00	45 50- 52 00	32 50- 39 00	39 00	39 00	39 00	30 16	52 00	
Weaving overseer.....	do	78 00	71 50	65 00	65 00	65 00	65 00	65 00	52 00	52 00	52 00	58 50	52 00	41 08	41 08	43 16	.....
Second hand.....	Day	1 62½- 1 87½	1 37½- 2 25	1 12½- 1 00	1 00- 1 02½	1 00- 1 02½	1 00- 1 02½	1 00- 1 02½	05- 1 33	75- 1 37½	75- 1 37½	75- 1 25	75- 1 25	00	02½	02½	1 00- 1 12½	50- 1 00
Picker.....	do	1 00- 1 25	75- 1 00	70- 87½	70- 87½	70- 87½	70- 87½	70- 87½	05	75	75	75	00	02½	02½	02½	.....
Card-stripper.....	do	75- 1 00	70- 81	70- 75	70	70	70	70	05	75	75	75	50	50	50	50	.....
Grinder.....	do	1 12½- 1 25	87½- 1 08	75- 1 00	75- 1 00	75- 1 00	75- 1 00	75- 1 00	08- 87½	75- 1 00	75- 1 00	75- 1 00	00	00	00	75	.....				
Drawer.....	do	06	06	05	02½	02½	02½	02½	44	50	50	50	42	42	42	45	.....
Speeder.....	do	75	75	75	65	65	65	75	02½	75	75	75	50	50	50	50	50	
Frame-spinner.....	do	62	62	62	56	56	56	56	50	50	50	50	42	42	42	42	42	
Doffer.....	do	56	56	56	50	50	50	50	50	50	50	50	38	38	38	38	38	
Spooler.....	do	68	68	68	62	62	62	62	62	62	62	62	50	50	50	50	50	
Warper.....	do	80	75	62½	70	70	70	70	75	83	83	83	70	70	70	82	.....
Mule-spinner.....	do	1 70	1 55	1 00	1 00	1 00	1 00	1 00	05	95	95	95	88	83	83	06	00	
Back boy.....	do	50	45	30	30	30	30	30	25	30	30	30	25	25	25	25	25	
Spinning section-hand.....	do	2 00	1 75	1 50	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	
Dresser.....	do	2 50	2 25	2 00	2 00	2 00	2 00	1 75	1 02	1 02	1 02	1 02	1 50	1 50	1 50	1 50	1 50	
Slasher.....	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Weaving section-hand.....	do	1 75	1 02½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 20	1 37½	1 25	1 37½	1 25	1 25	1 10½	.....
Cloth-trimmer.....	do	58	54	50	50	50	50	50	45	45	45	45	54	50	50	42	50	
Folder.....	do	58	54	50	50	50	50	50	45	45	45	45	54	50	50	42	50	
Baber.....	do	64	88	80	80	80	80	80	75	75	75	75	80	75	75	75	75	
Carpenter.....	do	2 00	1 75	1 02	1 02	1 02	1 02	1 02	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Machinist.....	do	2 50	2 25	2 00	2 00	2 00	2 00	2 00	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	
Painter.....	do	2 00	1 75	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Yard-hand.....	do	1 25	1 12½	1 00	75	75	75	75	87½	1 00	1 00	1 00	1 00	75	75	75	75	
Common laborer.....	do	1 25	1 12½	1 00	75	75	75	75	87½	1 00	1 00	1 00	1 00	75- 83	75- 83	75	75	

REMARKS.—This mill manufactures cotton cloth, was established in 1850, and gives rates of wages for a large number of classes of employes for every year since that time. In addition to those in the table the following are given :

Table showing rates of wages or average earnings of certain classes of labor from 1850 to 1860.

Classes of employes.	Unit of payment.	DATES.														
		1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.	1849.	1848.	1847.	
Cloth-room overseer.....	Day	\$1 75	\$1 50	\$1 00	\$1 00	\$1 75	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$2 00	\$1 75
Lapper.....	do	1 00	90	65	95	1 00	1 25	1 25	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½
Spreader.....	do	70	60	65	65	70	90	90	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Lap-boy.....	do	45	40	42	42	45	50	50	58	58	58	58	58	58	58	50
Slubber.....	do	83	75	80	80	88	1 00	1 00	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 00
Piecer, mule.....	do	1 75	1 50	1 05	1 05	1 75	2 00	2 00	2 10	2 10	2 10	2 10	2 10	2 10	2 10	1 80
Twister.....	Beam	16½	13½	15	15	16	18	18	21	21	21	21	21	21	21	17- 19
Pressman.....	Day	1 25	1 00	1 00	1 00	1 12½	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 07½
Watchman.....	do	1 25	1 12½	1 25	1 25	1 31	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Cloth-room overseer.....	Day	\$1 50	\$1 12½	\$1 12½	\$1 12½	\$1 12½	\$1 12½	\$1 12½	\$87½	\$1 00	\$1 00	\$1 00	.....	.....	.....	.....
Lapper.....	do	1 00	75	70	70	70	70	70	65	75	75	75	\$0 66	\$0 62½	\$0 62½	\$0 62½	
Spreader.....	do	75	70	62½	50	50	50	50	58	65- 75	65- 75	65- 75	50	50	50	50	
Lap-boy.....	do	45	42	38	33	33	33	33	20	33	33	33	33	33	33	33	
Slubber.....	do	75	75	75	65	65	65	65	65	75	75	75	50	50	50	\$0 50	
Piecer, mule.....	do	1 70	1 55	1 00	1 00	1 00	1 00	1 00	95	95	95	95	83	83	88	66	
Twister.....	Beam	16	15	16	12½	12½	12½	12½	11	12½	12½	12½	a1 25	a1 25	a1 25	10	
Pressman.....	Day	1 25	1 12½	1 00	1 00	1 00	1 00	1 00	87½	1 00	1 00	1 00	.....	.....	.....	.....
Watchman.....	do	1 18½- 1 25	1 06- 1 00	1 00- 87½	80- 87½	80- 87½	80- 87½	80- 87½	87½	1 00	1 00	1 00	1 00	62½	62½	75	75

a Per day.

Harmony Mills, Cohoes, New York—Continued.

There have been a few opportunities for over-time work, which is paid for at regular rates. These extra earnings, however, have not been included in the table.

The employes have some allowances which would increase the apparent value of their earnings. These are rents, at 40 per cent. less, and board at 25 per cent. less than regular prices.

All-cash payments are made every month, and the method of payment in store-orders or merchandise has never been used.

The hours of labor have been as follows:

Year.	NUMBER OF HOURS WORKED.	
	Mechanics.	Others.
1850.....		12
1855.....	11	12
1860.....	11	12
1865.....	11	11
1870.....	10	11
1875.....	10	11
1880.....	10	10½

Any decrease in hours of labor has always shown a corresponding decrease in production, and in no instance has this decrease been compensated for except by a corresponding increase in the speed of machinery.

The machinery has been improved and greater speed rendered possible.

This mill averaged 12 months a year from 1850 to 1885, 11½ months from 1856 to 1860, 11¼ months from 1866 to 1875, 9½ months in 1880, and 11 months in the census year, ending May 31, 1880. The causes of irregularity were a strike of 2 weeks in 1867, running short time in 1861 and 1879, and a 4-weeks' strike in the spring of 1880. The strike of 1857 was caused by a reduction of wages rendered necessary by the panic, and in 1880 by a labor-union's opposition to an overseer. The loss in wages on the latter occasion was \$80,000.

The selling prices of printing cloths, 64 by 64, are given as follows for the years named:

1850.....	\$0 5½	1870.....	\$0 7½
1855.....	5½	1875.....	5½
1860.....	5½	1880.....	3½
1865.....	40		

The improvements introduced within the past 25 years have enabled the same number of employes to produce 30 per cent. more work than formerly, the quality of which is also better.

In 1866 it took 12 dressing frames, at a cost of \$6 40, to do what in 1880, with 3 slashers, cost \$1 75.

In 1866 a cut cost for labor 84.5 cents.

In 1880 a cut cost for labor 52 cents.

In 1872 labor was 12 cents per pound of cotton used.

In 1880 labor was 8½ cents per pound of cotton used.

The trade is neither dangerous nor unhealthful. It is believed that outside surroundings have more to do with the health of the operatives than any thing in the mill.

Saratoga "Victory" Manufacturing Company, Victory Mills, New York.

Classes of employes.	Unit of payment.	DATES.									
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Carding overseer.....	Month..	\$50 16	\$46 54	\$48 02	\$44 20	\$53 82	\$62 14	\$61 36	\$46 80	\$54 86	\$54 60
Spinning overseer.....	do ..	62 06	51 12	52 26	51 74	60 42	60 32	64 48- 78 00	61 10- 61 00	51 74- 65 00	52 00- 65 00
Picker.....	Day ..	1 00	90	90	90	1 00	1 12	1 11	1 21	1 23	1 16
Card-stripper.....	do ..	86	79	84	84	93	1 03	1 00	1 10	1 10	1 12
Grinder.....	do ..	1 22	1 12	1 14	1 17	1 27	1 43	1 49	1 47	1 50	1 51
Drawer.....	do ..	50	54	52	50	53	54	55	64	61	63
Speeder, ghl.....	do ..	82	72	73	69	80	90	88	81	95	96
Doffer.....	do ..	47	44	49	49	48	46				
Spooler.....	do ..	50	46	52	51	50	52	48	52	42	46
Warper.....	do ..	95	1 04	1 01	97	79	1 03	1 00	94	82	85
Spinning section-hand.....	do ..	2 41	1 97	2 01	1 99	2 17	2 32	2 43	2 35	1 99	2 00
Dresser.....	do ..	1 33	1 00	2 15	1 91	2 09	2 26	1 74	1 63	3 32	3 43
Web-drawer.....	do ..	88	66	70	66	73	69	71	77	70	1 75
Weaver.....	do ..	50- 1 51	44- 1 31	49- 1 33	48- 1 34	53- 1 51	60- 1 67	62- 1 68	58- 1 95	57- 1 90	57- 1 89

REMARKS.—This establishment has been in operation since 1846, and manufactures cambrics, silecias, and cotton dress-goods.

There have been no opportunities for over-time work except in the machine-shop and occasionally in the dye-house. These would increase the regular wages but slightly, and have not been included in the table.

The allowances are coal at nominal cost, low rents, and cheap board, and pasturage for cattle at nominal rates. These would increase regular wages, and have not been considered in the rates given.

Payments are monthly and in cash.

The hours of labor have been uniformly 10 for dyers and finishers, and 11 for all other classes.

Strikes and lockouts are rare. Sometimes when strikes are epidemic in other parts of the country, some uneasiness is felt here in sympathy, but strikes are generally averted, and no loss of any consequence has occurred from this cause.

The variation in the cost of labor per pound of silecia since 1855 is shown in the following statement:

Year.	Cost of labor per pound of silecia.
1855.....	\$0 31,300
1860.....	31,300
1865.....	1 31,700
1870.....	53,880
1875.....	36,880
1880.....	28,330

The trade is no more dangerous than any other involving the use of machinery, and the local conditions are favorable to health, the climate being exceptionally good.

Briggs & Brothers, Philadelphia, Pennsylvania—Continued.

Classes of employes.	Unit of payment.	DATES.											
		1860.	1868.	1867.	1866.	1865.	1864.	1863.	1872.	1861.	1860.	1850.	
Carding overseer	Month..	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	.....
Spinning overseer	do	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	.....
Weaving overseer	do	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	00 00	.....
Second hand	Day	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Picker	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Grinder	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Mule-spinner	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	.....
Spinning section-hand	do	1 00 $\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	1 00$\frac{1}{2}$	.....
Web-drawer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Weaver	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Folder	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Machinist	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	.....
Common laborer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....

REMARKS.—The firm making this return manufactures double and twist cottonades.

Payments are wholly in cash and every two weeks.

All classes work 10 hours per day.

The trade is regarded as healthful.

The works averaged 11 months a year up to the census year, during which they ran full time. The cause of irregularity was fluctuation in demand. No strikes or lockouts have taken place.

There has been no increase in the efficiency of labor at this establishment.

Lonsdale Company, Lonsdale and Cumberland, Rhode Island.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.																	
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.			
Spinning overseer	Month..	\$01 00	.....	.....	.....	.....	\$75 40	.....	.....	.....	.....	.....	.....	.....	.....	\$74 88	.....	.....	.....
Second hand	Day	1 92	.....	.....	.....	.....	1 50	.....	.....	.....	.....	.....	.....	.....	.....	1 85	.....	.....	.....
Speeder	do	1 25	.....	.....	.....	.....	1 00	.....	.....	.....	.....	.....	.....	.....	.....	1 25	.....	.....	.....
Frame-spinner	do	67	.....	.....	.....	.....	58	.....	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....
Spooler	do	85	.....	.....	.....	.....	70	.....	.....	.....	.....	.....	.....	.....	.....	83	.....	.....	.....
Warper	do	1 33	.....	.....	.....	.....	1 25	.....	.....	.....	.....	.....	.....	.....	.....	1 50	.....	.....	.....
Mule-spinner	do	1 50	.....	.....	.....	.....	1 25	.....	.....	.....	.....	.....	.....	.....	.....	1 33	.....	.....	.....
Spinning section-hand	do	1 80	.....	.....	.....	.....	1 70	.....	.....	.....	.....	.....	.....	.....	.....	1 80	.....	.....	.....
Dresser	do	2 17	.....	.....	.....	.....	1 90	.....	.....	.....	.....	.....	.....	.....	.....	2 50	.....	.....	.....
Weaver	do	1 25	.....	.....	.....	.....	1 08	.....	.....	.....	.....	.....	.....	.....	.....	1 17	.....	.....	.....
Carpenter	do	1 87	.....	.....	.....	.....	1 00	.....	.....	.....	.....	.....	.....	.....	.....	2 00	.....	.....	.....
Machinist	do	2 00	.....	.....	.....	.....	1 75	.....	.....	.....	.....	.....	.....	.....	.....	2 17	.....	.....	.....
Common laborer	do	1 17	.....	.....	.....	.....	1 10	.....	.....	.....	.....	.....	.....	.....	.....	1 25	.....	.....	.....

Classes of employes.	Unit of payment.	DATES.																
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1850.	1845.	1840.	1835.	
Spinning overseer	Month..	\$75 40	.....	.....	.....	.....	\$52 00	.....	.....	.....	.....	.....	\$52 00	.....	\$52 00	\$45 50	\$39 00	\$45 50
Second hand	Day	1 80	.....	.....	.....	.....	1 25	.....	.....	.....	.....	.....	1 10	.....	1 10	1 00	1 08	1 00
Speeder	do	1 17	.....	.....	.....	.....	75	.....	.....	.....	.....	.....	67	.....	67	70	60	50
Frame-spinner	do	1 00	.....	.....	.....	.....	75	.....	.....	.....	.....	.....	60	.....	50	50	45	40
Spooler	do	80	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	58	.....	50	50	50	50
Warper	do	1 25	.....	.....	.....	.....	1 00	.....	.....	.....	.....	.....	70	.....	60	60	65	60
Mule-spinner	do	1 50	.....	.....	.....	.....	1 00	.....	.....	.....	.....	.....	1 00	.....	1 00	1 00	80	70
Spinning section-hand	do	1 70	.....	.....	.....	.....	1 33	.....	.....	.....	.....	.....	1 17	.....	1 20	1 17	1 10	1 00
Dresser	do	2 25	.....	.....	.....	.....	1 50	.....	.....	.....	.....	.....	1 40	.....	1 40	1 50	1 50	1 42
Weaver	do	1 20	.....	.....	.....	.....	1 10	.....	.....	.....	.....	.....	1 00	.....	1 00	1 00	83	75
Carpenter	do	1 75	.....	.....	.....	.....	1 25	.....	.....	.....	.....	.....	1 25	.....	1 25	1 33	1 30	1 25
Machinist	do	1 75	.....	.....	.....	.....	1 50	.....	.....	.....	.....	.....	1 50	.....	1 33	1 40	1 35	1 25
Common laborer	do	1 17	.....	.....	.....	.....	90	.....	.....	.....	.....	.....	85	.....	80	75	75	75

REMARKS.—This company, which is engaged in the manufacture of fine and medium grades of cotton and silecias and satcens for lining cloth, was established in 1823, and rates of wages are given for every fifth year since 1835.

Payments are monthly and in cash, except that rent and amount of meat-bill are deducted. The use of store-orders was discontinued in 1840, as it was believed that the men would be better satisfied if paid in cash and free to purchase where they pleased.

Lonsdale Company, Lonsdale and Cumberland, Rhode Island—Continued.

Mechanics at this establishment have some opportunities for over-earnings in making repairs, which have been considered in the table.

The only allowance given to employes of a pecuniary nature is moderate house-rent. The schedule notes, however, in this connection the efforts made by the company at its own expense to render its villages attractive to its employes as cheap places of abode, and as furnishing ample facilities for education, reading, amusement, and religious worship.

The hours of labor, which are the same for all classes, were 12 from 1830 to 1860, 11 to 1870, and 10½ since that date.

It has been observed that reduction in the hours of labor reduces production, though not in exact proportion to the reduction in running time, as for shorter periods employes can run machines faster and give closer attention. No effect of shorter hours upon the character and habits of employes has been visible. The effects on health can not be estimated, as numerous sanitary improvements have been made in mills and dwellings.

The factory was in constant operation from 1830 to 1856. In 1857 it ran full time but 6 months, then ran half time or stopped entirely, owing to the panic. In 1861 it made but short time, and stopped 90 days for repairs, the cause of irregularity being partly the paralysis of trade caused by the breaking out of the rebellion, and partly delays in remodeling and repairing the mill. In 1865 there was a strike of 6 days, in 1875 one lasting 4 weeks, and in 1876 one lasting 3 weeks. Full time was made in the census year. The strike in 1865 had for its object higher wages and reduced hours of labor. The mill was idle about a week. After the hands returned to work notice was given that at the expiration of a fortnight wages would be advanced 12½ per cent., and the hours of labor would be reduced from 12 to 11 a day. The strike in 1875 was among the weavers in one mill, and because their wages were not advanced at the same

time that those of other classes were advanced. The weavers were joined for a while by the mule-spinners, but by no other hands. The strike lasted about a month, and resulted in the return to work of the strikers at the old rates. The most important labor dispute was in January, 1876. Its apparent cause was a reduction in wages, and it lasted over three weeks, ending in the complete submission of the strikers after a loss in wages of about \$50,000.

There has been a marked increase in the efficiency of labor, resulting from more thorough training of overseers and superintendents, better training of operatives, more rigid discipline, and the influx of skilled labor from Europe.

During the time covered by the rates of wages the changes in the system of machinery have been so important that they amount to a revolution. Every machine in use in 1830 has been discarded for a new invention, which lessens the cost of manufacturing. Hand-mules have given place to self-acting mules; cumbersome looms, capable only of slow speed and requiring the strength of a man to operate them, have been replaced by looms from which a woman can produce at least 50 per cent. more cloth per hour. Improved spinning-frames do away with the necessity of a small army of children in the spinning-rooms, and self-stripping cards do the work which was formerly done by able-bodied men. The slasher dresses yarn much better than the old-fashioned dressing-machine, without the need of the unwholesome heat of the dressing-room and with a reduction of three-fourths in the number of men employed. With modern machinery operatives do not work so hard, the number required to produce a given result is very much reduced, and the product is greatly increased.

These proprietors consider cotton-manufacturing a healthful occupation. They state that danger from accidents is very much reduced by protecting gears and shafts and by improved construction of machinery.

Tennessee Manufacturing Company, Nashville, Tennessee.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.						
		1880.	1870.	1878.	1877.	1876.	1875.	1874.
Carding overseer	Month..	\$97 50	\$91 00- 97 50	\$91 00	\$91 00	\$91 00	\$91 00	\$91 00
Spinning overseer.....	do	91 00- 97 50	91 00- 97 50	91 00	91 00	91 00	91 00	91 00
Second hand.....	Day	2 00- 2 50	2 00- 2 50	2 00- 2 50	2 00- 2 50	2 00- 2 25	2 00- 2 25	2 00- 2 25
Picker.....	do	88	81- 88	79- 81	79	79	79	79
Card-stripper	do	67	64- 66	64- 66	66	66	66	66
Drawer	do	60	57- 60	57	57	57	57	57
Doffer	do	37	34- 37	34	30- 34	30	30	30
Spooler	do	35	33- 35	33- 35	50- 52	50	50	50
Warper.....	do	94	91- 94	81- 91	80- 81	80	80	80
Mule-spinner.....	do	1 11	1 02- 1 11	1 02- 1 16	1 10- 1 50	1 50	1 50	1 50
Slasher	do	1 25	1 21- 1 25	1 21- 1 50	1 40- 1 50	1 40	1 40	1 40
Web-drawer	do	87	76- 87	76- 77	77- 80	80	80	80
Weaver.....	do	83	74- 83	74- 78	78- 80	80	80	80
Weaving section-hand.....	do	2 00	1 75- 2 00	1 75	1 75- 2 00	2 00	2 00	2 00
Carpenter.....	do	2 35	2 25- 2 35	2 25- 2 50	2 25- 2 50	2 25	2 25	2 25
Machinist.....	do	2 50	2 25- 2 50	2 25- 2 50	2 00- 2 50	2 00	2 00	2 00
Common laborer.....	do	80	80	80	80	80	80	80

Tennessee Manufacturing Company, Nashville, Tennessee—Continued.

REMARKS.—The extra earnings from over-time, for which there are occasional opportunities, would increase the wages but slightly, and have not been included in the table. The only classes under any expense for implements are carpenters and machinists, who furnish their own tools to some extent.

Payments are in cash and every month. All classes work 11 hours per day. The company considers these hours as the most advantageous for both parties, as shorter hours would lessen wages and output, and would also be productive of evil habits in employes, many of whom would not spend their leisure time properly.

The mill has virtually made full time since its establishment. The only labor difficulty in the history of the works was caused by the misconduct of an official, who, upon being discharged, incited about 20 of the hands to follow him out, which necessitated the stopping of other departments and a loss of \$36,000 in wages. The following table gives the selling prices of a number of arti-

cles of product, for two of which the labor cost is given, and also the percentage of wages to total cost of production:

Year.	SELLING PRICE.				LABOR COST.		Percentage of wages to cost.
	4-4 sheeting, per yard.	7-8 sheeting, per yard.	Drilling, per yard.	Batting, per pound.	Sheeting, per yard.	Drilling, per yard.	
1875	\$0 12	\$0 10	\$0 13	\$0 17	\$0 01 ³⁸ / ₁₀₀	\$0 01 ⁷⁸ / ₁₀₀	Per cent.
1880	8 ¹ / ₂	7 ¹ / ₂	0	14	1 ³⁸ / ₁₀₀	1 ⁷⁸ / ₁₀₀	22

There has been an increase in the efficiency of labor, attributable to experience and discipline.

The usual improvements in machinery have been introduced. The trade is healthful. There are occasional slight accidents, which could generally be avoided by greater care on the part of operatives.

Janesville Cotton Manufacturing Company, Janesville, Wisconsin.

Classes of employes.	Unit of payment.	DATES.					
		1880.	1879.	1878.	1877.	1876.	1875.
Spinning overseer	Month	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00
Second hand	Day	1 50	1 50	1 50	1 50	1 50	1 50
Picker	do	00 ³ / ₄	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}
Card-stripper	do	1 00	1 00	1 00	1 00	1 00	1 00
Grinder	do	1 50	1 50	1 50	1 50	1 50	1 50
Drawer	do	00 ³ / ₄	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}
Speeder	do	83 ¹ / ₂	83^{1}/_{2}	83^{1}/_{2}	83^{1}/_{2}	83^{1}/_{2}	83^{1}/_{2}
Frame-spinner	do	54 ¹ / ₂	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}
Doffer	do	54 ¹ / ₂	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}	54^{1}/_{2}
Spooler	do	00	00	00	00	00	00
Warper	do	00	00	00	00	00	00
Mule-spinner	do	00 ³ / ₄	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}	00^{3}/_{4}
Back boy	do	50	50	50	50	50	50
Spinning section-hand	do	1 00 ³ / ₄	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}	1 00^{3}/_{4}
Dresser	do	2 25	2 25	2 25	2 25	2 25	2 55
Web-drawer	Piece	22	22	22	22	22	22
Weaver	do	22- 26	22- 26	22- 26	22- 26	22- 26	22- 26
Weaving section-hand	Day	2 00	2 00	2 00	1 75	1 75	1 75
Folder	do	1 25	1 25	1 25	1 25	1 25	1 25
Baler	do	1 50	1 50	1 50	1 50	1 50	1 50
Carpenter	do	2 00	2 00	2 00	2 00	2 00	2 00
Machinist	do	2 25	2 25	2 25	2 25	2 25	2 25
Common laborer	do	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—This cotton-mill was established in 1875, and manufactures sheetings.

The following table shows the rates of wages or average daily earnings of certain classes of labor from 1875 to 1880:

Classes of employes.	Unit of payment.	DATES.					
		1880.	1879.	1878.	1877.	1876.	1875.
Lapper	Day	\$1 35	\$1 35	\$1 35	\$1 35	\$1 35	\$1 35
Bobbin-boy	do	45	45	45	45	45	45
Spare hand	do	1 00	1 00	1 00	1 00	1 00	1 00
Cloth-table	do	1 05	1 05	1 05	1 05	1 05	1 05
Brushing-machine	do	1 12 ¹ / ₂	1 12^{1}/_{2}	1 12^{1}/_{2}	1 12^{1}/_{2}	1 12^{1}/_{2}	1 12^{1}/_{2}
Stamper	do	1 50	1 50	1 50	1 50	1 50	1 50
Boiler	do	1 12 ¹ / ₂	2 12 ¹ / ₂	1 12 ¹ / ₂	1 12^{1}/_{2}	1 12^{1}/_{2}	1 12^{1}/_{2}
Teamster (with team)	do	1 92					

Payments are monthly and in cash.

The works, which never stop except for repairs and holidays, are in operation an average of 11¹/₂ months a year, and the employes state that they have never had any thing in the nature of a strike.

The following table gives the selling price, labor cost, and percentage of wages to cost of sheetings:

Year.	Selling price of sheeting per yard.		Labor cost of sheeting per yard.		Percentage of wages to cost of sheeting.
	50 by 56.	64 by 50.	50 by 56.	64 by 50.	
1875	\$0 08				Per cent.
1880	0 ³ / ₄	\$0 07 ¹ / ₂	\$0 01 ³⁸ / ₁₀₀	\$0 01 ⁷⁸ / ₁₀₀	25

It is stated that in 1875 the operatives were learning their work, and the cost of labor was very high in proportion to output.

An increase has taken place in the efficiency of labor, arising from a better understanding of the business.

HEMP AND JUTE MANUFACTURE.

But one return, giving rates of wages for sixteen classes of labor from 1871, was received from this industry.

An establishment in New Jersey.

Classes of employ6s.	Unit of payment.	DATES.									
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Batcher.....	Day.....	\$1 26	\$1 14	\$1 26	\$1 26	\$1 26	\$1 26	\$1 33½	\$1 33½	\$1 33½	\$1 33½
Breaker.....	do.....	83½	79	83½	83½	83½	83½	1 00	1 00	1 00	1 00
Carder.....	do.....	66½	62½	66½	66½	66½	66½	01½	83½	83½	83½
Preparer.....	do.....	95½	87½	95½	95½	95½	95½	1 08½	1 08½	1 12½	1 12½
Spinner.....	do.....	80	81	90	90	1 00	95	1 00	1 08½	1 08½	1 00
Reeler.....	do.....	1 00	95½	1 16½	1 16½	1 33½	1 33½	1 37½	1 45½	1 45½	1 45½
Twister.....	do.....	83½	70	79	70	87½	83½	87½	01½	91½	91½
Baller.....	do.....	79	70½	79	79	83½	70	60½	01½	01½	01½
Bleacher.....	do.....	1 27	1 20½	1 35	1 35	1 50	1 42	1 50	1 54	1 54	1 54
Dyer.....	do.....	1 27	1 20½	1 35	1 35	1 50	1 42	1 50	1 58½	1 58½	1 58½
Dryer.....	do.....	1 22	1 20½	1 35	1 35	1 45½	1 35	1 45½	1 50	1 50	1 50
Winder.....	do.....	1 00	1 04½	1 00	1 00	1 08½	1 04½	1 08½	1 12½	1 12½	1 12½
Warper.....	do.....	1 16½	1 08½	1 16½	1 16½	1 16½	1 16½	1 16½	1 20½	1 20½	1 20½
Weaver.....	do.....	1 08½	1 04½	1 08½	1 08½	1 08½	1 04½	1 04½	1 04½	1 04½	1 04½
Packer.....	do.....	1 33½	1 20½	1 35	1 35	1 50	1 42	1 50	1 58½	1 58½	1 58½
Machinist.....	do.....	2 16½	2 10½	2 33½	2 33½	2 50	2 50	2 60½	2 75	2 75	2 75

REMARKS.—These works manufacture hemp carpets, napier matings, jute canvas, yarns, and twines, and have been in operation since 1844, though wages are given only from 1871.

No supplementary statements are made in this return except regarding payments, which it is reported are fortnightly and wholly in cash.

SILK MANUFACTURE.

When asked for information as to rates of wages, the silk-manufacturers of the country almost with one accord began to make excuses. In no industry of the importance of this was there manifested such a disinclination to give the information asked for. Of the 11 schedules sent out, only 4 were returned, all of which are tabulated. Two of these, however, may be regarded as fairly representing those branches of the silk industry to which they relate, one from New Jersey being quite complete from 1866.

This classification includes the manufacture of a large variety of silk goods, among which are machine twist, tram, organzine, fringe, broad silks, gros-grains, serges, surahs, satins de chine, and silk handkerchiefs.

In one of the reports the following table, showing the rates of wages per week paid in the manufacture of silk both in this country and abroad, was included, with the statement that it fairly represents the wages at the time stated. It is included here on the authority of the person sending it:

Table showing rates of wages in silk manufacture, per week, 1882.

Designation of operative.	Sex.	United States (1879-1880).					Foreign (1882).								
		Average per United States census, 1879-1880.	Recent in United States (1882).	Estimated average in England.	Estimated average in Germany.	Estimated average in France.	Estimated average in Italy.	Designation of operative.	Sex.	Average per United States census, 1879-1880.	Recent in United States (1882).	Estimated average in England.	Estimated average in Germany.	Estimated average in France.	Estimated average in Italy.
Hard-silk winder (a).....	F.	\$5 25		\$2 00		\$1 40		Weaver of better-grade ribbons.....							\$3 90
Hard-silk doubler.....	F.	5 18				2 45		Weaver of fancy ribbons.....							5 10
Hard-silk spinner.....	M.	5 57				\$2 10		Weaver of best novelty ribbons.....		\$15 00					9 00
Do.....	F.	4 87	\$5 00			2 00	1 44	Weaver of damasks.....	M.				\$3 03		
Hard-silk twistor.....	M.	5 08				3 42		Weaver of dress goods.....	M.	12 00			2 73	6 00	
Do.....	F.	5 07				2 10		Do.....	F.	9 00			1 08		
Soft-silk winder.....	F.	6 35	8 00			2 00		Weaver of plush, etc.....	M.				4 07		
Warper.....	M.	10 71						Do.....	F.				2 70		
Do.....	F.	7 02	10 00			2 40		Loom-fixer (b).....	M.	\$15 87					
Beamer (b).....	M.	12 11						Finisher (b).....	M.	13 50					
Do.....	F.	7 72						Designer.....	M.	24 71	\$12 00				
Warp-twister.....	M.	13 00						Lace operative (machine).....	M.	14 75	15 00	9 11			
Weaver on hand-loom (c).....	M.	14 15			\$3 93	5 40	4 80	Do.....	F.	5 00		3 00	1 00	3 00	
Do.....	F.	8 44			2 72	3 00	2 28	Braid operative (machine) (d).....	M.	16 00			7 90		
Weaver on power-loom.....	M.	11 43		5 40	3 00			Braider (d).....	F.	5 41			2 32		
Do.....	F.	7 94		4 38				Fringe-maker.....	F.	5 30			1 43		
Weaver of plain common ribbons.....						2 70		Dyer.....	M.	12 77		7 00			\$3 30

a Lower figures are given for wages of children in England.

b Not separately employed under such designations in Europe.

c Hand-loom are more used than power-loom in Europe; the reverse is true here. Statistics from Europe do not distinguish the two classes.

d Systems of employment here and in Europe differ materially.

Extra earnings or deductions.—There are some opportunities for over-time, especially at mills that make what may be termed seasonable goods, owing to the greatly increased demand at times for these goods.

There are no allowances or deductions; that is, none that would increase or decrease the rates of wages given in the above tables.

Payments.—Payments are in cash. At three of the mills reporting, payments are every two weeks; at the fourth, monthly.

Hours of labor.—At three of the establishments reporting, the hours of labor are 10 a day; at the fourth, 10½.

Regularity of employment.—Three of the establishments reporting state that they run 12 months a year; the other from 10½ to 11 months. The irregularity is owing to change in fashions and to over-production.

Relation of wages and labor to selling price and cost.—So many different classes of goods are represented in the schedules that it is impossible to give any general statement under this head. Each report must be examined for itself on this point.

Efficiency of labor and labor-saving machinery.—There seems to have been an increase in the average efficiency of the men employed in the works. This statement does not necessarily imply that the efficiency of certain men has increased, but there are more skilled workmen in the industry in the country, proportionately to the demand, now than some years ago; consequently a better selection of workmen can be made, and the average efficiency is somewhat increased.

I can give no better statement regarding the introduction of labor-saving machinery and the various steps of progress in the introduction of the manufacture of different grades of silk into this country than that contained in the report of Mr. William C. Wyckoff, special agent of the Census in charge of the statistics of silk:

“The beginnings of the manufacture of sewing silk by machinery have already been described; the production of ‘machine twist’—a kind of thread suited for use on the sewing-machine, and first adapted to that purpose in February, 1852—gave a great impetus to this branch of the trade. Since then the sewings and twist manufacture, keeping pace with the rapidly increasing use of sewing-machines, has wholly freed itself from foreign rivalry, but suffers from the keenest of home competition. Manufactures of spun silk (which now include almost every kind of silk goods) were begun at South Manchester, Connecticut, about twenty-five years ago. Ribbons began to be made to supply deficiencies in imported invoices as early as 1861; their manufacture here was much stimulated during the war of the rebellion by the high price of gold, which checked their import. Plain gros-grain dress silks were made to some extent by different manufacturers before 1866, when the business was organized in New Jersey; its most rapid growth is since 1876. Brocaded silks and satins were attempted on a large scale earlier than plain gros-grain, and were produced in several factories when that was confined to a few. The business of printing Asiatic pongees preceded the regular manufacture of handkerchiefs, which was of slow growth until 1876, when it received a remarkable impulse from the Centennial Exhibition. Hair nets and spot nets were largely produced in 1868; a lace covering for buttons was made on a lace machine in 1869; these undertakings paved the way for the manufacture of silk laces, which was established at Brooklyn, New York, in 1871. The making of trimmings of all kinds forms a very large branch of the silk industry, but this high position has been acquired mostly within the last ten years, although certain classes of trimmings were produced before the present century, and have since been made continuously. Silk tapestry and the like are just emerging from the experimental stage, which velvet has not yet quitted.

“Throughout the silk manufacture, the condition, or rather the character, of the raw material is a potent factor. The machinery of American silk-mills is driven at the highest speed compatible with good work. Such speed is often needed to catch the demand of a short-lived fashion; and it proves generally profitable by economizing labor. For use on the swiftest spindles and looms, raw silk of the most uniform character is required. For many years the Asiatic supply was unsatisfactory, while the European was too costly to be used at a profit. An important effort was made in 1840-41 to secure the better preparation of China silk for this market. The chief point was to secure better reeling or re-reeling by means of a winding frame moved by a crank, in place of direct winding by hand from stationary bamboo sticks. In re-reeling, also, the sizes of the fiber were to be sorted. Improved reels made by Mr. Rixford, and provided with a traverse attachment, were sent to China. Owing to oriental prejudices, the attempt was at that time unsuccessful. About thirteen years afterward the effort was renewed, and the first re-reeled China silk was brought to New York in 1854. For a while the work was well done, but the Chinese became careless about it, and the re-reeled silk deteriorated so much that its importation ceased. A third effort to secure better reeling in China was made in 1867 and met with more permanent success,^(a) though at best the work there falls far short of the highest standards. Imperfect reeling in the United States had destroyed the market for our native silk and retarded our manufactures; imperfect reeling in China was for even a longer term the chief obstacle to improvement, all progress being hampered by defects in the raw material. Among the causes of rapid advance in the arts of manufacture during very recent years, improvement in the quality of raw silk, especially from Japan, holds a prominent place.”

^a Allen's *Chronology*, p. 9.

STATISTICS OF WAGES—SILK MANUFACTURE.

WAGES TABLES, WITH SUPPLEMENTARY AND EXPLANATORY REMARKS.

An establishment in Connecticut.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Foreman.....	Day	\$2 50	\$2 50	\$2 50	\$2 50	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00	\$3 00
Soft and hard-silk winder.....	do	1 00	90	90	1 04	1 04	1 08	1 08	1 08	1 08	1 08	1 08	1 00	1 00	1 00	1 00
Soft and hard-silk doubler.....	do	1 00	90	90	1 04	1 04	1 08	1 08	1 08	1 08	1 08	1 08	1 00	1 00	1 00	1 00
Spooler.....	do	1 00	1 00	1 00	1 12	1 12	1 12	1 12	1 10	1 16	1 16	1 16	1 16	1 10	1 16	1 16
Soft and hard-silk spinner.....	do	1 00	1 00	1 00	1 08	1 16	1 25	1 33	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Reeler.....	do	1 00	1 00	1 00	1 04	1 04	1 08	1 08	1 08	1 08	1 08	1 08	1 00	1 00	1 00	1 00
Dyer.....	do	3 00	2 50	2 50	2 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Dyer's helper.....	do	1 50	1 50	1 50	1 60	1 60	1 60	1 60	1 60	1 60	1 60	1 60	1 60	1 60	1 60	1 60
Engineer.....	do	2 02	2 02	2 02	2 02	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Watchman.....	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	.....	.....	.....	.....
Cleaner.....	Per lb.	30	40	40	40	40	40	40	40	40	40	40	.....	.....	.....	.....

REMARKS.—This establishment, which has been in operation since 1863, manufactures machine twist.

There are occasional opportunities for over-time work, for which price and a half is paid. Such extra earnings, however, have not been included in the table.

Payments have always been monthly and wholly in cash.

All classes work 10 hours a day.

Employment has been uninterrupted since the establishment of these works.

The following statement of selling prices, etc., is given:

Year.	Selling price of machine twist per pound.	Labor cost of machine twist per pound.	Percentage of wages to cost.
1866.....	\$16 00	\$2 46	.....
1870.....	15 00	1 10	7½
1875.....	9 90	1 00	10½
1880.....	7 39	80	10½

John Dunlap, Paterson, New Jersey.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Foreman.....	Day	\$4 16	\$4 16	\$5 00	\$5 00	\$5 00	\$5 00	\$5 00	\$5 00	\$5 00	\$4 16	\$4 16	\$4 16	\$3 70	\$3 70	\$3 70
Soft-silk winder.....	do	58-1 00	83	60-01	75	83	87	83	83	1 00	95	75	83	91	83	91
Hard-silk winder.....	do	50-1 04	41-01	75-01	75-01	62-75	50-1 00	75-1 00	83-1 00	83-1 25	87-1 33	83-1 29	95-1 29	91-1 25	83-1 16	90-1 00
Soft and hard-silk doubler.....	do	75-05	33-83	54-75	50-75	54-75	75-83	54-75	50-83	41-83	60-91	87-95	79-91	79-91	37-83	83-01
Spooler.....	do	91-1 00	91-1 00	83-1 00	83-1 08	83-1 08	58-1 16	66-1 16	83-1 33	20-1 33	87-1 25	95-1 25	87-1 25	79-1 04	70-1 50	91-1 33
Reeler.....	do	70-01	75-01	83	83	91	91	83	1 00	1 00	1 00	87	95	91	83	91
Engineer.....	do	3 00	3 00	3 00	3 00	3 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 60
Watchman.....	do	1 83	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 50	.....
Bobbin-boy.....	do	20-41	50	60	25	41	41	41	37	45	41	45	41	41	37	33-37
Stretcher.....	do	50-1 00	50	60	33	41	41	41	41	50	45	44-45	50	50	45	50
Mill-boy.....	do	.....	.....	.....	.....	50-1 00	50-1 00	41-1 00	66-1 00	1 00	91	83	45-95	87½	41-66	60
Skeiner.....	do	25	22	22	22	22	58	75	66-91	70-1 00	95-1 50	91-1 50	50-1 41	92-1 16	70	.....
Cleaner.....	do	.....	.....	.....	.....	.....	25-41	33-41	33-45	41-50	37-50	37	37	16-41	.....	.....
Helper.....	do	.....	.....	.....	.....	.....	.....	.....	83	.....	.....	83	83	83	83	83
Forewoman.....	do	2 08	2 08	1 50	1 50	1 50	1 50	1 33	.....	.....	.....	.....	.....	.....	.....	.....

α Per pound.

John Dunlap, Paterson, New Jersey—Continued.

REMARKS.—These works manufacture machine twist, sewing silk, tailor's twist, saddler's and embroidering silk, tram, and organzine.

There are opportunities for probably two months' over-time during the year.

Employés are required to pay for tools only when broken through their own carelessness.

Payments are fortnightly and in cash.

The hours of labor are 10 a day.

These works have been operated 12 months each year, and strikes are unknown.

There has been an increase in the efficiency of labor, owing to the fact that labor is more plentiful in the district in which the mill is situated than formerly, and it is therefore possible to select better men.

New and improved spinners and doublers have been introduced. These have effected a decrease in the cost of labor, but no change in the rates of wages.

The labor cost and percentage of wages to cost of three of the articles manufactured are given as follows for 1881:

Year.	LABOR COST PER POUND.			PERCENTAGE OF WAGES TO COST.		
	Machine twist.	Tram.	Organzine.	Machine twist.	Tram.	Organzine.
1880.....	\$1 00	\$0 50	\$1 00	Per cent. 6½	Per cent. 8½	Per cent. 10½

The trade is considered very healthful.

An establishment in New Jersey.

Classes of employés.	Unit of payment.	Average wages from 1861 to 1880.	Classes of employés.	Unit of payment.	Average wages from 1861 to 1880.	Classes of employés.	Unit of payment.	Average wages from 1861 to 1880.
Foreman	Day ...	\$2 50 to \$3 00	Hard-silk spinner	Day ...	\$0 50 to \$1 25	Engineer	Day ...	\$2 25 to \$2 50
Soft-silk winder	do	1 25 to 1 50	Reeler	do	75 to 1 00	Watchman	do	2 00
Hard-silk winder	do	50 to 1 15	Warper	do	1 00 to 1 50	Laborer	do	1 50
Soft-silk doubler	do	50 to 1 10	Weaver, hand-loom	do	2 25 to 3 00	Warp-picker	do	2 50 to 3 00
Hard-silk doubler	do	50 to 1 10	Weaver, power-loom	do	1 25 to 1 75	Finisher	do	1 75 to 2 50
Spooler	do	1 25 to 1 50						

REMARKS.—These works were established in 1855, and manufacture organzine, tram, and fringe silks, broad silks, handkerchiefs, and millinery silks. The rates of wages, it will be noticed, are averages for the period from 1861 to 1880.

There have been a few opportunities for extra earnings from over-time, but these have not been considered in the table.

Payments are every two weeks in cash.

All classes work 10 hours a day. The proprietors remark that they have found these hours to be to the best advantage both of employer and employed.

These works have averaged from 10½ to 11 months per year since their establishment. The causes of irregularity have been over-production and, more frequently, change of fashions. No strikes have occurred which have caused any loss in time or money.

The following statements regarding selling prices, labor cost, etc., are given:

Average selling price of satin and gros-grain ribbons of good quality per piece of 10 yards.

No. 5 ribbon, about 11 lines wide, say	\$1 05
No. 7 ribbon, about 14 lines wide, say	1 24
No. 9 ribbon, about 18 lines wide, say	1 55
No. 12 ribbon, about 23 lines wide, say	1 90
No. 16 ribbon, about 28 lines wide, say	2 20
No. 22 ribbon, about 34 lines wide, say	2 65
No. 30 ribbon, about 37 lines wide, say	2 95

NOTE.—Lines are French measure, about 11 lines constituting an inch.

Silk handkerchiefs cost from \$4 to \$15 per dozen, according to style and quality, which are very numerous. Wages and expenses are from 30 to 50 per cent. at the cost value, and even more at times, owing to the style and quality as before mentioned.

The broad silks manufactured are of many kinds and qualities. Satins from 20 to 22 inches wide cost by the piece from \$1 50 to \$2 per yard; tie and millinery silks from 18 to 26 inches wide cost 75 cents to \$2 per yard; satin and gros-grain, mixed, about 21 inches wide, from \$1 95 to \$2 25 per yard; grenadine silk, from 23 to 24 inches wide, from \$1 30 to \$2 25 per yard. These goods are sold in pieces containing from 20 to 50 yards each. Wages and expenses are from 25 to 40 per cent. of the cost value.

The selling price and labor cost of thrown silk for the last 15 years average as follows:

Material.	Selling price.	Labor cost.
Organzines	\$0 00 to \$7 00	\$1 10 to \$1 20
Tram silk	5 50 to 6 50	65 to 80
Fringe.....	5 00 to 6 00	55 to 85

The price is regulated by sudden changes in fashion, which will cause it to vary in price from 50 cents to \$1 50 and even \$2 per pound in a few days.

The statement is made that wages would average from 15 to 25 per cent. of total cost.

An establishment in New Jersey.

Classes of employes.	Unit of payment.	DATES.				Classes of employes.	Unit of payment.	DATES.			
		1880.	1870.	1878.	1877.			1880.	1870.	1878.	1877.
Soft- and hard-silk winder....	Day ...	\$0 80	\$0 75	\$0 75	\$0 75	Dyer	Day ...	\$5 83	\$5 83	\$5 83	\$5 83
Soft- and hard-silk doubler....	do ...	75	70	70	70	Dyer's helper, skilled.....	do ...	2 50	2 50	2 50	2 50
Spooler.....	do ...	83½	83½	83½	83½	Dyer's helper.....	do ...	1 00½	1 50	1 50	1 50
Soft- and hard-silk spinner, boy.	do ...	70	70	70	70	Engineer.....	do ...	2 25	2 25	2 25	2 25
Reeler.....	do ...	80	75	75	75	Laborer.....	do ...	1 50	1 50	1 50	1 50
Weaver.....	do ...	α 1 16- 3 33	α 1 16- 3 33	α 1 16- 3 33	α 1 16- 3 33	Watchman.....	Week...	12 00	12 00	12 00	12 00

α Average, \$1 75.

REMARKS.—This factory has been in operation manufacturing silk for over twenty years, but has been in the hands of its present proprietors but five years. The articles produced are machine twist, sewing silk, tram and organzine, and woven goods, including gros-grains, serges, surahs, and satins de chine.

Payments are in cash and fortnightly.

There has been an increase in the efficiency of labor among weavers, arising from the introduction of skilled English labor.

Some new machinery has been introduced, but this has effected no change in rates of wages or number of employes.

The trade is considered very healthful for indoor work, and there have been no serious accidents.

All classes work 10½ hours 5 days in the week, and 8½ hours on Saturday, thus averaging 10 hours a day.

The works have been in constant operation during the time covered by the report, and strikes have not been frequent.

There has been no change in the efficiency of labor.

Improvements in machinery are continually being made, which it would be difficult to itemize. Economy of space and increased speed are the chief advantages derived from these.

The trade is neither dangerous nor unhealthful.

The following statement is made regarding selling prices and labor cost of several varieties of product in 1880:

Products (1880).	Selling price.	Labor cost.	Percentage of wages to cost.
			Per cent.
Machine and sewing silk, per pound (16 ozs.)	\$7 25	\$1 00	14½
Gros-grain per yard, 27 inches wide	2 00	1 00	38½
Sergo, per yard, 28 inches wide	2 00	80	40½

The following detailed statement of cost of product is of interest:

Cost of product.	For machine silk.	For weaving gros-grain as above.	For weaving sergo as above.
Cost of 1 pound of raw silk	\$5 00	\$6 00	\$6 00
Quantity, decimal of a pound, required to make a unit of product (yard).....		0.165	0.12
Value, allowing 8 per cent. for waste in manufacture.	\$5 40	\$1 07	\$0 77
Wages on above to hands.....	\$1 00	\$1 00	\$0 80
Salary of foreman, superintendent, rent, interest, coal, etc.	\$0 50	\$0 50	\$0 50
Total cost of unit of product.....	\$0 90	\$2 57	\$2 07

THE WOOLEN INDUSTRY.

In their statements as to rates of wages the tabulations in connection with woolen manufacture are quite complete. In most instances rates of wages are given for twenty or more classes of employés. Only two tabulations cover a period of less than ten years, and many of them twenty or thirty years. The rates are also from establishments operated under varied and varying conditions. Some statements are from small mills, with antiquated machinery, doing custom work, and taking their pay not only in wool, but in other products of the farms in their immediate vicinity. Others are from the largest and oldest corporations in the country, that have kept abreast of all modern improvements, selling their products through commission-houses at a minimum price and a percentage of profit that would soon stop the smaller mills.

It is interesting to note that at a number of mills there has been little or no change in the rates of wages during the years covered by their reports. These mills are usually situated in agricultural districts, where, as has already been noted, the demand for labor outside of agricultural employments is very limited, the rates paid in farming in a measure determining those paid in the mills. In these localities rates are not only low, but fluctuate very slightly.

In this industry, as in cotton and silk, I endeavored to secure careful, accurate, and detailed statement as to the effect upon wages and production of the introduction of machinery, but find that such statements do not exist. Mr. George W. Bond, special agent of the census, in charge of the statistics of the woolen industry, writing in answer to my request for such a statement, says that he has been unable to find any source from which he could obtain such a statement as I asked for. Speaking further on this subject, he says: "The progress in mechanical improvements has been continuous, and those establishments only have been really successful which have had the courage to abandon their old machinery as fast as improved forms have proved to be of real importance. Much of this rejected machinery has been sold to factories in distant parts of the country which were pioneers in the wool manufacture in their respective localities, and it is this that has caused many of the failures in such attempts."

Several of the tabulations, however, give evidence as to the influence of changes in machinery upon the rates of wages, though the information is not always as definite and minute as could be wished. Quite a number of the schedules, however, indicate—in spinning for example—the employment of cheaper labor with the introduction of improved machinery.

Included in these tabulations are returns from factories making almost all grades and classes of woolen goods, from carding-rolls to the finest cassimeres, including yarns, flannels, blankets, shawls, jeans, and cloths of various kinds.

At one of the establishments reporting, a system of co-operation or industrial partnership had been in operation for two years prior to the census year. As this is one of the very few cases of co-operative production brought to light by this investigation, a brief statement regarding it may not be out of place: On June 1, 1878, this corporation issued a circular to its employés in which it stated that for some years the subject of co-operation had been attentively considered by the members of the company, but that the great depression in trade had prevented the adoption of any special plan, as it would have been useless to offer co-operation to workmen when there was prospect of loss instead of profit; but announced that from that date it was the purpose of the company, in each year in which there were surplus profits, to divide a sum among all of its employés, which sum should depend upon the results of the year's business.

Out of the net receipts for the year, wages, interest, and profit on capital were first to be paid, and an amount set aside for renewal of plant and to strengthen the reserve funds of the company. Out of what was left the bonus was to be taken. The method of distributing the bonus was in the form of a dividend of so much per cent. upon the amount of wages earned during the year by the person entitled to receive the bonus. Only those who had worked at least 7 months out of the 12 were entitled to the dividend. Employés who had been discharged for any cause or who had voluntarily left the employ of the company were not entitled to such dividends. For the first year, that is, the year ending January 31, 1879, there was no dividend; at the end of the second co-operative year, January 31, 1880, 5 per cent. on the gross amount of wages earned by each person was paid, and at the end of the third year, January 31, 1881, the same amount was divided among the employés.

There were sent to establishments engaged in woolen manufacture 185 schedules, of which 64 were returned and 36 tabulated. The classification by states of those tabulated is as follows:

Alabama	1	Kentucky	1	Oregon	1
Arkansas	1	Maine	1	Pennsylvania	2
California	1	Massachusetts	3	Rhode Island	3
Connecticut	1	Michigan	1	Utah	1
Delaware	1	Missouri	1	Vermont	1
Illinois	2	New Hampshire	2	Virginia	1
Indiana	3	New York	3	Wisconsin	2
Iowa	1	Ohio	2		

Extra earnings or deductions.—There seems to be no general rule as to over-time at the factories reporting. As is the case in many other industries, at mills making what may be termed seasonable goods, there are frequent opportunities for extra earnings. Certain classes of employes, as cloth-room employes and mechanics, have opportunities that others do not possess. As a rule, however, at the large establishments there is but little over-time.

These schedules give constant and frequent evidence of certain customs that have been of considerable importance in their relations to rates of wages in connection with the textile industry. We refer to the provisions made by the mill proprietors for cheap rents and low rates for board. In connection with most of the large textile-manufacturing establishments, especially in the past, and forming part of the plant, houses have been provided for their operatives. Where these are small and occupied by single families the rent is placed at lower rates than those ruling in the immediate neighborhood, while at the boarding-houses low rates for board are established. In comparing rates of wages at different establishments and in different periods at the same establishment, the existence of such arrangements will have a material effect upon the rates of wages.

The employes in woolen factories are under no necessity of employing under-hands or paying out any part of their wages for tools, etc.

Payments.—Cash payments are the rule. At some of the smaller establishments, situated in rural communities, stores still exist, but the custom of paying in merchandise in part was more common some years ago than at the present time. Now, of the 36 establishments whose rates of wages are tabulated, but 5 pay partly and 1 entirely in merchandise. This last, the Utah mill, owned by the Zion's co-operative corporation, gives quite an interesting return. The interval of payment is usually monthly.

Hours of labor.—With very few exceptions, the employes in the factories reporting worked 10 to 11 hours a day. At some works, however, where it is difficult to procure gas for artificial light, the rule is from sun to sun. It is interesting to note that the views of most of those giving their opinion as to the length of a day's labor favor the preservation of the *status quo*.

The following table shows the hours of labor at the establishments whose reports are tabulated:

Hours of labor.

Year.	10 hours.	10½ hours.	11 hours.	11½ hours.	12 hours.	12½ hours.	13 hours.	Sun to sun.
1830						1	2	
1835						2	2	
1840						2	2	
1845			1		1	1	2	
1850			2	1	2	1	2	
1855			7		2	1	1	
1860	2		0	1	2		1	
1865	7	1	13	3	2			
1870	8	2	16	4	1			2
1875	13	2	15	3				2
1880	12	2	17	2				2

The figures in the above table are for all classes of labor in all but two instances, these being establishments at which there are some classes whose time of working is different from that of the majority of classes at the works, and in such cases the number of hours worked by the majority of classes are taken and those of the others ignored.

Regularity of employment.—Though there has been considerable irregularity in the operation of some of the works, it is by no means as great as was noticed in connection with the cotton schedules, the same reason that caused the irregularity in the cotton industry from 1861 to 1865 or 1866 not operating in the woolen industry; indeed, these were among the most active and busy years in the history of most woolen factories.

From the returns it appears that labor difficulties have been infrequent, the chief causes of irregularity being want of water, light demand, changes in fashions, and, in one or two cases, tariff agitation.

Relation of wages and labor to selling price and cost.—It is almost impossible to give any statement regarding cost of production, etc., that shall be at all satisfactory. The quality and character of the goods manufactured vary so at the different mills that no general statement can be reached. The only tables from which any thing like a general deduction could be made would be those giving the percentage of wages to cost; and here the character of the machinery employed and the facilities for doing the work are so varied that it is impossible to make any general deduction.

Efficiency of labor and labor-saving machinery.—There seems to have been but very little change in the efficiency of labor except that which has come from experience, and this relates more to improvements in individuals than it does to any general improvement in the entire labor force. In some cases there has been improvement in the character of the entire labor force, however, growing out of the demand for better goods, and the sharpness of the competition that has increased with the growth of the country and of the demand for such goods.

Many of the establishments reporting have kept constant pace with the improvements in woolen machinery, and have adopted all such improvements as a trial has demonstrated to be of value. The general result of the introduction of these machines has been to decrease cost, increase production, and improve quality.

Wages in Great Britain.—For the sake of comparison we preface our own tables by a statement of the rates of wages paid in woolen manufacture in Great Britain in 1880, as given in the *Miscellaneous Statistics of the United Kingdom*, Part XI:

Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.	Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.
	BATLEY AND NEIGHBORHOOD.					DEWBURY AND NEIGHBORHOOD.			
1	Wool-sorters	Men	α 7 20	50½	2	Wool-sorters	Men	\$0 20	54
1	Wool-scourers and driers	Men	5 32	50½	2	Wool-sorters	Lads	3 03	54
3	Dyers	Men	5 32	50½	4	Scourers and driers	Men	5 81	54
1	Dyers, foremen	Men	12 10	50½	4	Scourers and driers	Lads	4 30	54
2	Teazers and willyers	Men	5 32	50½	1	Dyers	Men	5 32	54
4	Scribblers, feeders	Women	3 30	50½	3	Dyers	Lads	3 87	54
4	{ Condenser-minders	Lads and boys	2 42	50½	4	{ Dyers, foremen	Men	14 52	54
4	{ Condenser-minders	Women	2 42	50½	3	{ Teazers and willyers	Men	5 08	54
4	Spinners	Men	α 7 20	50½	3	{ Teazers and willyers	Lads	3 87	54
4	Spinners, piecers	Lads and boys	2 00	50½	1	Scribblers	Men	6 78	54
1	Spinners, foremen	Men	12 10	50½	1	Scribblers, foremen	Men	12 10	54
1	Warpers	Women	3 03	50½	2½	Scribblers, feeders	Women	3 03	54
1	Beamers	Men	5 57	50½	2½	{ Condenser-minders	Lads and boys	3 03	54
1	Headerers	Lads and boys	2 90	50½	2½	{ Condenser-minders	Women	3 03	54
2	Fettlers	Men	5 32	50½	4	Spinners	Men	7 74	54
4	Pattern-designers	Men	14 52	50½	5½	Spinners, piecers	Lads and boys	2 42	54
4	Pattern-weavers	Men	5 31	50½	1	Spinners, foremen	Men	9 08	54
1	Tuners	Men	9 08	50½	2	{ Warpings	Men	5 32	54
40½	{ Weavers	Men	α 4 34	50½	2	{ Warpings	Women	3 39	54
1	{ Weavers	Women	3 33	50½	1	{ Winders	Lads and boys	1 45	54
1	Burlers	Women	2 60	50½	1	{ Winders	Women	2 42	54
2	{ Knotters, menders, and sewers	Men	5 32	50½	3	{ Winders	Girls	1 45	54
2	{ Knotters, menders, and sewers	Women	3 15	50½	1½	Fettlers	Men	5 32	54
1	Fullers	Men	α 6 05	50½	1½	Yarn doublers and hankers	Women	2 90	54
1	Fullers, foremen	Men	α 0 03	50½	4	Pattern-designers	Men	14 52	54
4	Dressers or giggers	Men	5 32	50½	4	Pattern-weavers	Men	7 26	54
1	Tenterers	Men	α 6 05	50½	1	{ Weavers	Men	6 05	54
2	{ Cutters or croppers	Men	5 57	50½	40½	{ Weavers	Lads and boys	3 30	54
2	{ Cutters or croppers	Lads and boys	2 42	50½	1	{ Weavers	Women	3 03	54
2	Press-setters	Men	6 05	50½	1	Weavers, foremen or tuners	Men	8 47	54
1	Steamers	Men	6 05	50½	1½	Knotters, menders, and sewers	Women	2 00	54
1	Drawers	Men	α 3 47	50½	1½	Beamers	Men	5 32	54
1	Engine-tenters	Men	9 08	50½	3	Fullers	Men	5 81	54
1	Stokers	Men	4 30	50½	3	Fullers, foremen	Men	14 52	54
1	Mechanics	Men	8 47	50½	5½	Dressers or giggers	Men	5 08	54
1	Carters	Men	5 32	50½	2	Tenterers	Men	5 57	54
1	Warehousemen	Men	5 32	50½	2	{ Cutters or croppers	Men	5 57	54
						{ Cutters or croppers	Lads and boys	2 00	54

α For piece-work.

Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.	Proportion of persons employed per 100 hands.	Description of occupations.	Employés.	Rates of wages per week.	Hours of labor per week.	
DEWSBURY AND NEIGHBORHOOD—cont'd.					HUDDERSFIELD AND NEIGHBORHOOD—con.					
1	{ Press-setters	Men	\$5 57	54	1.2	{ Press-setters	Men	\$6 05	56	
	{ Brushers	Men	5 57	54		{ Press-setters	Lads	3 87	56	
	{ Steamers	Men	5 57	54	1.0	{ Steamers	Men	6 05	56	
1/4	{ Burlers	Lads and boys	2 90	54		{ Steamers	Women	2 03	56	
	{ Drawers	Men	9 08	54	4.4	{ Steamers	Girls	2 42	56	
1	{ Engine-tenters	Men	8 47	54	0.0	{ Burlers	Girls	2 68	56	
1	{ Stokers	Men	5 32	54	1.0	{ Drawers	Men	7 26	56	
1	{ Mechanics	Men	6 53	54	0.3	{ Brushers	Men	5 81	56	
2	{ Carters	Men	5 32	54	1.0	{ Brushers	Lads and boys	2 42	56	
1 1/4	{ Warehousemen	Men	5 81	54	0.7	{ Engine-tenters	Men	8 47	56	
1	{ Laborers	Men	4 84	54	0.7	{ Stokers	Men	5 32	56	
100					1.2	{ Stokers	Lads	4 11	56	
HUDDERSFIELD AND NEIGHBORHOOD.					1.2	{ Mechanics	Men	6 53	56	
1.0	{ Wool-sorters	Men	5 81	56	0.5	{ Carters	Men	5 32	56	
	{ Wool-sorters	Lads and boy	1 04	56	0.5	{ Carters	Lads and boys	2 90	56	
0.5	{ Wool-sorters	Women	2 42	56	1.2	{ Warehousemen	Men	0 05	56	
2.4	{ Scourers, driers, etc.	Men	5 32	56	0.2	{ Warehousemen	Lads and boys	2 90	56	
0.8	{ Dyers	Men	5 32	56	100.0	{ Laborers	Men	4 84	56	
0.8	{ Dyers, foremen	Men	12 10	56	LERDS AND NEIGHBORHOOD.					
1.0	{ Teazers and willyers	Men	5 32	56	4	{ Teazers and willyers	Men	5 81	56	
0.8	{ Teazers and willyers	Lads and boys	2 90	56	1	{ Scribblers, foremen	Men	13 31	56	
	{ Scribblers, foremen	Men	12 10	56	4	{ Condenser-minders	Lads and boys	2 54	56	
	{ Scribblers, feeders	Lads and boys	2 06	56	2	{ Spinners	Men	9 08	56	
2.9	{ Scribblers, feeders	Women	2 06	56	14	{ Spinners, piecers	Lads and boys	2 30	56	
	{ Scribblers, feeders	Girls	2 18	56	2	{ Warpors and beamers	Men	6 29	56	
0.8	{ Condenser-minders	Men	5 08	56	60	{ Weavers	Women	3 51	56	
	{ Condenser-minders	Women	2 90	56	1	{ Weavers, foremen	Men	12 10	56	
1.6	{ Spinners	Men	7 26	56	1	{ Knotters, menders, and sowers	Men	6 05	56	
	{ Spinners, piecers	Lads and boys	2 18	56	2	{ Fullers	Men	\$6 05-0 68	56	
10.0	{ Spinners, piecers	Women	2 90	56	100	STROUD AND NEIGHBORHOOD.				
0.8	{ Spinners, foremen	Men	10 89	56		{ Wool-sorters	Men	2 53	56	
	{ Warpors and beamers	Men	6 53	56		{ Wool-scourers, driers, etc.	Men	3 87	56	
2.0	{ Warpors and beamers	Lads	3 63	56		{ Dyers	Men	3 63	56	
	{ Warpors and beamers	Girls	2 42	56		{ Dyers	Lads and boys	1 94	56	
1.2	{ Healders	Men	2 20	56		{ Dyers, foremen	Men	7 26-10 80	56	
	{ Healders	Lads and boys	2 42	56		{ Teazers and willyers	Men	4 11	56	
	{ Healders	Girls	2 18	56		{ Teazers and willyers	Women	1 94	56	
1.7	{ Winders	Women	2 66	56		{ Scribblers	Men	8 81	56	
	{ Winders	Girls	2 42	56		{ Scribblers	Women	2 54	56	
0.8	{ Fottlers	Men	5 32	56		{ Scribblers	Girls	1 69	56	
	{ Fottlers	Lads	3 63	56		{ Scribblers, foremen	Men	6 29-10 16	56	
0.8	{ Pattern-designers	Men	14 52	56		{ Scribblers, feeders	Girls	1 82	56	
0.4	{ Pattern-weavers	Men	6 05	56		{ Spinners	Men	2 54	56	
	{ Weavers	Men	6 29	56		{ Spinners	Women	2 54	56	
30.8	{ Weavers	Lads and boys	2 30	56		{ Spinners, piecers	Girls	1 57	56	
	{ Weavers	Women	2 30	56		{ Spinners, foremen	Men	7 87	56	
	{ Weavers	Girls	2 30	56		{ Warpors and beamers	Men	2 18	56	
1.2	{ Weavers, foremen or tuners	Men	7 74	56		{ Warpors and beamers	Women	2 18	56	
1.6	{ Burlers	Men	5 32	56		{ Winders	Women	2 18	56	
	{ Burlers	Women	2 42	56		{ Winders	Girls	1 45	56	
5.4	{ Knotters, menders, and sowers	Women	3 63	56		{ Pattern-designers	Men	8 47-13 31	56	
	{ Knotters, menders, and sowers	Girls	2 06	56		{ Pattern-weavers	Men	5 45	56	
2.1	{ Fullers	Men	5 57	56		{ Weavers	Men	2 30	56	
0.5	{ Fullers, foremen	Men	8 47	56		{ Weavers	Women	2 30	56	
5.7	{ Dressors or giggers	Men	6 29	56		{ Weavers, foremen or tuners	Men	6 05-8 47	56	
	{ Dressors or giggers	Lads and boys	2 90	56		{ Burlers	Women	1 94	56	
0.6	{ Tenters	Men	5 81	56		{ Knotters, menders, and sowers	Women	2 90	56	
	{ Tenters	Lads and boys	2 90	56		{ Knotters, menders, and sowers	Girls	1 57	56	
8.7	{ Cutters or croppers	Men	5 81	56						
	{ Cutters or croppers	Lads and boys	2 90	56						

a For piece-work.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

Proportion of persons employed per 100 hands.	Description of occupation.	Employees.	Rates of wages per week.	Hours of labor per week.	Proportion of persons employed per 100 hands.	Description of occupation.	Employees.	Rates of wages per week.	Hours of labor per week.
	STROUD AND NEIGHBORHOOD—continued.					STROUD AND NEIGHBORHOOD—continued.			
	Fullers	Men	\$3 03-34 84	56		Steamers	Lads and boys	\$1 00	56
	Fullers	Lads and boys	2 42	56		Burlers	Women	1 00	50
	Fullers, foremen	Men	7 20-0 68	56		Drawers	Women	2 30	54
	Dressers or giggers	Men	3 03	56		Brushers	Men	3 03	56
	Dressers or giggers	Lads and boys	1 57	56		Engine tenters	Men	5 08	56
	Tenterers	Men	3 87	56		Stokers	Men	3 03	56
	Cutters or croppers	Men	3 03	56		Mechanics	Men	0 17	58
	Cutters or croppers	Lads and boys	1 45	56		Carters	Men	3 03	56
	Press-setters	Men	4 11	56		Warehousemen	Men	\$4 36-6 05	56
	Steamers	Men	3 00	56		Laborers	Men	3 51	56

WAGES TABLES, WITH SUPPLEMENTARY AND EXPLANATORY REMARKS.

Killebrew & Son, Newton, Alabama.

Classes of employes.	Unit of payment.	DATES.								
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.
Superintendent	Month	\$45 00	\$45 00	\$45 00	\$45 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00
Carder	Day	75	75	75	75	75	75	75	75	75
Spooler	do	50	50	50	50	50	50	50	50	50
Warper	do	50	50	50	50	50	50	50	50	50
Spinner (jack)	do	1 50	1 50	1 50	1 50	1 50	1 50	2 00	2 00	2 00
Weaver	do	50	50	50	50	50	50	50	50	50
Dyer	do	75	75	75	75	75	75	75	75	75
Teamster	do	75	75	75	75	75	75	75	75	75

REMARKS.—This mill has been in operation since 1872, and is what is known as a custom mill, manufacturing woolen jeans, spun yarn, and cotton-warps, carding-rolls, etc., and taking pay for work in wool, cotton, lard, bacon, etc. There is little subdivision of labor, one workman performing the duties that in larger mills would be divided between several. The dyer, for example, attends to the boiler and engine and runs the wool through the picker; the jack-spinner is loom-fixer; the reeler is warper also, and the lapper tender gets time to aid as teamster.

Employes receive free houses, garden, and firewood, the value of which has not been included in the table.

Payments are monthly. As the works are not on a railroad, provisions are supplied to operatives, which are regarded as advances on the month's work.

The mill runs from sunrise to sunset the year round. It is stated that this custom prevails among the farm labor in the neighborhood, and is very satisfactory to the mill employes. Their workmen who have worked in mills running 11 and 12 hours prefer the system of "sun to sun".

Regarding regularity of employment, the statement is made that the works have varied from 6 to 11 months a year; but as the time-books are not accessible no detailed statement can be made.

The principal causes of idleness have been improvements and additions to plant. No strikes have taken place.

The following statement of selling price and percentage of wages to cost is given:

Year.	SELLING PRICE.			Percentage of wages to cost of total production.
	Jeans, per yard.	Kersey's, per yard.	Yarns, per pound.	
1875	\$0 42½	\$0 25		<i>Per cent.</i>
1880	40	25	\$0 85	20 to 25

Labor has increased in efficiency, as the result of experience. When the mill started, but few of the workmen were skilled. They have acquired their skill at this mill. There has been but little change in the force for years.

The Apperly feeder for wool-cards has been introduced. This has effected a saving in labor and gives a more uniform roping and yarn.

The trade is esteemed very healthful, and but few accidents have occurred.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

Merrell & Magill, Camden, Arkansas.

Classes of employés.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Foreman.....	Month.....	\$35 10	\$49 02	\$49 02	\$66 56	\$66 56	\$66 56	\$66 56	\$83 20	\$83 20	\$83 20	\$83 20
Picker.....	Day.....	00	50	50	50	50	50	50	50	50	50	50
Carder.....	do.....	1 50	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Spinner.....	do.....	1 50	1 50	1 50	1 50	1 50	3 00	3 00	3 00	4 00	4 00	4 00
Scourer.....	do.....	75	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Engineer.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50

REMARKS.—This factory was established in 1870, and makes wool rolls, knitting yarns, jeans, tweeds, and linseys, buying their warps.

There are some opportunities for extra earnings by holiday work, but they are not improved. The same statement is made here, as in so many other cases where colored labor is employed, as to the fondness of this class for holidays and the loss that results.

No allowances or privileges are given employés except that the foreman, a colored man, receives free rent and fuel.

Payments are weekly and in cash, which is considered better than the store trade so common at many works employing colored labor, as men will work for less when paid in cash, and are better contented.

All classes work nominally from sunrise to sunset. Some of the hands are not prompt in coming to work, but the mill generally gets started within half an hour after sunrise.

The works are operated an average of 10 months per year. From Christmas to March little is done. The reasons of this are, first, the continuance of the usages of slavery times; second, the

inclemency of the weather; and third, insufficient material while awaiting the spring clip of wool.

The proprietors state that goods made at northern factories and sold on credit to the merchants in their neighborhood have so pressed them that they despair of making goods for the wholesale market, and confine their trade to barter at wholesale prices.

They are therefore unable to fill out the tables regarding selling price, labor, cost, etc.

There has been no change in the efficiency of labor. The employés are all colored people trained by the mill, who, though peculiar, do well under experienced management.

The company have of late been compelled by competition with northern-made goods to introduce all modern appliances. This must be done or southern manufacturing will be a failure. They state that their experience with labor-saving machinery has as yet been so limited that they are unable to speak intelligently of its effects.

The trade is considered usually healthful, and there are no fatal accidents on record.

An establishment in California.

Classes of employés.	Unit of payment.	DATES.													
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.
Superintendent.....	Month.....	\$150 00	\$150 00	\$150 00	\$150 00	\$250 00	\$250 00	\$250 00	\$150 00	\$150 00	\$100 00	\$100 00	\$100 00	\$100 00	\$200 00
Wool-sorter.....	Day.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 15	3 00	3 00
Picker (Chinese).....	do.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 15	1 15	1 08
Carder, boss.....	do.....	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00
Carder (Chinese).....	do.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 15	1 15	1 08
Carder, boy.....	do.....	1 75	1 75	2 00	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Spooler, girl.....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Warper.....	do.....	3 00	3 00	3 00	3 00	3 00	3 00	3 00	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Spinner.....	do.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	3 00	3 00	3 00	3 00	3 00	3 00
Spinner (Chinese).....	do.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 15	1 15	1 08
Weaver (white).....	do.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Weaver (Chinese).....	do.....	1 00	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 08	1 15	1 15	1 08
Loom-fixer.....	do.....	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00
Fuller (Chinese).....	do.....	1 20	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Shearer.....	do.....	.....	.....	.....	.....	.....	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00
Scourer (Chinese).....	do.....	1 20	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Dyer.....	do.....	1 73	1 73	1 73	1 73	1 73	3 00	3 00	3 00	4 00	5 00	5 00	5 00	5 00	4 00
Dyer's helper.....	do.....	1 00	1 08	1 08	1 08	1 08	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50	.....
Gigger (Chinese).....	do.....	1 00	1 08	1 08	1 08	1 08	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Engineer.....	do.....	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½
Machinist.....	do.....	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Laborer (Chinese).....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—This works manufactures blankets, flannels, cassimeres, and tweeds; and, as will be noticed, employs considerable Chinese labor.

Employés have occasional opportunities for extra earnings when the mill runs over-time. Such over-time is paid for at the regular rates, and has not been included in the tables.

Payments are in cash and monthly.

Eleven hours' labor a day is the rule for all classes.

The works have been in constant operation, with the exception of a month early in 1880, when, owing to legislation on the Chinese question, work was suspended, but the time was made up by running a quarter of a day extra every day for four months.

The following statement is made regarding selling price, etc.:

Year.	SELLING PRICE.		LABOR COST.		PERCENTAGE OF WAGES TO COST.	
	Blankets, per pair.	Flannel, per yard.	Blankets, per pair.	Flannel, per yard.	Blankets, Per cent.	Flannel, Per cent.
1880.....	\$8 24	\$0 55	\$0 77	\$0 08	11	20

There has been an increase in the efficiency of labor arising from experience. The trade is apparently healthful, and accidents can be avoided by proper care in managing machinery.

Putnam Woolen Company, Putnam, Connecticut.

Classes of employes.	Unit of pay-ment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Superintendent.....	Month.....	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00	\$250 00
Overseers of different departments.....	do.....	80 00	80 00	80 00	80 00	80 00	80 00	80 00	80 00	80 00	80 00	80 00
Wool-sorter.....	Day.....	1 90	1 90	1 90	1 90	1 90	1 90	1 90	1 90	1 90	1 90	1 90
Picker.....	do.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Carder(a).....	do.....	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½
Carder, boy.....	do.....	66½	66½	66½	66½	66½	66½	66½	66½	66½	66½	66½
Spooler.....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Warper.....	do.....	1 62½	1 62½	1 62½	1 62½	1 62½	1 75	1 75	1 75	1 75	1 75	1 75
Spinner.....	do.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Weaver.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Loom-fixer.....	do.....	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25	2 25
Fuller.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Shearer.....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Scourer.....	do.....	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½
Dyer(a).....	do.....	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½	3 07½
Dyer's helper.....	do.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Gigger.....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Machinist.....	do.....	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Carpenter.....	do.....	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Teamster.....	do.....	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75
Laborer.....	do.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25

a These are wages of overseers.

REMARKS.—Fancy cassimeres are made at this factory. Payments are monthly and all in cash.

The hours of labor are 11 a day, and it is stated that this number of hours constitutes a proper working-day, and that a reduction would decrease the output without benefiting the employes.

The mill has run the full 12 months a year since its establishment in 1870, and has had no strikes or lockouts.

Labor has increased in efficiency through steady employment and experience.

Self-acting mules and improved looms have been introduced. The former reduced cost of labor in spinning one-half, requiring but one man where two were formerly needed; the latter reduced cost and increased amount of production without affecting the rates of wages.

The selling price, labor cost, and percentage of wages to cost of cassimeres have been as follows:

Year.	Selling price, per yard.	Labor cost, per yard.	Percentage of wages to cost.
1870.....	\$2 75	\$0 33	13½
1875.....	2 50	30	13½
1880.....	2 25	30	15

There has never been a serious accident among the operatives at this mill, nor a death resulting from disease caused by the nature of the occupation.

An establishment in Delaware.

[Continued on next two pages.]

Classes of employes.	Unit of pay-ment.	DATES.									
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	
Overseers of different departments.....	Month.....	\$30 00-60 33½	\$47 00-60 33½	\$43 33½-60 33½	\$43 33½-60 33½	\$43 33½-60 33½	\$34 66½-60 33½	\$34 66½-65 00	\$34 66½-65 00	\$34 66½-65 00	\$34 66½-65 00
Wool-sorter.....	Day.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Picker.....	do.....	3 48	3 54	2 82	2 08	2 07	2 51	2 35	2 41	1 87	1 87
Carder(a).....	do.....	3 25	3 25	3 25	3 25	3 25	3 25	2 33½	2 50	2 50	2 50
Carder, boy.....	do.....	70½	70½	70½	70½	70½	70½	58½	58½	58½	58½
Spooler, girl.....	do.....	50	65½	54	65½	54	54	54	54	54	54
Warper.....	do.....	1 80½	2 04	1 88½	1 92½	2 00	2 11½	2 10½	2 42½	2 11½	2 11½
Spinner on hand-mule.....	do.....	2 34½	1 92½	1 54	1 88½	1 42½	1 65½	1 65½	1 92½	1 92½	1 92½
Spinner, self-actor.....	do.....	2 16½	2 16½	2 16½	2 16½	2 16½	2 16½	1 83½	1 83½	1 83½	1 83½
Self-actor helper.....	do.....	1 00	83½	83½	83½	1 00	83½	83½	83½	83½	83½
Weaver, male.....	do.....	2 07½	2 04	1 92½	1 88½	1 80½	1 77	1 62	2 04	1 84½	1 84½
Weaver, female.....	do.....	1 04	1 00	96	1 04	96	1 04	96	1 07½	96	96
Loom-fixer.....	do.....	1 66½	1 58½	1 58½	1 58½	1 58½	1 83½	1 83½	1 83½	1 83½	1 83½
Fuller.....	do.....	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½
Shearer, female.....	do.....	91½	91½	91½	91½	91½	91½	75	75	75	75
Scourer.....	do.....	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½
Dyer(a).....	do.....	2 66½	2 66½	2 16½	2 16½	2 16½	1 66½	1 66½	1 66½	1 66½	1 66½
Dyer's helper.....	do.....	1 25	1 25	1 33½	1 33½	1 33½	1 33½	1 25	1 25	1 25	1 25
Gigger.....	do.....	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Finisher(a).....	do.....	2 66½	2 66½	2 66½	2 66½	2 66½	2 66½	2 50	2 50	2 50	2 50
Finisher's helper, male.....	do.....	1 25	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½
Finisher's helper, female.....	do.....	66½	66½	66½	66½	66½	66½	66½	66½	66½	66½
Engineer.....	do.....	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½
Carpenter.....	do.....	2 08½	2 08½	2 08½	2 08½	2 16½	2 12½	2 12½	2 12½	2 12½	2 12½
Teamster.....	do.....	1 50	1 58½	1 58½	1 58½	1 58½	1 58½	1 66½	1 66½	1 66½	1 66½
Laborer.....	do.....	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Watchman.....	Night.....	1 42½	1 42½	1 42½	1 42½	1 42½	1 28½	1 28½	1 28½	1 28½	1 28½

a These are wages of overseers.

An establishment in Delaware—Continued.

Classes of employes.	Unit of pay-ment.	DATES.									
		1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.	1863.	
Overseers of different departments	Month	\$34 60½ 65 00	\$34 60½ 65 00	\$34 60½ 65 00	\$32 50- 65 00	\$32 50	\$34 00½	\$32 50- 65 00	\$35 00	.....
Wool-sorter	Day	1 25	1 25	1 25	1 25	1 25	1 25	1 30½	1 25	.....
Picker	do	2 54	1 25	.....	.....	1 33½	1 10½	1 10½	1 16½	.....
Carder	do	2 50	2 50	2 50	2 33½	2 33½	2 50	2 00	1 60½	.....
Carder, boy	do	58½	58½	58½	58½	58½	60½	60½	62½	.....
Spooler, girl	do	.....	.....	.....	.....	73	96	.....	64	.....
Warper	do	2 11½	2 11½	2 11½	2 11½	.....	.....	1 25	1 00½	.....
Spinner on hand-mule	do	2 15½	1 06	1 80½	1 77	1 65½	2 10½	2 04	1 54	.....
Spinner, self-acter	do	.....	.....	.....	.....	.....	.....	.....	.....	.....
Self-acter helper	do	.....	.....	.....	.....	.....	.....	.....	.....	.....
Weaver, male	do	2 00	1 77	1 84½	1 90	2 00	2 07½	1 92½	1 15½	.....
Weaver, female	do	1 07½	90	96	1 00	1 11½	1 35	92	77	.....
Loom-fixer	do	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fuller	do	1 83½	1 50	1 50	1 50	.....	.....	1 50	1 60½	.....
Shearer, female	do	75	75	75	75	.....	.....	75	60½	.....
Scourer	do	1 83½	1 50	1 50	1 50	.....	.....	1 50	1 60½	.....
Dyer	do	1 06½	1 06½	1 06½	1 60½	1 60½	1 80½	2 00	1 83½	.....
Dyer's helper	do	1 25	1 25	1 25	1 25	1 25	1 25	1 30½	1 33½	.....
Gigger	do	1 33½	1 33½	1 33½	1 33½	.....	.....	1 33½	.....	.....
Finisher	do	2 50	2 50	2 50	2 50	.....	.....	2 50	2 50	.....
Finisher's helper, male	do	1 83½	1 50	1 58½	1 83½	.....	.....	1 50	1 25	.....
Finisher's helper, female	do	66½	66½	66½	66½	.....	.....	66½	58½	.....
Engineer	do	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenter	do	2 12½	2 12½	2 12½	2 12½	2 04	2 04	2 04	2 04	.....
Teamster	do	1 66½	1 66½	1 66½	1 50	1 50	1 50	1 33½	1 33½	.....
Laborer	do	1 25	1 25	1 25	1 25	1 25	1 39½	1 33½	1 33½	.....
Watchman	Night	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 14½	1 28½	.....

NOTE.—The duties of superintendent and foreman, together with all office-work, are performed by the directors, who, together, receive for their services 2½ cents per yard for all goods produced.

REMARKS.—This mill has been in operation since June, 1864, and manufactures fancy cassimeres and occasionally kerseys. The table of wages has been made up with great care, and gives earnings of a large number of classes of employes. Accompanying the schedule was a statement of wages with a classification of labor differing from the above. It is as follows:

Classes of employes.	Unit of pay-ment.	DATES.																
		1880.	1870.	1873.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.	1866.	1864.	
Overseer of dyeing, or dyer	Month	\$40 33½	\$40 33½	\$50 33½	\$50 33½	\$50 33½	\$43 33½	\$43 33½	\$43 33½	\$43 33½	\$43 33½	\$43 33½	\$43 33½	\$43 33½	\$47 00½	\$52 00	\$47 00½	
Overseer of cards, or carder	do	84 50	84 50	84 50	84 50	84 50	84 50	60 60½	65 00	65 00	65 00	65 00	60 60½	60 60½	65 00	52 00	43 33½	
Overseer of spooling, or yarn-boss (a)	do	47 00½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Overseer of looms, or loom-boss	do	69 33½	69 33½	69 33½	69 33½	69 33½	69 33½	65 00	65 00	65 00	65 00	65 00	65 00	(b)	(b)	65 00	65 00	
Overseer of weaving, or cloth-boss	do	69 00	47 06½	43 33½	43 33½	43 33½	34 06½	34 06½	34 06½	34 06½	34 06½	34 06½	34 06½	32 50	32 50	34 06½	32 50	
Overseer of finishing, or finisher	do	60 33½	60 33½	69 33½	69 33½	69 33½	69 33½	65 00	65 00	65 00	65 00	65 00	65 00	(b)	(b)	65 00	65 00	
Wool-sorter	Day	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 30½	1 25	
Picker	do	3 48	3 54	2 82	2 08	2 07	2 51	2 35	2 41	1 87	2 54	1 25	.....	1 33½	1 10½	1 10½	1 10½	
Carder (c)	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carder, boy	do	70½	70½	70½	70½	70½	70½	58½	58½	58½	58½	58½	58½	58½	58½	66½	62½	62½
Spooler	do	50	65½	54	65½	54	.....	.....	.....	.....	.....	.....	.....	73	96	.....	54	
Warper	do	1 80½	2 04	1 88½	1 92½	2 00	2 11½	2 10½	2 42½	2 11½	2 11½	2 11½	2 11½	2 11½	(b)	(b)	1 25	1 00½
Spinner, hand-mule	do	2 34½	1 92½	1 54	1 88½	1 42½	1 05½	1 05½	1 92½	1 92½	2 15½	1 90	1 80½	1 77	1 65½	2 19½	2 04	1 54
Spinner, self-acter (d)	do	2 10½	2 16½	2 10½	2 10½	2 10½	2 10½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½
Weaver, female	do	1 04	1 00	96	1 04	90	1 04	90	1 07½	96	1 07½	96	96	1 00	1 11½	1 35	92	77
Weaver, male	do	2 07½	2 04	1 92½	1 88½	1 80½	1 77	1 62	2 04	1 84½	2 00	1 77	1 84½	1 96	2 00	2 07½	1 92½	1 15½
Loom-fixer (e)	do	1 66½	1 58½	1 58½	1 58½	1 58½	1 83½	.....	.....	1 33½	.....	.....	.....	.....	.....	.....	.....	.....
Fuller	do	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 83½	1 50	1 50	1 50	(b)	(b)	1 50	1 00½
Shearer, female	do	91½	91½	91½	91½	91½	91½	75	75	75	75	75	75	75	(b)	(b)	75	66½
Scourer	do	1 33½	1 33½	1 33½	88½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 50	1 50	1 50	(b)	(b)	1 50	1 00½
Dyer (f)	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dyer's helper	do	1 25	1 25	1 33½	1 33½	1 33½	1 33½	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 33½	1 33½
Gigger	do	.....	.....	.....	.....	.....	.....	.....	.....	1 33½	1 33½	1 33½	1 33½	1 33½	(b)	(b)	1 33½	.....
Engineer (g)	do	1 33½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinist (h)	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Overseer of weaving attended spooling also until 1880. d No self-acting mules until 1872. g No steam-engine until 1880.
 b Piece-work. e Overseer of looms did all fixing until 1875. h No machinist.
 c See "Overseer of cards". f See "Overseer of dyeing".

An establishment in Delaware—Continued.

Classes of employes.	Unit of payment.	DATES.																	
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.	
Carpenter	Day	\$2 08½	\$2 08½	\$2 08½	\$2 08½	\$2 10½	\$2 12½	\$2 12½	\$2 12½	\$2 12½	\$2 12½	\$2 12½	\$2 12½	\$2 12½	\$2 04	\$2 04	\$2 04	\$2 04	
Teamster	do	1 50	1 58½	1 58½	1 58½	1 58½	1 58½	1 60½	1 60½	1 60½	1 60½	1 60½	1 60½	1 50	1 50	1 50	1 33½	1 33½	
Laborer	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 33½	1 33½	
Self-actor helper (a)	do	1 00	83½	83½	83½	1 00	83½												
Piecer, boy	do	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	41½	
Beamer	do	1 60½	1 60½	1 60½	1 60½	1 60½	1 50				1 50	1 83½	1 83½	1 83½	(b)	(b)	1 83½	1 83½	
Loom-boss helper (b)	do																		
Finisher (c)	do																		
Finisher helper, male	do	1 25	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 50	1 58½	1 83½	(b)	(b)	1 50	1 25	
Finisher helper, female	do	00½	00½	00½	00½	00½	00½	07½	60½	60½	60½	60½	60½	60½	(b)	(b)	60½	58½	
Watchman	Night	1 42½	1 42½	1 42½	1 42½	1 42½	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 28½	1 14½	1 28½	
Hostler (d)	Day	1 50																	

a No helpers on self-actors until 1875. b See "Loom-fixer". c See "Overser of finishing". d Teamster attended all horses until 1880.

There have been occasional opportunities for extra earnings from over-time, which would about make up for lost time, and would increase regular wages only when over-time exceeded lost time. These have not been included in the table.

No employes are under any expense for tools, etc., except the picker, who generally pays a helper, though by working over-time he can do all the work himself. This necessity would decrease his wages, and has not been considered in making up the above rates.

Payments are in cash and monthly.

Carders and spinners with their helpers work 6 days of 10 hours one week, and 5 nights of 12 hours the next week. The watchman is on duty 13 hours 7 nights a week, and all other classes work 10 hours 6 days a week.

The mill averaged 11¼ months a year in 1864 and 1865, 9¼ months a year from 1866 to 1870, 11½ months a year from 1871 to 1879, and 11 months in the census year. The irregularity has been caused by repairs and over-production. There has never been a strike or lockout.

The selling prices, labor-cost, etc., of the woolen goods per yard made at this factory are as follows:

Years.	Selling price.	Labor cost.	Percentage of wages to cost.
1878	\$0 50	\$0 12½	Per cent.
1874	58	12	
1875	50	13	24
1876	54	12½	
1877	55	11½	
1878	56	11½	
1879	56	11	
1880	66	11	17½

There has been a gradual increase in the efficiency of labor, which is attributed to regular employment, training, and experience. The company state that they still have in their employ nearly 25 per cent. of the hands who were with them when they began business in 1864, and that 75 per cent. of the present employes have learned the business in this mill.

Two self-acting mules were put in in 1872 and two more in 1875, each one taking the place of a hand-mule. To run four hand-mules day and night required eight hand-mule spinners.

These, at \$13 per week, would amount to..... \$104 00

To run the self-actors day and night there are required—

Two self-actor spinners, at \$13 per week..... \$26 00

Two helpers, at \$6 per week..... 12 00

38 00

Saving in wages per week by use of self-actors..... 66 00

And four hands are now employed instead of eight hands.

The trade is neither dangerous nor unhealthful.

Diokerman & Co., Springfield, Illinois.

[Continued on next two pages.]

Classes of employes.	Unit of payment.	DATES.											
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.
Superintendent	Month	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$88 83½	\$83 83½
Oversers of different departments.	do	71 50	65 00	65 00	78 00	78 00	78 00	78 00	78 00	71 50-78 00	71 50-78 00	71 50-78 00	71 50-78 00
Wool-sorter	Day	2 25	2 00	2 00	2 25	2 25	2 50	2 50	2 25	2 00	2 00	2 00	2 00
Picker	do	1 25	1 00	90	1 00	1 00	1 00	1 00	1 00	1 25	1 25	1 25	1 25
Carder	do	2 75	2 50	2 50	3 00	3 00	3 00	3 00	3 00	2 75	2 75	2 75	2 75
Carder, boy	do	50-75	50-75	50-75	50-75	60-75	75	75	75	75	75	75	75
Spooler	do	57½	60	60	50	75	80	80	70	60	60	60	60
Warper	do	2 35	2 10	2 10	2 25	2 25	2 75	2 50	2 25	2 00	2 10	2 10	2 10
Spinner (a)	do	90	90	90	80	90	90	1 00	80	2 00	2 00	2 25	2 25

a The cause of the great reduction in spinner's wages in 1873 was the introduction of self-acting mules and the employment of boys in place of adults.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

Dickerman & Co., Springfield, Illinois—Continued.

Classes of employes.	Unit of payment.	DATES.											
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1873.	1872.	1871.	1870.	1869.
Weaver	Day	\$1 25- 1 75	\$1 20- 1 75	\$1 20- 1 50	\$1 15- 1 50	\$1 00- 1 50	\$1 15- 1 75	\$1 15- 1 75	\$1 00- 1 75	\$1 00- 1 75	\$1 00- 1 75	\$2 85	\$1 25- 1 75
Loom-fixer	do	1 75	1 50	1 50	1 50- 2 00	2 25- 2 50	2 50	2 50	2 00- 2 50	2 00	2 00	2 00	2 00
Fuller	do	1 50	1 50	1 25	1 50	1 50	1 75	1 75	1 00 ^g	1 00^{g}	1 00^{g}	1 00^{g}	1 00^{g}
Shearer	do	1 00	1 25	1 25	1 50	1 50	1 50	1 50	1 25	1 00	1 00	1 00	1 00
Scourer	do	1 50	1 50	1 25	1 50	1 50	1 75	1 75	1 75	1 00 ^g	1 00 ^g	1 00 ^g	1 00 ^g
Dyer	do	2 75	2 50	2 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Dyer's helper	do	1 25- 1 50	1 25	1 25	1 50	1 50	1 60 ^g 2 00	1 60 ^g 2 00	1 00 ^g	1 00^{g}	1 00^{g}	1 00^{g}	1 00^{g}
Gigger	do	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 00				
Finisher	do	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	2 00	2 00
Engineer	do	2 75	2 50	2 50	2 50	2 50	2 75	2 75	3 00	2 75	2 75	2 50	2 50
Machinist	do	2 00	2 00	2 00	2 00	2 00	2 00	2 50	2 50				
Carpenter	do	2 00	2 00	2 00	2 00	2 00	2 00	2 50	2 50				
Laborer	do	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50	1 00- 1 50					

Classes of employes.	Unit of payment.	DATES.											
		1808.	1807.	1800.	1805.	1804.	1803.	1802.	1801.	1800.	1850.	1858.	1857.
Superintendent	Month	\$89 33 ¹ / ₂	\$83 33 ¹ / ₂	\$83 33 ¹ / ₂	\$78 00	\$52 00	\$41 00	\$41 00					
Overseers of different departments.	do	71 50- 81 00	74 10- 78 00	71 50- 78 00	65 00- 78 00	45 50- 65 00	39 00- 52 00	36 80- 52 00	\$36 80- 52 00	\$32 50- 39 00	\$32 50- 39 00	\$32 50- 39 00	\$32 50- 39 00
Wool-sorter	Day	2 00	2 12 ¹ / ₂	2 75	2 75	2 00	1 50	1 25	1 25				
Picker	do	1 50	1 50	1 50	1 50	1 25	1 00	1 00	1 00	75	75	75	80
Carder	do	2 75	2 85	2 75	2 75	2 50	1 50	1 30	1 30	1 50	1 50	1 50	1 50
Carder, boy	do	75	80	80	80	80	75	60	60	75	75	75	80
Spooler	do	00	70	75									
Warper	do	2 10	2 12 ¹ / ₂	2 25									
Spinner	do	2 25	2 37 ¹ / ₂	2 50	2 50	2 00	1 40	1 30	1 30	1 40	1 40	1 40	1 25
Weaver	do	1 50- 1 75	1 50- 2 00	2 00	2 50	1 75	1 50	1 25	1 50	1 25	1 25	1 25	1 25
Loom-fixer	do	2 00	2 37 ¹ / ₂	2 50									
Fuller	do	1 00 ^g	1 00 ^g	2 00									
Shearer	do	1 00	1 00 ^g	1 75									
Scourer	do	1 00 ^g	1 00 ^g	2 00									
Dyer	do	3 50	3 00	3 00	3 00	2 50	2 00	2 00	2 00				
Dyer's helper	do	1 00 ^g	1 00 ^g	1 75									
Gigger	do												
Finisher	do	2 00	2 14	2 25	2 00	2 25	1 75	1 50	1 50	1 50	1 50	1 50	1 50
Engineer	do	2 50	2 50	2 50	2 50	2 00	1 75	1 00	1 00	1 25	1 25	1 25	1 50
Machinist	do												
Carpenter	do												
Laborer	do	1 00 1 50	1 25- 1 75	1 25- 1 75	1 00- 1 50	1 00- 1 50	75- 1 25	1 00	1 00	1 00	1 00	1 00	

REMARKS.—These works were established in 1851, and made flannels, cassimeres, and blankets up to 1880; at present they make only cassimeres.

When work is very pressing the employes sometimes have opportunities for extra earnings by making over-time. These, however, would increase regular wages but slightly, and have not been included in the table.

There are no allowances, except that opportunities are sometimes given to employes to purchase the necessaries of life at reduced rates. This advantage also has been disregarded in the table.

Payments have been made monthly and in cash since 1865; prior to that date the operatives were paid, on application, part in merchandise and part in cash, but this method was abandoned for the reason that cash payments were found to be more satisfactory to employes and more convenient to all concerned.

Up to 1855 all classes worked 11 hours a day; from 1855 to 1865, 10 hours. At the latter date, however, the hours of labor were increased to 10¹/₂ per day, to enable the company to compete with

those whose employes were required to work 10¹/₂ hours. The change, it is stated, has had very little effect on the hands, but has increased production proportionately. Over-time, it is remarked, increases output temporarily, but wears out hands and renders them unfit for regular hours.

From 1855 to 1860 the mill was in operation an average of only 6 months a year, as the factory buildings were too open to permit work to be carried on in winter. From 1860 to 1865 employment averaged 10 months a year; from 1865 to 1870, 11 months, and from 1870 to 1880, 11¹/₂ months, the irregularity having been occasioned by repairs and minor causes. The company report that they have had but few strikes and no lockouts. One or two strikes took place during the fluctuations caused by the war, only one of which was of long duration. The greatest loss was in wages to the employes, though, of course, the proprietors suffered some loss and much annoyance.

A statement regarding selling price, labor cost, and percentage of wages to cost is made as follows:

J. A. Leucke, jr., Evansville, Indiana—Continued.

Classes of employes.	Unit of payment.	DATES.								
		1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.	1863.
Overseers of different departments..	Month.....	\$65 00	\$65 00	\$65 00	\$65 00	\$65 00	\$60 00	\$60 00	\$50 00	\$45 00
Wool-sorter.....	Day.....	1 35	1 35	1 35	1 40	1 40	1 35	1 30	1 25	1 20
Picker.....	do.....	1 30	1 35	1 30	1 30	1 30	1 35	1 30	1 25	1 25
Carder.....	do.....	2 50	2 50	2 50	2 50	2 50	2 50	2 25	2 25	2 00
Carder, boy.....	do.....	65	65	70	70	70	00	00	05	50
Spooler.....	do.....	50	50	50	50	50	50	50	45	40
Warper.....	do.....	1 30	1 35	1 35	1 35	1 35	1 35	1 30	1 20	1 15
Spinner.....	do.....	1 60	1 60	1 65	1 65	1 60	1 60	1 55	1 35	1 25
Loom-fixer.....	do.....	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 00	2 00
Scourer.....	do.....	1 25	1 25	1 25	1 25	1 20	1 20	1 15	1 10	1 00
Dyer.....	do.....	2 00	2 00	2 00	2 00	2 00	1 75	1 75	1 75	1 50
Dyer's helper.....	do.....	1 25	1 25	1 25	1 25	1 25	1 20	1 20	1 10	1 00
Engineer.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 30	1 25

REMARKS.—There are sometimes opportunities for night-work. This is paid for at regular rates and has not been considered in the table.

Payments are made every two weeks and in cash, store-orders never having been used.

The hours of labor are 11 for all classes, which seem to be satisfactory to the employes, who have all the leisure they require.

From 1863 to 1865 the mill was operated 10 months each year, from 1876 to 1880, 11 months, and 12 months in the census year. There have been no strikes nor lockouts.

There has been an increase in the efficiency of labor resulting from experience. The manufacturer remarks, however, that the highest point of efficiency is not reached, for the reason that most of the employes are young women who soon marry and leave the mill.

Carding-machines of increased size have been introduced, which have enabled the same number of hands to turn out 33 1/2 per cent. more product. In 1875 self-operating spinning-mules were adopted which have increased the output per spindle one-third and reduced the cost of labor per unit of product one-half. Since 1876 the speed

of the looms has been increased, increasing production one-fourth but not affecting the cost of product. The operatives have received the advantage of the improvement, as that class of work is paid for by the yard.

The following table gives the selling price, labor cost, and percentage of wages to cost of some of the articles produced :

Year.	SELLING PRICE.			LABOR COST.		Percentage of wages to cost.
	Jeans, per yard.	Yarn, per pound.	Flannel, per yard.	Jeans, per yard.	Yarn, per pound.	
1865.....	\$0 85	\$1 00	\$0 62	\$0 10	\$0 18	20
1870.....	00	85	47 1/2	08	15	20
1875.....	50	85	40	06 1/2	12	20
1880.....	35	70	35	05 1/2	09	20

The occupation is considered healthful.

C. B. Geisendorff & Co., Indianapolis, Indiana.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Overseers of different departments.	Month.....	\$58 50-78 00	\$58 50-78 00	\$58 50-78 00	\$58 50-78 00	\$71 50-78 00	\$78 00-81 00	\$78 00-81 00	\$78 00-81 00	\$91 00	\$58 50-78 00	\$58 50-78 00	\$58 50-78 00	\$58 50-78 00	\$78 00	\$78 00
Wool-sorter.....	Day.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	1 60	1 60	1 60	1 60
Picker, boy.....	do.....	75	75	75	75	75	75	75	75	75	75	00	75	75	75	75
Carder.....	do.....	3 25	3 00	3 00	3 00	2 75	2 75	2 75	2 75	2 75	2 75	2 75	2 75	2 75	2 50	2 50
Carder, boy.....	do.....	00	00	00	00	00	00	00	00	00	00	00	75	75	75	75
Spooler, girl.....	do.....	50	50	50	50	50	50	50	50	50	50	50				
Warper.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 25
Spinner.....	do.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 00	2 00	2 00	2 25	2 50	2 50	2 50
Weaver, girl.....	do.....	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	83 1/2-1 33 1/2	1 00	1 00
Loom-fixer.....	do.....	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Fuller.....	do.....	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25
Shearer.....	do.....	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25
Scourer.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Dyer.....	do.....	2 00	2 00	2 00	2 00	2 00	2 50	2 50	2 50	2 50	2 25	2 25	2 25	2 25	3 00	3 00
Dyer's helper.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 50	1 50
Gigger.....	do.....	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Finisher.....	do.....	2 00	2 00	2 00	2 00	2 00	2 50	2 50	2 50	2 50	2 25	2 25	2 25	2 25	3 00	3 00
Engineer.....	do.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 50	2 50	2 50	2 50	2 50	2 50	2 50
Laborer.....	do.....	1 25	1 25	1 25	1 25	1 50	1 66 2/3	1 66 2/3	1 66 2/3	1 66 2/3	1 50	1 50	1 50	1 50	2 00	2 00

O. E. Geisendorff & Co., Indianapolis, Indiana—Continued.

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Overseers of different departments.	Month	\$78 00	\$65 00	\$52 00	\$52 00	\$49 30	\$30 00	\$30 00	\$30 00	\$30 00							
Wool-sorter	Day	1 00	1 00	1 50	1 50	1 50	1 25	1 00	1 00	1 00	\$1 00	\$1 00	\$1 00	\$1 00	\$1 00	\$1 00	\$1 00
Picker, boy	do	75	75	75	75	75	75	50	50	50	50	50	50	50	50	50	50
Carder	do	2 50	2 50	2 25	2 00	2 00	1 75	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Carder, boy	do	75	75	75	75	75	75	50	50	50	50	50	50	50	50	50	50
Spooler, girl	do																
Warper	do	1 25	1 25	1 25	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Spinner	do	2 50	2 00	2 00	2 00	1 50	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Weaver, girl	do	1 00	1 00	1 00	00 $\frac{3}{4}$	00 $\frac{3}{4}$	00 $\frac{3}{4}$	00 $\frac{3}{4}$	00 $\frac{3}{4}$	00 $\frac{3}{4}$	00 $\frac{3}{4}$	25-41 $\frac{3}{4}$	25-41$\frac{3}{4}$	25-41$\frac{3}{4}$	25-41$\frac{3}{4}$	25-41$\frac{3}{4}$	25-41$\frac{3}{4}$
Loom-fixer	do	2 50	2 00	2 00	2 00	1 00	1 00	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Fuller	do	2 25	2 25	2 00	2 00	1 00	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Shearer	do	2 25	2 25	2 00	2 00	1 00	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Scourer	do	1 50	1 50	1 50	1 50	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Dyer	do	3 00	3 00	2 00	2 00	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Dyer's helper	do	1 50	1 50	1 25	1 25	1 00	1 00	75	75	75	75	75	75	75	75	75	75
Higger	do	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Finisher	do	3 00	2 50	1 60 $\frac{3}{4}$	1 60 $\frac{3}{4}$	1 00 $\frac{3}{4}$	1 50	1 50	1 50	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Engineer	do	2 00	2 00	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00
Laborer	do	2 00	1 50	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	00	00	85	75

REMARKS.—This factory produces flannels, jeans, blankets, and yarns, and was established in 1846.

The extra earnings, for which regular opportunities are afforded all hands from May till November, would increase the rates of wages about 12 $\frac{1}{2}$ per cent. the year round, but have not been included in the table.

Payments are monthly and in cash, store-orders having been discontinued in 1860 because cash was more satisfactory to all concerned. It is less trouble and prevents overdrawing of accounts on the part of the workmen.

The hours of labor are 11 for all classes. This is considered the proper number of hours for a full day's labor. When over-time

work is done at night the effect of the lengthened hours upon the next day's work is unfavorable.

The works were in operation but 6 months a year from 1846 to 1855, 9 months from 1855 to 1860, 12 months from 1860 to 1875, and 10 months from 1875 to 1880. The cause of irregularity is want of capital. The products of this mill are heavy goods, all made after January 1, and have to be carried until the fall trade. This requires an amount of capital in excess of that which the mill can command. There has never been a strike or a lockout in this establishment.

The following statement regarding selling prices, labor cost, and percentage of wages to cost is exceptionally complete:

Year.	SELLING PRICE.			LABOR COST.			PERCENTAGE OF WAGES TO COST.		
	Jeans, per yard.	Flannel, per yard.	Yarn, per pound.	Jeans, per yard.	Flannel, per yard.	Yarn, per pound.	Jeans, Per cent.	Flannel, Per cent.	Yarn, Per cent.
1850	\$0 05	\$0 55	\$0 90	\$0 15	\$0 20	\$0 20	30	50	28 $\frac{1}{2}$
1855	00	50	90	15	20	20	30	50	28 $\frac{1}{2}$
1860	55	40	80	10	17	15	22 $\frac{1}{2}$	40	29 $\frac{1}{2}$
1865	1 20	1 05	1 00	15	20	20	15 $\frac{1}{2}$	22 $\frac{1}{2}$	14 $\frac{1}{2}$
1870	55	45	85	05	12	10	12 $\frac{1}{2}$	32 $\frac{1}{2}$	14 $\frac{1}{2}$
1875	50	45	85	05	12	10	11 $\frac{1}{2}$	32 $\frac{1}{2}$	14 $\frac{1}{2}$
1880	40	42 $\frac{1}{2}$	80	05	12	10	14 $\frac{1}{2}$	32 $\frac{1}{2}$	10 $\frac{1}{2}$

There has been an increase in the efficiency of labor arising from the large influx of foreign skilled workmen and also from experience on the part of young men who have grown up in the business.

The ordinary improvements and new machinery have been introduced.

The business is considered a healthful one.

Seymour Woolen Factory Company, Seymour, Indiana.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.									
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Overseers of different departments	Month	\$75 00-00 00	\$65 00-85 00	\$60 00-65 00	\$60 00-65 00	\$60 00-65 00	\$60 00-65 00	\$60 00-65 00	\$65 00-75 00	\$65 00-75 00	\$65 00-75 00
Wool-sorter	Day	1 54	1 35	1 25	1 25	1 25	1 25	2 50	3 00	3 00	3 00
Picker	do	1 35	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50
Carder	do	1 15 $\frac{1}{2}$ -1 75	1 10-1 15	1 00-1 10	1 00-1 10	1 00-1 10	1 00-1 10	1 25-1 50	1 25-1 50	1 25-1 50	1 25-1 50
Carder, boy	do	54-09	55-05	55-05	55-05	55-05	55-05	55-05	60-75	60-75	60-75
Spooler	do	60	50	50	55	55	55	65	65	65	65

Seymour Woolen Factory Company, Seymour, Indiana—Continued.

Classes of employé's.	Unit of payment.	DATES.									
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Warper	Day	\$0 85	\$0 05	\$0 05	\$0 00	\$0 00	\$0 75	\$1 00	\$1 00	\$1 00	\$1 00
Spinner	do	80- 1 35	55- 1 25	50- 1 20	50- 75	50- 75	50- 75	2 00	2 00	2 00	2 00
Weaver	do	84- 1 15½	75- 1 10	70- 1 00	70- 1 00	70- 1 00	80- 1 00	80- 1 00	80- 1 00	80- 1 00	80- 1 00
Loom-fixer	do	2 50	2 50	2 25	2 25	2 25	2 25	2 50	3 00	3 00	3 00
Faller	do	1 20	1 10	1 00	1 00	1 00	1 10	1 15	1 25	1 25	1 25
Shearer(a)	do	1 50	1 50	1 50	1 60	1 75	1 75	3 00	3 00	3 00	3 00
Scourer	do	1 10	1 10	1 10	1 10	1 10	1 15	1 25	1 25	1 25	1 25
Dyer	do	1 25½	1 76	1 10	1 10	1 10	1 25	1 25	1 50	1 50	1 50
Dyer's helper	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 10	1 10	1 10
Gigger	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 25	1 40	1 40
Engineer	do	1 73	1 00	1 50	1 50	1 75	1 75	2 50	2 00	2 00	2 00

a The decrease in wages of shearer is owing to the fact that latterly but few goods requiring shearing have been made.

REMARKS.—There have been opportunities for over-time sufficient to make the running-time of the mill about 3,650 turns a year. For over-time regular price is paid. This would increase the wages given above about 15 per cent., and has not been included in the table.

Payments are monthly and all in cash.

All classes work 10 hours a day. The proprietors give it as their

experience that over-time causes a nearly proportionate increase of production with no noticeable effects on character, habits, or health of employé's.

The works have been operated 12 months each year, and no strikes or lockouts have taken place.

The following are the selling prices, labor cost, and percentage of wages to cost of the articles produced at this establishment:

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Jeans, per yard.	Flannel, per yard.	Yarn, per pound.	Blankets, per pair.	Jeans, per yard.	Flannel, per yard.	Yarn, per pound.	Blankets, per pair.	Jeans, Per cent.	Flannel, Per cent.	Yarn, Per cent.	Blankets, Per cent.
1870.....					\$0 08	\$0 00	\$0 12	\$0 00	30	35	20	20
1875.....	\$0 35	\$0 40	\$0 60 to \$1 10	\$0 00 to \$7 00	08	08	10	57	25	20	15	15
1880.....	30	32	50 to 1 00	5 00 to 0 00	06	07	09	54	20	25	10	10

There has been no change in the efficiency of labor.

Self-acting mules were introduced in 1875, and the Bramwell first breaker-feeder and the Appery second breaker- and finisher-feeder in 1879. The effect of the introduction of the former was to reduce

the cost of spinning 33½ per cent., cheaper help being used, and of the introduction of the latter to lessen the number of carder boys by one-half.

The trade is not dangerous or unhealthful.

D. W. Jones, Manchester, Iowa.

[Continued on next page.]

Classes of employé's.	Unit of payment.	DATES.															
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Overseers of different departments.	Month	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 50	\$05 00	\$05 00	\$05 00	\$05 00
Wool-sorter	Day ..	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Picker	do ..	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Carder	do ..	1 25	1 25	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30
Carder, boy	do ..	60	60	60	60	60	60	60	60	60	60	60	65	65	65	65	65
Spooler	do ..	75	75	75	70	70	70	70	70	70	70	70	60	60	60	60	60
Warper	do ..	1 30	1 30	1 30	1 30	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Spinner	do ..	80	80	80	80	80	80	2 00	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25
Weaver	do ..	90	90	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Loom-fixer	do ..	1 63	1 03	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50
Fuller	do ..	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Shearer	do ..	2 00	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Scourer	do ..	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	2 00	2 00	2 00	2 00	2 00
Dyer	do ..	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	3 00	3 00	3 00	3 00	3 00
Dyer's helper	do ..	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50
Gigger	do ..	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Carpenter	do ..	3 00	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	3 00	3 00	3 00	3 00	3 00
Teamster	do ..	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50
Laborer	do ..	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50	1 50

REMARKS.—At this mill various fabrics, as blankets and flannels, together with yarn, carding rolls, etc., are made.

Employé's who have families are given low rents, free gardens,

and pasture privileges. These would increase regular wages 15 per cent., and have not been included in the table.

Payments are made on application, and are about two-thirds in

D. W. Jones, Manchester, Iowa—Continued.

cash and one-third in store-orders, though the acceptance of the latter is not compulsory.

All classes work 11 hours 5 days in the week and 10 hours on Saturday. The opinion is expressed that it is much to the advantage of the employes to be occupied full time, as they do not use their leisure to their own benefit.

From 1865, the date of the establishment, the works were in constant operation until 1870; from 1870 to 1875 but 10 months a

year were averaged, and from 1876 to 1880, 10½ months. Their irregularity was caused by the falling off of custom-trade and a scarcity of fuel, rendering winter work unprofitable. The proprietors state that when hand-spinners were in use, work was sometimes interrupted by combinations of the men, but since the introduction of automatic spinners all trouble of this character has ceased.

The following table gives selling price, labor cost, and percentage of wages to cost of the various articles manufactured at this mill:

Year.	SELLING PRICE.				COST OF LABOR TO UNIT OF PRODUCT.				PERCENTAGE OF WAGES TO COST.			
	Blankets, per pair.	Cassimeres, per yard.	Flannel, per yard.	Plain and fancy yarn, per pound.	Blankets, per pair.	Cassimeres, per yard.	Flannel, per yard.	Yarn, per pound.	Blankets.	Cassimeres.	Flannels.	Yarn.
1865.....	\$10 00 to \$12 00	\$1 75	\$0 85	\$1 25 to \$1 75	\$3 00	\$0 60	\$0 30	\$0 20	<i>Per cent.</i> 35	<i>Per cent.</i> 43	<i>Per cent.</i> 40	<i>Per cent.</i> 21
1870.....	9 00 to 11 00	1 65	70	1 15 to 1 60	3 00	50	25	18	35	40	38	19
1875.....	8 00 to 9 00	1 60	65	1 10 to 1 60	2 50	50	25	18	33	40	38	19
1880.....	7 50 to 8 50	1 40	55	1 00 to 1 40	1 75	35	10	12½	26	35	30	15

The rates of selling price are subject to discounts to the trade.

The cost of labor is possibly somewhat high, it is stated, on account of the goods being extra heavy.

On some fine black cloths, colored blankets, and fancy yarns made at this establishment wages are from 50 to 60 per cent. of the total cost.

There has been no increase in the efficiency of labor.

In 1876 three self-acting mules were introduced, and improved

looms have also been put in. The former have reduced wages greatly by permitting the employment of boys, increased the production 25 per cent., and improved the quality of product. The latter have increased the production 33½ per cent., without affecting wages, and have improved the quality of goods.

It is reported that accidents are rare at these works and that the trade in itself is very healthful, though the locality in which the establishment is situated is somewhat malarial.

O. Edlich & Brother, Louisville, Kentucky.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.																
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.
Wool-sorter	Day	\$1 75	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 75	\$1 75	\$1 75	\$2 00	\$2 00	\$2 00
Picker	do	00	00	00	00	05	00	05	75	00	00	75	75	75	75	75	75	75
Carder	do	3 50	3 50	3 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Carder, boy	do	70½	75	75	75	75	83½	83½	83½	83½	91½	1 00	1 00	1 00	1 33½	1 33½	1 25	1 25
Warper	do	2 00	1 70	1 75	1 75	1 75	1 75	2 00	2 50	2 00	2 00	2 00	2 00	2 00	2 50	2 50	2 50	2 50
Spinner	do	1 75	1 50	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 50	2 50	2 50	2 50
Weaver (hand)	do															2 10	2 25	2 25
Weaver (machine)	do	1 50	1 25	1 25	1 25	1 25	1 25	1 50	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Scourer	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 37½	1 50	1 50	1 37½	1 50	1 50	2 00	2 00	2 00
Dyer	do	3 00	3 00	2 75	2 75	2 75	2 75	3 00	3 00	2 75	2 75	2 75	2 75	3 00	3 00	3 00	3 00	3 50
Dyer's helper	do	75	60½	60½	60½	60½	75	75	83½	83½	83½	83½	83½	83½	1 00	1 00	1 00	1 00
Engineer	do	2 50	2 25	2 25	2 25	2 25	2 25	2 25	2 50	2 25	2 25	2 00	2 00	2 00	2 00	2 50	2 50	2 50

REMARKS.—This mill was established in 1862, but as most of the labor was performed by the proprietors during the first two years of the business, rates of wages are given only since 1864. The articles produced are flannels and yarns.

There have been some opportunities for over-time work, which is paid for at regular rates and has not been considered in the table. No allowances are made to employes, except that in case of idleness only half pay is deducted, and this also has been disregarded in making up the rates of wages.

Payments are weekly and all in cash, store-orders having never been used.

From the establishment of the mill until 1879 the hours of labor were 10 a day for all classes, but in the census year they were increased to 11, and the proprietors remark that they have found that 11 hours are not too long for this kind of labor if careful attention be paid to ventilation and light; the eyes seem to tire before the limbs.

The mill was operated an average of 8 months a year from 1862 to 1865; 9 months from 1865 to 1870; 8 months from 1875 to 1879, and 10 months in the census year. The cause of idleness is stated

to have been that the goods manufactured are seasonable and find no market from April to July, and owing to the violent fluctuations in the price of raw wool, consequent upon speculation, the risk in working "on stock" is very great.

No interruptions arising from labor difficulties have occurred.

The following very complete statement is made regarding selling price, labor cost, and percentage of wages to cost of the articles manufactured at this establishment:

Year.	SELLING PRICE.		LABOR COST.		PERCENTAGE OF WAGES TO COST.	
	Flannel, per yard.	Yarn, per pound.	Flannel, per yard.	Yarn, per pound.	Flannel.	Yarn.
1865.....	\$0 75	\$1 60	\$0 30	\$0 40	<i>Per cent.</i> 46	<i>Per cent.</i> 33
1870.....	63	1 36	22	34	50	33
1875.....	58	1 25	20	30	50	30
1880.....	50	1 12	15	28	50	32

There has been no change in the efficiency of labor, and no labor-saving or improved machinery has been introduced. Until 1866,

O. Edlich & Brother, Louisville, Kentucky—Continued.

however, the better grades of flannels were woven on hand-loom; since that date on power-loom, with a saving of from 65 to 75 per cent. in wages.

The trade is neither dangerous nor unhealthful. The air in spinning and weaving rooms is always filled with particles of wool and dye-stuffs, remaining in the staple from the dye-house, but this

dust is very light and is not injurious when the precaution is taken by those inhaling it to breathe through the nose. The proprietor making this return states that in his native village in Saxony, where about three-fourths of a population of 10,000 are engaged in woolen-mills, consumption and similar lung diseases are known only by name.

S. P. Brown & Co., Dover, Maine.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880	1870	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866
Foreman	Month	\$80 00	\$80 00	\$75 00	\$80 00	\$80 00	\$80 00	\$80 00	\$80 00	\$75 00	\$65 00	\$65 00	\$65 00	\$60 00	\$60 00	
Overseers of different departments.	do	58 50	55 00	55 00	60 00	60 00	58 50-00 00	60 00	60 00	60 00	60 00	60 60	58 50	58 50	58 50	
Wool-sorter	Day	1 35	1 35	1 40	1 60	1 60	1 60	1 75	1 75	1 70	1 67	1 60	1 50	1 67	1 67	
Picker	do	1 00	00	90	1 00	1 00	1 00	1 00	1 00	1 00	85	85	90	90	1 00	
Carder, boy	do	75	75	75	85	85	85-87	85	85	85	85	85	85	85	90	
Spooler	do	1 00	1 00	1 00	1 00	1 00	90	90	90	90	85	75	75	75	75	
Warper, male	do	1 05	1 85	1 05	1 00	1 60	1 65	1 75								
Warper, female	do								1 00	1 00	1 00	1 00	1 00	1 00	1 00	
Spinner	do	1 35	1 30	1 00	1 00	1 00	1 42-1 70	1 75	1 80	1 80	1 80	1 80	1 80	1 80	1 80	
Weaver, female	do	1 14	1 14	1 14	1 12	1 10	1 08-1 25	1 10	1 10	1 10	1 10	1 05	95	1 00	1 00	
Loom-fixer	do	1 35	1 35	1 35	1 35	1 25	1 45	1 45	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Fuller	do	1 32	1 32	1 32	1 35	1 35	1 42	1 60	1 50	1 50	1 50	1 50	1 50	1 50	1 75	
Scourer	do	1 32	1 32	1 32	1 50	1 50	1 45	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Dyer	do	2 00	1 75	1 75	2 00	1 00	1 87	2 00	2 00	1 87	1 75	1 75	1 75	1 85	1 85	
Dyer's helper	do	1 25	1 20	1 25	1 35	1 35	1 42	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Machinist	do	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	
Carpenter	do	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	
Teamster	do	1 25	1 25	1 35	1 40	1 40	1 40	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Laborer	do	1 25	1 25	1 35	1 40	1 40	1 40	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	

Classes of employes.	Unit of payment.	DATES.														
		1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850
Foreman	Month	\$60 00	\$55 00	\$45 00	\$39 00	\$39 00	\$39 00	\$39 00	\$39 00	\$39 00	\$38 80	\$38 80	\$33 00	\$30 00	\$28 00	\$20 00
Overseers of different departments.	do	58 50	55 00	39 00	39 00	39 00	39 00	39 00	39 00	39 00	38 80	38 80	32 00	22 00	30 00	20 00
Wool-sorter	Day	1 55	1 40	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Picker	do	1 00	1 00	1 00	90	80	80	86	86	86	86	86	86	86	75	75
Carder, boy	do	90	75	90	55	50	50	50	50	50	50	50	50	50	40	87
Spooler	do	80	75	50	40	46	46	46	46	46	46	46	46	46	40	37
Warper, male	do															
Warper, female	do	1 00	93	67	67	67	67	67	67	67	67	67	65	60	50	45
Spinner	do	1 32	1 75	1 50	1 30	1 30	1 30	1 25	1 10	1 10	1 25	1 15	1 10	1 00	75	75
Weaver, female	do	1 00	95	80	75	75	70	67	67	67	67	65	65	65	50	45
Loom-fixer	do	1 50	1 33	1 33	1 33	1 10	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Fuller	do	1 75	1 50	1 25	1 10	1 05	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Scourer	do	1 50	1 25	1 15	1 10	1 00	1 00	1 00	90	90	90	86	86	86	75	75
Dyer	do	1 87	1 75	1 50	1 50	1 33	1 33	1 33	1 33	1 33	1 33	1 25	1 25	1 25	1 25	1 00
Dyer's helper	do	1 60	1 25	1 15	1 10	1 00	1 00	90	90	90	90	86	86	86	86	75
Machinist	do	2 25	2 00	1 50	1 50	1 33	1 33	1 33	1 33	1 33	1 33	1 25	1 25	1 25	1 00	1 00
Carpenter	do	2 25	2 00	1 50	1 50	1 33	1 33	1 33	1 33	1 33	1 33	1 25	1 25	1 25	1 00	1 00
Teamster	do	1 50	1 33	1 10	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	86	86	75
Laborer	do	1 50	1 33	1 10	1 00	1 00	1 00	1 00	90	90	1 00	1 00	1 00	86	86	75

REMARKS.—This firm was engaged from 1830 to 1836 in carding and cloth dressing. The manufacture of cloth was not begun until about the latter date. From 1836 to 1844 a variety of goods, viz, satinets, cassimeres, etc., were produced, but since 1844 wool twilled flannels have been practically the exclusive production. The operatives are, almost without exception, American, drawn from the immediate neighborhood of the works, and no children have been employed.

In 1830 and 1840 overseers were paid \$1 a day, common hands 65 cents, and carders 37 cents. In 1840 spinners were paid 65 cents a day, and weavers 43 cents.

There are occasional opportunities for night-work in the spinning and carding departments; this would increase the regular wages but slightly, and has not been included in the table.

The employes have low rents, and at times reduced rates for board, which would enhance the wages given in the table.

From the establishment of the works until 1870 payments were quarterly; since 1870 they have been monthly. All cash is the rule, the use of store-orders having been abandoned in 1848 because competition in a growing village rendered them unnecessary.

From 1830 to 1845 all classes worked 12½ hours per day; in 1845 the day's labor was reduced 30 minutes; and in 1850 a further reduc-

Fitchburg Woolen Mill Company, Fitchburg, Massachusetts—Continued.

REMARKS.—This mill was founded in 1822 and gives rates of wages since 1850. The articles of manufacture are cassimeres, suitings, and carriage goods. The return is as complete as any received, and is perhaps the most interesting. The mill is in some degree a pioneer in the manufacture of woollens in this country, and has some characteristics nearly if not quite peculiar to itself, such as always having been successful, always having met its liabilities, always having maintained a good reputation for the character of its goods, always having kept in operation whatever the condition of business, and never having changed ownership except by partial sales, chiefly occasioned by the decease of partners.

A few of the employes have occasional opportunities for over-time; but this has not been included in the table and would but slightly increase the rates given. Low rates are charged for board, but the advantage thus afforded has been considered in the rates given. These rates both for men and for women from 1850 are as follows:

Rates of board per week, including washing.

Year.	Men, per week.	Women, per week.	Year.	Men, per week.	Women, per week.	Year.	Men, per week.	Women, per week.
1850..	\$1 70	\$1 50	1801.	\$2 25	\$1 75	1871.	\$3 75	\$2 50
1851..	1 70	1 50	1802.	2 25	1 75	1872.	3 75	2 50
1852..	1 70	1 50	1803.	2 25	1 75	1873.	3 75	2 50
1853..	1 70	1 50	1804.	2 25	1 75	1874.	3 75	2 50
1854..	1 70	1 50	1805.	3 25	2 25	1875.	3 75	2 50
1855..	2 00	1 75	1806.	3 50	2 50	1876.	3 75	2 50
1856..	2 00	1 75	1807.	3 50	2 50	1877.	3 50	2 50
1857..	2 00	1 75	1808.	3 75	2 50	1878.	3 50	2 50
1858..	2 25	1 75	1809.	3 75	2 50	1879.	3 50	2 50
1859..	2 25	1 75	1870.	3 75	2 50	1880.	3 50	2 50
1860..	2 25	1 75						

These are the rates the company charged its help, and from 1862 to 1880 are actually less than the amounts paid by the company to the boarding-house keeper. For a portion of the time they are 25 per cent. less and at others 12½ per cent., exclusive of rent or board-ing-house.

Payments are all in cash. From 1850 to 1870 the interval of payment was quarterly; since 1870 it has been monthly.

Mr. William H. Vose, the treasurer of the company, who makes this return and to whom special thanks are due for his courtesy, and who, in various capacities, from apprentice to treasurer, has been connected with the manufacture of woollens for fifty-eight years, states that prior to 1850 it was customary to begin work as soon as there was sufficient light, even in the long summer days, and to work as late as the light would permit, with no fixed regular hours. This was the custom at the smaller mills owned by individuals and companies, and not at those of the large corporations. In the short days, or for about six months of the year, it was customary to work until 9 o'clock in the evening, beginning early in the morning and taking about a half hour each for breakfast, dinner, and supper. For the last twenty-five years supper has been deferred until work was ended, at 7 o'clock, and since 10 hours has constituted a day's work the general practice has been to begin at 7 o'clock in the morning and to close at 6 in the afternoon, taking one hour (from 12 to 1) for dinner. To employes whose habits are correct and who employ their time usefully (whether married or single), the lessening of the hours of labor is a boon to be appreciated and highly valued, while to the thriftless and dissolute it is far otherwise. The work in a woolen-mill is not heavy or hard; and taking into account the large investment in mill machinery, etc., 10 hours' labor is worth no more per hour than 12 hours, and the manufacturer can afford to pay only in proportion to the hours of labor.

Labor in a well-arranged woolen-mill is considered a healthful employment; and so regarded, health would not suffer essentially by 11 or 12 hours' labor.

The works have never been idle, except occasionally a short time for repairs, and no labor troubles have been experienced.

The following statement shows the prices at which goods were sold by agents; to get the net prices, commission, interest, and other contingent expenses must be deducted:

Year.	3-4 standard cassimeres, common colors, per yard.	3-4 cassimeres, indigo blue, per yard.	Year.	3-4 standard cassimeres, common colors, per yard.	3-4 cassimeres, indigo blue, per yard.
1850.....	\$0 00	.....	1866.....	\$1 60	\$2 00
1851.....	05	\$1 10	1867.....	1 20	1 75
1852.....	05	1 10	1868.....	1 10	1 65
1853.....	1 00	1 15	1869.....	1 25	1 70
1854.....	1 05	1 20	1870.....	1 20	1 70
1855.....	1 05	1 20	1871.....	1 25	1 00
1856.....	05	1 15	1872.....	1 40	1 75
1857.....	1 00	1 20	1873.....	1 30	1 70
1858.....	05	1 20	1874.....	1 25	1 70
1859.....	1 05	1 25	1875.....	1 10	1 60
1860.....	1 05	1 20	1876.....	1 00	1 40
1861.....	1 05	1 20	1877.....	05	1 30
1862.....	1 05	1 45	1878.....	00	1 25
1863.....	1 15	1 00	1879.....	00	1 20
1864.....	1 42	2 00	1880.....	1 05	1 40
1865.....	2 00	2 50			

The cost of labor per yard of 3-4 standard cassimeres, common colors, is given as 25 cents in 1865, 25½ cents in 1870, 18½ cents in 1875, and 19½ cents in 1880.

The percentage of wages to cost of the article mentioned above has been as follows:

Year.	Per cent.	Year.	Per cent.
1864..	14½	1873..	19
1865..	12½	1874..	23
1866..	.....	1875..	21½
1867..	.....	1876..	12½
1868..	17½	1877..	24
1869..	17½	1878..	22½
1870..	22½	1879..	24½
1871..	22½	1880..	20½
1872..	22½		

The increase in the ratio of wages to cost in 1880 is accounted for by the fact that the price of wool for that year was very low.

There has been a slight increase in the efficiency of labor, arising from experience.

Automatic attachments to spinning-jacks, burr-pickers to remove extraneous substances from wool, improved looms, and various minor improvements have been introduced. These have enlarged production, improved the quality of the goods, and decreased the cost of product with no decrease in the number of employes or reduction of rates of wages.

With proper attention to ventilation of the mill the trade of woolen-manufacturer is not unhealthful.

In closing his statement, Mr. Vose gives a brief history of the Fitchburg Woolen Mill, which, as it indicates the changes in this industry, is interesting in a condensed form:

"In 1822 Samuel Willis and Abiel J. Towne purchased the brick cotton-mill in the center of the then village of Fitchburg, and founded what has ever since been known as the Fitchburg Woolen Mill. They furnished it with two sets of cards and the necessary looms, spinning-jennies, and finishing machinery, for the manufacture of cassimeres made exclusively from fine wool.

"In 1834, the mill and machinery having been injured to some extent by fire, an addition was made to the main building, other necessary buildings erected, the water-power improved by a new dam, and the capacity of the mill increased by three sets of narrow cards with Goulding's improved condenser and spinning-jacks, whereby the process of first carding the wool into rolls and then converting the rolls into roping on what was called a 'billy', was

Fitchburg Woolen Mills Company, Fitchburg, Massachusetts—Continued.

dispensed with and the wool was taken from the condenser to the jacks without any intervening process and spun into yarn.

"The improvements in woollen machinery by Goulding marked an era in the progress of the manufacture of woollens in New England.

"The writer was employed in this mill in 1823 and 1829 as a spinner on a jenny of eight spindles. The yarn was wound (as spun) on the spindles in 'cops', and then 'warped' on 'warping-bars' consisting of a wooden frame with pins in the sides or posts on which the female operative extended the yarn by passing it to and fro as many times and using as many pins as would give the required

length to the warp, after which the warp was sized in a tub and drawn through a metal tube by hand to press the sizing out, and then stretched out in the sun or in a warm room to dry, and was then ready to be 'drawn' into the harness and reed for the loom.

"Later, this primitive process was superseded by the 'dresser', by which the yarn is warped and sized and dried by one continuous process.

"In 1831 and 1862 the mill was enlarged and new machinery put in, increasing its capacity to five sets, and other improvements added, materially increasing its capacity and value."

An establishment in Massachusetts.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.											
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.
Overseers of different departments.	Month ..	\$45 50-208 33 $\frac{1}{2}$	\$42 00-208 33 $\frac{1}{2}$	\$45 50-208 33 $\frac{1}{2}$	\$45 50-208 33 $\frac{1}{2}$	\$30 00-208 33 $\frac{1}{2}$	\$30 00-208 33 $\frac{1}{2}$	\$30 00-208 33 $\frac{1}{2}$	\$30 00-150 00	\$30 00-150 00			
Wool-sorter	Day	1 72	1 57	1 49	1 52	1 62	1 74	1 74	1 83	1 82	1 78	1 80	1 70
Picker	do	91	86	90	96	1 07	1 12	1 20	1 31	1 32	1 28	1 29	1 23
Carder	do	2 75	2 75	2 75	2 75	2 75	3 00	2 50	3 00	3 00	3 00	3 00	2 50
Carder, boy	do	70	61	61	63	70	80	85	88	89	90	95	92
Spooler, female	do	53	57	52	48	53	59	59	64	64	62	64	64
Warper	do	80-1 17	1 05-1 10	99-1 05	1 05-1 09	1 00-1 17	1 20-1 35	1 10-1 20	1 29 $\frac{1}{2}$ -1 51 $\frac{1}{2}$	1 28 $\frac{1}{2}$ -1 71 $\frac{1}{2}$	1 28 $\frac{1}{2}$ -1 79 $\frac{1}{2}$	1 33 $\frac{1}{2}$ -1 85 $\frac{1}{2}$	1 37 $\frac{1}{2}$ -1 57
Spinner	do	1 19	1 16	1 20	1 22	1 37	1 48	1 54	1 60	1 50	1 52	1 60	1 63
Weaver, female	do	97	88	88	80	94	1 18	1 20	1 02 $\frac{1}{2}$	1 21 $\frac{1}{2}$	1 14 $\frac{1}{2}$	1 13 $\frac{1}{2}$	1 17 $\frac{1}{2}$
Loom-fixer	do	1 19	1 13	1 15	1 20	1 28	1 42	1 48	1 61	1 65	1 61	1 58	1 59
Fuller	do	96	93	93	94	99	1 10	1 18	1 29	1 29	1 27	1 26	1 22
Dyer	do	1 02	99	1 05	1 03	1 14	1 26	1 25	1 30	1 37	1 33	1 33	1 31
Gigger	do	95	92	93	92	1 01	1 10	1 15	1 30	1 28	1 28	1 28	1 28
Finisher, male	do	95	93	93	93	1 00	1 09	1 12	1 29	1 22	1 29	1 31	1 25
Finisher, female	do	61	62	62	62	60	77	77	81	81 $\frac{1}{2}$	81 $\frac{1}{2}$	82	82 $\frac{1}{2}$
Teamster	do	1 18-2 05	1 14-2 05	1 10-2 05	1 22-2 05	1 25-2 05	1 45-2 05	1 53-2 05	1 60-2 05	1 50-2 05	1 50-2 05	1 50-2 05	1 50-2 05
Laborer	do	1 13-2 05	1 14-2 05	1 10-2 05	1 22-2 05	1 25-2 05	1 45-2 05	1 53-2 05	1 60-2 05	1 50-2 05	1 50-2 05	1 50-2 05	1 50-2 05
Waste-sorter	do	54	50	50	50	50	50	60	66	67	65	65	60
Harness-cleaner	do	1 19	1 13	1 15	1 20	1 28	1 42	1 48	1 61	1 65	1 61	1 58	1 59
Repairer	do	1 76	1 69	1 71	1 75	1 80	1 97	2 09	2 21	2 21	2 18	2 18	2 19
Watchman	do	1 13	1 14	1 16	1 22	1 25	1 45	1 53	1 60	1 56	1 56	1 56	1 56

Classes of employes.	Unit of payment.	DATES.											
		1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.
Overseers of different departments.	Month ..	\$30 00-150 00	\$30 00-150 00	\$30 00-150 00	\$30 00-150 00	\$30 00-150 00	\$31 20-150 00	\$26 00-100 00	\$26 00-100 00	\$26 00-100 00	\$26 00-100 00	\$26 00-75 00	\$26 00-100 00
Wool-sorter	Day	1 79	1 78	2 00	1 84	1 62	1 82	1 18	1 16	1 17	1 10	1 15	.....
Picker	do	1 28	1 23	1 30	1 32	1 15	85	81	74	81	.....	.....	.....
Carder	do	2 75	2 48	2 75	2 50	2 00	1 25	1 75	1 75	1 75	1 75	1 75	2 00
Carder, boy	do	95	95	94	90	77	65	55	54	68	62	58	.....
Spooler, female	do	66	60	55	34	32	31	31	.....	.....	.....	.....	.....
Warper	do	1 07 $\frac{1}{2}$ -1 09 $\frac{1}{2}$	1 86 $\frac{1}{2}$ -1 68 $\frac{1}{2}$	1 67 $\frac{1}{2}$ -1 74 $\frac{1}{2}$	1 09 $\frac{1}{2}$ -1 18 $\frac{1}{2}$	80 $\frac{1}{2}$ -1 02 $\frac{1}{2}$	91 $\frac{1}{2}$ -95 $\frac{1}{2}$	90 $\frac{1}{2}$ -92 $\frac{1}{2}$	77 $\frac{1}{2}$ -1 12 $\frac{1}{2}$	75 $\frac{1}{2}$ -84 $\frac{1}{2}$	91 $\frac{1}{2}$ -95 $\frac{1}{2}$	75 $\frac{1}{2}$ -88 $\frac{1}{2}$	.....
Spinner	do	1 53	1 41	1 72	1 65	1 20	93	94	85	78	80	78	.....
Weaver, female	do	1 13 $\frac{1}{2}$	1 13 $\frac{1}{2}$	1 24 $\frac{1}{2}$	92 $\frac{1}{2}$	70 $\frac{1}{2}$	60 $\frac{1}{2}$	71 $\frac{1}{2}$	75 $\frac{1}{2}$	69 $\frac{1}{2}$	78 $\frac{1}{2}$	66	.....
Loom-fixer	do	1 57	1 60	1 70	1 59	1 38	1 10	98	.....	.....	.....	.....	.....
Fuller	do	1 15	1 15	1 27	1 25	1 23	87	80	70	81	76	74	.....
Dyer	do	1 33	1 34	1 50	1 49	1 32	98	91	91	91	82	82	.....
Gigger	do	1 26	1 27	1 41	1 38	1 27	92	86	84	84	83	72	.....
Finisher, male	do	1 27	1 30	1 42	1 35	1 19	92	90	91	88	82	73	.....
Finisher, female	do	79 $\frac{1}{2}$	78 $\frac{1}{2}$	87 $\frac{1}{2}$	60 $\frac{1}{2}$	59 $\frac{1}{2}$	54 $\frac{1}{2}$	56	51 $\frac{1}{2}$	48 $\frac{1}{2}$	47 $\frac{1}{2}$	49 $\frac{1}{2}$	.....
Teamster	do	1 53-2 50	1 52-2 50	1 54-2 50	1 54-2 25	1 54-2 00	1 32-1 62	1 06-3 00	1 00-2 50	1 00-2 50	1 10-2 00	90-1 75	2 00
Laborer	do	1 53-2 50	1 52-2 50	1 54-2 50	1 54-2 25	1 32-2 00	1 32-1 02	1 00-3 00	1 00-2 50	1 00-2 50	1 10-2 00	90-1 75	2 00
Waste-sorter	do	64	67	54	40	53	43	35	34	34	32	30	.....
Harness-cleaner	do	1 57	1 60	1 70	1 59	1 38	1 10	98	.....	.....	.....	.....	.....
Repairer	do	2 00	2 00	2 19	2 19	1 91	1 60	1 40	1 35	1 38	1 38	1 25	.....
Watchman	do	1 53	1 52	1 54	1 54	1 32	1 06	1 00	1 00	1 00	1 10	90	.....

An establishment in Massachusetts—Continued.

REMARKS.—The establishment making this return was founded in 1830, and produces indigo-blue coatings, police and jacket cloth, cassimeres, ladies' sackings, beavers, opera flannels, and shawls.

The following table of wages of overseers in the different departments is given:

Departments.	DATES.											
	1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.
Waste-sorting	\$1 75	\$1 05	\$1 05	\$1 05	\$1 65	\$1 75	\$1 75	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50
Picking (a)	2 50	2 50	2 00	1 80	1 80							
Dyeing	b2,000 00	b2,000 00	b2,000 00	4 50	4 00	3 50	b900 00	b1,800 00	b1,800 00	b1,800 00	b1,800 00	b1,800 00
Wool-sorting	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b2,500 00	b1,800 00
Carding (three overseers)	3 75	3 75	3 75	3 75	3 60	4 00	3 72	4 00	4 00	4 00	4 00	4 00
	2 75	2 75	2 75	2 75	2 75	3 00	3 00	3 00	3 00	3 00	3 00	3 00
	3 00	3 00	3 00	3 00	3 00	3 00	2 50	3 00	3 00	3 00	3 00	2 50
Spinning (two and three overseers)	3 00	3 00	3 00	3 00	3 00	3 20	3 20	3 50	3 25	3 00	3 00	3 00
	3 40	3 40	3 40	3 40	3 40	3 72	3 72	4 00	3 75	3 50	3 50	3 50
Spooling (c)	2 75	2 75	2 75	2 75	2 75	3 00	3 00					
Weaving (two overseers)	4 00	4 00	4 00	4 00	3 40	3 50	3 50	3 75	3 75	3 50	2 75	3 75
Dressing (two overseers)	3 50	3 50	3 50	3 50	3 40	3 50	3 50	3 75	3 75	3 75	3 75	3 75
Fulling	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 00	3 00	3 00
Gigging	4 00	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50
Finishing	3 75	3 75	3 75	3 75	3 75	3 20	3 50	3 50	3 50	3 50	3 50	3 50
Repairs (two overseers to 1874)	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 50	4 00	4 00	4 00
Yard	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00	b920 00

Departments.	DATES.											
	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.
Waste-sorting	\$1 50	\$1 50	\$1 50	\$1 50	\$1 50	\$1 20	\$1 00	\$1 00	\$1 00	\$1 00	\$1 00	\$1 00
Picking (a)												
Dyeing	b1,800 00	b1,200 00	b1,200 00	b1,200 00	b1,200 00	b900 00	b1,200 00					
Wool-sorting	b1,800 00	b1,800 00	b1,500 00	b1,500 00	3 50	3 00	2 75	2 50	2 50	2 50	2 00	2 00
Carding (three overseers)	4 00	3 50	3 15	3 50	2 50	1 25	1 75	1 75	1 75	1 75	1 75	2 00
	2 75	2 75	2 48	2 75	2 00	2 50	1 75	1 75	1 75	1 75	1 75	2 00
	4 50	3 00	4 00	4 00	4 00	4 00	3 00	3 00	3 00	3 00	2 25	b1,000 00
Spinning (two and three overseers)	3 00	2 48	2 75	2 75	2 75	2 00	1 75	1 75	1 75	1 75	1 75	1 25
	3 00	2 70	3 00	3 00	2 25	2 00	1 75	1 75	1 75	1 75	2 00	2 00
	3 50	3 15	3 50	3 00	3 00	2 25	1 75	1 75	1 75	1 75	1 25	1 50
Spooling (c)												
Weaving (two overseers)	3 50	3 38	3 75	3 75	3 00	2 50	2 25	2 25	2 25	2 25	1 75	2 00
Dressing (two overseers)	3 75	3 75	3 75	3 75	2 75	2 00	1 75	1 75	1 75	1 75	1 50	2 00
Fulling	3 00	2 70	3 00	3 00	3 00	2 50	2 00	2 00	2 00	2 00	1 75	2 00
Gigging	4 50	4 00	4 50	4 00	3 50	3 25	3 00	3 00	3 00	2 75	2 25	2 00
Finishing	3 50	3 00	4 00	4 00	3 50	3 25	3 00	3 00	3 00	3 00	2 25	2 00
Repairs (two overseers to 1874)	3 50	3 15	3 50	3 00	3 00	2 50	2 00	2 00	2 00	2 00	1 75	1 25
	3 75	3 00	4 00	3 50	3 50	2 75	2 00	2 00	2 00	2 00	1 75	1 00
Yard	2 50	2 50	2 50	2 25	2 00	1 02	3 00	2 50	2 50	2 00	1 75	2 00

a Previously to 1876 included in carding overseers' work.

b Per annum.

c Included in spinning until 1874.

The wages given are net, there being no opportunities for extra earnings and no allowances or deductions.

Payments are made in cash monthly and on application.

From 1855 to 1871 the hours of labor were 11 a day; from 1871 to 1875, 10½, and from 1875 to 1880, 10 hours.

The works have been in constant operation, with the exception of an occasional day or two lost in the spring on account of high water; no labor troubles have arisen.

The ratio of wages to whole cost of total production is given as 20.38 per cent. for 1880.

There has been no change in the efficiency of labor.

Improved machinery has been introduced.

The statement is made by the proprietors of this establishment that the trade is neither dangerous nor unhealthful, and many of the operatives have been in the employ of the company for twenty-five consecutive years.

An establishment in Massachusetts.

Classes of employes.	Unit of payment.	DATES.										
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Foreman.....	Month..	\$83 20	\$83 20	\$82 08	\$83 72	\$87 10	\$98 80	\$93 00	\$93 08	\$90 48	\$93 00	\$96 20
Overseers of different departments.	do	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00	78 00- 117 00
Wool-sorter.....	Day	1 50	1 50	1 60	1 00	1 00	1 00	1 55	1 65	1 65	1 62	1 62
Picker.....	do	1 10	1 10	1 10	1 10	1 10	1 10	1 10	1 10	1 25	1 25	1 25
Carder, boss.....	do	4 00	4 00	4 00	4 00	4 00	4 50	5 00	5 00	5 00	5 00	5 00
Carder, boy.....	do	70	70	70	70	70	70	68	70	70	70	70
Spooler, girl.....	do	45	45	45	45	45	45	45	45	45	45	45
Warper.....	do	1 15	1 15	1 15	1 15	1 15	1 15	1 15	1 25	1 25	1 25	1 25
Spinner.....	do	98	98	1 04	1 03	95	91	80	92	85	1 75	1 75
Weaver.....	do	1 08	1 08	1 06	1 01	1 03	1 11	1 05	1 12	1 10	1 04	1 10
Loom-fixer.....	do	1 00	1 00	1 00	1 05	2 00	2 00	1 08	2 08	2 08	2 00	1 02
Fuller.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 35
Shearer.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Scourer.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Dyer.....	do	1 12½	1 12½	1 20	1 25	1 25	1 25	1 20	1 25	1 25	1 25	1 25
Dyer's helper.....	do	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25	1 10- 1 25
Gigger.....	do	1 12½	1 12½	1 20	1 25	1 25	1 25	1 20	1 25	1 25	1 25	1 25
Engineer.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Machinist.....	do	3 25	3 25	3 25	3 25	3 25	3 25	3 17	3 22	3 25	3 25	3 25
Carpenter.....	do	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25	1 37½- 2 25
Laborer.....	do	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25	1 00- 1 25

REMARKS.—From 1830 to 1860 this establishment manufactured carriage cloths; from 1860 to 1870, balmoral skirts and repellents; since 1870 suitings, carriage-rugs, and sleeping-car blankets have been its products.

The opportunities for extra earnings are few and would increase regular wages not more than 1 per cent.

The employes living in the company's houses have reduced rents, which have not been considered in the above table.

Payments are in cash. The use of store-orders was abandoned in 1855 because the employes were dissatisfied. From 1830 to 1865 payments were made on application, with quarterly settlements, and since the latter date, once a month.

From 1830 to 1865 all classes worked 13 hours a day; from 1865 to 1875, 11 hours, and since 1875, 10 hours. The reduction to 10 hours was made because the state allows women and minors to work but 60 hours a week, and the proprietors desired to have all hands work the same time. This reduction has lessened output about 3 per cent.

Employment has been uninterrupted since the establishment of the works, except in 1867, when the mill ran short time for a portion of the year on account of business depression, losing about three-fourths of a month. The mill has never been stopped by reason of strikes or lockouts, and but little annoyance has arisen from this cause.

The table given below shows the selling price of the various articles of product and the average labor cost and percentage of wages to total cost:

Year.	SELLING PRICE.				AVERAGE LABOR COST.	Percentage of wages to cost of product.
	Balmoral skirts, per dozen.	Sleeping-car blankets, per pound.	Repellents, per yard.	Carriage rugs, each.	Repellents, per yard.	
1860...	\$30 00					
1865...	48 00			\$7 50		14. 03
1870...	24 00	\$1 75	\$1 30	0 75	\$0 22½	21. 29
1875...	15 00	1 35	1 00	0 00	20½	20. 06
1880...		1 50 to 1 00	1 00	0 50	15½	21. 52

There has been an increase in the efficiency of labor during the past 10 or 15 years, arising from careful selection and training of employes, especially as to morals.

Attachments on spinning-jacks have been introduced which have lessened the cost of spinning 50 per cent., and the improved looms now in use have increased production 100 per cent.

Clinton Woolen Manufacturing Company, Clinton, Michigan.

Classes of employes.	Unit of payment.	DATES.													
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1860.	1868.	1867.
Superintendent.....	Month	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$112 50	\$112 50	\$100 00	\$100 00	\$100 00	\$125 00	\$125 00	\$125 00
Overscers of different departments.	do	05 00	01 10-05 00	05 00-07 50	05 00-07 50	05 00-07 50	05 00-07 50	52 00-78 00	48 75-78 00	45 50-71 50	58 50-78 00	58 50-78 00	05 00-01 00	78 00	78 00
Wool-sorter.....	Day	1 87½	1 87	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 75	1 75	1 75
Picker.....	do	00	00	00	00	00	00	80	70	80	70	80	80	80	80
Carder.....	do	1 15	1 15	1 87½	1 87½	1 87½	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 75	1 75
Carder, boy.....	do	70	05	05	70	70	70	70	70	70	75	80			
Spooler.....	do	00	60	00	00	00	00	00	00	00	00	00	60	00	60
Warper.....	do	1 25	1 87½	1 25									1 87½	1 25	1 25
Spinner.....	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 75	1 87½	1 87½
Weaver.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Loom-fixer.....	do	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Fuller.....	do	1 50	1 50	1 75	1 75	1 75	1 75	1 75	1 02	1 02	1 02½	1 02½	1 75	1 75	1 75
Shoarer.....	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 12½	1 37	1 25	1 25	1 25	1 50	1 50
Scourer.....	do	1 25	1 25	1 87	1 50	1 50	1 87	1 37	1 37	1 37	1 37	1 25	1 75	1 50	1 50
Dyer.....	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Gigger, boy.....	do	70	70	70	70	90	80	70	70	80	80	80	75	75	75
Engineer.....	do	2 25	2 25	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 00	2 00

REMARKS.—This establishment, which manufactures plain and fancy cassimeres, has been in existence since 1866.

When business is pressing there are occasional opportunities for over-time, for which regular rates are paid. These have not been considered in making up the table.

Payments have always been monthly and in cash.

The hours of labor are 11 for all classes.

From 1870 to 1875 the works were in operation an average of 10½ months a year, and from 1875 to 1880, 10½ months, the principal cause of idleness being repairs. There have been no strikes or lock-outs.

No change has taken place in the efficiency of labor.

Some labor-saving machinery has been introduced, the effect of which has been a reduction in the cost of labor.

The trade is regarded as not dangerous and as no more unhealthful than any other in-door pursuit.

The following statement is made regarding selling price, labor cost, and percentage of wages to cost of product:

Year.	Selling price of cloth per yard.	Labor cost of cloth per yard.	Percentage of wages to cost of cloth.
1870.....	\$1 30	\$0 25	Per cent. 21.4
1875.....	1 10	18½¢	18.6
1880....	83	11½¢	20.0

With regard to the above table it is stated that the decline in price did not come entirely from a decline in values, as the quality of the goods is not the same for the several years. The variation in the cost of labor is partly accounted for in the same manner.

T. A. & William Bray, Pay Down, Missouri.

Classes of employes.	Unit of payment.	DATES.													
		1880.	1870.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	
Overscers of different departments.	Month	\$45 50	\$45 50	\$45 50	\$45 50	\$52 00	\$52 00						\$50 80	\$50 80	\$50 80
Spinner.....	Day	1 50	1 50	1 50	1 50	1 50	1 50						1 75	1 75	1 75
Weaver.....	do												1 00	1 00	1 00
Dyer.....	do	1 75	1 75	1 75	1 75	2 00	2 00						2 00	2 00	2 00
Machinist.....	do												2 50	2 50	3 00
Carpenter.....	do	1 50	1 25	1 25	1 25	1 50	1 50	\$1 50	\$1 50	\$1 50	\$1 50	1 50	1 50	1 50-1 75	
Teamster.....	do	50	50	05	05	75	75	75	75	75	75	75	75	75	1 00
Laborer.....	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—This mill produces jeans, linseys, blankets, and yarn. The opportunities for extra earnings from over-time are few, and would not increase wages more than 5 per cent., and have not been considered in the table.

Payments have always been weekly and in cash.

All classes worked from 10 to 12 hours a day from 1867 to 1870, and since 1870, 10 hours have been the rule. The proprietors state that it has been necessary to be very lenient with the operatives as to time, they as a class being very independent.

From 1867 to 1870 the mill was run an average of 9 months a year; from 1871 to 1875, 6 months, and from 1876 to 1880, 7 months. The idleness was occasioned by over-production and consequent excessive competition. There has never been a strike or lockout.

The selling prices of the various articles produced were as follows for the years named:

Year.	Jeans, per yard.	Flannel, per yard.	Blankets, per pound.	Yarn, per pound.
1867.....	\$1 00	\$1 00	\$1 10	\$1 25
1870.....	50	50	05	00
1875.....	35	30	50	55
1880.....	45	45	05	05

No labor-saving machinery has been introduced. The trade is not regarded as dangerous or unhealthful.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

Manchester Mills, Manchester, New Hampshire.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Overseers of different departments.	Month	\$101 92	\$101 66	\$104 00	\$99 06	\$91 78	\$91 78	\$85 80	\$92 82	\$91 00	\$89 06	\$88 14	\$88 66	\$86 58	\$90 58	\$94 04
Wool-sorter.....	Day	1 65	1 78	1 82	1 92	1 86	1 93	1 84	2 00	2 00	1 97	1 70	1 98	2 00	2 00	2 06
Picker.....	do	1 02	95	1 03	1 04	1 19	1 17	1 22	1 42	1 33	1 37	1 42	1 35	1 33	1 33	1 33
Carder.....	do	1 02	95	1 03	1 04	1 10	1 17	1 22	1 33	1 33	1 33	1 42	1 35	1 33	1 33	1 33
Carder, boy.....	do	61	58	61	69	83	83	81								
Spooler.....	do	67	60	62	70	68	77	93	93	1 01	94	1 13	1 17	88	95	1 10
Warper.....	do	65	83	92	94	1 00	1 18	1 27	93	1 01	94	1 13	1 17	88	95	1 10
Spinner.....	do	66	61	61	78	95	1 00	1 00	1 16	1 05	1 17	1 20	98	90	91	91
Weaver.....	do	1 06	96	1 06	1 05	1 15	1 17	1 14	1 28	1 31	1 30	1 45	1 23	1 22	1 40	1 33
Loom-fixer.....	do	1 75	1 74	1 74	1 75	1 78	1 75	1 75	1 75	1 75	1 75	1 75	1 55	1 05	1 75	1 75
Shearer.....	do	1 15	1 10	1 10	1 15	1 12½	1 12½	92	1 00	1 08	1 00	1 00	1 58	1 50	1 42	1 28
Dyer.....	do	6 00	6 00	6 00	6 00											
Dyer's helper.....	do	1 31	1 22	1 22	1 28											
Gigger.....	do	1 31	1 22	1 22	1 28											
Machinist.....	do	1 74	1 79	1 77	1 91	1 97	2 04	2 25	2 28	2 22	2 19	1 95	1 97	1 93	1 81	1 86
Carpenter.....	do	1 74	1 79	1 77	1 91	1 97	2 04	2 25	2 39	2 38	2 17	2 23	2 28	2 21	2 04	2 04
Teamster.....	do	1 30	1 27	1 44	1 38	1 50	1 50	1 58	1 07	1 07	1 50	1 50	1 75	1 07	1 07	1 50
Laborer.....	do	1 30	1 27	1 44	1 38	1 50	1 50	1 58	1 50	1 50	1 42	1 33	1 42	1 42	1 42	1 33

Classes of employes.	Unit of payment.	DATES.															
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Overseers of different departments.	Month	\$85 80	\$78 52	\$66 30	\$69 96	\$70 46	\$60 56	\$54 00	\$55 12	\$63 90	\$62 40	\$61 62	\$57 46	\$63 18	\$50 08	\$62 92	\$62 92
Wool-sorter.....	Day	1 83	1 72	1 71	1 40	1 41	1 48	1 21	1 20	1 21	1 25	1 29	1 33	1 32	1 28	1 30	1 25
Picker.....	do	1 25	1 25	1 00	95	92	92	1 00	1 00	98	95	92	89	89	80	80	90
Carder.....	do	1 25	1 25	92	95	92	92	92	92	98	95	92	89	89	80	80	90
Carder, boy.....	do																
Spooler.....	do	76	76	77	61	60	60	74	52	54	44	45	46	46	30	38	40
Warper.....	do	76	76	77	61	60	60	74	52	54	44	45	46	46	30	38	40
Spinner.....	do	66	63	58	58	64	52	51	45	34	32	37	31	30	31	30	32
Weaver.....	do	87	85	70	62	70	78	77	58	49	51	50	51	53	43	40	44
Loom-fixer.....	do	1 67	1 50	1 33	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Shearer.....	do	1 17	1 12	1 25	1 25	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	92	92	92
Dyer.....	do																
Dyer's helper.....	do																
Gigger.....	do																
Machinist.....	do	1 95	1 61	1 66	1 42	1 43	1 30	1 33	1 24	1 42	1 30	1 50	1 46	1 34	1 27	1 34	1 19
Carpenter.....	do	1 95	2 12	1 62	1 48	1 43	1 47	1 39	1 28	1 46	1 50	1 50	1 46	1 34	1 27	1 34	1 19
Teamster.....	do	1 50	1 50	1 25	1 17	1 17	1 17	1 17	1 17	1 07	1 08	1 08	1 09	1 00	1 00	1 00	1 00
Laborer.....	do	1 25	1 25	1 17	1 00	1 00	1 00	1 00	1 00	1 07	1 00	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—Worsted dress-goods, in connection with cotton fabrics, are manufactured at this mill.

The extra earnings from over-time work, for which there are few opportunities, would increase the wages but slightly, and have not been considered in the wages table.

The employes have always been paid monthly and in cash.

All classes work 64½ hours per week—11½ hours five days, and 8½ hours on Saturday.

The statement regarding hours of labor runs back only to 1870, the writer stating that he is not able to give exact figures prior to that date.

The works have been in operation 12 months per year since 1870, prior to which date there is no statement. Strikes and lockouts, it is remarked, are infrequent in this industry.

There has been no change in the efficiency of labor. The trade is healthful.

An establishment in New Hampshire.

[Continued on next two pages.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Superintendent.....	Month	\$250 00	\$250 88	\$208 33	\$208 33	\$208 33	\$208 33	\$208 33	\$208 33	\$208 33	\$208 33	\$208 33	\$100 00	\$100 00	\$100 00	\$100 00
Overseers of different departments.	do	78 00-91 00	78 00-91 00	78 00-91 00	78 00-91 00	78 00-91 00	78 00-91 00	71 50-78 00	71 50-78 00	65 00-78 00	65 00-78 00	65 00-78 00	52 00-65 00	52 00-65 00	52 00-65 00	52 00-65 00
Wool-sorter.....	Day	1 50-1 80	1 50-1 75	1 50-1 75	1 50-1 75	1 50-1 83½	1 50-1 83½	2 00	2 00	1 50-1 67½	1 50-1 67½	1 50-1 67½	1 50-1 85	1 50-1 85	1 50-1 70	1 50-1 70
Picker.....	do	1 00-1 35	1 00-1 35	1 35	1 35	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 37½	1 37½
Carder.....	do	80-90	80-90	90	90	1 00	1 00	1 00	1 00	1 00	1 00	1 00	92	92	75	75

An establishment in New Hampshire—Continued.

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Spooler	Day	\$0 75- 1 00	\$0 75- 1 00	\$0 50- 75	\$0 50- 75	\$0 05- 100	\$0 05- 1 00	\$0 75- 1 00	\$0 75- 1 00	\$0 05- 80	\$0 05- 80	\$0 05- 80	\$0 00	\$0 00	\$0 50	\$0 50
Spinner	do	1 50- 1 75	1 50- 1 75	1 50- 1 75	1 50- 1 75	1 05- 1 05	1 05- 2 00	1 75- 2 00	1 75- 2 00	1 70- 2 00	1 70- 2 00	1 70- 2 00	1 80	1 80	1 50- 1 75	1 50- 1 75
Weaver	do	1 35- 1 00	1 25- 1 50	1 25- 1 50	1 25- 1 50	1 25- 1 75	1 25- 1 75	1 25- 1 75	1 25- 1 75	1 25- 1 75	1 25- 1 75	1 25- 1 75	1 35- 1 50	1 35- 1 50	1 25- 1 50	1 25- 1 50
Loom-fixer	do	1 00	1 80	1 80	1 80	2 00	2 00	2 00	2 00	1 82	1 82	1 82	1 02½	1 02½	1 75	1 75
Fuller	do	1 15- 1 25	1 15- 1 25	1 25- 1 35	1 25- 1 35	1 37½- 1 50	1 37½- 1 50	1 25- 1 50	1 25- 1 50	1 50	1 50	1 50	1 30	1 30	1 30	1 30
Shearer	do	1 50	1 50	1 02½	1 02½	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 75	1 30	1 30
Dyer	do	1 25	1 25	1 35	1 35	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 30	1 30	1 30	1 30
Gigger	do	1 15	1 15	1 25	1 25	1 37½	1 37½	1 37½	1 37½	1 30	1 30	1 30	1 30	1 30	1 17	1 17
Engineer	do	3 00	3 00	3 00	3 00	3 00	3 00	2 75	2 75	2 50	2 50	2 50	2 25	2 25	2 00	2 00
Machinist	do	2 25- 2 50	2 00- 2 25	2 00- 2 25	2 00- 2 25	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 00- 2 25	2 00- 2 25	2 00	2 00
Carpenter	do	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	2 50	2 50	2 50	2 50
Teamster	do	1 50	1 50	1 02½	1 02½	1 75	1 75	1 75	1 75	1 50	1 50	1 50	1 50	1 50	1 80	1 30
Laborer	do	1 50	1 25	1 35	1 35	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 37½	1 37½

Classes of employes.	Unit of payment.	DATES.															
		1866.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.	1850.
Superintendent	Month	\$100 00															
Overseers of different departments.	do	52 00- 05 00	\$30 00- 45 50	\$30 00	\$32 50	\$32 50	\$32 50	\$35 10	\$35 10	\$35 10							
Wool-sorter	Day	1 50- 1 70	1 00														
Picker	do	1 37½															
Carder	do	75	02½	02½	50	50	50	50	55- 00	50	50	50	50	50	50	50	
Spooler	do	50	50	50	50	50	50	50	50	50	37½	37½	37½	37½	37½	37½	
Spinner	do	1 50- 1 75	1 25	1 25	1 10	1 10	1 10	1 10	1 00	1 00	1 10	1 10	1 00	1 00	1 00	1 00	
Weaver	do	1 25- 1 50	1 10- 1 25	1 10- 1 25	1 10	1 10	1 10	1 10	1 00	1 00	80	80	70	70	70	70	
Loom-fixer	do	1 75															
Fuller	do	1 30	1 00	1 00	87½	87½	87½	87½	87½								
Shearer	do	1 30	1 12½	1 12½													
Dyer	do	1 30	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	87½	87½	87½	87½	87½	
Gigger	do	1 17															
Engineer	do	2 00	1 50	1 50	1 37½	1 37½	1 37½										
Machinist	do	2 00	1 35	1 35	1 25	1 25	1 25										
Carpenter	do	2 50	1 75	1 75	1 75	1 75	1 75										
Teamster	do	1 30	1 00	1 00	87½	87½	87½	87½	87½								
Laborer	do	1 37½	1 00	1 00	87½	87½	87½	87½	87½								

REMARKS.—This firm manufactured flannels prior to 1860, and since that time all-wool cassimeres and suitings for men's wear have been produced.

In addition to the rates in the table, the following wages in the years 1835 and 1845 are given:

Classes of employes.	1835.	1845.
Wool-washer . . . per day..	\$0 05	\$0 08
Dyer do . . .	05	08
Carder do . . .	37½	45
Spinner do . . .	\$0 60 to 0 70	85
Dresser do . . .	05	07½
Spooler do . . .	33	35
Weaver do . . .	48	50
Overseers do . . .	1 25	1 25

Over-time is occasionally made to even up work and make repairs. In some instances extra work is paid for at regular rates, and in others price and a half is the rule. These opportunities for increasing regular earnings have not been considered in the table. To those employes living in the company's houses a reduction of from 25 to 50 per cent. from the current rates for rent is made.

From 1830 to 1855, 13 hours of labor a day was the rule for all classes; in 1855 the hours of labor were reduced to 11. The belief is expressed that a reduction to 10 hours would lessen production proportionately, and would not affect the character, habits, or health of employes.

The statement regarding selling price, labor cost, etc., refers only to plain flannel, and is as follows:

Year.	Selling price, per yard.	Labor cost, per yard.	Percentage of wages to cost.
1830	\$0 32 to \$0 35		<i>Per cent.</i>
1835	20 to 32		
1840	28 to 30		
1845	24, 35½		
1850	23 to 24	\$0 04, 35½	a 22
1855	18 to 20	5, 35½	a 25
1860			
1865			
1870			b 19, 35½
1875			b 13, 35½
1880			b 10, 35½

a Flannels, 40 picks. b Cassimeres.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

An establishment in New York—Continued.

Classes of employes.	Unit of payment.	DATES.											
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	
Scourer.....	Day....	\$1 15	\$1 15	\$1 15	\$1 15	\$1 15	\$1 15	\$1 15					\$1 50
Dyer.....	do....	4 00	2 00	2 00	2 00	2 00	2 00	2 00					2 50
Dyer's helper.....	do....	1 15	1 15	1 15	1 15	1 15	1 15	1 15					1 25
Gigger.....	do....	1 15	1 15	1 15	1 15	1 15	1 15	1 15					1 25
Finisher.....	do....	55- 1 05	71- 1 19	71- 1 19	71- 1 19	71- 1 19	71- 1 19	71- 1 19					80- 1 17½
Engineer.....	do....	4 00	4 00	4 00	4 00	4 00	4 00	4 00					4 00
Machinist.....	do....	2 25	2 35	2 35	2 35	2 35	2 35	2 35					2 01
Carpenter.....	do....	2 25	2 35	2 35	2 35	2 35	2 35	2 35					2 01
Teamster.....	do....	1 50	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½					1 34½
Laborer.....	do....	1 15	1 15	1 15	1 15	1 15	1 15	1 15					1 34½
Watchman.....	do....	1 10	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½					1 34½

Classes of employes.	Unit of payment.	DATES.											
		1869.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.	1860.	1859.	
Superintendent.....	Month..	\$300 00	\$300 00	\$300 00	\$300 00	\$300 00	\$160 00	\$160 00	\$160 00	\$160 00	\$160 00	\$160 00	
Foreman.....	do....	200 00	200 00	200 00	200 00	200 00	100 00	100 00	100 00	100 00	100 00	100 00	
Overseers of different departments.	do....	70 50	70 50	70 50	70 50	70 50	53 50	53 50	53 50	53 50	53 50	53 50	
Wool-sorter.....	Day....	1 00	1 00	1 00	1 00	1 00	1 10	1 10	1 10	1 10	1 10	1 10	
Picker.....	do....	1 25	1 25	1 25	1 25	1 25	02½	02½	02½	02½	02½	02½	
Carder.....	do....	1 50	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	
Carder, girl.....	do....	57½	57½	57½	57½	57½	42	42	42	42	42	42	
Spooler, girl.....	do....	42	42	42	42	42	30	30	30	30	30	30	
Warper.....	do....	1 72½	1 72½	1 72½	1 72½	1 72½	75	75	75	75	75	75	
Spinner.....	do....	1 00	1 00	1 00	1 00	1 00	1 13	1 13	1 13	1 13	1 13	1 13	
Spinner, boy or girl.....	do....	46	40	40	40	40	50	50	50	50	50	50	
Weaver.....	do....	1 25	1 25	1 25	1 25	1 25	94	94	94	94	94	94	
Weaver, boy or girl.....	do....	54	54	54	54	54	40	40	40	40	40	40	
Loom-fixer.....	do....	1 75	1 75	1 75	1 75	1 75	1 50	1 50	1 50	1 50	1 50	1 50	
Fuller.....	do....	1 50	1 50	1 50	1 50	1 50	75	75	75	75	75	75	
Shearer.....	do....	75	75	75	75	75	75	75	75	75	75	75	
Scourer.....	do....	1 50	1 50	1 50	1 50	1 50	75	75	75	75	75	75	
Dyer.....	do....	2 00	2 00	2 00	2 00	2 00	1 50	1 50	1 50	1 50	1 50	1 50	
Dyer's helper.....	do....	1 25	1 25	1 25	1 25	1 25	70	70	70	70	70	70	
Gigger.....	do....	1 25	1 25	1 25	1 25	1 25	70	70	70	70	70	70	
Finisher.....	do....	60- 1 28.	60- 1 28	60- 1 28	60- 1 28	60- 1 28	81- 70½	81- 70½	81- 70½	81- 70½	81- 70½	81- 70½	
Engineer.....	do....	4 00	4 00	4 00	4 00	4 00	2 00	2 00	2 00	2 00	2 00	2 00	
Machinist.....	do....	1 75	1 75	1 75	1 75	1 75	1 25	1 25	1 25	1 25	1 25	1 25	
Carpenter.....	do....	1 75	1 75	1 75	1 75	1 75	1 25	1 25	1 25	1 25	1 25	1 25	
Teamster.....	do....	1 25	1 25	1 25	1 25	1 25	75	75	75	75	75	75	
Laborer.....	do....	1 25	1 25	1 25	1 25	1 25	75	75	75	75	75	75	
Watchman.....	do....	1 25	1 25	1 25	1 25	1 25	85	85	85	85	85	85	

REMARKS.—This mill was established in 1865, and produces wool cassimeres.

The employes never work over-hours nor on legal holidays.

Payments have always been monthly and in cash.

All classes worked 12 hours a day up to 1875, when the number of hours was reduced to 11.

The mill was in operation 12 months a year from 1855 to 1870; an average of 8½ months from 1870 to 1875, and 11 months from 1875 to 1880. The occasion of stoppage was the rebuilding of the mill after a fire.

There has been a great increase in the efficiency of labor. This has arisen from a demand for more perfect goods, resulting in the exacting of more perfect work from the hands, and closer inspection of product.

Labor-saving machinery has been introduced in the spinning department. This has not reduced the number of employes, but has made possible the substitution of boys in many places formerly filled by men, and has increased the wages of the men who remain.

The trade is reported to be neither dangerous nor unhealthful.

A statement regarding labor cost and percentage of wages to cost is made as follows:

Year.	Labor cost per yard of wool cassimeres.	Percentage of wages to cost.
1860....	\$0 37	Per cent. 16
1865....	60	19
1870....	74	27
1875....	66	24
1880....	62	25

The apparent decrease in the cost of labor from 1875 to 1880 is accounted for by the fact that in those years purchased yarn was used to some extent, the proportion of the amount purchased to the whole amount used varying from one-fifth in 1875 to one-third in 1880. The same fact explains the apparent decrease in percentage of wages to cost after 1870.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

James Roy & Co., West Troy, New York.

Classes of employes.	Unit of payment.	DATES.															
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Overseers of different departments.	Month.	\$42 00-78 00	\$39 00-78 00	\$39 00-78 00	\$55 25-78 00	\$55 25-78 00	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$50 70-84 50	\$54 00-78 20	\$63 70-72 80	\$63 70-72 80
Wool-sorter	Day	1 86-1 98	1 41-1 49	1 75-1 81	1 37-1 91	1 75-1 82	2 01-1 98	1 95-2 01	1 81-2 08	1 70-2 18	1 75-2 03	1 80-2 03	1 37-2 17	1 47-2 15	07-2 23	1 80-2 05	2 16-1 08
Carder	do	72-1 35	09-1 20	52-1 14	54-1 12	50-1 20	03-1 46	50-1 42	54-1 50	55-1 50	55-1 50	55-1 50	58-1 62	50-1 62	76-1 75	78-1 75	47-1 73
Spooler	do	48-78	48-07	47-63	45-57	62-78	74-93	78-1 04	70-92	59-78	82-1 05	82-1 05	87-1 20	64-88	63-82	62-80	63-1 06
Warper	do	1 31-1 67	1 20-1 31	1 45-1 44	1 53-1 50	1 48-1 85	2 08-1 78	2 23-2 08	2 36-2 29	1 02-1 95	1 75-2 40	2 22-2 11	2 39-2 30	2 45-2 00	2 15-2 12	2 41-1 43	2 22-1 73
Spinner	do	1 18-1 08	1 32-1 21	03-1 24	1 12-1 24	1 77-1 53	1 80-1 74	04-1 89	1 21-1 05	90-1 87	1 02-1 22	1 63-2 13	1 93-2 01	1 37-2 01	1 07-1 71	90-1 69	1 32-1 02
Weaver	do	86-1 25	89-1 28	04-1 40	98-1 32	82-1 24	93-1 53	85-1 42	1 09-1 44	1 37-1 92	1 16-1 90	97-1 41	1 04-1 03	82-1 35	1 05-1 40	07-1 30	93-1 65
Laborer	do	1 12 1/2	1 00	1 00	1 00	1 00	1 23 1/2	1 23 1/2	1 20	1 12 1/2	1 35-1 00	1 95	1 30	1 30	1 40	1 40	1 40

REMARKS.—There are few opportunities for over-time at this establishment. All payments on this account have been included in the wages given. The hours of labor have been 10 a day for all classes since the year 1865. Between 1865 and 1880 not more than two months were lost at this mill. Payments are monthly and in cash.

L. Rambo & Co., Dresden, Ohio.

[Continued on next page.]

Classes of employes.	Unit of payment.	DATES.														
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.
Overseers of different departments.	Month	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$52 00	\$58 50	\$58 50	\$58 50	\$58 50
Wool-sorter	Day	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	75	75	75	75
Picker, boy	do	85	85	85	85	85	85	85	85	85	85	85	75	75	75	75
Carder	do												2 25	2 25	2 25	2 25
Carder, boy	do	65	65	65	65	65	65	65	65	65	65	65	75	75	75	75
Warper	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 25	1 25	1 25	1 25
Spinner	do	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Weaver	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Loom-fixer	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Fuller	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50
Shearer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	2 00	2 00	2 00	2 00
Scourer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	2 00	2 00	2 00	2 00
Dyer	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Dyer's helper	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50
Gigger	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 50	1 50	1 50	1 50
Teamster	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00

Classes of employes.	Unit of payment.	DATES.														
		1865.	1864.	1863.	1862.	1861.	1860.	1859.	1858.	1857.	1856.	1855.	1854.	1853.	1852.	1851.
Overseers of different departments.	Month	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50	\$58 50
Wool-sorter	Day							1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Picker, boy	do	75	75	75	75	60	60	60	60	60	60	60	60	60	60	60
Carder	do	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25
Carder, boy	do	75	75	75	75	60	60	65	65	65	65	65	65	65	65	65
Warper	do	1 25	1 25	1 25	1 25	1 00	1 00	70	70	70	70	70	70	70	70	70
Spinner	do	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Weaver	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Loom-fixer	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Fuller	do	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Shearer	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Scourer	do	2 00	2 00	2 00	2 00	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Dyer	do	2 00	2 00	2 00	2 00	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Dyer's helper	do	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Gigger	do	1 50	1 50	1 50	1 50	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Teamster	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00

REMARKS.—This mill was built in 1861, and manufactures cassimeres, flannels, blankets, yarns, etc. There have been some opportunities for over-time at this establishment. This would increase the regular wages perhaps 5 per

L. Rambo & Co., Dresden, Ohio—Continued.

cent. for the whole time covered by the report, and has not been considered in the table.

Payments have always been monthly, and since 1860 wholly in cash. Prior to that date payment was largely in merchandise, but little money being in circulation.

The hours of labor have averaged 10 a day since 1871 for all classes the year round, though the number of hours have varied with the length of the days, as work is not done by artificial light. Prior to 1871 the average day's work was at least an hour longer than at present.

This return states that the trade is healthful and not considered dangerous; but one accident has occurred in the history of the works, the victim in this instance being a boy whose hand was taken off in the machinery.

The following table gives the selling prices to dealers:

Year.	Cassimeres, per yard.	Flannels, per yard.	Blankets, per yard.	Yarn, per pound.
1865.....	\$1 15	\$0 55	\$1 00	\$1 00
1870.....	1 20	55	1 00	1 00
1875.....	1 20	55	1 00	1 00
1880.....	1 10	55	1 00	1 00

The works have been operated 11 months each year. No strikes or lockouts have taken place.

There has been no change in the efficiency of labor. No labor-saving machinery has been introduced.

New Lisbon Woolen Manufacturing Company, New Lisbon, Ohio.

Classes of employes.	Unit of pay-ment.	DATES.									
		1880.	1870.	1878.	1877.	1870.	1875.	1874.	1878.	1872.	1871.
Superintendent.....	Month.....	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00	\$75 00
Foreman.....	do.....	75 00	75 00	75 00	75 00	75 00	75 00	75 00	75 00	75 00	75 00
Overseers of different depart-ments.	do.....	43 16	43 16	43 16	43 16	45 50	45 50	46 80	52 00	52 00	52 00
Wool-sorter.....	Day.....	1 00	1 00	1 00	1 00	1 75	1 75	1 80	2 00	2 50	2 50
Picker.....	do.....	75	75	75	60	60	60	60	60	75	75
Carder.....	do.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 50	2 50
Carder, boy.....	do.....	50	50	50	50	50	50	50	50	50	50
Spooler.....	do.....	50	50	40	40	40	40	40	40	50	50
Warper.....	do.....	1 13	1 13	1 00	1 00	1 00	1 00	1 00	1 00	1 25	1 25
Spinner.....	do.....	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 25	2 50	2 50
Weaver(a).....	do.....	90	1 00	95	90	88	90	90	90	1 00	90
Loom-fixer.....	do.....	1 00	1 00	1 00	1 00	1 00	1 75	1 75	2 00	2 00	2 00
Fuller.....	do.....	2 00	2 00	1 75	1 75	1 75	1 75	1 80	2 00	2 00	2 00
Shearer.....	do.....	2 00	2 00	1 75	1 75	1 75	1 75	1 80	2 00	2 00	2 00
Scourer.....	do.....	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 25	1 25	1 25
Dyer.....	do.....	2 00	2 00	1 75	1 75	1 75	1 75	1 80	2 00	2 00	2 00
Dyer's helper.....	do.....	1 00	1 00	90	90	90	1 00	1 00	1 00	1 00	1 00
Gigger.....	do.....	1 00	1 00	90	90	90	1 00	1 00	1 00	1 00	1 00
Finisher.....	do.....	2 00	2 00	1 75	1 75	1 75	1 75	1 80	2 00	2 00	2 00
Engineer.....	do.....	1 75	1 00	1 00	1 00	1 00	1 75	1 80	2 00	2 00	2 00
Laborer.....	do.....	1 50	1 25	1 00	1 00	1 25	1 25	1 50	1 50	1 75	1 50

a These are wages of an average weaver, some making as low as 65 cents, others as high as \$1 25.

REMARKS.—At these works flannels, cassimeres, blankets, and yarns are produced.

The entire mill is occasionally run over-hours, when all classes are paid extra at the regular rates. These opportunities for increasing wages have not been considered in the table.

Payments are made every two weeks and wholly in cash, the use of store-orders having been abandoned in 1875, after a trial of three years, because they were unsatisfactory to the hands, and money had become more plenty than it had previously been.

The hours of labor are 10½ five days in the week and 8 on Saturday, the mill closing at 3 o'clock on that day.

The works have been in constant operation except during a portion of the years 1873, 1874, and 1875, when some irregularity was caused by over-production and consequent unprofitable prices. There have been neither strikes nor lockouts.

Below are statements giving the selling price, labor cost, and percentage of wages to cost of the articles manufactured at this establishment:

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Flannel, per yard.	Cassimere, per yard.	Blankets, per pound.	Yarn, per pound.	Flannel, per yard.	Cassimere, per yard.	Blankets, per pound.	Yarn, per pound.	Flannel.	Cassimere.	Blankets.	Yarn.
1864.....									Per cent. 40	Per cent. 50	Per cent. 25	Per cent. 25
1870.....	\$0 55	\$1 25	\$1 00	\$1 00	\$0 17	\$0 25	\$0 25	\$0 25	37½	30	30	30
1875.....	44	1 00	1 00	85	16	25	20	18	45	30	23	24
1880.....	40	1 00	90	70	14	25	18	13	40	30	22½	20

No change in the efficiency of labor has been noticed.

Self-acting jack-heads on spinning-machines have been introduced. These have enabled one man to do the work formerly re-

quiring two, and thus reduced the cost of labor 50 per cent. They have also increased production and improved the quality of goods.

The trade is reported as free from risk of accident and disease.

STATISTICS OF WAGES—THE WOOLEN INDUSTRY.

Brownsville Woolen Mills Company, Brownsville, Oregon.

Classes of employes.	Unit of pay-ment.	DATES.					
		1880.	1879.	1878.	1877.	1876.	1875.
Superintendent	Month	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00	\$125 00
Overseers of different departments	do	65 00- 78 00	65 00- 78 00	65 00- 78 00	65 00- 78 00	65 00- 78 00	65 00- 78 00
Wool-sorter	Day	2 50	2 50	2 50	2 50	2 50	2 50
Picker	do	1 50	1 50	1 50	1 50	1 50	1 50
Carder	do	1 50	1 50	1 50	1 50	1 50	1 50
Carder, boy	do .....	75- 1 00	75- 1 00	75- 1 00	75- 1 00	75- 1 00	75- 1 00
Spooler	do	50	50	50	50	50	50
Warper	do	2 00	2 00	2 00	2 00	2 00	2 00
Spinner	do	2 00	2 00	2 00	2 00	2 00	2 00
Weaver	do	1 50	1 50	1 50	1 50	1 50	1 50
Loom-fixer	do	2 00	2 00	2 00	2 00	2 00	2 00
Fuller	do	2 00	2 00	2 00	2 00	2 00	2 00
Shearer	do	1 50	1 50	1 50	1 50	1 50	1 50
Dyer	do	3 00	3 00	3 00	3 00	3 00	3 00
Dyer's helper	do	1 75	1 75	1 75	1 75	1 75	1 75
Gigger	do	2 00	2 00	2 00	2 00	2 00	2 00
Laborer	do	1 50	1 50	1 50	1 50	1 50	1 50

REMARKS.—The firm making this return is engaged in the manufacture of blankets, flannels, tweeds, and cassimeres. The establishment has been in existence as a woolen-mill since 1863, though the present management dates only from 1875, and the figures are given only from that date.

Over-time is frequently made, for which the employes receive extra pay at regular rates.

The operatives are privileged to purchase the products of the mill at reduced prices; but this allowance would increase their wages but slightly, and has been disregarded in making up the tables.

Monthly payments are the rule, 50 per cent. in cash and 50 per cent. in store-orders. Prior to 1879 the company owned the store upon which the orders were issued, but since that date the store has been discontinued, and orders on other firms are given.

All classes work 10 hours a day. It is believed that a reduction in hours would not prove beneficial to employer or employe.

The works have been operated an average of 7 months a year. There have been no stoppages arising from labor disputes.

A very complete statement as to selling price, labor cost, etc., is given as follows:

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Flannel, per yard.	Tweed, per yard.	Cassimere, per yard.	Blankets, per pair.	Flannel, per yard.	Tweed, per yard.	Cassimere, per yard.	Blankets, per pair.	Flannel.	Tweed.	Cassimere.	Blankets.
1875	\$0 45 to \$0 55	\$0 75 to \$1 00	\$1 00 to \$1 25	\$3 00 to \$12 50	\$0 08	\$0 12	\$0 24	\$1 05 to \$2 10	Per cent. 20	Per cent. 20	Per cent. 30	Per cent. 25 to 30
1880	45 to 55	75 to 1 00	1 00 to 1 25	3 00 to 12 50	08	12	24	1 05 to 2 10	20	20	30	25 to 30

There has been no change in the efficiency of labor. No improved or labor-saving machinery has been introduced.

The trade is not regarded as dangerous or unhealthful.

J. Clarence Oresson & Co., Norristown, Pennsylvania.

[Continued on next page.]

Classes of employes.	Unit of pay-ment.	DATES.																
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.
Superintendent	Month	\$125 00	\$125 00	\$150 00	\$166 66	\$166 66	\$166 66	\$166 66	\$166 66	\$166 66								
Foreman	do									\$80 00	\$80 00	\$80 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00
Overseers of different departments	do	39 00- 43 33½	39 00	39 00- 43 33½	39 00- 43 33½	45 50- 56 33½	56 33½- 47 66½	48 00	48 00	58 00	58 00	62 79	62 79	62 79	62 79	62 79	62 79	62 79
Carder	Day	2 00	1 75	2 00	2 33½	2 33½	2 50	2 50	2 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Carder, boy	do	47½	44½	45½	44½	44½	58½	45	45	50	50	60½	60½	60½	60½	60½	60½	60½
Spooler	do	62½	58½	58½	58½	58½	60½	60½	60½	75	79	79	79	79	79	79	79	79
Warper	do	1 75	1 75	1 75	2 08½	2 08½	2 50					2 50	2 50	2 50	2 50	2 50	2 50	2 50
Spinner	do	2 00	2 16½	2 16½	2 16½	2 16½	2 50	2 50	2 50	2 50	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00
Dyer	do	1 50	1 50	1 50	1 50	1 50	1 66½	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66
Dyer's helper	do	1 33½	1 33½	1 33½	1 33½	1 33½	1 33½	1 50	1 50	1 50	1 66	1 66	1 66	1 66	1 66	1 66	1 66	1 66
Finisher	do	1 66½	1 66½	1 66½	1 83½	1 83½	2 16½	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25	2 25
Engineer	do	1 66½	1 66½	1 75	1 75	1 75	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00

REMARKS.—This establishment has been in operation since 1864, and manufactures jeans and warp yarn. The wages in the table are net, there being no opportunities for

extra earnings worthy of consideration, and no allowances or deductions.

From 1864 to 1871 it was the practice to pay the employes monthly.

J. Clarence Cresson & Co., Norristown, Pennsylvania—Continued.

Since 1871 payments have been made every two weeks. Employés have always been paid wholly in cash.

The hours of labor are 10 a day, with the exception of the last two years covered by the report, when the mill did not run after dark, thereby losing about half a day per week. The slight reduction in hours has decreased production, but has had no bad effect on the employés—it has given the youth an opportunity to improve their minds.

The mill has been in operation an average of 10 months a year since 1864, except between 1870 and 1875, when it averaged about 9½ months per year, the cause of idleness being light demand for goods. Strikes have been rare and of short duration.

The selling price and labor cost of products are as follows:

Year.	SELLING PRICE.		LABOR COST.	
	Yarn, per pound.	Jeans, per yard.	Yarn, per pound.	Jeans, per yard.
1864-1870.....	\$1 00 to \$0 60	\$0 80 to \$0 45	\$0 05	\$0 07½
1875.....	30	32 to 40	4½	5½
1880.....	18½ to 20	18 to 25	3¾	4

There has been no change in the efficiency of labor, and no labor-saving machinery has been introduced.

The trade is regarded as very healthful.

An establishment in Pennsylvania.

[Continued on next page.]

Classes of employés.	Unit of payment.	DATES.						
		1880.	1879.	1878.	1877.	1876.	1875.	1874.
Superintendent.....	Month..	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00	\$05 00
Overseers of different departments.....	do	64 22- 104 00	54 86- 104 00	50 70- 104 00	50 70- 104 00	55 00- 104 00	58 50- 93 60	64 48- 93 34
Wool-sorter.....	Day ...	1 80	1 40	1 42	1 43	1 44	1 39	1 50
Picker.....	do	1 28	1 27	1 25	1 25	1 25	1 25	1 31
Carder.....	do	1 90	1 63	1 48	1 48	1 68	1 57	1 56
Carder, boy.....	do	40- 62	36- 47	35- 47	35- 47	38- 51	40- 54	44- 50
Warper.....	do	1 93	1 78	1 72	1 72	1 88	1 90	2 10
Spinner.....	do	60- 1 32	50- 1 27	48- 1 25	48- 1 40	1 02	1 77	2 02
Weaver.....	do	90	88	89	77	83	87	90
Loom-fixer.....	do	2 02	1 80	1 90	1 78	1 84	1 80	1 90
Fuller.....	do	1 15	92	1 00	1 00	1 12	1 16	1 20
Shearer.....	do	05	05	02	60	60	80	80
Scourer.....	do	1 15	98	1 00	1 00	1 12	1 16	1 20
Dyer.....	do	4 00	4 00	4 00	4 00	4 00	3 50	3 47
Dyer's helper.....	do	1 14	1 06	1 00	1 06	1 16	1 20	1 35
Gigger.....	do	1 15	98	1 00	1 00	1 12	1 16	1 20
Finisher.....	do	1 15	98	1 00	1 00	1 12	1 16	1 20
Engineer.....	do	1 05	1 80	1 74	1 74	1 80	2 12	2 50
Machinist.....	do	2 16	2 00	1 80	1 90	2 15	2 25	2 50
Carpenter.....	do	1 68	1 60	1 52	1 52	1 65	1 70	1 07
Teamster.....	do	1 50	1 25	1 10	1 00	1 15	1 50	1 75

REMARKS.—The works at present occupied by the firm making this return were established in 1873, and produce fancy cassimeres.

In very busy seasons, which sometimes last two months a year, the employés have made an hour and a half extra time a day. The extra earnings, for which opportunity is thus afforded, have been included in the table.

Payments are monthly, from two-thirds to three-fourths being in cash and the balance in store-orders, though their acceptance is not compulsory.

The hours of labor are 10 a day. As of the 215 persons employed 127 are females and 41 youths under eighteen—that is, 78 per cent. of the whole—it is thought that an increase of hours would not increase production proportionately.

The following represents the percentage of full time the weavers have been employed:

Year.	Percentage.
1874.....	81
1875.....	88
1876.....	89
1877.....	74
1878.....	65
1879.....	87
1880.....	97

The following table gives the selling price and labor cost per

pound, and percentage of wages to cost of fancy cassimeres, the goods weighing from 7 to 30 ounces per yard:

Year.	Selling price.	Labor cost.	Percentage of wages to cost.
1874.....	\$1 57 ¹⁰ / ₁₀₀	\$0 26	Per cent. 18
1875.....	1 44 ⁰⁰ / ₁₀₀	21 ⁰ / ₁₀₀	15
1876.....	1 31 ⁰⁰ / ₁₀₀	20 ⁰ / ₁₀₀	17
1877.....	1 14 ⁰⁰ / ₁₀₀	18 ⁰ / ₁₀₀	16
1878.....	1 00	18 ⁰ / ₁₀₀	17
1879.....	1 07 ⁰⁰ / ₁₀₀	18 ⁰ / ₁₀₀	19
1880.....	1 30 ⁰⁰ / ₁₀₀	19 ⁰ / ₁₀₀	15

The above selling prices and labor cost are per pound. Per yard the selling price would be from 50 cents to \$2 50. Goods, it is stated, cost almost in exact proportion to their weight. If cost of yards is wanted it will be found by taking the percentage the weight in ounces per square yard bears to 16, and multiplying by the labor cost given above.

Interest on capital is the only element omitted in computing total cost.

The works have been virtually in constant operation, the slight irregularity which has occurred being caused by accidents to machinery and dependence on foreign countries for fashions. There have been no strikes or lockouts.

An establishment in Rhode Island—Continued.

Employés are provided with houses and gardens at low rents, and are privileged to purchase the products of the mill at wholesale prices. In March, 1880, 5 per cent. on the net earnings of each individual was paid to such as had been in the company's employ 7 months during 1879. In other words, there was established a system of industrial partnership and profit-sharing. None of these allowances have been considered in making up the table of wages.

Employés are paid all in cash. The use of store-orders was abandoned many years ago, and before the memory of the present proprietors. Payments were quarterly up to 1865, since which time they have been monthly.

The statement regarding the hours of labor goes back to 1850, from which date to 1855 all classes worked 12 hours; from 1855 to 1875, 11 hours; since 1875, 10½ hours.

From 1871 to 1875 the works were in operation 10½ months per year; from 1876 to 1880, 10½ months; and in the census year 12 months. The cause of the idleness is stated to be tariff agitation and high duties on wool. No strikes or lockouts have occurred for 20 years.

There has been a decrease in the efficiency of labor. This has arisen from the reduction of the standard of a day's work and the large proportion of foreign operatives now employed.

It is stated that the variety of goods produced is so great, owing to change in styles of shawls and the variation in weight and quality of worsteds and cassimeres, as to make the comparison of prices from year to year not strictly reliable.

Self-operating mules, card-feeders, drying-machines, hydro-extractors, and steam-tubing have been introduced.

The effect of these has been to increase production, to decrease relatively the number of hands employed, and to increase their wages. Self-operating mules have reduced the cost of spinning one-half.

The following statement of selling prices of some of the articles produced is given:

Year.	Midals shawls, 72 by 144, each.	Green T shawls, 63 by 120, each.	Green T shawls, 67½ by 135, each.	Heavy cassimere, 6-4, per yard.
1855.....			\$5 25	
1861.....	\$6 50			
1866.....	9 50	\$6 50	7 50	
1870.....	7 75	3 75	5 75	
1875.....	6 00	4 00		\$1 50
1880.....	6 00	3 75		1 25

The statement regarding healthfulness and accidents is as follows: The woolen-manufacturing business is probably more healthful than most other industries requiring the same confinement. The rooms are free from deleterious dust, and the health of the operatives is good. There are occasional accidents, generally due to carelessness; only one fatal accident, however, has occurred in 40 years, less serious ones happening at long intervals.

Beaver Co-operative Wool Manufacturing Association, Beaver, Utah Territory.

Classes of employés.	Unit of payment.	DATES.										
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.
Superintendent.....	Month..	\$125 00	\$125 00	\$125 00	\$150 00	\$150 00	\$150 00	\$150 00	\$150 00	\$200 00	\$166 66	.....
Foreman.....	do	125 00	125 00	125 00	125 00	125 00	125 00	125 00	125 00	125 00	125 00	.....
Overseers of different departments.	do	72 80	72 80	72 80	72 80	72 80	72 80	72 80	72 80	72 80	72 80	\$73 80
Wool-sorter.....	Day	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40
Picker.....	do	1 50	1 50	1 50	1 50	2 00	2 00	2 00	2 00	2 00	2 00	.....
Carder.....	do	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80
Carder, boy.....	do	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	.....
Spooler.....	do	75	75	75	75	75	75	75	75	75	75	.....
Warper.....	do	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40
Spinner.....	do	2 60	2 60	2 60	2 60	2 60	2 60	2 60	2 60	2 60	2 60	2 60
Weaver and loom-fixer.....	do	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	.....
Scourer, fuller, and shearer.....	do	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	3 00	.....
Dyer and gigger.....	do	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40	2 40
Dyer's helper.....	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	.....
Machinist.....	do	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	4 00	.....
Carpenter.....	do	4 00	4 00	4 40	4 00	4 00	4 00	4 00	4 00	4 00	4 00	.....

REMARKS.—This mill was established in 1866, and manufactures doeskins, kerseys, dress flannels, jeans, and linseys.

Employés are subject to no expense for tools, etc.

Payments have been made in part each week, with settlement in full at the end of the month. Employés have been paid wholly in merchandise since 1873, the system of cash payments having been discontinued because of the failure of the company to sell their manufactures for cash.

Ten hours of labor a day has been the rule.

From 1875 to 1880 the works were in operation an average of 10½ months per year, the causes of idleness being lack of material, breaks in reservoir (caused by freshets), and repairs.

There has been an increase in the efficiency of labor arising from the employment of more experienced workmen.

The following figures of selling price, labor cost, and percentage of wages to cost are based on the barter prices or the prices that are received for the goods when exchanged for other merchandise. Cash prices would be from one-quarter to one-third less:

Year.	SELLING PRICE.				LABOR COST.				PERCENTAGE OF WAGES TO COST.			
	Doeskin, per yard.	Kersey, per yard.	Dress flannel, per yard.	Jeans, per yard.	Doeskin, per yard.	Kersey, per yard.	Dress flannel, per yard.	Jeans, per yard.	Doeskin, Per cent.	Kersey, Per cent.	Dress flannel, Per cent.	Jeans, Per cent.
1875.....	\$1 75	\$1 20	\$0 85	\$0 90	\$0 63	\$0 46	\$0 38½	\$0 40½	58½	50½	56½	58
1880.....	1 75	1 20	85	90	63	46	38½	40½	58½	50½	56½	58

Burlington Woolen Company, Colchester, Vermont.

Classes of employes.	Unit of payment.	DATES.									
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
Overseers of different departments.	Month	\$52 00	\$65 00	\$58 50	\$52 00	\$65 00	\$71 50	\$71 50	\$71 50	\$71 50	\$71 50
Wool-sorter	Day	1 38	1 40	1 55	1 47	1 77	2 00	1 71	1 85½	1 90½	1 74
Picker	do	93	93	95	93	1 04	1 17	1 08	1 19	99	1 07
Carder	do	77	77	82	78	90	94	86	87	85	84
Spooler	do	38	33	33	33	33	33	30	36	30	30
Warper	do	70	65	65	60	60	60	80	72	72	70
Spinner	do	76	67	74	72	85	97	93	90	98½	1 01
Weaver	do	81	75	76	73	83	84	77	83	72	87
Loom-fixer	do	1 07	1 03	1 30	1 50	1 75	1 75	2 00	2 00	2 00	2 25
Fuller	do	1 02	1 02	1 06	1 05	1 24	1 84	1 23	1 29	1 19	1 07
Shearer	do	94	88	1 03	80	1 00	1 07	95	1 01	85	91
Scourer	do	1 10	1 05	1 10	1 10	1 12½	1 12	1 25	1 25	1 12½	1 12½
Dyer	do	1 30	1 34	1 40	1 37	1 77	1 78	1 00	1 72	1 64	1 58
Dyer's helper	do										
Gigger	do	99	1 01	1 06	99	1 17	1 28	1 16	1 13	99	92
Engineer	do	4 50	4 05	4 50	4 50	4 50	4 50	5 00	5 00	5 00	4 00
Machinist	do	1 75	1 50	1 75	1 85	1 75	1 75	2 00	2 25	2 25	2 25
Carpenter	do	1 75	1 25	1 50	1 50	2 00	2 00	2 00	2 25	2 25	2 25
Teamster	do	1 20	1 15	1 12½	1 28	1 46	1 46	1 50	1 50	1 50	1 50
Laborer	do	1 00	90	80	1 00	1 00	1 25	1 25	1 25	1 25	1 25

Classes of employes.	Unit of payment.	DATES.									
		1870.	1860.	1868.	1867.	1866.	1865.	1864.	1863.	1862.	1861.
Overseers of different departments.	Month	\$78 00	\$65 00	\$65 00	\$65 00	\$58 50	\$52 00	\$52 00	\$52 00	\$52 00	
Wool-sorter	Day	1 75	1 75	1 85	2 25	2 25	2 00	1 65	1 65	1 50	
Picker	do	1 12½	1 10	1 10	1 12½	1 12½	1 12½	70	70	70	
Carder	do	62	62	62	70	70	60	50	50	50	
Spooler	do	36	40	40	45	45	33	33	33	33	
Warper	do	70	72	70	65	65	60	50	50	50	
Spinner	do	1 00	1 50	1 25	1 25	1 25	1 00	1 00	96	96	
Weaver	do	1 00	1 00	1 00	87	75	70	65	60	54	
Loom-fixer	do	2 25	1 75	1 75	1 44	1 44	1 37½	1 37½	1 25	1 25	
Fuller	do	1 00	1 12½	1 12½	1 12½	1 12½	1 12½	78	75	75	
Shearer	do	90	91	70	70	62	62	40	40	30	
Scourer	do	1 15	1 25	1 20	1 12½	1 25	1 25	70	70	70	
Dyer	do	1 12½	1 20	1 20	1 25	1 12½	1 12½	77	70	70	
Dyer's helper	do										
Gigger	do	80	95	1 00	1 00	1 12½	1 12½	70	70	70	
Engineer	do	4 00	4 00	4 00	3 00	3 00	3 00	3 00	3 00	2 25	
Machinist	do	2 25	2 00	2 00	3 00	3 00	3 00	2 50	2 00	1 75	
Carpenter	do	2 25	2 00	2 00	2 50	2 25	2 27½	2 00	1 75	1 50	
Teamster	do	1 50	1 50	1 62½	1 75	1 33½	1 33½	1 00	1 00	1 00	
Laborer	do	1 25	1 25	1 20	1 25	1 25	1 25	75	75	75	

REMARKS.—At these mills, which have been running since 1836, cassimeres, doeskins, police and military goods, cloakings, etc., are manufactured.

Over-time work, which is paid for at the rate of price and a quarter, would at times enable the employes to add 20 per cent. to their regular earnings. This has not been considered in making up the table.

Arrangements are made by which the operatives are enabled to purchase the necessaries of life at very low rates. This consideration, also, would enhance the value of the rates given above.

Payment is nearly all in cash. A few store-orders, which are equivalent to money, are issued to hands who can not buy on thirty days' credit. Payments are made once a month.

From 1835 to 1860 all classes worked 12½ hours a day; for the next five years, 12 hours; until 1875, 11½ hours, and since 1875, 11 hours. The party making the return gives it as the result of twenty-four years' experience that a reduction of hours, unattended by efficient measures for the constant employment of hands, results in a corresponding decrease of production; but where kind and firm measures are applied, 11 hours will yield as large a product as it is possible to obtain from one set of hands.

The works are never idle and have never experienced a strike or a lockout.

The following table regarding selling price, etc., refers to woolen

cloth, such as beavers, doeskins, etc., three-fourths of a yard in width:

Year.	Selling price, per yard.	Labor cost, per yard.	Percentage of wages to cost.
1865....	\$1 69.25	\$0 20.55	Per cent.
1870....	1 13.25	21.55	22½
1875....	1 10.50	22.55	23
1880....	86.50	21.55	26.

The labor cost in 1870 was 1.952 cent; 1875, 2.444 cents; 1880, 2.171 cents.

There has been an increase in the efficiency of carders, spinners, weavers, and dyers. The increase has arisen from competition between factories, resulting in a demand for better goods.

Improved methods and machinery have been adopted from time to time, which has tended to reduce the number of employes, but this effect has been more than counterbalanced by the demand upon the manufacturers to compete with foreign makers in artistic designs and durability of fabric and colors.

The trade is not dangerous but very healthful, the location of this mill and the sanitary precautions observed rendering the health of its operatives particularly good.

McLean Manufacturing Company, Janesville, Wisconsin—Continued.

Classes of employes.	Unit of payment.	DATES.											
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	
Loom-fixer.....	Day	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75	\$1 75
Fuller	do	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50
Shearer	do	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25	1 25
Scourer	do	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½
Dyer's helper.....	do	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½
Gigger	do	87½	87½	87½	87½	87½	87½	87½	87½	87½	87½	87½	87½
Carpenter	do	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
Teamster	do	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½
Laborer.....	do	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½	1 12½

REMARKS.—This factory has been operated since 1850, but the management has been changed several times and the schedule covers only the last eleven years. The products are repellents and union cassimeres.

The opportunities for over-time are very few, and have been considered in the table.

The only allowance is to the watchman, and consists of free house and cow-pasturage.

Payments are monthly and wholly in cash.

All classes work 11 hours a day. This, the proprietor remarks, experience shows to be the best time for employer and employe.

Employment has been constant, with the exception of the loss of one month, in the period covered by the report. There have been no labor disturbances.

The selling prices, labor cost, etc., in 1880 were as follows:

SELLING PRICE.			LABOR COST.		Percentage of wages to cost.
Plain repellents, 6-4 yard.	Fancy repellents, 6-4 yard.	Union cassimere, 3-4 yard.	Repellents, 6-4 yard.	Union cassimere, 3-4 yard.	
\$0 50 to \$0 90	\$0 05 to \$0 90	\$0 00	\$0 18½	\$0 12½	Per cent. 25

There has been no change in the efficiency of labor, and no labor-saving machinery has been introduced.

The trade is reported to be healthful and free from accidents.

Chapman & Hewitt, Menasha, Wisconsin.

Classes of employes.	Unit of payment.	DATES.												
		1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1867.
Superintendent.....	Month ..	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00	\$50 00
Overscers of different departments.	do	65 00	70 00	70 00	75 00	75 00	75 00	70 00	65 00	65 00	65 00	54 60	54 60	54 60
Wool-sorter	Day	1 40	1 40	1 40	1 25	1 25	1 25	2 00	2 50	2 50	2 00	2 00	2 00	2 00
Picker	do	75	75	75	75	70	70	80	75	75	75	75	75	75
Carder	do	2 75	2 75	2 75	3 00	3 00	3 00	3 00	3 00	3 00	2 50	2 50	2 25	2 25
Carder, boy.....	do	75	75	75	75	75	75	75	75	75	75	50	50	50
Spooler	do	50	50	50	50	50	50	50	50	50	50	50	50	50
Warper	do	85	85	85	85	85	85	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Spinner	do	1 50	1 50	1 50	1 50	1 50	1 75	1 50	1 75	1 75	1 75	1 50	1 50	1 50
Weaver, male	do	1 50	1 50	1 50	1 50	1 25	1 50	1 25	1 00	1 00	1 00	1 00	1 00	1 00
Weaver, female	do	80	90	90	90	1 00	1 00	90	75	75	75	75	75	75
Scourer	do	1 25	1 25	1 50	1 50	1 50	1 50	1 50	1 75	1 75	1 75	1 25	1 25	1 25
Dyer	do	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 00	2 00	2 00
Dyer's helper	do	1 25	1 25	1 25	1 00	1 00	1 00	1 00	1 25	1 25	1 25	1 00	1 00	1 00
Laborer	do	1 25	1 25	1 50	1 50	1 50	1 50	1 25	.....	.....	.....	1 25	1 25	1 25

REMARKS.—This mill, manufacturing cloth, flannel, and yarn, was established in 1867.

Since 1876 there have been opportunities each year for the employes to increase the wages, as given in the preceding table, by about 20 per cent., the mill running five hours per day extra from July to December.

Payments have always been monthly, and since 1873 wholly in cash, the use of store-orders being abandoned because the company

had become able to pay in cash, and considered it best for all concerned to do so.

All classes of employes work 11 hours per day.

From 1867 to 1870 the mill ran an average of 10 months a year; from 1871 to 1875, 11 months; and since 1876, 12 months. There have been no strikes or lockouts.

Below are the selling prices and labor cost of the various articles produced, with percentage of wages to total cost of entire product:

Year.	SELLING PRICE.			LABOR COST.			Percentage of wages to cost.
	Flannel, per yard.	Cloth, per yard.	Yarn, per pound.	Flannel, per yard.	Cloth, per yard.	Yarn, per pound.	
1870.....	\$0 45	\$1 00	\$1 00	.....	.....	.....	Per cent.
1875.....	42½	90	90	.....	.....	.....	.....
1880.....	40	85	85	\$0 06½	\$0 13	\$0 12	22

There has been an increase in the efficiency of labor, resulting from experience. The trade is considered healthful.