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WAGES AND HOURS OF LABOR SERIES

**HOURS AND EARNINGS IN ANTHRACITE  
AND BITUMINOUS COAL MINING**

**1922 AND 1924**



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## HOURS AND EARNINGS IN ANTHRACITE AND BITUMINOUS COAL MINING, 1922 AND 1924

### INTRODUCTION

The coal industry in the United States comprises anthracite and bituminous coal mining.

Anthracite or hard coal mining is limited almost entirely to a small area of about 500 square miles in northeastern Pennsylvania. The total production of anthracite in that State in 1924, according to the United States Geological Survey, was 87,926,862 net tons and the total number of wage earners was 160,009. About 96 per cent of this production was in five counties—Luzerne, Schuylkill, Lackawanna, Northumberland, and Carbon. The present study covers 56 collieries employing 44,500 anthracite wage earners, of whom 34,136, or 77 per cent, were employed underground or inside the mines, and 10,364, or 23 per cent, were employed on the surface or outside the mines. In the 1922 study, 21,999 anthracite wage earners were included, of whom 78 per cent were employed underground.

Bituminous or soft coal is mined in 31 States and Alaska, the total production for 1924 being 483,686,538 net tons and the total number of wage earners in the industry being 619,604. However, about 92 per cent of the production and about 90 per cent of the total employees were in 11 States. The present study covers 140,719 wage earners (23 per cent of the total), of which 124,691, or 89 per cent, were employed underground and 16,028, or 11 per cent, were employed on the surface. In the 1922 study 52,748 bituminous wage earners were covered, of whom 89 per cent were employed underground. The production of bituminous coal and the number of wage earners engaged in such production in 1924, according to the Geological Survey, are shown in Table 1 for each of the 11 States referred to:

TABLE 1.—NUMBER OF BITUMINOUS MINES (EXCLUSIVE OF WAGON MINES), PRODUCTION, NUMBER OF EMPLOYEES, AND NUMBER OF EMPLOYEES COVERED IN PRESENT STUDY, 1924, BY PRINCIPAL STATES

State	Number of mines <sup>1</sup>	Total production <sup>1</sup>	Number of wage earners	
			Total <sup>1</sup>	Covered in present study
Pennsylvania.....	2, 122	130, 633, 773	169, 322	42, 796
West Virginia.....	1, 220	101, 662, 897	102, 263	25, 473
Illinois.....	488	68, 323, 281	89, 363	22, 749
Kentucky.....	660	45, 147, 204	55, 766	15, 003
Ohio.....	750	30, 473, 007	44, 229	10, 545
Indiana.....	248	21, 480, 213	27, 558	5, 177
Alabama.....	238	19, 130, 184	27, 956	8, 495
Virginia.....	115	10, 693, 464	12, 679	1, 908
Colorado.....	231	10, 444, 098	12, 954	3, 797
Tennessee.....	139	4, 556, 555	9, 365	2, 902
Kansas.....	228	4, 247, 733	8, 561	1, 874
Total, 11 States.....	6, 439	446, 792, 409	559, 956	140, 719
Total, all States.....	7, 586	483, 686, 538	619, 604	.....

<sup>1</sup> United States Geological Survey figures.

The data obtained for each employee covered by the present study included the number of starts, or days, hours worked, and earnings in a half-month pay period in October, November, or December, 1924, except in a few instances where the survey had to be carried on in the early part of 1925. The information was taken directly from the pay rolls and other records of the mines of coal companies in the 11 States by agents of the Bureau of Labor Statistics, except in a few instances, where the companies preferred to make copies of the records for the bureau. Such companies were furnished instructions as to what the bureau desired and also the blanks used by agents in reporting data to the bureau.

Nearly all of the mining companies from whom data were requested cooperated with the bureau to the fullest extent. In a few instances data were refused, but such refusal, except in one State, caused little or no inconvenience or delay as data were obtained for a sufficient number of employees of other mines to fill the quota for each State. In Virginia, however, several large companies, each operating a number of important mines in the State, did not cooperate. For this reason the reports for Virginia cover only 15 per cent of the total number of wage earners employed in the industry in that State in 1924, and the averages for Virginia, therefore, may not be as representative as the averages for the other States. The number of wage earners for whom data were obtained in other States ranged from 19 per cent of the total number in the industry in Indiana, where many mines were not in operation at the time of inquiry, to approximately 30 per cent in Colorado.

In the tables given in this bulletin averages are presented separately for anthracite wage earners and for bituminous wage earners by occupations. In order to distinguish the occupations of underground wage earners from those of employees in surface occupations, the former are grouped under the head "Inside mine" and the latter under "Outside mine."

## AVERAGE HOURS AND EARNINGS

### MINERS, MINERS' LABORERS, AND LOADERS

Table 2 shows the average number of starts and the average hours and earnings for each of six anthracite and six bituminous underground or "inside mine" occupations for 1922 and 1924. The employees in these occupations do the mining and loading of coal, rock, and dirt into mine cars. The term "starts," as here used, means the number of days or parts of days on which the wage earners in these occupations worked in a half-month pay period.

In 1924 the six anthracite occupations listed had a total of 23,715 wage earners, or 53 per cent of the total of 44,500 employees in all occupations for which data were secured, and the six bituminous occupations had a total of 91,167, or 65 per cent of the 140,719 employees in all occupations for which data were obtained. The average hours and earnings of wage earners in the six anthracite occupations are based on (1) time at the face excluding time for lunch, (2) time at face including time for lunch, and (3) total time in mine including time for lunch and time of travel in mine from the mine opening to the face and return. As a considerable number of employees in the six bituminous occupations were reported as having *no* stated

length of time for lunch and as eating while at work or while waiting for mine cars, hours at the face exclusive of lunch time could not be determined for the employees of many mines, and therefore no averages are shown for bituminous employees in these occupations for time at face with lunch time excluded.

The term "face," as here used, means the perpendicular surface of the seam of coal on which miners work, and at or near which loaders are working.

*Time for lunch* is the difference between the average hours per start based on time at face *excluding lunch* and those based on time at face, *including lunch*. (Table 2 shows that, excluding time for lunch the 11,778 contract miners of the 55 anthracite collieries covered in 1924 were at the face an average of 6.3 hours per start or day, while including time for lunch they were at the face an average of 6.8 hours per start or day, the difference being 0.5 hour per start or day, or 30 minutes for lunch.

*Travel time in mine* from opening into mine to the face and return is the difference between the average hours per start, or day, based on the *time at face, including time for lunch* and those based on *total time in colliery or mine*. Including time for lunch these 11,778 contract miners were at the face an average of 6.8 hours per start or day, while including travel time in mine and time for lunch their average time in colliery was 7.5 hours per start, or day, the difference being 0.7 hour, or 42 minutes average time of travel in mine per day.

Reading further in the table, it is seen that these 11,778 contract miners made an average of 10.8 starts or worked on 10.8 calendar days in the half-month pay period.<sup>1</sup> In the half-month pay period they were at the face or their place of work in the collieries 68.5 hours exclusive of 30 minutes per start (or day) for lunch and 73.9 hours, including the time for lunch, and were in the collieries an average of 81.4 hours, including time for lunch and 42 minutes per start or day of travel time in mine from shaft to the face and return. They earned an average of \$1.432 per hour based on hours at the face excluding time for lunch, \$1.327 based on hours at face including time for lunch, and \$1.204 based on total time in colliery. They earned an average of \$9.07 per start or calendar day and \$98.07 in the half-month pay period. The averages for other occupations may be read in like manner.

Comparing 1922 and 1924 averages for anthracite contract miners, it will be observed that average starts and hours were more and the average earnings less in 1922 than in 1924. The increase in average earnings is due in part to the September, 1923, increase of 10 per cent in wage rates and in part apparently to greater production per man per hour than in 1922, and also possibly to the inclusion of data for employees of 31 collieries in 1924 that were not included in the 1922 study.

Company miners, company miners' laborers, consideration miners, and consideration miners' laborers are time workers, being paid at a specified rate per hour or day. At times they may do other work or be paid piece rates, earning more per hour than their regular hourly rate. This often occurs with consideration miners, who are shown as having an average *rate* of 86.1 cents per hour, as compared with an average *earning* of 93.3 cents per hour, based on time at

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<sup>1</sup> One colliery had no contract miners, the work being done by consideration miners.

face excluding time for lunch. Average rates of wages per hour are therefore shown for these occupations in order that they may be compared with the average earnings per hour. As contract miners and contract miners' laborers are not time workers, average rates of wages per hour are not shown for them.

Comparing 1922 and 1924 averages for hand loaders, pick or hand miners, and machine miners in bituminous mining, in Table 2 it is seen that the average starts and hours in half month and average earnings per hour, per start, and in half month were less in 1924 than in 1922. The decreases were due to a general depression in bituminous mining in 1924 resulting, as reported by officials of companies, in less work at many mines in several States; to reductions in wage rates between January, 1922, and the fall of 1924 by a very large percentage of the mines in four or five States from which 1924 data were obtained, and also possibly to the inclusion in the 1924 figures of data for mines of two States (Tennessee and Virginia) and a large number of mines in other States that were not included in the 1922 data.

**TABLE 2.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF MINERS AND LOADERS, INSIDE MINE, 1922 AND 1924, BY KIND OF COAL AND OCCUPATION**

Kind of coal and occupation	Year	Number of—		Average number of starts (days) in half month	Average hours—						Average rate of wages per hour at face, excluding lunch	Average earnings—				
		Mines	Employees		In half month, based on—			Per start, based on—				Per hour, based on—			Per start (day)	In half month
					Time at face		Time in mine	Time at face		Time in mine		Time at face		Time in mine		
					Excluding lunch	Including lunch		Excluding lunch	Including lunch			Excluding lunch	Including lunch			
<b>ANTHRACITE</b>																
<b>Laborers:</b>																
Company miners'-----	1922	25	774	11.2	91.7	97.5	105.1	8.2	8.7	9.4	\$0.621	\$0.629	\$0.592	\$0.549	\$5.15	\$57.66
	1924	47	1,699	10.2	84.1	89.4	96.5	8.2	8.7	9.4	.686	.696	.655	.607	5.72	58.57
Consideration miners'-----	1922	11	339	11.4	90.0	96.3	103.0	7.9	8.4	9.0	.655	.654	.611	.572	5.16	53.87
	1924	22	748	10.6	86.1	91.4	97.7	8.1	8.6	9.2	.765	.767	.722	.676	6.21	65.98
Contract miners'-----	1922	29	3,383	9.8	65.3	70.0	76.2	6.7	7.2	7.8	-----	.829	.773	.711	5.55	54.15
	1924	53	6,794	10.1	67.3	72.4	79.1	6.7	7.2	7.8	-----	.971	.903	.826	6.47	65.39
<b>Miners:</b>																
Company-----	1922	25	775	11.1	90.6	96.1	103.2	8.2	8.7	9.3	.683	.687	.657	.612	5.71	63.17
	1924	47	1,735	10.3	84.5	89.8	96.7	8.2	8.7	9.3	.757	.795	.747	.694	6.49	67.15
Consideration-----	1922	12	626	12.9	98.5	104.8	110.5	7.7	8.1	8.6	.755	.833	.831	.787	6.76	87.04
	1924	22	961	10.9	84.7	90.1	96.3	7.8	8.3	8.9	.861	.933	.876	.820	7.26	78.99
Contract-----	1922	29	6,209	11.5	73.8	79.6	87.4	6.4	6.9	7.6	-----	1.173	1.088	.991	7.53	86.60
	1924	55	11,778	10.8	68.5	73.9	81.4	6.3	6.8	7.5	-----	1.432	1.327	1.204	9.07	98.07
<b>BITUMINOUS</b>																
<b>Loaders, hand</b> -----	1922	176	22,560	8.7	-----	66.2	71.5	-----	7.7	8.3	-----	-----	.902	.836	6.90	59.75
	1924	514	61,936	8.1	-----	63.3	68.6	-----	7.8	8.5	-----	-----	.811	.748	6.32	51.29
<b>Miners, hand or pick</b> -----	1922	127	8,429	9.2	-----	71.0	77.5	-----	7.7	8.4	-----	-----	.840	.769	6.47	59.62
	1924	291	21,424	8.5	-----	65.6	71.2	-----	7.7	8.4	-----	-----	.808	.744	6.26	53.02
<b>Miners, machine</b> -----	1922	161	2,371	9.5	-----	75.4	81.5	-----	7.9	8.6	-----	-----	-----	1.274	1.180	10.10
	1924	485	6,499	8.8	-----	72.9	78.6	-----	8.3	8.9	-----	-----	1.163	1.079	9.65	84.79
<b>Loaders, contract</b> -----	1924	24	170	9.5	-----	79.9	84.3	-----	8.4	8.9	-----	-----	.929	.881	7.82	74.26
<b>Loaders, machine</b> -----	1924	10	102	9.4	-----	84.3	90.4	-----	9.0	9.6	-----	-----	.690	.644	6.20	58.20
<b>Miners, gang</b> -----	1924	40	1,086	8.1	-----	65.6	71.1	-----	8.1	8.8	-----	-----	1.187	1.094	9.66	77.79

AVERAGE HOURS AND EARNINGS

**EMPLOYEES IN OCCUPATIONS OTHER THAN MINERS, MINERS' LABORERS, AND LOADERS**

As already stated, the averages in Table 2 are for employees of occupations inside the mines who work at or near the face of the workings, mining and loading coal, rock, and dirt into mine cars. Table 3 presents 1922 and 1924 average starts, or days, and average hours and earnings for employees in other inside occupations and for each outside occupation. The employees in these occupations are usually time workers, being paid rates per hour, day, or week. Their average hours and earnings are based on hours actually worked, no time for lunch or for travel in mine being included in the hours used in the computations.

In this table the averages for anthracite employees in the occupations inside the mines in 1922 are for 5,014 wage earners, or 29 per cent of the total of the 17,120 inside workers covered, and in 1924 for 10,421, or 31 per cent of the total of the 34,136 inside workers covered. The averages for bituminous employees in the occupations inside the mines in 1922 are for 13,379, or 29 per cent of the total of 46,739 inside workers, and in 1924 for 33,524, or 27 per cent of the total of 124,691 inside workers.

The averages for anthracite employees in the occupations outside the mines are for 4,879, or 22 per cent of the total of 21,999 in all inside and outside occupations in the mines included in the 1922 study, and for 10,364, or 23 per cent of the total of 44,500 included in the 1924 study. The averages for bituminous employees in occupations outside the mines are for 6,009, or 11 per cent of the total of 52,748 in all inside and outside occupations in 1922, and for 16,028, or 11 per cent of the 140,719 in all occupations in the 1924 study.

*Anthracite occupations inside mines.*—Average starts, or days, in the half month for employees in each of these occupations in 1924 range from 10.8 for the 48 blacksmiths to 14.8 for the 350 pump men. The high average for pump men is due to the number working every day in the half month, including Sundays, 113 of the 350 working on 15 days and 145 working on 16 days in the half month covered. Average hours worked in the half month range from 90.1 for timber men to 126.9 for pump men. Average hours per start, or day, range from 8.2 for door tenders (boys), masons, and timber men to 9.4 for motormen. Average earnings in the half month in 1924 range from \$35.64 for door tenders (boys) to \$89.89 for machinists. Average earnings per start, or day, range from \$3.13 for door tenders (boys) to \$6.98 for blacksmiths. Average earnings per hour range from 38.1 cents for door tenders (boys) to 77.5 cents for blacksmiths. *Averages for anthracite occupations outside mines and for bituminous occupations inside and outside mines may be compared in like manner. For State averages in bituminous occupations see Table B (p. 46).*

AVERAGE HOURS AND EARNINGS

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TABLE 3.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY KIND OF COAL, PLACE OF WORK, AND OCCUPATION

Kind of coal, place of work, and occupation	Year	Number of—		Average number of starts (days) in half month	Average hours worked		Average earnings—		
		Collieries or mines	Employees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>ANTHRACITE</b>									
<i>Inside mine</i>									
Blacksmiths.....	1922	12	23	12.7	115.5	9.1	\$79.08	\$6.21	\$0.685
	1924	23	48	10.8	97.0	9.0	75.18	6.98	.775
Bratticemen.....	1922	21	136	12.0	100.6	8.4	66.06	5.53	.657
	1924	43	260	11.5	97.2	8.4	68.87	5.99	.709
Cagers.....	1922	28	196	12.2	119.3	9.8	72.04	5.90	.604
	1924	54	627	11.5	107.2	9.3	71.41	6.20	.666
Car runners.....	1922	22	402	12.2	105.4	8.7	62.35	5.12	.592
	1924	43	745	11.5	100.6	8.7	65.25	5.66	.649
Door tenders (boys).....	1922	26	190	11.7	95.2	8.2	32.56	2.79	.342
	1924	47	368	11.4	93.5	8.2	35.64	3.13	.381
Drivers.....	1922	27	539	11.6	95.5	8.2	55.39	4.78	.580
	1924	52	1,054	11.3	97.8	8.6	61.83	5.46	.632
Engineers.....	1922	24	152	13.9	117.7	8.5	76.14	5.49	.647
	1924	49	296	12.7	112.5	8.8	77.93	6.12	.692
Laborers.....	1922	29	1,426	11.8	99.3	8.4	60.39	5.10	.608
	1924	55	2,388	11.1	95.0	8.6	63.05	5.68	.664
Machinists.....	1922	15	31	14.0	120.9	8.6	82.03	6.85	.678
	1924	26	52	13.5	123.5	9.2	89.89	6.67	.728
Masons.....	1922	16	51	12.9	105.8	8.2	71.65	5.54	.677
	1924	28	104	12.1	98.9	8.2	72.04	5.96	.728
Motormen.....	1922	27	327	12.8	120.9	9.5	78.37	6.14	.648
	1924	50	733	11.4	107.2	9.4	75.32	6.60	.703
Motor brakemen.....	1922	27	310	12.1	110.6	9.1	64.64	5.33	.585
	1924	51	724	11.2	99.9	9.0	63.87	5.72	.639
Pump men.....	1922	26	180	15.9	129.6	8.2	81.29	5.12	.627
	1924	51	350	14.8	126.9	8.6	87.52	5.90	.690
Timber men.....	1922	20	161	10.9	89.1	8.2	60.31	5.52	.677
	1924	48	370	10.9	90.1	8.2	69.75	6.38	.774
Trackmen.....	1922	27	177	13.0	110.1	8.5	74.29	5.71	.675
	1924	55	406	12.0	104.5	8.7	77.39	6.47	.741
Other employees.....	1922	29	713	13.0	116.7	9.0	69.60	5.37	.596
	1924	55	1,896	12.0	106.8	8.9	80.43	6.70	.753
<i>Outside mine</i>									
Ashmen.....	1922	25	67	15.4	135.7	8.8	71.25	4.63	.525
	1924	41	94	14.4	124.3	8.6	73.73	5.11	.593
Blacksmiths.....	1922	29	64	13.5	120.5	8.9	80.38	5.96	.667
	1924	55	142	12.5	113.4	9.1	84.45	6.75	.745
Cagers.....	1922	26	100	12.8	120.3	9.4	64.48	5.05	.536
	1924	52	234	12.1	112.4	9.3	67.29	5.57	.599
Carpenters.....	1922	26	221	12.8	113.9	8.9	75.29	5.88	.661
	1924	56	607	12.3	109.0	8.9	78.53	6.40	.720
Car runners.....	1922	22	87	12.3	106.5	8.6	56.36	4.57	.529
	1924	41	231	10.9	97.2	8.9	56.75	5.19	.584
Dumpers.....	1922	26	85	12.2	111.0	9.1	58.82	4.82	.530
	1924	55	197	12.0	109.0	9.0	63.24	5.23	.586
Engineers.....	1922	29	203	15.0	129.1	8.6	83.39	5.58	.646
	1924	52	441	14.2	122.7	8.6	87.71	6.17	.715
Firemen.....	1922	29	249	15.7	127.8	8.1	76.05	4.84	.595
	1924	51	413	14.7	123.6	8.4	80.66	5.50	.653
Jig runners.....	1922	23	109	13.2	124.1	9.4	62.96	4.77	.507
	1924	47	282	11.9	114.5	9.6	65.50	5.51	.572
Laborers.....	1922	29	1,349	12.1	105.9	8.8	55.77	4.62	.527
	1924	55	2,612	12.0	109.3	9.1	63.10	5.24	.577
Loaders.....	1922	27	187	12.9	113.8	8.8	60.37	4.69	.531
	1924	54	381	11.7	104.4	8.9	61.01	5.20	.584
Machinists.....	1922	27	89	13.7	127.1	9.3	83.20	6.09	.655
	1924	51	244	13.2	122.5	9.3	86.98	6.60	.710
Oilers.....	1922	28	69	13.2	122.9	9.3	64.58	4.90	.525
	1924	50	134	11.8	112.8	9.5	65.64	5.55	.582
Platemen.....	1922	25	181	12.5	106.0	8.5	56.15	4.49	.530
	1924	45	366	11.1	96.1	8.6	54.37	4.89	.566
Repairmen.....	1922	14	94	13.7	116.7	8.5	68.26	4.98	.585
	1924	38	182	11.9	105.9	8.9	66.86	5.61	.631
Slaters (boys).....	1922	26	410	12.2	98.7	8.1	32.91	2.69	.333
	1924	53	1,103	11.6	96.2	8.3	35.68	3.08	.371
Timber cutters.....	1922	28	181	12.3	106.3	8.7	57.10	4.66	.537
	1924	46	240	11.4	96.7	8.5	58.47	5.15	.605
Trackmen.....	1922	22	60	12.1	98.6	8.2	54.13	4.49	.549
	1924	42	127	11.2	100.7	9.0	61.77	5.49	.613
Other employees.....	1922	29	1,074	13.5	127.7	9.5	67.30	5.00	.527
	1924	56	2,334	12.7	113.6	8.9	71.47	5.63	.629

TABLE 3.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY KIND OF COAL, PLACE OF WORK, AND OCCUPATION—Continued

Kind of coal, place of work, and occupation	Year	Number of—		Average number of starts (days) in half month	Average hours worked		Average earnings—		
		Collieries or mines	Employees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>BITUMINOUS</b>									
<i>Inside mine</i>									
Brakemen.....	1922	181	1,333	19.4	77.3	18.2	\$60.18	\$6.41	\$0.779
	1924	547	4,259	8.9	75.0	8.4	53.25	5.96	.710
Bratticemen and timbermen.....	1922	181	986	10.4	85.7	8.1	70.26	6.81	.820
	1924	484	2,521	9.8	81.1	8.3	63.04	6.44	.778
Cagers.....	1922	83	185	10.3	89.4	8.6	77.82	7.52	.871
	1924	198	410	9.6	83.2	8.7	71.53	7.46	.860
Drivers.....	1922	125	2,080	9.5	78.7	8.2	64.84	6.82	.824
	1924	377	4,608	8.8	72.3	8.2	54.08	6.12	.748
Laborers.....	1922	181	2,967	9.9	80.8	8.0	56.30	5.73	.697
	1924	502	7,228	8.9	74.2	8.3	48.74	5.47	.657
Motormen.....	1922	183	1,296	10.1	84.2	8.4	68.62	6.82	.815
	1924	548	3,751	9.7	83.6	8.6	62.89	6.46	.752
Pump men.....	1922	157	452	13.0	110.2	8.5	80.90	6.24	.734
	1924	402	1,015	11.7	103.4	8.8	70.38	6.02	.681
Trackmen.....	1922	198	1,393	10.7	87.3	8.2	72.05	6.77	.826
	1924	587	4,026	9.7	81.2	8.3	59.83	6.14	.737
Trappers (boys).....	1922	103	393	9.1	72.3	7.9	34.09	3.75	.472
	1924	273	925	8.3	66.7	8.0	27.24	3.27	.408
Other employees.....	1922	188	2,294	10.9	91.4	8.3	75.49	6.97	.826
	1924	538	4,786	10.5	89.7	8.5	73.32	6.97	.817
<i>Outside mine</i>									
Blacksmiths.....	1922	191	339	11.7	102.0	8.6	87.42	9.47	.857
	1924	581	969	10.7	92.0	8.6	71.75	6.72	.780
Carpenters and car-repair men.....	1922	157	427	11.1	94.7	8.4	71.23	6.42	.752
	1924	474	1,354	10.4	89.6	8.6	61.96	5.93	.691
Engineers.....	1922	129	267	13.9	121.3	8.7	99.50	7.21	.820
	1924	333	732	12.9	114.4	8.9	91.56	7.09	.801
Firemen.....	1922	79	327	13.9	117.1	8.5	87.24	6.48	.745
	1924	212	636	12.6	110.7	8.8	78.83	6.25	.712
Laborers.....	1922	195	2,407	10.1	84.8	8.4	55.06	5.49	.649
	1924	591	7,514	9.5	81.2	8.6	46.73	4.93	.575
Other employees.....	1922	193	2,242	11.8	101.3	8.5	70.02	5.96	.691
	1924	578	4,823	11.1	99.1	8.9	62.73	5.64	.633

<sup>1</sup> Not including data for 8 employees whose starts were not reported.

<sup>2</sup> Not including data for 79 employees whose starts were not reported.

<sup>3</sup> Not including data for 2 employees whose starts were not reported.

<sup>4</sup> Not including data for 89 employees whose starts were not reported.

<sup>5</sup> Not including data for 237 employees whose starts were not reported.

<sup>6</sup> Not including data for 6 employees whose starts were not reported.

<sup>7</sup> Not including data for 30 employees whose starts were not reported.

<sup>8</sup> Not including data for 137 employees whose starts were not reported.

<sup>9</sup> Not including data for 9 employees whose starts were not reported.

<sup>10</sup> Not including data for 22 employees whose starts were not reported.

<sup>11</sup> Not including data for 24 employees whose starts were not reported.

<sup>12</sup> Not including data for 51 employees whose starts were not reported.

<sup>13</sup> Not including data for 75 employees whose starts were not reported.

### CLASSIFIED AVERAGE EARNINGS PER HOUR

Average earnings per hour for each of the 11,778 contract miners and 6,794 contract miners' laborers in anthracite mining included in 1924 have been computed by dividing his net earnings in the half-month pay period for which data were taken (1) by his total hours at the face in the half month including time for lunch, and (2) by his total hours in the colliery in the half month including time for lunch and time of travel in the colliery. The first method gives average earnings per hour for each man based on time in colliery exclusive of time of travel, and the second gives his average earnings per hour based on time in colliery including time of travel. Average earnings per hour by the first method are greater than by the second owing to the fact that the time used in the former does not include the unproductive time of travel in mine which is included in the latter.

Average earnings per hour have also been computed in like manner for each of the 61,936 hand loaders, 21,424 pick or hand miners, 6,499 machine miners in bituminous mining in 1924.

The term "net earnings in half month," as used above, means the remainder after deductions for powder, dynamite, or other explosives, fuses and caps used by miners and loaders in blasting coal from seams, and for tool sharpening or blacksmithing. Deductions for these costs were made from the earnings of employees who paid them. A very few companies do not charge employees for explosives or tool sharpening.

Employees in the above-named occupations, except in a very few mines, are tonnage workers, being paid rates per ton. Averages have also been computed for each employee in 10 of the most important anthracite and 8 of the most important bituminous occupations of time workers by dividing earnings in the half month by hours actually worked. Time workers are paid rates per hour, per day, or per week.

Table 4 shows the number and the per cent (actual and cumulative) of contract miners and of contract miners' laborers whose average earnings per hour, based on time at the face including time for lunch, and based on total time in collieries, were within each classified amount. Table 5 (p. 11) shows like classification of hand loaders, hand or pick miners, and machine miners in bituminous mining in 1924.

#### ANTHRACITE TONNAGE WORKERS

Based on time at the face including time for lunch, 195, or 2 per cent of the 11,778 contract miners covered in 1924, earned 60 and under 70 cents per hour. Based on the total time in colliery including time for lunch and time of travel in colliery, 375 of them, or 3 per cent, earned 60 and under 70 cents per hour. Based on the time at the face, 423, or 4 per cent, earned less than 70 cents per hour, while based on the total time in the colliery, 711, or 6 per cent, earned less than that amount. Based on time at the face, 54 per cent earned less than \$1.30 per hour, while based on total time in the colliery, 66 per cent earned less than that amount. Based on time at the face, 98 per cent earned less than \$3 per hour, while based on total time in the colliery, 99 per cent earned less than \$3 per hour. Based on time at the face, 2 per cent earned \$3 and over per hour, while based on time in collieries, 1 per cent earned that amount.

Reading the figures for the 6,794 contract miners' laborers, it is seen that 32 per cent of them earned an average of 80 and under 90 cents per hour, based on either the time at the face or the time in the collieries, and that 56 per cent, or more than half of them, earned less than 90 cents per hour based on time at the face, while 78 per cent earned less than that amount, based on total time in collieries.

Both actual and cumulative percentages have been computed to the nearest full number, the fractional part of 1 per cent being dropped when less than one-half and increased to one when one-half or more. The cumulative percentages for the contract miners' laborers based on time at face including lunch show that 3,820, or 56 per cent of them, earned less than 90 cents per hour. It will be observed in the column in Table 4 giving cumulative percentages that 100 is in some instances shown two or more times. The 100 in each case except the one at the foot of the column may be any fractional part between  $99\frac{1}{2}$  and 100.

TABLE 4.—NUMBER AND PER CENT OF CONTRACT MINERS AND CONTRACT MINERS' LABORERS WHOSE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—ANTHRACITE COAL MINING

Classified earnings per hour	Contract miners (55 collieries)						Contract miners' laborers (53 collieries)					
	Number based on—		Per cent based on—				Number based on—		Per cent based on—			
			Actual—		Cumulative—				Actual—		Cumulative—	
	Time at face, including lunch	Time in colliery, including lunch and travel	Time at face, including lunch	Time in colliery, including lunch and travel	Time at face, including lunch	Time in colliery, including lunch and travel	Time at face, including lunch	Time in colliery, including lunch and travel	Time at face, including lunch	Time in colliery, including lunch and travel		
Under 30 cents.....	15	20	(1)	(1)	(1)	(1)	1	(1)	(1)	(1)	(1)	
30 and under 40 cents.....	27	44	(1)	(1)	(1)	1	2	10	(1)	(1)	(1)	
40 and under 50 cents.....	74	104	1	1	1	1	30	50	(1)	1	1	
50 and under 60 cents.....	112	168	1	1	2	3	80	156	1	2	2	
60 and under 70 cents.....	195	375	2	3	4	6	278	693	4	10	6	
70 and under 80 cents.....	435	718	4	6	7	12	1,283	2,259	19	33	25	
80 and under 90 cents.....	787	1,143	7	10	14	22	2,147	2,147	32	32	56	
90 cents and under \$1.....	1,056	1,332	9	11	23	33	1,504	808	22	12	78	
\$1 and under \$1.10.....	1,132	1,386	10	12	33	45	720	348	11	5	89	
\$1.10 and under \$1.20.....	1,257	1,297	11	11	43	56	394	116	6	2	95	
\$1.20 and under \$1.30.....	1,228	1,137	10	10	54	66	130	83	2	1	97	
\$1.30 and under \$1.40.....	1,050	937	9	8	63	74	82	48	1	1	98	
\$1.40 and under \$1.50.....	883	669	7	6	70	79	45	23	1	(1)	99	
\$1.50 and under \$1.60.....	711	505	6	4	76	84	33	20	(1)	(1)	99	
\$1.60 and under \$1.70.....	565	353	5	3	81	87	18	11	(1)	(1)	99	
\$1.70 and under \$1.80.....	409	303	3	3	84	89	16	1	(1)	(1)	100	
\$1.80 and under \$1.90.....	327	206	3	2	87	91	9	6	(1)	(1)	100	
\$1.90 and under \$2.....	249	195	2	2	89	92	1	7	(1)	(1)	100	
\$2 and under \$2.50.....	692	549	6	5	95	97	15	3	(1)	(1)	100	
\$2.50 and under \$3.....	363	246	3	2	98	99	6	3	(1)	(1)	100	
\$3 and over.....	211	89	2	1	100	100	1	1	(1)	(1)	100	
Total.....	11,778	11,778					6,794	6,794				
Average earnings per hour.....	\$1.327	\$1.204					\$0.903	\$0.826				

<sup>1</sup> Less than one-half of 1 per cent.

### BITUMINOUS TONNAGE WORKERS

The 61,936 hand loaders in Table 5 earned an average of 81.1 cents per hour based on time at the face, including lunch, and 74.8 cents per hour based on total time in mine. Reading part of the cumulative percentages for them, based on time at the face, it is seen that 2 per cent earned under 30 cents per hour, 6 per cent under 40 cents, 15 per cent under 50 cents, 52 per cent under 80 cents, and 74 per cent under \$1 per hour. Averages and percentages for hand or pick miners are almost the same as for hand loaders. Machine miners averaged \$1.163 per hour based on time at the face, and \$1.079 per hour based on total time in mine. Based on time at the face, 55 per cent of them earned under \$1.20 per hour and 76 per cent under \$1.50 per hour. For classification of employees in these three occupations in each State, according to average earnings per hour, see Table C (p. 54).

Mines having coal-mining machines, as a rule, employ machine miners to operate the machines and hand loaders to shovel the coal from the floor of the mine into mine cars after it has been blasted from the seam. In Table 5 and other tables figures are shown for loaders of 514 mines and machine miners of 485 mines. In a number of mines in which machine miners work at night, time was not kept for them as the mine employee designated to keep the time was on duty during the day only, while in a few others time was not kept for other reasons.

TABLE 5.—NUMBER AND PER CENT OF LOADERS AND MINERS WHOSE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—BITUMINOUS COAL MINING

Classified earnings per hour	Loaders, hand (514 mines)						Miners, hand or pick (291 mines)						Miners, machine (485 mines)					
	Number based on—		Per cent based on—				Number based on—		Per cent based on—				Number based on—		Per cent based on—			
	Time at face, including lunch	Time in mine, including lunch and travel	Actual—		Cumulative—		Time at face, including lunch	Time in mine, including lunch and travel	Actual—		Cumulative—		Time at face, including lunch	Time in mine, including lunch and travel	Actual—		Cumulative—	
			Time at face, including lunch	Time in mine, including lunch and travel	Time at face, including lunch	Time in mine, including lunch and travel			Time at face, including lunch	Time in mine, including lunch and travel	Time at face, including lunch	Time in mine, including lunch and travel			Time at face, including lunch	Time in mine, including lunch and travel		
Under 30 cents.....	1,158	1,604	2	3	2	3	439	620	2	3	2	3	32	37	(1)	1	(1)	1
30 and under 40 cents.....	2,847	3,823	5	6	6	9	834	1,126	4	5	6	8	84	138	1	2	2	3
40 and under 50 cents.....	5,085	6,439	8	10	15	19	1,563	2,045	7	10	13	18	222	286	3	4	5	7
50 and under 60 cents.....	6,821	8,066	11	13	26	32	2,364	2,902	11	14	24	31	392	405	6	6	11	13
60 and under 70 cents.....	7,984	9,199	13	15	39	47	2,862	3,192	13	15	38	46	301	368	5	6	16	19
70 and under 80 cents.....	8,323	8,388	13	14	52	61	3,094	3,190	14	15	52	61	375	449	6	7	22	26
80 and under 90 cents.....	7,478	7,198	12	12	64	72	2,844	2,738	13	13	65	74	507	658	9	10	30	36
90 cents and under \$1.....	6,381	5,686	10	9	74	81	2,389	2,010	11	9	76	83	532	383	8	9	39	45
\$1 and under \$1.10.....	5,071	4,311	8	7	83	88	1,715	1,307	8	6	84	89	504	568	8	9	46	54
\$1.10 and under \$1.20.....	3,897	2,883	6	5	89	93	1,146	886	5	4	90	93	565	544	9	8	55	63
\$1.20 and under \$1.30.....	2,603	1,804	4	3	93	96	779	511	4	2	93	96	481	459	7	7	62	70
\$1.30 and under \$1.40.....	1,798	1,066	3	2	96	98	539	311	3	1	96	97	413	452	6	7	69	77
\$1.40 and under \$1.50.....	1,007	636	2	1	97	99	289	210	1	1	97	98	452	385	7	6	76	83
\$1.50 and under \$1.60.....	649	311	1	1	99	99	205	121	1	1	98	99	349	280	5	4	81	87
\$1.60 and under \$1.70.....	339	232	1	(1)	99	100	137	83	(1)	(1)	99	99	242	204	4	3	85	90
\$1.70 and under \$1.80.....	227	105	(1)	(1)	99	100	96	60	(1)	(1)	99	99	272	176	4	3	89	93
\$1.80 and under \$1.90.....	130	74	(1)	(1)	100	100	63	40	(1)	(1)	99	100	154	127	2	2	91	95
\$1.90 and under \$2.....	81	36	(1)	(1)	100	100	47	21	(1)	(1)	100	100	144	116	2	2	94	96
\$2 and under \$2.50.....	117	57	(1)	(1)	100	100	70	46	(1)	(1)	100	100	343	184	5	3	99	99
\$2.50 and under \$3.....	18	11	(1)	(1)	100	100	17	5	(1)	(1)	100	100	55	42	1	1	100	100
\$3 and over.....	12	7	(1)	(1)	100	100	2	-----	(1)	-----	100	-----	20	8	(1)	(1)	100	100
Total.....	61,936	61,936	-----	-----	-----	-----	21,424	21,424	-----	-----	-----	-----	6,499	6,499	-----	-----	-----	-----
Average earnings per hour.....	\$0.811	\$0.748	-----	-----	-----	-----	\$0.809	\$0.745	-----	-----	-----	-----	\$1.163	\$1.079	-----	-----	-----	-----

<sup>1</sup> Less than one-half of 1 per cent.

## ANTHRACITE TIME WORKERS

Table 6 shows the actual and the cumulative percentages of employees whose average earnings per hour were within each classified amount for each of 8 specified occupations inside mines and 2 occupations outside mines. The employees in these occupations are next in importance to contract miners and contract miners' laborers. The data for the 8 inside occupations cover 9,705 employees and for the 2 outside occupations cover 3,219 employees, a total of 12,924, or 29 per cent, of the total covered in the anthracite industry in 1924.

The actual percentages given in the table show that 88 per cent of the cagers, 100 per cent of the car runners, 79 per cent of the drivers, 91 per cent of the inside laborers, and 88 per cent of the motor brakemen earned an average of 60 and under 70 cents per hour; that 73 per cent of the company miners, 52 per cent of the motormen, and 70 per cent of the carpenters, earned an average of 70 and under 80 cents per hour, and that 96 per cent of the laborers outside mine earned 50 and under 60 cents per hour.

TABLE 6.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—ANTHRACITE COAL MINING

Classified earnings per hour	Cagers, inside mine		Car runners, inside mine		Drivers, inside mine		Laborers, inside mine		Laborers, company miners, inside mine		Miners, company, inside mine		Motormen, inside mine		Motor brakemen, inside mine		Carpenters, outside mine		Laborers, outside mine	
	Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent	
	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative
30 and under 40 cents					2	2	(1)	(1)							(1)	(1)			1	1
40 and under 50 cents							(1)	(1)							(1)	(1)			1	2
50 and under 60 cents	1	1	(1)	(1)	19	21	2	2	(1)	(1)	(1)	(1)			11	12			96	98
60 and under 70 cents	88	89	100	100	79	100	91	93	64	64	1	1	48	48	88	100	28	28	1	100
70 and under 80 cents	11	100	(1)	100	(1)	100	6	99	34	97	73	74	52	100	(1)	100	70	99	(1)	100
80 and under 90 cents	(1)	100				100	1	100	2	99	18	91			(1)	100	1	100	(1)	100
90 and under \$1					(1)	100	(1)	100	(1)	100	3	95					(1)	100		
\$1 and under \$1.10					(1)	100			(1)	100	1	96								
\$1.10 and under \$1.20									(1)	100	1	97								
\$1.20 and under \$1.30											1	99								
\$1.30 and under \$1.40											(1)	99								
\$1.40 and under \$1.50											(1)	99								
\$1.50 and under \$1.60											1	100								
\$1.60 and under \$1.70											(1)	100								
\$1.70 and under \$1.80											(1)	100								
\$1.90 and under \$2											(1)	100								

<sup>1</sup> Less than one-half of 1 per cent.

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CLASSIFIED AVERAGE EARNINGS PER HOUR

## BITUMINOUS TIME WORKERS

Table 7 shows the percentage (actual and cumulative) of employees whose average earnings per hour were within each classified amount, for each of 6 specified occupations inside the mine and 2 outside the mine. The employees in these occupations are considered next in importance to hand loaders, pick or hand miners, and machine miners. The data for the 6 inside occupations cover 26,388 employees and the 2 outside occupations cover 8,868 employees, a total of 35,256, or 25 per cent of the total number of bituminous employees included in the 1924 study.

The actual percentages show two distinctive groups of employees—one consisting of a considerable percentage of employees at an average earning of 50 and under 60 cents per hour and the other of a much larger percentage (excepting for carpenters and laborers) at an average of 90 cents and under \$1 per hour. This is due, as can be seen in General Table D (p. 57), to difference in averages in different States.

**TABLE 7.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—BITUMINOUS COAL MINING**

Classified earnings per hour	Brakemen, inside mine		Bratticemen and timbermen, inside mine		Drivers, inside mine		Laborers, inside mine		Motormen, inside mine		Trackmen, inside mine		Carpenters, outside mine		Laborers, outside mine	
	Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent		Per cent	
	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative
Under 30 cents	(1)	(1)	(1)	(1)	2	2	2	2					(1)	(1)	6	6
30 and under 40 cents	4	4	2	2	8	10	8	10	1	1	2	2	3	4	15	21
40 and under 50 cents	14	19	6	8	7	17	19	29	3	5	5	6	9	13	23	43
50 and under 60 cents	22	40	16	24	12	29	33	49	28	33	30	38	25	38	17	60
60 and under 70 cents	9	49	15	39	14	43	6	54	13	46	12	48	14	52	4	64
70 and under 80 cents	3	52	2	41	3	46	5	60	5	51	4	52	8	60	4	68
80 and under 90 cents	6	58	2	43	3	49	11	70	2	53	3	55	16	76	27	96
90 cents and under \$1	41	99	55	99	49	96	29	100	33	87	45	100	22	98	4	100
\$1 and under \$1.10	(1)	100	1	100	1	100	(1)	100	13	100	(1)	100	2	100	(1)	100
\$1.10 and under \$1.20	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100
\$1.20 and under \$1.30	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100
\$1.30 and under \$1.40	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100
\$1.40 and under \$1.50	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100
\$1.50 and under \$1.70	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100

<sup>1</sup> Less than one-half of 1 per cent.

CLASSIFIED AVERAGE EARNINGS PER HOUR

## REGULAR OR BASIC HOURS PER DAY AND PER WEEK

The number of hours of work per day and per week of time workers at the 56 anthracite collieries and the 599 bituminous mines included in this report are fixed by a specified time for beginning work on each working day of the week, for the midday lunch or dinner, and for quitting work in the afternoon. The vast majority of the time workers at these collieries and mines begin work at 6.30, 7, or 7.30 a. m., work  $4\frac{1}{2}$  or 5 hours in the morning, take 30 minutes for lunch, work 3 or  $3\frac{1}{2}$  hours in the afternoon, and quit work at or near 3.30 p. m. The regular or basic hours of work of these employees are therefore 8 per day and 48 per week, exclusive of lunch time. Some of the pump men, engineers, firemen, motormen, drivers, car runners and cagers, and a few employees in some of the other occupations work at times or whenever necessary more than 8 hours per day, and in several occupations some work on Sunday. The Sunday work and the time in excess of 8 hours per day is generally called overtime and is paid for at the regular rate.

The United States Geological Survey<sup>1</sup> reports a total of 687,958 bituminous employees of 9,297 mines in 1922, and of these employees 647,050 at 7,995 mines as having the regular or basic 8-hour day. The 8-hour day in bituminous mining has by agreement been in effect at a very large per cent of the mines in the United States for more than 25 years. Section 5 of the Chicago, January 28, 1898, agreement between the miners and operators of the central competitive field states "That on and after April 1, 1898, the 8-hour workday, with 8 hours' pay, consisting of 6 days per week, shall be in effect in all the districts represented, and that uniform wages for day labor shall be paid the different classes of labor in the fields named."

The data shown in Table 8 as to hours is also given by the Geological Survey.<sup>1</sup>

TABLE 8.—PERCENTAGE OF MEN EMPLOYED IN BITUMINOUS COAL MINES THAT HAD AN ESTABLISHED WORKING-DAY OF 8, 9, OR 10 HOURS, 1903 TO 1922 \*

Year	Per cent of total employees in—			Weighted average working-day (hours)	Year	Per cent of total employees in—			Weighted average working-day (hours)
	8-hour mines	9-hour mines	10-hour mines			8-hour mines	9-hour mines	10-hour mines	
1903	56.4	17.1	26.5	8.7	1914	60.7	15.4	23.9	8.60
1904	62.1	13.8	24.1	8.6	1915	59.6	17.0	23.4	8.60
1905	61.1	13.6	25.3	8.6	1916	58.6	17.4	24.0	8.60
1906	63.0	13.5	23.5	8.6	1917	79.0	12.6	8.4	8.30
1907	64.0	11.6	24.4	8.6	1918	90.6	6.7	2.7	8.12
1908	63.5	11.1	25.4	8.6	1919	95.5	3.5	1.0	8.06
1910	62.1	11.3	26.6	8.6	1920	97.1	2.0	.9	8.04
1911	62.9	10.9	26.2	8.6	1921	96.6	2.9	.5	8.04
1912	61.6	11.5	26.9	8.6	1922	95.1	4.0	.9	8.06
1913	61.9	15.2	22.9	8.6					

\* Percentages are calculated on base of total number of men in mines definitely reported as having 8-hour, 9-hour, or 10-hour day. A small number of mines that work more than 10 hours or less than 8 hours have been excluded, as have also all mines for which the reports were defective or which changed their working-day during the year.

<sup>1</sup> United States Department of the Interior, Geological Survey. Coal in 1922. Washington, 1924, p. 503.

The 9-hour day and 54-hour week in anthracite mining, which was established by the 1903 award of the Anthracite Coal Strike Commission, was changed to an 8-hour day and 48-hour week by the May, 1916, agreement. The 8-hour day as defined by the 1916 agreement and continued in effect to date by subsequent agreements is as follows:

An 8-hour day means eight (8) hours of actual work for all classes of labor at the usual working place, exclusive of noontime, for six (6) days per week, if the operator desires to work his mines to that extent, excluding legal holidays. The time required in going and coming from place of employment in and about the mine shall not include any part of the day's labor.

The hours of tonnage or piece workers in anthracite and bituminous mining are presumed or expected to be approximately the same as those of the time workers, but in actual practice their hours are usually more or less irregular. Some tonnage workers enter the collieries as early as 6 or 6.30 a. m., begin work immediately on arrival at the face, and work throughout the day, eating their lunch while waiting for mine cars or material; some quit for the day at or near noon; while others enter the collieries around or after 7 a. m., take as much time for lunch as they desire, and often quit work before the mine as a whole ceases operation.

### WAGE REDUCTIONS AND INCREASES

Between January 1, 1922, and the half-month pay period in 1924 or 1925 for which data as to hours and earnings of employees were taken for each of the 599 bituminous mines included in the study, 38 of the 39 mines in Alabama, 2 of the 17 in Colorado, 71 of the 79 in Kentucky, 2 of the 57 in Ohio, 59 of the 155 in Pennsylvania, 20 of the 20 in Tennessee, 11 of the 12 in Virginia, and 117 of the 142 in West Virginia, or a total of 320, made one or more changes in wage rates.

No change was made in the wage rates of any of the 46 mines covered in Illinois, of the 23 in Indiana, or of the 9 in Kansas, and no change was made in the rates of 15 of the 17 mines covered in Colorado, 8 of the 79 in Kentucky, 55 of the 57 in Ohio, 94 of the 155 in Pennsylvania, 1 of the 12 in Virginia, 25 of the 142 in West Virginia, or of a total of 276 of the 599 mines in all these States combined.

One mine in Alabama and 2 in Pennsylvania made no report as to change in wage rates.

Of the 320 mines making changes in wage rates 4 in Kentucky and 5 in Pennsylvania made only one change increasing rates; 2 in Colorado, 38 in Kentucky, 25 in Pennsylvania, 2 in Tennessee, 7 in Virginia, and 68 in West Virginia made one or more reductions in rates; and 38 in Alabama, 29 in Kentucky, 2 in Ohio, 28 in Pennsylvania, 18 in Tennessee, 4 in Virginia, and 47 in West Virginia made two or more changes, rates at these mines being reduced and then increased, or increased and then reduced.

The general level of wage rates in bituminous mining, on account of the changes enumerated above, were lower in 1924 than in 1922, and in anthracite mining were, on account of the 10 per cent increase in September, 1923, higher in 1924 than in 1922. This statement as to wage rates applies also to average earnings per hour as is shown in Table 2, (p. 5), Table A (p. 44) and Table B (p. 46).

**CLASSIFIED HOURS IN HALF MONTH****ANTHRACITE WORKERS**

Table 9 shows for 1924 the actual and cumulative percentages of employees whose hours of work in the half month were within each classified number of hours for each of 10 of the most important underground or inside occupations and 2 of the most important surface or outside occupations in anthracite mining. Contract miners and contract miners' laborers are tonnage workers. Their hours are the total time in collieries including time for lunch and time of travel in collieries. The employees in the other occupations are time workers and their hours are actual time at work exclusive of time for lunch and time of travel in collieries. Average hours in half month for these occupations are shown for tonnage workers in Table 2 (p. 5) and for time workers in Table 3 (p. 7).

In the half month the hours of a larger per cent (14) of the cagers and of 8 other occupations are within the group "104 and under 112 hours" than within any other group.

Reading the cumulative percentages, it is seen that the hours of 56 per cent of the cagers, 68 per cent of the car runners, 73 per cent of the drivers, 74 per cent of the inside laborers, 87 per cent of the company miners' laborers, 93 per cent of the contract miners' laborers, 88 per cent of the company miners, 95 per cent of the contract miners, 56 per cent of the motormen, and 67 per cent of the motor brakemen are under 112 in the half month, thus showing that the hours of contract miners' laborers and contract miners, even with the inclusion of time for lunch and time of travel, are fewer than the hours of any of the other inside occupations.

In this table and in Table 10 a small per cent of employees in each occupation is shown as working under 8, 16, 24, 32 and 40 hours in the half month. Practically every company reported a few employees in each occupation as working on fewer days and fewer hours than the number of days and hours the colliery or mine was in operation in the half month for which data were taken. The time lost by such employees was due to sickness, other disability, or voluntary absence, or to labor turnover. A number of employees in the service of the companies at the beginning of the half month covered by the study left the service before the end of the half month and a number entered the service after the beginning of the period taken.

**BITUMINOUS WORKERS**

Table 10 shows for 1924 the actual and cumulative percentages of employees whose hours in the half month were within each classified number of hours for each of 9 of the most important underground or inside occupations and 2 of the most important surface or outside occupations in bituminous coal mining. Hand loaders, hand or pick miners, and machine miners are tonnage workers. Their hours are the total time in mines including time for lunch and time of travel. The employees in the other occupations are time workers, and their hours are actual time at work exclusive of time for lunch and time of travel. For similar classifications of bituminous employees in these occupations in each State see Table E (p. 60).

Reading the actual percentages for brakemen, shown in Table 10, it is seen that the hours in the half month of 10 per cent of them were 72 and under 80; of 11 per cent, 80 and under 88, of 12 per cent, 88 and under 96; and of 11 per cent, 96 and under 104. Approximately the same percentages are shown in these groups of classified hours for 7 or 8 other occupations in the table. The per cent of hand loaders, hand or pick miners, and machine miners in these groups is less than that for any of the other occupations. Except in a few cases less than 10 per cent of the employees of any of the occupations are found in any of the other groups.

TABLE 9.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE HOURS IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—ANTHRACITE COAL MINING

Classified hours in half month	Cagers, <sup>1</sup> inside colliery		Car runners, <sup>1</sup> inside colliery		Drivers, <sup>1</sup> inside colliery		Laborers, <sup>1</sup> inside colliery		Laborers, <sup>1</sup> company miners', inside colliery		Laborers, <sup>2</sup> contract miners', inside colliery		Miners, company, <sup>1</sup> inside colliery		Miners, contract, <sup>1</sup> inside colliery		Motor-men, <sup>1</sup> inside colliery		Motor brakemen, <sup>1</sup> inside colliery		Carpenters, <sup>2</sup> outside colliery		Laborers, <sup>3</sup> outside colliery			
	PER CENT																									
	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative
Under 8 hours.....										( <sup>4</sup> )	( <sup>4</sup> )	1	1	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
8 and under 16 hours.....	( <sup>4</sup> )	( <sup>4</sup> )	1	1	( <sup>4</sup> )	( <sup>4</sup> )	1	1	1	2	( <sup>4</sup> )	3	3	1	4	1	2	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
16 and under 24 hours.....	1	1	1	2	1	1	1	1	1	2	5	2	6	1	3	1	3	1	1	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
24 and under 32 hours.....	( <sup>4</sup> )	1	1	2	1	2	1	2	1	6	2	7	3	11	4	2	4	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
32 and under 40 hours.....	( <sup>4</sup> )	2	1	3	1	3	1	4	2	7	3	11	2	6	2	4	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
40 and under 48 hours.....	( <sup>4</sup> )	2	1	4	1	4	1	5	2	9	3	13	2	7	3	7	1	2	1	3	1	1	3	1	2	
48 and under 56 hours.....	1	3	1	5	1	5	2	7	2	12	4	17	3	11	4	11	1	3	1	4	1	4	1	4	1	
56 and under 64 hours.....	3	6	1	6	2	6	3	10	3	15	5	22	4	15	7	18	1	4	2	6	1	5	1	6	1	
64 and under 72 hours.....	3	8	2	8	4	10	4	14	7	22	9	31	9	24	10	28	3	6	4	10	1	6	2	8	1	
72 and under 80 hours.....	5	13	6	14	7	17	9	22	12	34	12	43	14	38	14	42	5	11	8	18	5	11	5	13	1	
80 and under 88 hours.....	9	22	9	23	12	29	12	34	15	49	13	56	16	54	15	58	9	20	9	27	7	18	11	24	1	
88 and under 96 hours.....	11	33	10	33	9	38	10	45	10	60	13	69	7	61	16	74	12	31	14	41	7	25	9	33	1	
96 and under 104 hours.....	9	41	11	44	12	50	11	55	11	71	14	83	9	70	13	87	13	44	11	52	9	34	8	41	1	
104 and under 112 hours.....	14	56	25	68	24	73	18	74	16	87	10	93	18	88	8	95	12	56	15	67	16	50	15	55	1	
112 and under 120 hours.....	13	69	14	82	12	85	11	85	6	93	5	98	5	93	4	99	11	67	13	80	15	65	10	65	1	
120 and under 128 hours.....	8	77	8	90	8	93	6	91	3	96	2	100	3	96	1	100	10	77	9	88	12	77	8	73	1	
128 and under 136 hours.....	8	84	5	94	3	96	4	94	3	99	( <sup>4</sup> )	100	1	98	( <sup>4</sup> )	100	10	87	5	93	8	85	6	79	1	
136 and under 144 hours.....	5	90	3	97	2	98	2	96	1	99	( <sup>4</sup> )	100	1	98	( <sup>4</sup> )	100	6	93	3	97	6	91	5	84	1	
144 and under 152 hours.....	3	93	2	99	1	99	2	98	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	99	( <sup>4</sup> )	100	3	97	1	98	4	95	5	89	1	
152 and under 160 hours.....	3	96	( <sup>4</sup> )	99	( <sup>4</sup> )	99	1	99	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	99	( <sup>4</sup> )	100	2	98	2	100	3	98	4	92	1	
160 and under 168 hours.....	1	97	1	100	( <sup>4</sup> )	100	1	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	99	( <sup>4</sup> )	100	2	100	( <sup>4</sup> )	100	1	99	3	96	1	
168 and under 176 hours.....	1	98	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	1	100	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	1	100	2	98	1	
176 and under 184 hours.....	1	99	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	1	100	1	99	1	
184 and under 192 hours.....	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	1	100	1	99	1
192 hours and over.....	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	100	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	1	100	1	100	1

<sup>1</sup> The hours for this occupation are hours actually worked or time at face, exclusive of travel time and lunch time.

<sup>2</sup> The hours for this occupation are total hours in mine, including hours actually worked, travel time in mine, and lunch time.

<sup>3</sup> The hours for this occupation are hours actually worked.

<sup>4</sup> Less than one-half of 1 per cent.

TABLE 10.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE HOURS IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—BITUMINOUS COAL MINING

Classified hours in half month	Brakemen, <sup>1</sup> inside mine		Brattice-men and timbermen, <sup>1</sup> inside mine		Drivers, <sup>1</sup> inside mine		Laborers, <sup>1</sup> inside mine		Motormen, <sup>1</sup> inside mine		Trackmen, <sup>1</sup> inside mine		Carpenters, <sup>2</sup> outside mine		Laborers, <sup>2</sup> outside mine		Loaders, <sup>3</sup> hand, inside mine		Miners, <sup>3</sup> machine, inside mine		Miners, <sup>3</sup> hand or pick, inside mine	
	PER CENT																					
	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative	Act-ual	Cumu-lative
Under 8 hours.....	(*)	(*)	(*)	(*)	(*)	(*)	1	1	(*)	(*)	(*)	(*)	-----	-----	(*)	(*)	1	1	(*)	(*)	1	1
8 and under 16 hours.....	2	3	2	3	3	3	4	5	1	2	2	2	1	1	2	3	2	2	2	2	2	2
16 and under 24 hours.....	2	5	1	3	2	4	3	8	1	3	1	4	1	2	2	5	3	6	2	4	2	5
24 and under 32 hours.....	2	7	2	6	3	8	3	11	2	5	2	6	1	3	3	8	5	11	4	8	3	8
32 and under 40 hours.....	4	12	2	8	4	11	3	15	3	7	3	9	2	5	3	11	6	17	4	12	5	13
40 and under 48 hours.....	5	16	3	11	6	17	5	20	3	10	3	12	3	8	4	15	7	24	5	17	6	19
48 and under 56 hours.....	6	23	2	14	9	26	5	25	4	15	4	16	4	12	6	21	8	32	7	24	9	28
56 and under 64 hours.....	8	31	7	21	10	36	6	31	6	21	7	22	5	17	6	27	10	42	9	33	9	37
64 and under 72 hours.....	9	40	8	29	8	44	7	38	8	29	7	30	4	21	7	33	10	52	8	41	10	47
72 and under 80 hours.....	10	50	10	38	10	53	9	47	9	38	9	39	8	29	9	42	10	63	8	49	12	59
80 and under 88 hours.....	11	62	14	52	11	64	12	58	11	49	11	50	9	37	10	53	10	72	8	57	12	71
88 and under 96 hours.....	12	74	13	65	11	76	12	70	13	62	14	63	15	52	11	64	11	83	11	69	11	83
96 and under 104 hours.....	11	85	14	78	12	87	12	82	14	77	14	77	15	67	11	75	7	90	9	78	7	90
104 and under 112 hours.....	7	98	11	89	7	95	9	91	11	87	10	87	14	80	9	84	5	96	8	86	6	96
112 and under 120 hours.....	3	98	5	95	3	97	5	96	5	96	6	93	8	88	5	90	3	99	6	93	3	99
120 and under 128 hours.....	2	98	3	98	2	98	2	98	3	98	3	96	6	94	4	94	1	99	3	95	1	100
128 and under 136 hours.....	1	99	1	99	(*)	100	(*)	100	(*)	99	2	98	3	97	3	97	1	100	3	97	(*)	100
136 and under 144 hours.....	1	100	99	(*)	100	99	100	99	1	1	1	99	2	98	1	98	1	100	1	99	(*)	100
144 and under 152 hours.....	(*)	100	(*)	99	(*)	100	(*)	100	(*)	99	1	99	1	99	(*)	99	(*)	100	(*)	99	(*)	100
152 and under 160 hours.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100
160 and under 168 hours.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100
168 and under 176 hours.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100
176 and under 184 hours.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100
184 and under 192 hours.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100
192 hours and over.....	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100	(*)	100

CLASSIFIED HOURS IN HALF MONTH

<sup>1</sup> The hours for this occupation are hours actually worked or time at face, exclusive of travel time and lunch time.  
<sup>2</sup> The hours for this occupation are hours actually worked.  
<sup>3</sup> The hours for this occupation are total time in mine, including hours actually worked, travel time in mine, and lunch time.  
<sup>4</sup> Less than one-half of 1 per cent.

**CLASSIFIED EARNINGS IN HALF MONTH**

Actual and cumulative percentages of employees whose hours of work in the half month in 1924 were within each classified number of hours are shown in Table 9 for each of 10 inside and 2 outside occupations in anthracite mining, and in Table 10 for each of 9 inside, and 2 outside occupations in bituminous mining. Percentages, actual and cumulative, of employees whose earnings in the half month were within each classified amount are presented in Table 11 for the same occupations for which classified hours are shown in Table 9, and in Table 12 for the same occupations for which classified hours are shown, in Table 10. For similar classification of bituminous employees in these occupations in each State see Table F. (p. 66).

Tables 9 and 10 in effect show the number of hours worked or on duty in the half month, and Tables 11 and 12 show the amount of money earned in those hours. Employees who lost time or worked short time in the half month on account of sickness, other disability, or for any other reason, and whose hours in the half month were consequently few in number, of course earned a small amount of money in the half month and are therefore in the lowest groups of classified earnings in the half month.

In Table 11 it is seen that in the half month 15 per cent of the contract miners' laborers, 13 per cent of the company miners' laborers, 9 per cent of the inside laborers and company miners, 8 per cent of the outside laborers, 7 per cent of the drivers and motor brakemen, 6 per cent of the car runners, 5 per cent of the cagers and contract miners, 4 per cent of the carpenters, and 3 per cent of the motormen earned less than \$40 in the half-month pay-roll period covered in 1924. These figures show that a larger per cent of the contract miners' laborers and company miners' laborers earned less than \$40 in the half month than the employees in any of the other occupations. Reverting to Table 9, it is seen that the hours of 17 per cent of the contract miners' laborers, 12 per cent of the company miners' laborers, 11 per cent of the company miners and contract miners, 7 per cent of the inside laborers, 5 per cent of the car runners and drivers, 4 per cent of the motor brakemen, carpenters, and outside laborers, and 3 per cent of the cagers and motormen were less than 56 in the half month. Thus it is seen that a larger per cent of the contract miners' laborers and company miners' laborers worked under 56 hours in the half month and earned less than \$40 in the half month than employees in any of the other occupations.

TABLE 11.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—ANTHRACITE COAL MINING

Classified earnings in half month	Cagers, inside colliery		Car-runners, inside colliery		Drivers, inside colliery		Laborers, inside colliery		Laborers, company miners, inside colliery		Laborers, contract miners, inside colliery		Miners, company, inside colliery		Miners, contract, inside colliery		Motormen, inside colliery		Motor brakemen, inside colliery		Carpenters, outside colliery		Laborers, outside colliery		
	PER CENT																								
	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual
Under \$5.....	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
\$5 and under \$10.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
\$10 and under \$15.....	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
\$15 and under \$20.....	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1
\$20 and under \$25.....	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
\$25 and under \$30.....	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1
\$30 and under \$35.....	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1	6	1
\$35 and under \$40.....	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1
\$40 and under \$45.....	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1	8	1
\$45 and under \$50.....	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1
\$50 and under \$55.....	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1
\$55 and under \$60.....	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1	11	1
\$60 and under \$65.....	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1	12	1
\$65 and under \$70.....	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1
\$70 and under \$75.....	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1	14	1
\$75 and under \$80.....	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
\$80 and under \$85.....	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1
\$85 and under \$90.....	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1	17	1
\$90 and under \$100.....	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1	18	1
\$100 and under \$110.....	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1	19	1
\$110 and under \$120.....	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1	20	1
\$120 and under \$140.....	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1	21	1
\$140 and under \$160.....	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1	22	1
\$160 and under \$180.....	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1	23	1
\$180 and under \$200.....	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1	24	1
\$200 and over.....	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

<sup>1</sup> Less than one-half of 1 per cent.

CLASSIFIED EARNINGS IN HALF MONTH

TABLE 12.—PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—BITUMINOUS COAL MINING

Classified earnings in half-month	Brakemen, inside mine		Brattice-men, and timber men, inside mine		Drivers, inside mine		Laborers, inside mine		Motormen, inside mine		Trackmen, inside mine		Carpenters, outside mine		Laborers, outside mine		Loaders, hand, inside mine		Miners, machine, inside mine		Miners, hand or pick, inside mine	
	PER CENT																					
	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative
Under \$5.....	1	1	1	1	1	1	3	3	(1)	(1)	1	1	(1)	(1)	2	2	2	2	1	1	1	1
\$5 and under \$10.....	2	4	2	2	3	4	4	4	7	2	2	3	1	1	3	5	3	4	1	2	2	3
\$10 and under \$15.....	2	6	1	3	2	6	4	11	1	1	4	1	2	5	9	3	7	1	3	3	6	
\$15 and under \$20.....	3	9	2	5	3	9	4	14	2	2	6	2	4	4	13	4	12	1	5	4	9	
\$20 and under \$25.....	4	13	3	8	5	14	5	19	2	7	3	9	3	7	20	5	17	2	6	5	14	
\$25 and under \$30.....	5	18	3	11	5	19	6	25	3	9	3	12	3	10	7	27	6	23	2	8	19	
\$30 and under \$35.....	6	24	4	15	7	26	6	31	4	13	4	16	4	14	7	34	7	30	3	11	25	
\$35 and under \$40.....	7	31	4	19	7	33	8	38	4	17	5	21	5	19	9	43	7	37	3	15	32	
\$40 and under \$45.....	7	38	5	24	6	39	8	47	5	23	6	27	7	26	9	52	7	44	4	18	40	
\$45 and under \$50.....	9	47	5	28	7	46	7	53	8	31	7	34	7	33	8	60	7	52	4	22	48	
\$50 and under \$55.....	9	55	7	35	7	53	8	61	8	39	9	42	10	42	7	67	7	59	4	26	56	
\$55 and under \$60.....	6	61	6	41	6	59	6	67	8	47	7	49	7	49	5	72	7	65	5	30	7	
\$60 and under \$65.....	6	67	9	50	7	66	5	72	7	54	9	58	8	57	5	77	6	72	5	35	6	
\$65 and under \$70.....	7	74	10	60	6	72	6	77	8	62	8	66	6	63	5	81	6	77	5	40	6	
\$70 and under \$75.....	5	79	5	65	4	76	5	83	7	68	5	71	7	70	4	86	5	82	5	45	5	
\$75 and under \$80.....	6	85	8	74	5	82	5	87	5	74	7	77	6	76	4	90	4	86	5	51	4	
\$80 and under \$90.....	8	93	11	85	7	88	7	95	11	85	10	87	10	85	5	95	5	92	9	60	7	
\$90 and under \$100.....	5	98	9	94	8	96	3	98	9	94	8	95	8	93	3	98	3	95	9	68	4	
\$100 and under \$110.....	2	99	3	97	3	99	1	99	4	98	3	98	4	97	1	99	2	97	6	75	2	
\$110 and under \$120.....	1	100	2	99	1	100	1	100	2	99	1	99	2	99	(1)	100	1	98	6	81	1	
\$120 and under \$140.....	(1)	100	1	100	(1)	100	(1)	100	1	100	1	100	1	100	(1)	100	1	100	9	89	1	
\$140 and under \$160.....	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	(1)	100	6	95	(1)	
\$160 and under \$180.....																			3	97	(1)	100
\$180 and under \$200.....																			1	99	(1)	100
\$200 and under \$220.....																			1	100	(1)	100
\$220 and under \$240.....																			1	100	(1)	100
\$240 and under \$260.....																			(1)	100	(1)	100
\$260 and under \$280.....																			(1)	100	(1)	100
\$280 and under \$300.....																			(1)	100	(1)	100

1 Less than one-half of 1 per cent.

## STATE AVERAGES FOR MINERS AND LOADERS

Average starts, or calendar days, in the half month, average hours and earnings per start, average days of operation in the year ending October 31, 1924, and in the calendar year 1924, and estimated possible average annual earnings are presented in Table 13 for *miners and loaders* of each of the 11 States included in the 1924 study and for all of the 11 States combined.

Miners and loaders in anthracite mining, as here used, include 11,778 contract miners, 6,794 contract miners' laborers, 1,735 company miners, 1,699 company miners' laborers, 961 consideration miners, and 748 consideration miners' laborers, or a total of 23,715 employees. In bituminous mining, they include 61,936 hand loaders, 21,424 hand or pick miners, 6,499 machine miners, 1,036 gang miners, 170 contract loaders, and 102 machine loaders, or a total of 91,167.

Average starts, or calendar days in the half month in 1924 for each State were obtained by dividing the total number of starts made in the half month by all miners and loaders by the number of such miners and loaders. All States combined, in bituminous mining, average 8.3 starts, or days, in the half month, and the averages by States range from 6.3 for Indiana to 9.8 for Kansas.

Average hours per start for each State were obtained by dividing the total number of hours spent at the *face* or places of work in the mines in the half month by all miners and loaders by the total number of starts made by the employees in these occupations. All States combined average 7.8 hours per start, and the averages by States range from 6.5 for Kansas to 8.5 for Alabama.

Average earnings per start for each State were obtained by dividing the total earnings of all miners and loaders in the half month by the total number of starts made by them in the half month. All States combined average \$6.56 per start, or day, and the averages by States range from \$4.08 for Tennessee to \$8.56 for Indiana.

Of the 599 mines included in the study, 549 reported the number of days of operation in the year ending October 31, 1924, which weighted by the number of miners and loaders in each of the reporting mines, average 198.2 days in the year. The averages by States range from 147.7 for Indiana to 242.5 days for Virginia.

The days of operation in the calendar year 1924 for *all mines of each State* are the days as reported by the United States Geological Survey for that year, weighted by the total number of employees in all occupations of each mine. All of the 11 States combined average 172 days in the calendar year. The averages for the States range from 136 days for Indiana to 226 for Virginia. The method of computing the average (172) is explained in footnote 4 to Table 13. The average for all bituminous mines in the United States as reported by the Geological Survey for the calendar year 1924 is 171 days, or one day less than the average for the 11 States.

The estimated possible average annual earnings of miners and loaders based on average earnings per start and average days of operation for the year ending October 31, 1924, for the mines included in the study by the bureau are \$1,300. The averages by States range from \$757 for Tennessee to \$1,483 for Illinois. The estimated possible average annual earnings of the employees based on average earnings per start and average days of operation for the calendar year 1924, for all the mines of the 11 States are \$1,128 and the

averages by States range from \$649 for Tennessee to \$1,287 for Colorado. Any estimate of possible yearly earnings, however, should take all mines into consideration.

Many of the mines which were not in operation in the latter part of 1924 or early in 1925, when the study was made, may have been in operation early in 1924. In order to obtain hours per start, or day, and in the half month for miners and loaders it was necessary to find mines in operation, as very few of them seldom, if ever, recorded the hours per day or pay period of the employees in these occupations. This in part explains why the mines included in the study in each of the 11 States have a greater average number of days of operation in the year ending October 31, 1924, than all mines of each State in the calendar year 1924. This condition, however, does not materially affect the representative character of the average hours or earnings in Table 13 or any of the other tables in this report. The mines, after arrangements had been made with them, kept a special day-by-day record of hours for each of the miners and loaders for a half-month pay period.

TABLE 13.—AVERAGE STARTS (DAYS) IN HALF MONTH, AVERAGE HOURS AND EARNINGS PER START, AVERAGE DAYS OF OPERATION, AND ESTIMATED POSSIBLE ANNUAL EARNINGS OF MINERS AND LOADERS, 1924, BY KIND OF COAL, AND STATE

Kind of coal, and State	Number of—		Average starts (days) in half month	Average hours per start (day), including lunch	Average earnings per start (day)	Number of mines reporting days of operation	Average days of operation in—		Estimated possible average yearly earnings of miners and loaders in—	
	Mines studied	Miners and loaders					Year ending Oct. 31, 1924, of mines reporting	Calendar year 1924, of all mines in State <sup>1</sup>	Mines studied <sup>2</sup>	All mines in State <sup>3</sup>
<b>ANTHRACITE</b>										
Pennsylvania.....	56	23,715	10.5	7.3	\$7.77	56	286.7	274	\$2,228	\$2,129
<b>BITUMINOUS</b>										
Alabama.....	39	4,068	7.9	8.5	4.57	38	231.2	220	1,057	1,005
Colorado.....	17	2,448	8.0	7.6	7.23	16	157.0	178	1,352	1,287
Illinois.....	43	15,769	7.7	7.9	8.35	44	173.5	148	1,483	1,265
Indiana.....	23	3,627	6.3	7.4	8.56	22	147.7	136	1,264	1,134
Kansas.....	9	1,474	9.8	6.5	5.92	9	192.9	151	1,142	694
Kentucky.....	79	8,802	8.2	7.9	5.63	67	260.3	174	1,128	980
Ohio.....	57	7,637	7.6	7.7	7.17	57	177.7	143	1,274	1,025
Pennsylvania.....	155	29,190	8.9	8.2	6.40	140	215.2	180	1,377	1,152
Tennessee.....	20	1,873	7.8	7.7	4.08	20	165.6	159	757	649
Virginia.....	12	1,121	8.4	7.7	4.65	10	242.5	226	1,128	1,051
West Virginia.....	142	14,258	8.4	7.0	6.10	126	204.4	182	1,247	1,110
Total.....	599	91,167	8.3	7.8	6.56	549	198.2	472	1,300	1,128

<sup>1</sup> The figures for each State are as reported by United States Geological Survey.

<sup>2</sup> Computed by multiplying the average earnings per start by the average days of operation in year ending Oct. 31, 1924, for mines reporting.

<sup>3</sup> Computed by multiplying the average earnings per start by the average days of operation in the calendar year 1924 of all mines in State.

<sup>4</sup> This average is for the States included in this table, with the days of operation for each State weighted by the number of miners and loaders shown in the table.

**INDEX NUMBERS OF CONTRACT MINERS' TONNAGE OR MINE-CAR RATES, 1902 TO 1926**

Contract miner is the most important occupation in anthracite mining. The 11,778 employees in this occupation constitute a little over 26 per cent of the 44,500 anthracite employees covered in the 1924 study. They are paid tonnage rates or a mine rate per car. The rates per car vary with the capacity of the car—1½, 2, 2½, or 3 tons. Many of the contract miners employ one or more contract miners' laborers to assist them in their work, which consists of drilling holes into the seams of coal with electric or compressed air coal-mining machines, of loading the holes with explosives, of blasting the coal from the seams, and of loading the coal rock, and dirt into mine cars. The major part of the earnings of the 6,794 contract miners' laborers covered in 1924 were paid from the gross earnings of the contract miners by whom they were employed, the other part being paid by the coal companies for which they worked. The contract miners pay for the explosives used in blasting the coal from the seams.

As contract miners are paid on the tonnage or mine-car basis, and as but a very few companies keep any kind of a record of hours of work of these employees, there is little or no information available as to hours or earnings per hour for this occupation for any of the years before or immediately after the World War. It is therefore not practicable to present index numbers of changes of hourly rates or earnings for a period of years for this occupation as has been done by the bureau for important occupations in other industries. The per cent of increase in tonnage, mine-car, or other piece rates is, however, shown in Table 14 for the years 1902 to 1924, with the 1902 rates as the basis of comparison, or 100. Part of the earnings of contract miners' laborers and all the cost of explosives are paid from the gross earnings of the contract miners. As these expenses may not have changed during the years 1902 to 1924 in the same proportion as the tonnage or mine-car rates have changed, the index numbers should not be construed as representing exact changes in net average earnings per hour. It is assumed, however, that they approximately represent the trend of tonnage rates and earnings per hour of contract miners.

The 1902 tonnage or mine-car rates differed from colliery to colliery and possibly even within a colliery on account of varying conditions, as such rates have differed in each of the years since 1902. In 1903 the Anthracite Coal Strike Commission made an award by which contract miners were given an increase of 10 per cent over the 1902 rates, and which also provided for an additional increase of 1 per cent of the 1903 rate (representing an index of 110) for each 5-cent advance in the April, 1903, wholesale price of coal at New York City. This award continued in effect 9 years. During these years the 10 per cent increase plus the 1 per cent increases caused by the advance in the wholesale price of coal at New York City over the April, 1903, price resulted in increases ranging from 14.22 per cent in 1907 to 14.95 per cent in 1904 and 1911.

The May, 1912, agreement eliminated the 1 per cent increase for each 5-cent advance in the April, 1903, wholesale price of coal at

New York City, and increased the 1903 rate (index 110) 10 per cent, thus making the index 121 for 1912, which continued in effect 4 years or to March 31, 1916.

The May, 1916, agreement increased this rate 7 per cent, making the index 129.47. The May, 1916, rate was increased by the agreement of May, 1917, by 10 per cent, to an index of 142.42; by that of November, 1917, by 25 per cent, to an index of 161.84; by that of November, 1918 (which continued in force until April, 1920), by 40 per cent, to an index of 181.26; and by the August, 1920, award of the Anthracite Coal Commission by 65 per cent, to an index of 213.63. This award continued in effect until September, 1923, when the strike of that year was settled, at which time the rate made by the award was increased 10 per cent, to an index of 234.99 or a little more than two and one-third times the 1902 rate. By agreement made in February, 1926, at the end of the strike which began September 1, 1925, the September, 1923, index will continue in effect to January, 1927.

TABLE 14.—PERIODS OF WAGE AGREEMENTS AND INDEX NUMBERS OF PIECE OR TONNAGE RATES OF CONTRACT MINERS, 1902 TO 1926—ANTHRACITE COAL MINING

[1902=100.00]

Period of wage agreement	Index number	Period of wage agreement	Index number
1902.....	100.00	Apr. 1, 1913, to Mar. 31, 1914.....	121.00
Apr. 1, 1903, to Mar. 31, 1904.....	114.40	Apr. 1, 1914, to Mar. 31, 1915.....	121.00
Apr. 1, 1904, to Mar. 31, 1905.....	114.95	Apr. 1, 1915, to Mar. 31, 1916.....	121.00
Apr. 1, 1905, to Mar. 31, 1906.....	114.31	May, 1916, to May, 1917.....	129.47
Apr. 1, 1906, to Mar. 31, 1907.....	114.58	May, 1917, to November, 1917.....	142.42
Apr. 1, 1907, to Mar. 31, 1908.....	114.22	November, 1917, to November, 1918.....	161.84
Apr. 1, 1908, to Mar. 31, 1909.....	114.40	November, 1918, to November, 1919.....	181.26
Apr. 1, 1909, to Mar. 31, 1910.....	114.49	November, 1919, to Mar. 31, 1920.....	181.26
Apr. 1, 1910, to Mar. 31, 1911.....	114.40	April, 1920, to Sept. 1, 1923.....	213.63
Apr. 1, 1911, to May, 1912.....	114.95	Sept. 1, 1923, to January, 1927.....	234.99
May, 1912, to Mar. 31, 1913.....	121.00		

### INDEX NUMBERS OF HAND LOADERS AND HAND OR PICK MINERS' TONNAGE RATES IN HOCKING VALLEY DISTRICT, 1902 TO 1925

In number of employees and in work performed hand loaders and hand or pick miners are the basic occupations in bituminous mining. The 61,936 hand loaders and 21,424 hand or pick miners together represent a little more than 59 per cent of the total of 140,719 employees of the 599 mines covered in the 1924 study of bituminous mining.

Like contract miners in anthracite mining, hand loaders, and hand or pick miners in bituminous mining are paid on the tonnage basis and practically no data are available either as to hours per day in the half-month pay periods or as to earnings per hour. The employees in these two occupations as a rule pay for the explosives used by them in blasting the coal from the seams and for the sharpening of their tools. Index numbers based on average *net* earnings per hour for a period of years could not therefore be computed for these occupations.

Loading rates per ton of 2,000 pounds in rooms with hand drilling and hand or pick mining rates per ton of 2,000 pounds of run of

mine for each of the years 1902 to 1924, as given in Thirty-Two Years' Record of Hocking Valley Mining, of the 1924 agreement between the miners and operators of the Hocking Valley district of Ohio, have been used in computing index numbers for these two occupations with the 1902 rate as the base, or 100. "Run of mine" is coal as it comes from the mines, including the various sizes of "jump" and "slack." The Hocking Valley district is Subdistrict No. 1 of District No. 6 of the United Mine Workers of America. The rates entered in Table 15 for hand or pick mining are, as stated in the "New York, N. Y., March 31, 1920, interstate agreement between the miners and the operators of western Pennsylvania, Ohio, Indiana, and Illinois, for the thin vein district of western Pennsylvania, eastern Ohio, Hocking, Cambridge, and Amsterdam-Bergholz district of Ohio."

Inasmuch as loaders and hand or pick miners have usually paid for explosives and tool sharpening from the amounts earned by them at their tonnage rates and as the cost of such explosives may not have changed in the same proportion as the tonnage rates have changed, the index numbers in Table 13 do not represent exact net average earnings per hour. They do, however, show the exact trend of tonnage rates in the Hocking Valley district, and it is believed that they also represent very nearly the trend in average earnings per hour.

TABLE 15.—PERIODS OF WAGE AGREEMENTS, TONNAGE RATES, AND INDEX NUMBERS THEREOF FOR HAND LOADERS AND HAND OR PICK MINERS, 1902 TO 1925—BITUMINOUS COAL MINING

[1902 rate=100.00. Corrected figures for hand or pick miners]

Period of wage agreement	Hand loaders', tonnage rate in rooms, with hand drilling		Hand or pick miners' tonnage rate for run of mine	
	Amount	Index number	Amount	Index number
Apr. 1, 1902, to Mar. 31, 1903.....	\$0.4400	100.00	\$0.5714	100.00
Apr. 1, 1903, to Mar. 31, 1904.....	.5100	115.91	.6429	112.51
Apr. 1, 1904, to Mar. 31, 1905.....	.4800	109.09	.6071	106.25
Apr. 1, 1905, to Mar. 31, 1906.....	.4900	109.09	.6071	106.25
Apr. 1, 1906, to Mar. 31, 1907.....	.5135	116.70	.6429	112.51
Apr. 1, 1907, to Mar. 31, 1908.....	.5135	116.70	.6429	112.51
Apr. 1, 1908, to Mar. 31, 1909.....	.5135	116.70	.6429	112.51
Apr. 1, 1909, to Mar. 31, 1910.....	.5135	116.70	.6429	112.51
Apr. 1, 1910, to Mar. 31, 1911.....	.5470	124.32	.6785	118.74
Apr. 1, 1911, to Mar. 31, 1912.....	.5470	124.32	.6785	118.74
Apr. 1, 1912, to Mar. 31, 1913.....	.5850	132.95	.7143	125.01
Apr. 1, 1913, to July 15, 1914.....	.5850	132.95	.7143	125.01
July 16, 1914, to Mar. 31, 1915.....	.4000	90.91	.6780	118.31
Apr. 1, 1915, to Mar. 31, 1916.....	.4000	90.91	.6780	118.31
Apr. 1, 1916, to Apr. 15, 1917.....	.4260	96.82	.6764	118.38
Apr. 16, 1917, to Oct. 29, 1917.....	.5110	116.14	.7764	135.88
Oct. 29, 1917, to Mar. 31, 1918.....	.5960	135.45	.8764	153.38
Apr. 1, 1918, to Mar. 31, 1919.....	.5960	135.45	.8764	153.38
Apr. 1, 1919, to Dec. 1, 1919.....	.5960	135.45	.8764	153.38
Dec. 1, 1919, to Mar. 31, 1920.....	.6900	156.82	.9864	172.63
Apr. 1, 1920, to Mar. 31, 1921.....	.8000	181.82	1.1164	195.38
Apr. 1, 1921, to Mar. 31, 1922.....	.8000	181.82	1.1164	195.38
Apr. 1, 1922, to Mar. 31, 1923.....	.8000	181.82	1.1164	195.38
Apr. 1, 1923, to Mar. 31, 1924.....	.8000	181.82	1.1164	195.38
Apr. 1, 1924, to Mar. 31, 1925.....	<sup>1</sup> .8000	<sup>1</sup> 181.82	<sup>1</sup> 1.1164	<sup>1</sup> 195.38
Apr. 1, 1925, to Mar. 31, 1926.....	<sup>1</sup> .8000	<sup>1</sup> 181.82	<sup>1</sup> 1.1164	<sup>1</sup> 195.38

<sup>1</sup> Renewed by Jacksonville agreement.

**CLASSIFIED STARTS (DAYS) IN HALF MONTH**

The number of starts, or calendar days, on which employees were on duty or did any work in the half month were obtained for each of the 44,500 anthracite and 140,719 bituminous employees covered by the 1924 study and are presented in Table 16. If a man were on duty any part of a day he was reported as having made a start or worked on that day. The table shows for each occupation in anthracite mining and in bituminous mining the average number of starts, or days, per man and the number and per cent of employees who were reported as having worked each specified number of starts or days, in the half month. For similar classification of employees in each occupation and in each State see Table G (p. 72).

The officials of nearly every anthracite colliery and bituminous mine reported some employees as having worked on fewer than the number of days the colliery or mine was in operation in the half month in 1924 for which data was reported and as having lost one or more days of work on account of sickness or other disability, voluntary absence, or leaving the service. It was frequently reported that a number of employees left the service before the end of the half month studied and that others entered service after the beginning of the period taken. The starts, or days, so lost account in part for the number and per cent of employees who are shown as having worked 1, 2, 3, 4, or 5 days. Also, owing to the depression in bituminous mining or to no market, many mines were running short time or only 1, 2, 3, or 4 days per week or 3, 4, or 5 days in the half month.

A record of hours per day or in the half month of tonnage workers is kept by only a very small per cent of the companies in the coal industry. It was therefore not possible to obtain data as to days and hours from all companies and mines for an identical half month. In reading the figures in the table it should be borne in mind that the number of week days in the half month taken were 12, 13, or 14. While in nearly all occupations some employees are shown as having made more than 12, 13, or 14 starts, this is because they worked on Sundays as well as week days.

**TABLE 16.—NUMBER AND PER CENT OF EMPLOYEES MAKING EACH SPECIFIED NUMBER OF STARTS (DAYS) IN HALF MONTH, 1924, BY KIND OF COAL, PLACE OF WORK, AND OCCUPATION**

Kind of coal, place of work, and occupation	Number of—		Average number of starts (days)	Number of employees whose starts (days on which they worked) in half month were—															Per cent of employees whose starts (days on which they worked) in half month were—																	
	Col- lieries or mines	Em- ploy- ees		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>ANTHRACITE</b>																																				
<i>Inside mine</i>																																				
Laborers, contract miners'.....	53	6,794	10.1	181	147	139	162	154	172	243	369	522	984	910	825	1,581	360	37	8	3	2	2	2	2	3	4	5	8	14	13	12	23	5	1	(1)	
Miners, contract.....	55	11,778	10.8	63	52	78	90	147	179	336	640	1,092	2,309	1,457	1,555	3,235	521	19	5	1	(1)	1	1	1	2	3	5	9	20	12	13	27	4	(1)	(1)	
Blacksmiths.....	23	48	10.8	1	1	1	1	1	1	1	1	3	12	5	2	11	6	1	1	2	2	2	2	2	2	2	2	6	25	10	4	23	13	2	2	
Bratticemen.....	43	260	11.5	1	2	2	1	1	1	6	7	11	49	48	34	63	18	11	7	(1)	1	1	(1)	1	1	1	2	3	4	19	13	13	24	7	4	3
Cagers.....	54	627	11.5	2	3	2	1	5	10	15	18	38	99	75	89	177	70	15	8	(1)	(1)	(1)	(1)	1	2	2	3	6	16	12	14	28	11	2	1	
Car runners.....	48	745	11.5	6	4	8	5	5	7	8	18	38	94	88	111	272	70	7	3	1	1	1	1	1	1	2	5	13	12	15	37	9	1	(1)		
Door tenders (boys).....	47	368	11.4	2	1	2	4	5	3	6	15	16	47	46	57	143	21	1	(1)	1	1	1	1	1	2	4	4	13	13	15	39	6	1	(1)		
Drivers.....	52	1,054	11.3	3	10	9	12	6	7	20	36	85	154	97	160	338	111	3	3	(1)	1	1	1	1	1	1	3	8	15	9	15	32	10	(1)	(1)	
Engineers.....	49	296	12.7	1	2	2	2	2	2	2	3	8	23	34	37	96	41	26	24	1	1	1	1	1	1	1	1	3	8	11	13	32	14	9	8	
Laborers.....	55	2,388	11.1	13	17	27	29	29	49	69	96	197	377	286	271	587	254	68	40	1	1	1	1	1	2	3	4	8	16	11	11	25	11	3	2	
Laborers: Company miners'.....	47	1,699	10.2	38	26	25	27	40	27	51	108	185	337	171	171	397	54	28	14	2	2	1	2	2	3	6	11	20	10	10	23	3	2	1		
Consideration miners'.....	22	748	10.6	14	16	18	13	14	25	26	31	31	69	116	93	173	102	5	2	2	2	2	2	3	3	4	4	9	16	12	23	14	1	(1)		
Machinists.....	26	52	13.5	1	1	1	1	2	1	1	1	1	2	2	2	11	12	8	1	1	1	1	1	4	2	2	2	4	4	4	21	23	23	15		
Masons.....	28	104	12.1	1	1	1	1	1	1	3	2	2	6	16	17	43	11	2	1	1	1	1	1	3	2	2	6	15	16	41	11	2	1			
Miners:																																				
Company.....	47	1,735	10.3	26	15	26	22	32	36	61	126	196	399	103	132	444	86	17	14	1	1	1	1	2	2	4	7	11	23	6	8	26	5	1	1	
Consideration.....	22	961	10.9	1	13	9	5	12	22	27	50	103	176	101	79	238	119	5	1	(1)	1	1	1	1	2	3	5	11	18	11	8	25	12	1	(1)	
Motormen.....	50	733	11.4	1	4	3	4	4	5	12	25	63	111	107	94	202	81	15	2	(1)	1	(1)	1	1	1	2	3	9	15	15	13	28	11	2	(1)	
Motor brakemen.....	51	724	11.2	1	4	2	7	6	8	22	28	58	120	106	98	195	61	8	1	(1)	1	(1)	1	1	1	3	4	8	17	15	14	27	8	1		
Pumpmen.....	51	350	14.8	1	1	1	1	1	2	2	2	1	2	2	7	24	49	113	145	(1)	1	1	1	1	1	1	1	1	1	2	7	14	32	41		
Timbermen.....	48	370	10.9	3	2	2	6	5	7	12	14	31	62	43	59	87	25	10	2	1	1	1	2	7	2	3	4	8	17	12	16	24	7	3	1	
Trackmen.....	55	406	12.0	3	3	3	7	5	1	3	8	15	47	47	55	117	73	20	5	1	1	1	1	2	4	7	10	8	10	19	8	8	8	17		
Other employees.....	55	1,896	12.0	12	16	16	20	27	27	37	82	130	196	155	183	369	149	147	330	1	1	1	1	1	2	4	7	10	8	10	19	8	8	8	17	
Total.....	56	34,136	10.9	369	334	369	417	500	590	962	1,679	2,825	5,675	3,996	4,131	8,803	2,294	569	623	1	1	1	1	1	2	3	5	8	17	12	12	26	7	2	2	

<sup>1</sup> Less than one-half of 1 per cent.

CLASSIFIED STARTS (DAYS) IN HALF MONTH



BITUMINOUS																																					
<i>Inside mine</i>																																					
Brakemen.....	547	4,259	8.9	100	84	108	173	189	257	344	407	469	552	625	533	298	74	35	11	2	2	3	4	4	6	8	10	11	13	15	13	7	2	1	(1)		
Bratticemen and timbermen.....	484	2,521	9.8	40	35	48	63	87	67	153	223	247	356	382	383	287	103	37	10	2	1	2	2	3	3	6	9	10	14	15	15	11	4	1	(1)		
Cagers.....	198	410	9.6	3	3	9	17	15	21	39	43	36	41	50	51	53	16	10	3	1	1	2	4	4	5	10	9	10	12	12	13	8	4	2	(1)		
Drivers.....	377	4,603	8.8	111	81	118	156	272	347	429	435	457	549	562	581	388	84	27	6	2	2	3	3	3	6	8	9	8	10	12	13	8	2	1	(1)		
Laborers.....	502	7,228	8.9	290	249	228	255	369	352	437	569	677	920	959	910	707	209	83	14	4	3	3	3	4	5	6	4	4	11	22	12	27	10	3	(1)		
Loaders, contract.....	24	170	9.5			3	4	15	10	6	6	19	37	21	46	2		1				2	2	2	2	5	6	4	4	11	22	12	27	10	3	(1)	
Loaders, hand.....	514	61,936	8.1	1,092	1,500	2,588	3,248	3,872	5,273	6,580	7,642	6,642	8,338	7,921	4,975	2,054	193	19	5	2	2	4	5	6	6	9	11	12	11	13	13	8	3	(1)	(1)		
Loaders, machine.....	10	102	9.4	5	4	3		6	4	7	1	7	16	17	10	13	8	1			2	4	3	4	5	6	4	7	1	7	16	17	10	13	8	1	(1)
Miners, gang.....	40	1,036	8.1	10	19	36	37	74	100	204	98	88	160	153	56	1					1	2	3	4	7	10	20	9	8	15	15	5	(1)				
Miners, hand or pick.....	291	21,424	8.5	268	358	597	834	1,274	2,047	1,836	2,498	2,780	3,275	2,820	1,888	891	54	4		1	2	3	4	6	10	9	12	13	15	13	9	4	(1)	(1)			
Miners, machine.....	485	6,499	8.8	135	90	213	220	297	505	615	720	588	787	971	852	438	58	10		2	1	3	3	5	8	9	11	9	12	15	13	7	1	(1)			
Motormen.....	548	3,751	9.7	43	52	71	100	106	159	232	339	369	461	668	552	412	114	63	10	1	1	2	3	4	6	9	10	12	18	15	11	3	2	(1)	(1)		
Pumpmen.....	402	1,015	11.7	19	14	10	15	19	29	27	21	54	61	113	136	123	113	222	39	2	1	1	1	2	3	3	2	5	6	11	13	12	11	22	4	(1)	
Trackmen.....	587	4,026	9.7	76	54	97	114	131	151	232	360	366	462	617	631	461	175	86	13	2	1	2	3	4	6	9	9	11	15	16	11	4	2	(1)	(1)		
Trappers (boys).....	273	925	8.3	14	24	40	53	42	66	112	108	88	103	123	86	58	7	1		2	3	4	6	5	7	12	11	10	11	13	9	6	1	(1)	(1)		
Other employees.....	538	4,786	10.5	62	45	66	102	126	184	213	272	354	471	752	752	785	290	283	29	1	1	2	3	4	4	6	7	10	16	16	16	6	6	1	(1)		
<b>Total.....</b>	<b>599</b>	<b>124,691</b>	<b>8.6</b>	<b>2,268</b>	<b>2,612</b>	<b>4,235</b>	<b>5,391</b>	<b>6,894</b>	<b>9,572</b>	<b>11,466</b>	<b>13,742</b>	<b>13,241</b>	<b>16,589</b>	<b>16,754</b>	<b>12,442</b>	<b>6,971</b>	<b>1,498</b>	<b>876</b>	<b>140</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>10</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>(1)</b>		
<i>Outside mine</i>																																					
Blacksmiths.....	581	969	10.7	9	13	15	9	23	29	41	46	77	86	154	196	153	69	44	5	1	1	2	1	2	3	4	5	8	9	16	20	16	7	5	1		
Carpenters and car repair men.....	474	1,354	10.4	9	12	20	27	37	49	73	56	110	136	221	285	209	73	32	5	1	1	1	2	3	4	5	4	8	10	16	21	15	5	2	(1)		
Engineers.....	333	732	12.9	4	1	3	4	9	6	17	13	26	41	78	117	57	286	31	1	(1)	(1)	1	1	1	2	2	4	6	6	10	16	8	39	4	(1)		
Firemen.....	212	636	12.6	5	4	8	7	9	11	9	16	22	37	38	51	90	77	226	26	1	1	1	1	1	2	1	3	3	6	6	8	14	12	36	4	(1)	
Laborers.....	591	7,514	9.5	163	130	214	244	322	372	452	588	693	831	1,127	1,027	868	334	127	22	2	2	3	3	4	5	6	8	9	11	15	14	12	4	2	(1)		
Other employees.....	578	4,823	11.1	80	88	74	87	88	132	146	219	244	340	559	800	886	370	606	104	2	2	2	2	2	3	3	5	5	7	12	17	18	8	13	2		
<b>Total.....</b>	<b>598</b>	<b>16,028</b>	<b>10.4</b>	<b>270</b>	<b>248</b>	<b>334</b>	<b>378</b>	<b>488</b>	<b>599</b>	<b>738</b>	<b>938</b>	<b>1,172</b>	<b>1,471</b>	<b>2,140</b>	<b>2,436</b>	<b>2,323</b>	<b>980</b>	<b>1,321</b>	<b>193</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>13</b>	<b>15</b>	<b>14</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>(1)</b>		
<b>Grand total.....</b>	<b>599</b>	<b>140,719</b>	<b>8.8</b>	<b>2,538</b>	<b>2,860</b>	<b>4,569</b>	<b>5,769</b>	<b>7,382</b>	<b>10,171</b>	<b>12,204</b>	<b>14,680</b>	<b>14,413</b>	<b>18,060</b>	<b>18,894</b>	<b>14,877</b>	<b>9,294</b>	<b>2,478</b>	<b>2,197</b>	<b>333</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>11</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>(1)</b>		

1 Less than one-half of 1 per cent.

## CLASSIFIED DAYS OF OPERATION IN YEAR

Anthracite mining is limited in area and in number and capacity of collieries. The annual production of anthracite coal seldom exceeds the demand, consequently the collieries, except in case of controversies between the operators and miners as in 1922, 1923, and 1925, have been operated nearly the full number of working-days in each year. The United States Geological Survey reports a weighted average of 271 days of operation for all collieries in the industry in the calendar year 1921; 151 days in 1922; 268 days in 1923; and 274 days in 1924. The weighted average days of operation for each of the years ending October 31, 1921 and 1924, as computed by the Bureau of Labor Statistics for the 21,999 employees of 29 collieries covered in 1922 were 287.2 days, and for the 44,500 employees of the 56 collieries in 1924 were 286.3 days.

Average days of operation in 1921, based on the 12,106 miners and miners' laborers were 287.7, or 0.5 of a day more than the average based on the 21,999 employees in all occupations. The average in 1924 based on the 23,715 miners and miners' laborers were 286.7, or 0.4 of a day more than for the 44,500 employees in all occupations. In bituminous mining, as can be seen in comparing averages for bituminous mines in Table 17, with those in Table 13 (p. 26) there is very little difference in the averages for miners and loaders and for all occupations combined.

In Table 17 it will be seen that of the 29 collieries included in the 1922 study one was in operation 190 and under 220 days; six were in operation 250 and under 280 days; and 22, or 76 per cent, were in operation 280 and under 310 days; also, that of the 56 collieries in the 1924 study, 1 was in operation under 50 days; 1 was in operation 160 and under 190 days; 10 were in operation 250 and under 280 days; and 44, or 79 per cent, were in operation 280 and under 310 days.

Bituminous mining is very extensive in area and the number and capacity of mines are large. Production would be much in excess of demands should all the mines in the industry be operated nearly full time or approximately 300 days per year. Many mines, therefore, have been in operation much less than 300 days per year, due primarily to "no market" or lack of orders. Table 18 (p. 36) shows that 529 of the 549 mines were closed on account of no market. The days the mines were closed ranged from 30 to 220 for 473 of the 529 mines closed for this cause. Thirty-three mines were closed under 30 days, and 23 were closed 220 days and over in the year on account of no market.

Data as to days of operation for the year ending October 31, 1924, were not available for 50 of the 599 bituminous mines, and therefore the average days of operation and the classification for that year shown in Table 17 are for 549 mines. Reading part of the totals shown for the bituminous mines in that table it is seen that 8 mines were in operation under 50 days in the year; 8 were in operation 50 and under 70 days; 21 were in operation 70 and under 100 days; 44 were in operation 100 and under 130 days; and 57 were in operation 130 and under 160 days, making 25 per cent of the mines in operation under 160 days in the year. Only 5 per cent of them were in operation 280 days and over.

TABLE 17.—AVERAGE AND CLASSIFIED DAYS OF OPERATION OF MINES, 1921 AND 1924, BY KIND OF COAL, AND STATE

Kind of coal, and State	Year ending Oct. 31	Number of collieries or mines	Average number of days of operation in year	Number of mines in operation each classified number of days in year ending Oct. 31, 1921 and 1924										
				Under 50	50 and under 70	70 and under 100	100 and under 130	130 and under 160	160 and under 190	190 and under 220	220 and under 250	250 and under 280	280 and under 310	310 and over
<b>ANTHRACITE</b>														
Pennsylvania	1921	29	287.2								1		6	22
	1924	56	286.3	1					1				10	44
<b>BITUMINOUS</b>														
Alabama	1921	10	222.0				1	2			5	1		
	1924	39	220.5		1		1	2	7	10	10	5	2	1
Colorado	1921	8	200.2						2	4	2			
	1924	17	187.6				2	3	3	6	2		1	1
Illinois	1921	22	193.9				1	2	5	9	4			
	1924	46	173.2		4	6	8	10	10	4	2			
Indiana	1921	12	171.4		1	1			5	4	1			
	1924	23	148.2		1	1	6	3	3	4	3	1		
Kansas	1924	9	193.1	1				1	1	4	2			
Kentucky	1921	20	204.6			2	1	3	3	4	4	3		
	1924	79	201.7		1	4	13	13	12	14	9	1		
Ohio	1921	25	184.6		1	3	6	5	5	3	2			
	1924	57	178.4	4	3	2	7	8	8	12	5	4	4	
Pennsylvania	1921	44	202.3			1		7	16	12	1	3	3	1
	1924	155	218.3	1		7	10	8	27	26	29	20	10	2
Tennessee	1924	20	183.9			1	2	2	5	1	5	2	2	
Virginia	1921	12	243.4								7	3		
	1924	47	195.5		2	6	12	5	10	7	2	2	2	
West Virginia	1921	142	205.5	2	3	5	6	9	25	30	21	22	3	
Total bituminous	1921	188	197.4			7	13	32	41	53	23	11	5	2
	1924	599	200.2	8	8	21	44	57	102	115	100	69	23	2

1 Not including days of operation of 1 mine, data being for part of year only.  
 2 Not including days of operation of 2 mines, data not reported.  
 3 Not including days of operation of 12 mines, data not reported.  
 4 Not including days of operation of 5 mines, data not reported; 9 mines data for part of year only; and 1 mine closed entire year.  
 5 Not including days of operation of 2 mines, data for part of year only.  
 6 Not including days of operation of 1 mine, data not reported.  
 7 Not including days of operation of 10 mines, data not reported; 5 mines data for part of year only; and 1 mine closed entire year.  
 8 Not including days of operation of 50 mines—29 mines data not reported, 19 mines data for part of year only, and 2 mines closed entire year.

CLASSIFIED DAYS CLOSED IN YEAR

The cause of closing and the number of days each mine was closed for each cause were obtained for the year ending October 31, 1924, for the 56 anthracite collieries and for 549 of the 599 bituminous mines included in the 1924 study. Data as to closing were not available for 50 bituminous mines.

Each of the 56 anthracite collieries and 549 bituminous mines for which data as to days and cause of closing were reported was closed one or more days in the specified year on account of no market, shortage of railroad cars, transportation disability, mine disability, strikes, labor shortage, holidays, or other causes.

Table 17 shows average and classified days of operation in year for the anthracite and the bituminous mines of each State. Table 18 shows the cause of closing of the mines, and the classification or grouping of mines closed in each State by the number of days closed for each cause. Reading these tables it will be observed that 155 Pennsylvania bituminous mines were included in the 1924 study; the days

of operation and the days closed are shown for 140 of the 155, such data not being available for the other 15 mines in this State. Of the 140 for which data were available, 135 were closed on account of no market. Three of them were closed 1 and under 5 days and 1 was closed 300 days and over. The days closed of the other 131 were between these two extremes, 64 of them being closed 100 and under 300 days in the year.

Reading the totals in Table 18, of mines closed on account of no market, it is seen that 18 anthracite collieries and 529 bituminous mines, including 38 in Alabama, 15 in Colorado, 44 in Illinois, 22 in Indiana, 9 in Kansas, 63 in Kentucky, 56 in Ohio, 135 in Pennsylvania, 20 in Tennessee, 10 in Virginia, and 117 in West Virginia were closed on account of no market. The totals for each of the other specified causes and for other causes may be read in like manner.

TABLE 18.—NUMBER OF MINES CLOSED IN EACH STATE IN YEAR ENDING OCTOBER 31, 1924, BY KIND OF COAL, SPECIFIED CAUSE, AND CLASSIFIED NUMBER OF DAYS CLOSED

Cause of closing of mines and classified number of days closed	Number of mines closed each classified number of days												Total
	Anthracite, Pennsylvania	Bituminous											
		Alabama	Colorado	Illinois	Indiana	Kansas	Kentucky	Ohio	Pennsylvania	Tennessee	Virginia	West Virginia	
NO MARKET													
Under 5 days	6						2	3				2	7
5 and under 10 days	2						2		1	1			3
10 and under 15 days	6	1					1	2	1				6
15 and under 20 days		1	1				1		1			2	4
20 and under 25 days							1	1		1		1	4
25 and under 30 days	1						1	3	1			1	7
30 and under 35 days	1	2	1	1	1	1	1	3	1			2	12
35 and under 40 days							1	1	2	1	1	7	14
40 and under 45 days	1	1			1		1	5	1			3	10
45 and under 50 days				2	1	2	2	5				4	16
50 and under 55 days		1			1	1	6	2	2	1	2	7	22
55 and under 60 days		1			1	1	3	3	1	1		1	12
60 and under 65 days		1		1	1	1	2	6			3	3	18
65 and under 70 days		3					5	1	5			7	21
70 and under 75 days		1		1	2		2	1	4	2		3	16
75 and under 80 days				1	1		2	4	1		1	9	19
80 and under 85 days		4					6	3	8		2	2	25
85 and under 90 days		1	1	1	2		2	2	6	2		2	17
90 and under 95 days		2		2	1		2	2	7			6	22
95 and under 100 days		3		3		1	1	3	3			2	18
100 and under 110 days		3	1	3			2	3	8			5	25
110 and under 120 days		1	4	5	1		4	2	5	1		8	31
120 and under 130 days		4	1	3	1		1	1	7			6	24
130 and under 140 days		2		3			2	4	15			9	35
140 and under 150 days		2		4			4	3	4	3		2	22
150 and under 160 days			1	3	2		3	4	3	2		1	19
160 and under 170 days		1	1	5	1		2	1	4	1		6	22
170 and under 180 days		1	1		2		2		2			1	9
180 and under 190 days			1		1		4	4	2			1	18
190 and under 200 days		1		1	2		1	1	2			5	12
200 and under 220 days				4	1		1	2	9			2	19
220 and under 240 days		1		1				1	2	1		3	9
240 and under 260 days		1			1			4				2	7
260 and under 280 days						1		1	1			2	5
280 and under 300 days								1					1
300 days and over									1				1
Total	18	38	15	44	22	9	63	56	135	20	10	117	529

<sup>1</sup> Not in operation in year Nov. 1, 1923, to Oct. 31, 1924, but in operation in half month ending Dec. 31, 1924, for which data were taken.

TABLE 18.—NUMBER OF MINES CLOSED IN EACH STATE IN YEAR ENDING OCTOBER 31, 1924, BY KIND OF COAL, SPECIFIED CAUSE, AND CLASSIFIED NUMBER OF DAYS CLOSED—Continued

Cause of closing of mines and classified number of days closed	Number of mines closed each classified number of days												Total	
	Anthracite, Pennsylvania	Bituminous												
		Alabama	Colorado	Illinois	Indiana	Kansas	Kentucky	Ohio	Pennsylvania	Tennessee	Virginia	West Virginia		
<b>LACK OF RAILROAD CARS</b>														
1 day.....	2	2	1	2	1	1	1	3	1	2		4	18	
2 days.....	2	7			2	4	5	2	2	3		9	32	
3 days.....		1		2	4			2	2			4	16	
4 days.....		1	1	1				1	1	1		3	11	
5 days.....		2						2	1	1		7	13	
6 days.....		2				1				1		4	8	
7 days.....							2					6	8	
8 days.....							1	1		1	1	3	7	
9 days.....							1					5	6	
10 days.....			1	1			5			2	2	3	14	
11 days.....				1			4					2	7	
12 days.....				1		1	3					3	8	
13 days.....												3	3	
14 days.....								1			1	3	5	
15 and under 20 days							3		1			6	10	
20 and under 25 days				1			4					6	11	
25 and under 30 days							1					1	2	
35 and under 40 days							3					1	4	
40 and under 45 days	1											1	1	
60 days.....													1	
70 days.....			1										1	
83 days.....			1										1	
127 days.....								1					1	
<b>Total.....</b>	<b>5</b>	<b>15</b>	<b>5</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>38</b>	<b>12</b>	<b>9</b>	<b>11</b>	<b>4</b>	<b>74</b>	<b>187</b>	
<b>TRANSPORTATION DISABILITY</b>														
1 day.....			1	3			1		1			5	11	
2 days.....				2			1		4	1		2	10	
3 days.....					1							3	4	
4 days.....							1					1	2	
6 days.....												1	1	
9 days.....									1			1	1	
10 days.....					1							1	1	
14 days.....							1					1	1	
15 days.....							1		1			1	2	
16 days.....							1					1	1	
20 days.....									1				1	
25 days.....	1												1	
26 days.....									1				1	
<b>Total.....</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>9</b>	<b>6</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>12</b>	<b>36</b>		
<b>MINE DISABILITY</b>														
1 day.....	2	5	1	6			5	9	7	4		11	48	
2 days.....	4	7	3	2	4		3	11	3	2	1	13	49	
3 days.....	2	3	2	2			1	1	1	1		9	20	
4 days.....	2	1	1	1	3		1	2	2		1	5	17	
5 days.....				1			2	1				1	9	
6 days.....							2	1				4	9	
7 days.....	3				1		1	1	1		1	4	8	
8 days.....			1			2	1					1	5	
9 days.....	2			1	1				1			2	9	
10 days.....	5		1	1			2					5	9	
11 days.....					1							4	5	
12 days.....								1			1		2	
13 days.....				1					1				2	
14 days.....										1			2	
15 and under 20 days	2			1			3					2	9	
20 and under 25 days	1		1	1								4	6	
25 and under 30 days										1		1	2	
30 days.....			1									1	1	
40 and under 50 days				1			2						3	
50 and under 60 days					1			1					2	
60 and under 70 days							2						2	
70 and under 80 days			1	1									2	
125 days.....					1								1	
<b>Total.....</b>	<b>23</b>	<b>16</b>	<b>12</b>	<b>19</b>	<b>13</b>	<b>2</b>	<b>25</b>	<b>28</b>	<b>16</b>	<b>8</b>	<b>5</b>	<b>71</b>	<b>215</b>	

TABLE 18.—NUMBER OF MINES CLOSED IN EACH STATE IN YEAR ENDING OCTOBER 31, 1924, BY KIND OF COAL, SPECIFIED CAUSE, AND CLASSIFIED NUMBER OF DAYS CLOSED—Continued

Cause of closing of mines and classified number of days closed	Number of mines closed each classified number of days												
	An-thra-cite, Penn-syl-va-nia	Bituminous											Total
		Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	
<b>STRIKE</b>													
1 day	2							2	2			1	3
2 days	3	1			1			2				1	5
3 days	1				1		1	2	1			1	6
4 days	2											1	1
5 days	1				2			1					3
6 days	1				1			2	1	3			7
7 days	3							2	1				1
8 days	2												
9 days	1												
10 and under 20 days	8			1	1				1			1	4
20 and under 30 days	1								1			1	2
30 and under 40 days								2					6
40 and under 50 days	1					4	1						2
50 and under 60 days	1					2	1			1			4
60 and under 70 days							5	1	1				7
92 days							1	1					1
103 days													1
104 days												1	1
118 days										1			1
124 days												1	1
152 days										1			1
175 days												1	1
231 days													1
Total	27	1		1	6	8	9	11	8	6		9	59
<b>LABOR SHORTAGE</b>													
1 day				1			1	5	2			4	13
2 days							2	4				3	9
3 days							1	2				3	6
4 days							1	1			1	1	3
5 and under 10 days							1	1				5	7
10 and under 15 days							1	1				1	3
15 and under 20 days												1	1
24 days												1	1
26 days									1				1
30 days							1						1
Total				1			8	13	3		1	19	45
<b>HOLIDAYS</b>													
2 days		17	3					15	9	10	4	20	78
3 days	1							21	1	3	2	18	41
4 days		19	1					22	9	6	3	28	87
5 days		2	3					8	8	2		28	51
6 days	5		9	3	1	1	1	33				14	62
7 days	7			17	10	1	1	56				20	105
8 days	11			16	4	1	1	6				1	29
9 days	20			3	4			6			2	2	18
10 days	10			2	2	5		2					11
11 days	1			1	1			53	1				56
12 days	1			2		1		1	4				8
14 days									3				3
Total	56	38	16	44	22	9	67	57	140	20	10	126	549
<b>OTHER CAUSE</b>													
1 day	1		1	4	1	1	1	5	5			14	32
2 days	2			4	1		2	2	2		3	7	21
3 days	2			1	1	2	3	1	1		1	1	11
4 days	7		1	1	1	1	1					3	9
5 days	1	1			1			1				1	4
6 days	6			1								1	2
7 days	6											2	2
8 days	5											4	4
9 days	2												2
10 and under 15 days	16						1					1	2
15 and under 20 days	5									1			1
20 and under 25 days								1	1			1	3
25 and under 30 days	1								1				1
30 and under 35 days										1		3	4
40 and under 50 days									1			1	2
87 days							1					1	1
95 days												1	1
122 days												1	1
Total	54	1	2	11	5	4	10	13	10	2	4	41	108

IMPORTANCE OF ANTHRACITE AND BITUMINOUS MINING

Table 19 compiled from Coal in 1922<sup>1</sup> and from the 1923 and 1924 preliminary reports published by the United States Geological Survey indicates the importance of anthracite and bituminous mining in number of employees, net tons of coal produced, value of total production, and value per net ton at the collieries or mines, in each of the years 1914 to 1924. Index numbers based on these figures, with the 1914 figures taken as the base, or 100 per cent, are also shown in the table.

During the period covered by the table the number of anthracite employees decreased from 179,679 to 160,009, or 11 per cent.

The average number of days of operation shows that anthracite mining is stable, to the extent that employees have, since 1915, had the opportunity to work an average of more than 250 days in each year except 1922, when the collieries were closed by a general strike lasting 138 working days. The average days of operation by years, 1922 excepted, ranged from 230 in 1915 to 293 in 1918.

TABLE 19.—NUMBER OF EMPLOYEES, AVERAGE NUMBER OF DAYS OF OPERATION, NET TONS MINED, AND VALUE OF TOTAL PRODUCTION AND PER TON, AT COLLIERIES OR MINES, AND INDEX NUMBERS THEREOF, 1914 TO 1924, BY KIND OF COAL, AND YEAR

[1914 average=100]

Kind of coal, and year	Number of employees	Average number of days mines were in operation	Net tons produced	Value at colliery or mine		Index numbers of—				
				Total production	Per ton	Number of employees	Average number of days mines were in operation	Net tons produced	Value at colliery or mine	
									Total production	Per ton
<b>ANTHRACITE</b>										
1914.....	179,679	245	90,821,507	\$188,181,399	\$2.07	100	100	100	100	100
1915.....	176,552	230	88,995,061	184,653,498	2.07	95	94	98	92	100
1916.....	159,369	253	87,578,493	202,009,561	2.31	89	103	96	107	112
1917.....	154,174	285	99,611,811	283,650,723	2.85	86	116	110	151	138
1918.....	142,121	293	98,826,084	336,480,347	3.40	82	129	109	179	184
1919.....	154,571	266	88,092,201	364,926,950	4.14	92	109	97	194	200
1920.....	145,055	271	89,598,249	434,252,000	4.85	81	111	99	231	234
1921.....	159,499	271	90,473,461	452,305,000	5.00	89	111	100	240	242
1922.....	156,849	*151	54,683,622	278,700,000	5.01	87	*62	60	145	242
1923.....	157,743	*268	98,339,009	506,787,600	5.43	88	*109	103	269	262
1924.....	160,009	274	87,926,862	477,231,000	5.43	89	112	97	254	262
<b>BITUMINOUS</b>										
1914.....	583,506	195	422,703,970	493,309,244	1.17	100	100	100	100	100
1915.....	557,456	203	442,624,426	502,637,688	1.13	95	104	105	102	96
1916.....	561,102	230	562,519,682	665,116,077	1.32	96	118	119	135	113
1917.....	603,143	243	551,790,563	1,249,272,837	2.26	103	125	131	253	193
1918.....	615,305	249	579,355,820	1,491,808,940	2.57	105	128	142	302	220
1919.....	621,998	195	465,860,058	1,160,616,013	2.49	107	100	110	235	213
1920.....	639,547	220	568,666,683	2,129,933,000	3.75	110	113	135	432	321
1921.....	663,754	149	415,921,950	1,199,983,600	2.89	114	76	98	243	247
1922.....	*687,958	142	422,268,069	1,274,820,000	3.02	118	73	100	258	258
1923.....	*702,817	179	564,156,917	1,513,327,000	2.68	120	92	133	307	229
1924.....	*619,604	171	483,686,538	1,062,626,050	2.20	106	88	114	215	188

\* Collieries closed 138 days by general strike of 142,442 of the employees. Maintenance employees were not included in the strike orders.

\* Collieries closed 19 days by general strike of approximately 145,000 of the employees. Maintenance employees were not included in the strike orders.

\* Including wagon mines.

\* Excluding wagon mines.

<sup>1</sup> United States Department of the Interior. Geological Survey. Coal in 1922. Washington, 1924.

The number of net tons of anthracite coal produced by years, 1922 excepted, ranged from 87,578,493 in 1916 to 99,611,811 in 1917.

The value of the annual production at the anthracite collieries increased from \$188,181,399 in 1914 to \$506,787,000 in 1923, an increase of 169 per cent, and the value per ton increased from \$2.07 in 1914 to \$5.43 in 1923 and 1924, or an increase of 162 per cent. In other words, the value per ton at the mine was nearly  $2\frac{2}{3}$  times as much in 1924 as in 1914.

The figures for bituminous mining in this table may be explained in a similar way.

### INCREASE OF MINING COSTS, FREIGHT RATES, AND COST OF DISTRIBUTION—ANTHRACITE

Every consumer of anthracite is well aware of the continuing increase in the retail price of this necessary and important commodity. The extent of this increase since 1913 is shown by the following average retail prices of Pennsylvania anthracite, white ash stove coal:

	January price	July price
1913.....	\$7. 99	\$7. 46
1914.....	7. 80	7. 60
1915.....	7. 83	7. 54
1916.....	7. 93	8. 12
1917.....	9. 29	9. 08
1918.....	9. 88	9. 96
1919.....	11. 51	12. 14
1920.....	12. 59	14. 28
1921.....	15. 99	14. 90
1922.....	14. 98	14. 87
1923.....	15. 43	15. 10
1924.....	15. 77	15. 24

The increase has caused much discussion, concern, and speculation as to the contributing causes, some of which are suggested by the findings of the United States Coal Commission, which made a thorough study of the various items of cost (including cost of mining, freight rates, and expense of distribution) incurred by retail coal dealers in providing coal yards, storage, and delivery trucks in sufficient quantity to make prompt delivery of coal at all seasons of the year.

The commission in its report on anthracite coal, dated July 5, 1923, (pp. 4-6) covers the items of cost in detail, stating:

In the 10 years under review by the commission's accounting staff, labor costs in the production of fresh-mined coal have risen from \$1.56 a gross ton in 1913 to \$4.12 in the first half of 1923, the cost of supplies from 35 to 71 cents, and general expenses from 32 to 92 cents. Labor cost bears about the same relation to total mine cost in 1923 (71.7 per cent) as in 1913 (70 per cent); supplies cost relatively less in 1923; and general expenses are relatively higher in 1923.

The average mine cost of a ton of coal with the 9 railroad companies has been \$2.23 in 1913 to \$5.75 in 1923. With 3 independent companies for which there are continuous records the corresponding change has been from an average cost of \$2.50 in 1913 to \$6.32 in 1923. Examined in detail, the increase in mine cost for these 12 companies was moderate until 1918, when for three successive years there was an annual jump of approximately \$1.

The item of freight alone in the examples cited takes from 16 to 30 cents of the consumer's dollar. The question as to whether or not the existing freight rates on anthracite are excessive is one that comes under the jurisdiction of the Interstate Commerce Commission.

FREIGHT RATES FROM SCRANTON AND WILKES-BARRE TO SPECIFIED CITIES,  
1913 AND 1925

[Data furnished by Interstate Commerce Commission]

City	Rate per gross ton of 2,240 pounds					
	Prepared sizes (lump, egg, stove, chestnut)		Pea		Buckwheat and smaller sizes	
	1913	1925	1913	1925	1913	1925
Boston.....	\$2.70	\$4.16	\$2.70	\$4.16	\$2.70	\$4.16
New York.....	1.80	2.90	1.65	2.65	1.45	2.39
Philadelphia.....	1.80	2.90	1.50	2.52	1.35	2.27
Baltimore.....	2.00	3.28	1.60	2.65	1.60	2.65
Washington.....	2.00	3.28	1.85	3.02	1.60	2.65
Richmond.....	2.15	3.40	2.00	3.25	2.00	3.28
Pittsburgh.....	2.00	3.28	1.85	3.02	1.85	3.02
Cleveland.....	2.75	4.16	2.75	4.16	2.75	4.16
Detroit.....	3.00	4.66	3.00	4.66	3.00	4.29
Cincinnati.....	3.50	5.29	3.50	5.29	3.50	5.26
Chicago.....	3.50	5.67	3.50	5.36	3.50	5.36
St. Louis.....	4.00	6.30	4.00	5.99	4.00	5.99
Kansas City.....	1 6.30	10.03	1 6.30	9.72	1 3.90	9.72
Milwaukee.....	4 4.17	7.08	4 4.17	6.77	4 4.17	6.77
Minneapolis.....	7 5.74	9.21	7 5.74	8.90	7 5.74	8.90

<sup>1</sup> The St. Louis rate of \$4 per ton of 2,240 pounds, and \$2.05 per ton of 2,000 pounds, St. Louis to Kansas City.

<sup>2</sup> The St. Louis rate of \$6.30 per ton of 2,240 pounds, and \$3.33 per ton of 2,000 pounds, St. Louis to Kansas City.

<sup>3</sup> The St. Louis rate of \$5.99 per ton of 2,240 pounds, and \$3.33 per ton of 2,000 pounds, St. Louis to Kansas City.

<sup>4</sup> The Chicago rate of \$3.50 per ton of 2,240 pounds, and 60 cents per ton of 2,000 pounds, Chicago to Milwaukee.

<sup>5</sup> The Chicago rate of \$5.67 per ton of 2,240 pounds, and \$1.26 per ton of 2,000 pounds, Chicago to Milwaukee.

<sup>6</sup> The Chicago rate of \$5.36 per ton of 2,240 pounds, and \$1.26 per ton of 2,000 pounds, Chicago to Milwaukee.

<sup>7</sup> The Chicago rate of \$3.50 per ton of 2,240 pounds, and \$2 per ton of 2,000 pounds, Chicago to Minneapolis.

<sup>8</sup> The Chicago rate of \$5.67 per ton of 2,240 pounds, and \$3.16 per ton of 2,000 pounds, Chicago to Minneapolis.

<sup>9</sup> The Chicago rate of \$5.36 per ton of 2,240 pounds, and \$3.16 per ton of 2,000 pounds, Chicago to Minneapolis.

The expense of distributing coal is the item of cost nearest home, and yet it is an item that the consumers may overlook. The city retailer may have provided extensive storage in his coal yard or pocket and delivery trucks sufficient to meet promptly every call for immediate delivery in midwinter; the small dealer may own neither yard nor delivery equipment, simply selling from the car to the consumer's own truck or a hired truck. Such a variation in service naturally involves a variation in gross margin or difference between the cost of anthracite on the dealer's siding and his price to the consumer. The field agents of the commission have found that these margins are as high as \$3.50 or more per ton and as low as \$1, or even less. The larger service rendered to the city consumer includes unloading, storage, screening, and delivery. In five of the larger cities examination of books of the dealers handling anthracite coal almost exclusively showed that the average gross margin per ton was \$2.88 in 1920, \$2.55 in 1921, and \$2.41 in 1922. The average expenses of these dealers for these three years was \$2.39, \$2.26, and \$1.99, respectively, showing a decrease since 1920, and a net margin of 49, 29, and 42 cents, respectively, for the three years. Returns received from retailers throughout the country show that in the past five years there has been in general an increase in gross margins in the later years, amounting for some dealers to \$1 or more. Generally there is also a considerable diversity in the margins reported, due either to price competition among dealers, or to the varying cost to dealers, depending on whether the coal was purchased from big companies or from independents or from jobbers. Were it not for these wide differences in wholesale prices the normal effect of competition would tend to narrow this spread of margins in the retail trade. The source of the anthracite, as determining the cost to the dealer, may have more to do with his success than the relative efficiency of his business organization. The characteristic feature in retailing of anthracite is the lack of uniformity in margins both within the same city and between cities.

## BRIEF HISTORY OF DISCOVERY AND PRODUCTION OF ANTHRACITE

The mining of anthracite in the United States is limited almost entirely to nine counties, located in east central Pennsylvania, of approximately 3,000 square miles, of which area only one-sixth is underlaid with coal of sufficient quantity to make it profitable to mine. Small amounts are produced in six other counties in the same section of Pennsylvania, and also in Virginia, Arkansas, and Colorado.

It is generally understood by producers and others engaged in marketing this coal that 75 to 80 per cent is produced by eight companies generally known as the "old-line companies," and 20 to 25 per cent by companies known to the industry as the "independents." The selling price per ton by the old-line companies at the mines is less than that of the independents, according to information obtained from retailers and also according to the report of the United States Coal Commission to the President, dated July 5, 1923 (p. 3), as follows:

Eight of the larger coal companies, most of them still closely affiliated with the railroads, are grouped together in price quotations, and their product is known as "company" coal in contrast with "independent" coal produced by 100 or more smaller "individual" companies. In 1913 the average mine price of stove anthracite was \$3.53 a gross ton; to-day the quotations are \$8 to \$8.25 a gross ton for "company" and \$8.50 to \$11.50 for "independent" coal.

According to tradition, anthracite was discovered in 1791 by a trapper who found pieces exposed among the roots of a fallen tree. He recognized them as coal, and made an effort to develop a business by mining and selling the coal to citizens of the near-by city of Philadelphia. The people, however, were dubious as to the value of the "black stones" as fuel, and not only refused to buy but had the first shipments condemned as worthless and the promoters declared impostors.

The attitude of the people as well as the lack of means of transportation retarded the development of the industry for many years, until the building of railroads and the construction of canals leading from the anthracite field to the rapidly increasing centers of population along the middle Atlantic coast.

Between 1807 and 1820, according to the United States Geological Survey, only 12,000 tons of anthracite coal were produced in the United States, 1,322 tons in 1821, and 13,685 tons in 1824. Production increased rapidly each year to 215,272 tons in 1830, 690,854 tons in 1835, 1,071,151 tons in 1837, 2,009,207 tons in 1844, 4,138,164 tons in 1850, 8,141,754 tons in 1855, 15,664,275 tons in 1870, 28,649,812 tons in 1880, 46,468,641 tons in 1890, 60,418,005 tons in 1899, 77,659,850 tons in 1905, and 85,604,312 tons in 1907. Since 1907, the annual production has ranged from 81,070,359 tons in 1909 to 99,611,811 tons in 1917, except in 1922 and 1925 when, on account of the general strikes extending from April 1 to September 9, 1922, and from September 1, 1925, to February, 1926, production dropped to 54,683,022 tons in 1922 and to 62,116,000 in 1925.

OCCUPATIONS IN COAL INDUSTRY

The occupations for which data are presented in this bulletin are listed below. For definitions see pages 90 to 92.

ANTHRACITE COAL

*Inside work:*

Blacksmiths.  
 Cagers.  
 Car runners.  
 Door tenders (boys).  
 Drivers.  
 Engineers.  
 Laborers.  
 Laborers, company miners'.  
 Laborers, consideration miners'.  
 Laborers, contract miners'.  
 Machinists.  
 Masons.  
 Miners, company.  
 Miners, consideration.  
 Miners, contract.  
 Motormen.  
 Motor brakemen.  
 Pump men.  
 Timbermen.  
 Trackmen.  
 Other employees.

*Outside work:*

Ash men.  
 Blacksmiths.  
 Cagers.  
 Carpenters.  
 Car runners.  
 Dumpers.  
 Engineers.  
 Firemen.  
 Jig runners.  
 Laborers.  
 Loaders.

*Outside work—Continued.*

Machinists.  
 Oilers.  
 Plate men.  
 Repair men.  
 Slaters (boys).  
 Timber cutters.  
 Trackmen.  
 Other employees.

BITUMINOUS COAL

*Inside work:*

Brakemen.  
 Brattice men and timber men.  
 Cagers.  
 Drivers.  
 Laborers.  
 Loaders, contract.  
 Loaders, hand.  
 Loaders, machine.  
 Miners, gang.  
 Miners, hand or pick.  
 Miners, machine.  
 Motormen.  
 Pump men.  
 Trackmen.  
 Trappers (boys).  
 Other employees.

*Outside work:*

Blacksmiths.  
 Carpenters.  
 Engineers.  
 Firemen.  
 Laborers.  
 Other employees.

## GENERAL TABLES

TABLE A.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF MINERS AND LOADERS, 1922 AND 1924, BY OCCUPATION AND STATE

## BITUMINOUS COAL MINING

Occupation and State	Year	Number of—		Average number of starts (days) in half month	Average hours—				Average earnings—			
		Mines	Em- ployees		In half month, based on—		Per start, based on—		Per hour, based on—		In half month	Per start
					Time at face, including lunch	Time in mine	Time at face, including lunch	Time in mine	Time at face, including lunch	Time in mine		
<b>LOADERS, HAND</b>												
Alabama.....	1922	8	1,535	8.4	69.8	74.9	8.3	8.9	\$0.497	\$0.464	\$34.73	\$4.12
	1924	32	3,060	7.6	64.8	70.4	8.5	9.3	.492	.454	31.93	4.20
Colorado.....	1922	7	445	9.1	69.9	77.5	7.7	8.5	.927	.837	64.84	7.13
	1924	15	1,178	8.0	62.3	66.8	7.8	7.9	.858	.799	53.41	6.65
Illinois.....	1922	17	4,257	8.9	70.7	75.1	8.0	8.5	1.197	1.127	84.58	9.53
	1924	35	10,079	7.6	60.8	66.2	8.0	8.7	1.092	1.003	66.40	8.76
Indiana.....	1922	8	1,436	8.3	61.7	64.6	7.5	7.8	1.146	1.094	70.65	8.54
	1924	15	2,470	6.0	45.3	47.4	7.5	7.9	1.083	1.034	49.05	8.17
Kentucky.....	1922	20	2,540	8.6	63.4	67.7	7.3	7.8	.752	.704	47.64	5.51
	1924	78	7,268	8.1	63.2	67.8	7.8	8.4	.693	.646	43.78	5.40
Ohio.....	1922	25	3,119	8.7	65.0	70.9	7.5	8.2	.973	.893	63.32	7.29
	1924	55	6,832	7.7	59.1	64.3	7.7	8.4	.860	.791	50.87	6.63
Pennsylvania.....	1922	41	5,650	8.8	68.5	75.4	7.8	8.6	.739	.672	50.64	5.79
	1924	128	19,046	8.9	72.3	78.7	8.1	8.9	.743	.682	53.68	6.05
Tennessee.....	1922	17	860	7.5	56.5	60.1	7.6	8.1	.508	.478	28.73	3.85
	1924	4	295	5.1	38.8	41.6	7.7	8.2	.939	.876	36.42	7.20
Utah.....	1922	12	1,006	8.2	61.6	65.4	7.5	8.0	.604	.569	37.24	4.53
Virginia.....	1922	1	76	10.1	85.9	89.0	8.5	8.8	.893	.862	76.68	7.60
Washington <sup>1</sup> .....	1922	42	2,979	8.6	60.2	64.7	7.0	7.5	.904	.841	54.40	6.33
West Virginia.....	1922	127	10,139	8.2	56.4	61.4	6.8	7.4	.831	.764	46.91	5.69
	1924	3	228	10.0	79.3	84.2	7.9	8.4	1.158	1.080	91.80	9.20
Wyoming.....	1922	3	228	10.0	79.3	84.2	7.9	8.4	1.158	1.080	91.80	9.20
Total.....	1922	176	22,560	8.7	66.2	71.5	7.7	8.3	.902	.836	59.75	6.90
	1924	514	61,936	8.1	63.3	68.6	7.8	8.5	.811	.748	51.29	6.32
<b>MINERS, HAND OR PICK</b>												
Alabama.....	1922	8	785	8.8	66.2	74.8	7.5	8.5	.548	.485	36.28	4.11
	1924	18	1,477	8.3	69.5	75.7	8.4	9.2	.577	.529	40.07	4.84
Colorado.....	1922	6	504	10.2	81.3	90.1	8.0	8.8	.993	.896	80.69	7.90
	1924	11	1,146	7.9	57.4	62.9	7.3	8.0	.929	.847	53.31	6.76
Illinois.....	1922	11	1,864	10.3	80.3	86.2	7.8	8.4	.865	.806	69.45	6.77
	1924	28	3,921	8.1	62.9	67.6	7.8	8.4	.912	.849	57.38	7.12
Indiana.....	1922	7	542	8.0	55.8	59.3	7.0	7.4	.827	.779	46.19	5.75
	1924	12	709	7.1	49.9	53.5	7.0	7.5	1.087	1.014	54.28	7.60
Kansas.....	1922	9	1,474	9.8	64.0	69.6	6.5	7.1	.901	.829	57.70	5.90
	1924	5	223	8.7	64.5	69.3	7.4	8.0	.825	.768	53.21	6.12
Kentucky.....	1922	14	654	8.5	70.9	77.8	8.3	9.1	.776	.707	55.00	6.45
	1924	3	47	9.8	79.9	86.7	8.1	8.8	.916	.844	73.18	7.46
Ohio.....	1922	2	15	5.5	38.9	44.6	7.1	8.2	1.041	.910	40.54	7.42
	1924	42	2,898	9.1	72.2	79.7	8.0	8.8	.767	.696	56.38	6.10
Pennsylvania.....	1922	105	8,010	8.7	70.7	76.9	8.1	8.8	.777	.714	54.91	6.31
	1924	14	869	8.0	62.1	67.0	7.7	8.3	.541	.502	33.60	4.18
Tennessee.....	1922	4	167	5.9	41.9	45.6	7.2	7.8	1.023	.941	42.92	7.33
	1924	3	243	10.7	90.2	97.9	8.5	9.2	1.068	.984	96.31	9.03
Utah.....	1922	34	972	8.1	55.4	59.4	6.8	7.3	1.019	.950	56.45	6.95
	1924	77	3,046	8.5	61.6	67.4	7.2	7.9	.831	.760	51.18	5.99
Washington.....	1922	4	124	10.3	85.1	89.9	8.3	8.7	1.215	1.150	103.38	10.05
West Virginia.....	1922	4	124	10.3	85.1	89.9	8.3	8.7	1.215	1.150	103.38	10.05
Wyoming.....	1922	4	124	10.3	85.1	89.9	8.3	8.7	1.215	1.150	103.38	10.05
Other States.....	1922	1	13	9.8	81.9	86.8	8.3	8.8	.652	.615	53.38	6.27
	1924	1	13	9.8	81.9	86.8	8.3	8.8	.652	.615	53.38	6.27
Total.....	1922	127	8,429	9.2	71.0	77.5	7.7	8.4	.840	.769	59.62	6.47
	1924	291	21,424	8.5	65.6	71.2	7.7	8.4	.809	.745	53.06	6.27

<sup>1</sup> Loaders in this State also did the machine mining.

TABLE A.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF MINERS AND LOADERS, 1922 AND 1924, BY OCCUPATION AND STATE—Continued

## BITUMINOUS COAL MINING—Continued

Occupation and State	Year	Number of—		Average number of starts (days) in half month	Average hours—				Average earnings—			
		Mines	Employees		In half month, based on—		Per start, based on—		Per hour, based on—		In half month	Per start
					Time at face, including lunch	Time in mine	Time at face, including lunch	Time in mine	Time at face, including lunch	Time in mine		
<b>MINERS, MACHINE</b>												
Alabama.....	1922	6	146	9.5	79.6	83.8	8.4	8.8	\$0.611	\$0.580	\$48.64	\$5.13
	1924	27	342	8.4	75.8	81.6	9.0	9.7	.836	.775	63.29	7.56
Colorado.....	1922	6	85	9.3	71.4	79.3	7.7	8.5	1.493	1.344	106.69	11.49
	1924	15	119	8.8	72.3	77.5	8.2	8.8	1.336	1.246	96.56	11.01
Illinois.....	1922	15	369	10.0	76.4	81.5	7.6	8.1	1.500	1.407	114.68	11.46
	1924	35	1,196	7.8	60.0	65.5	7.7	8.4	1.500	1.376	90.10	11.57
Indiana.....	1922	8	136	8.8	66.1	69.3	7.5	7.9	1.832	1.748	121.06	13.73
	1924	15	260	6.5	49.4	51.7	7.7	8.0	1.684	1.609	83.15	12.88
Kentucky.....	1922	19	268	9.7	73.6	78.7	7.6	8.1	1.166	1.091	85.83	8.88
	1924	75	797	8.8	78.5	83.3	8.9	9.4	.927	.874	72.79	8.25
Ohio.....	1922	25	354	9.9	78.2	85.1	7.9	8.6	1.395	1.282	109.12	10.99
	1924	57	740	8.8	71.1	77.1	8.1	8.7	1.175	1.175	90.62	10.27
Pennsylvania.....	1922	41	703	9.3	76.7	84.3	8.2	9.0	1.090	.991	83.55	8.94
	1924	126	1,852	9.7	81.4	88.3	8.4	9.1	1.142	1.053	92.95	9.61
Tennessee.....	1924	16	125	8.2	68.5	73.1	8.3	8.9	.649	.514	37.66	4.58
Utah.....	1922	3	21	6.5	48.3	51.9	7.5	8.0	1.745	1.621	84.19	13.00
Virginia.....	1924	12	93	9.9	92.2	96.7	9.4	9.8	.657	.626	60.63	6.14
West Virginia.....	1922	35	271	9.3	74.7	80.1	8.1	8.6	1.379	1.287	103.06	11.13
	1924	107	975	9.0	73.3	78.7	8.1	8.7	1.134	1.055	83.09	9.20
Wyoming.....	1922	3	18	9.8	76.5	81.4	8.3	8.3	2.142	2.013	163.76	16.65
Total.....	1922	161	2,371	9.5	75.4	81.5	7.9	8.6	1.274	1.180	96.14	10.10
	1924	485	6,499	8.8	72.9	78.6	8.3	8.9	1.163	1.079	84.79	9.65
<b>LOADERS, CONTRACT</b>												
Alabama.....	1924	10	72	8.3	70.3	73.8	8.4	8.8	.954	.909	67.06	8.03
Kentucky.....	1924	8	85	10.2	85.4	90.5	8.4	8.9	.878	.823	74.94	7.36
Virginia.....	1924	2	4	10.5	90.3	93.8	8.6	8.9	1.129	1.087	101.88	9.70
West Virginia.....	1924	4	9	11.8	100.4	106.5	8.5	9.0	1.127	1.063	113.14	9.61
Total.....	1924	24	170	9.5	79.9	84.3	8.4	8.9	.929	.881	74.26	7.82
<b>LOADERS, MACHINE</b>												
Ohio.....	1924	2	15	11.6	98.1	102.4	8.5	8.8	1.179	1.130	115.75	9.98
West Virginia.....	1924	5	46	10.8	99.1	106.7	9.2	9.9	.681	.633	67.48	6.23
Other States.....	1924	3	41	7.0	62.7	67.8	9.0	9.7	.429	.394	26.72	3.82
Total.....	1924	10	102	9.4	84.3	90.4	9.0	9.6	.690	.644	58.20	6.20
<b>MINERS, GANG</b>												
Illinois.....	1924	18	573	7.7	63.4	68.8	8.3	9.0	1.361	1.254	86.23	11.25
Indiana.....	1924	6	98	7.0	53.7	55.8	7.7	8.0	1.318	1.269	70.82	10.15
Pennsylvania.....	1924	8	282	9.2	76.2	83.5	8.3	9.1	.865	.789	65.90	7.16
West Virginia.....	1924	6	43	10.1	70.9	76.6	7.0	7.6	1.031	1.000	79.00	7.81
Other States.....	1924	2	40	5.9	45.4	48.4	7.7	8.2	1.241	1.165	56.37	9.55
Total.....	1924	40	1,036	8.1	65.6	71.1	8.1	8.8	1.187	1.094	77.79	9.66

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE**

**BITUMINOUS COAL MINING**

[The data in this table are for employees who are usually paid rates per hour, day, or week]

Place of work, occupation, and State	Year	Number of—		Average number of starts made in half month	Average hours worked		Average earnings			
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour	
<b>INSIDE MINE</b>										
<b>Brakemen:</b>										
Alabama.....	1922	8	139	7.8	61.8	8.0	\$22.89	\$2.95	\$0.370	
	1924	24	220	8.6	78.1	9.0	29.99	3.47	.384	
Colorado.....	1922	6	29	10.9	87.6	8.0	83.32	7.65	.952	
	1924	16	79	8.8	70.9	8.0	64.70	7.23	.912	
Illinois.....	1922	20	216	10.4	85.8	8.3	80.04	7.78	.937	
	1924	43	764	8.1	66.6	8.2	62.14	7.70	.935	
Indiana.....	1922	10	88	9.6	76.9	8.0	72.24	7.52	.939	
	1924	18	185	6.6	52.7	8.0	49.72	7.51	.944	
Kansas.....	1924	9	26	10.7	85.2	7.9	73.65	6.86	.895	
Kentucky.....	1922	19	143	9.2	75.0	8.2	49.04	5.34	.654	
	1924	75	539	8.9	75.5	8.5	43.01	4.85	.570	
Ohio.....	1922	22	65	8.9	71.3	8.0	66.79	7.51	.930	
	1924	48	161	8.8	71.1	8.1	64.77	7.35	.911	
Pennsylvania.....	1922	44	319	10.5	81.0	10.4	65.24	10.84	.806	
	1924	147	979	9.9	84.1	8.5	69.24	6.99	.822	
Tennessee.....	1924	20	65	9.1	72.5	7.9	50.58	3.35	.422	
Utah.....	1922	3	13	5.5	43.3	7.9	43.08	7.89	.995	
Virginia.....	1924	12	82	8.4	71.3	8.5	51.27	3.73	.439	
Washington.....	1922	3	13	12.5	103.7	8.1	93.38	7.31	.901	
West Virginia.....	1922	45	306	9.3	76.0	8.2	54.71	5.91	.720	
	1924	134	1,189	9.0	75.7	8.4	44.10	4.88	.583	
Wyoming.....	1922	1	2	13.0	104.0	8.0	101.35	7.80	.975	
<b>Total.....</b>	1922	181	1,333	10.4	77.3	10.2	60.18	16.41	.779	
	1924	647	4,259	8.9	75.0	8.4	53.25	5.96	.710	
<b>Bratticemen and timbermen:</b>										
Alabama.....	1922	9	19	9.9	80.5	8.1	34.16	3.43	.424	
	1924	24	89	9.2	79.8	8.7	34.74	3.78	.436	
Colorado.....	1922	7	33	11.6	92.7	8.0	91.09	7.87	.983	
	1924	17	100	9.8	79.2	8.1	73.98	7.53	.934	
Illinois.....	1922	21	197	10.9	87.7	8.0	82.23	7.54	.938	
	1924	43	542	9.1	73.0	8.0	68.44	7.50	.937	
Indiana.....	1922	11	53	9.3	71.4	7.7	67.31	7.25	.942	
	1924	18	80	8.2	65.3	7.9	61.19	7.45	.937	
Kansas.....	1924	6	14	11.9	99.1	8.3	93.13	7.81	.940	
Kentucky.....	1922	17	58	9.8	79.9	8.2	55.33	5.65	.693	
	1924	63	245	9.5	81.3	8.5	50.36	5.30	.619	
Ohio.....	1922	24	139	10.3	82.1	8.0	76.87	7.50	.937	
	1924	44	237	9.8	80.3	8.2	74.89	7.63	.932	
Pennsylvania.....	1922	40	268	10.6	91.3	10.4	64.05	16.13	.701	
	1924	131	703	10.7	89.7	8.4	71.69	6.69	.799	
Tennessee.....	1924	18	36	9.0	75.3	8.3	34.42	3.81	.457	
Utah.....	1922	4	13	7.5	58.9	7.8	59.47	7.89	1.010	
Virginia.....	1924	10	21	9.3	79.1	8.5	38.61	4.16	.488	
Washington.....	1922	4	39	12.6	101.1	8.0	87.20	6.91	.863	
West Virginia.....	1922	41	155	9.8	80.5	8.2	61.12	6.25	.759	
	1924	110	454	9.6	81.1	8.4	49.76	5.16	.613	
Wyoming.....	1922	3	12	12.1	96.8	8.0	95.83	7.93	.990	
<b>Total.....</b>	1922	181	986	10.4	85.7	10.1	70.26	16.81	.820	
	1924	484	2,521	8.8	81.1	8.3	63.04	6.44	.778	

<sup>1</sup> Not including data for 8 employees whose starts were not reported.

<sup>2</sup> Not including data for 79 employees whose starts were not reported.

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued**

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>INSIDE MINE—continued</b>									
<b>Cagers:</b>									
Alabama.....	1922	1	6	10.2	101.7	10.0	\$31.38	\$3.09	\$0.309
Colorado.....	1922	5	13	11.8	91.4	7.7	90.97	7.68	.995
	1924	9	20	9.4	75.1	8.0	72.23	7.69	.962
Illinois.....	1922	22	62	10.6	94.7	8.9	88.71	8.35	.937
	1924	46	109	9.7	85.4	8.8	80.22	8.30	.940
Indiana.....	1922	12	22	10.5	88.9	8.4	82.81	7.85	.931
	1924	22	47	8.4	69.4	8.2	65.03	7.70	.937
Kansas.....	1924	9	20	11.1	104.9	9.5	98.36	8.90	.937
Kentucky.....	1922	2	4	8.5	72.9	8.6	61.14	7.19	.839
	1924	12	42	8.3	69.0	8.3	41.10	4.94	.597
Ohio.....	1922	10	27	8.8	71.9	8.2	67.11	7.61	.933
	1924	26	45	9.7	80.9	8.4	74.23	7.68	.917
Pennsylvania.....	1922	21	35	* 10.3	92.4	* 8.9	70.29	* 6.82	.761
	1924	56	96	10.6	93.9	8.8	77.91	7.32	.829
Washington.....	1922	1	2	14.0	112.5	8.0	77.35	5.53	.688
West Virginia.....	1922	8	12	9.7	80.9	8.4	65.54	6.78	.810
	1924	18	31	8.5	76.8	9.1	50.48	5.95	.657
Wyoming.....	1922	1	2	15.5	124.5	8.0	123.26	7.95	.990
Total.....	1922	83	185	* 10.3	89.4	* 8.6	77.82	* 7.53	.871
	1924	198	410	9.6	83.2	8.7	71.53	7.46	.860
<b>Drivers:</b>									
Alabama.....	1922	7	125	9.1	75.7	8.4	29.15	3.22	.385
	1924	34	486	7.5	63.1	8.4	22.09	2.94	.350
Colorado.....	1922	8	131	10.5	83.0	7.9	79.37	7.59	.956
	1924	17	259	8.7	69.8	8.0	65.59	7.52	.939
Illinois.....	1922	19	403	10.4	86.7	8.3	83.17	8.00	.960
	1924	35	599	8.8	74.1	8.4	69.53	7.90	.938
Indiana.....	1922	9	139	8.3	65.2	7.8	61.40	7.37	.942
	1924	20	214	7.0	55.1	7.8	51.99	7.40	.944
Kansas.....	1924	8	112	11.1	89.0	8.0	83.66	7.56	.940
Kentucky.....	1922	8	174	9.6	80.1	8.3	57.43	5.99	.718
	1924	40	469	8.5	70.0	8.2	44.56	5.23	.637
Ohio.....	1922	20	281	9.6	75.6	7.9	70.86	7.40	.938
	1924	47	467	8.8	70.5	8.0	65.77	7.49	.932
Pennsylvania.....	1922	23	472	* 9.5	82.5	* 8.3	58.10	* 6.04	.704
	1924	73	1,115	9.7	80.5	8.3	62.72	6.45	.779
Tennessee.....	1924	13	127	8.2	64.1	7.9	26.50	3.25	.414
Utah.....	1922	4	54	5.8	44.2	7.7	45.14	7.84	1.021
Virginia.....	1924	5	34	9.8	77.3	7.9	35.76	3.64	.463
Washington.....	1922	1	19	11.4	91.1	8.0	88.21	7.76	.969
	1924	22	257	9.1	73.4	8.1	58.83	6.49	.801
West Virginia.....	1924	80	721	8.9	71.8	8.1	45.66	5.14	.636
Wyoming.....	1922	4	25	11.3	90.2	8.0	83.63	7.83	.984
Total.....	1922	125	2,080	* 9.5	78.7	* 8.2	64.84	* 6.82	.824
	1924	377	4,603	8.8	72.3	8.2	54.08	6.12	.748

\* Not including data for 2 employees whose starts were not reported.

\* Not including data for 89 employees whose starts were not reported.

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>INSIDE MINE—continued</b>									
<b>Laborers:</b>									
Alabama.....	1922	9	354	9.7	78.5	8.1	\$28.49	\$2.94	\$0.363
	1924	35	736	8.5	75.0	8.8	28.73	3.38	.383
Colorado.....	1922	7	57	12.1	96.3	8.0	90.98	7.53	.945
	1924	7	69	8.9	71.1	8.0	65.46	7.36	.921
Illinois.....	1922	20	444	10.4	85.1	8.2	77.33	7.45	.909
	1924	39	1,097	8.6	69.0	8.0	63.08	7.32	.915
Indiana.....	1922	11	145	9.7	78.7	8.1	73.72	7.59	.937
	1924	18	167	7.5	60.5	8.1	56.89	7.59	.940
Kansas.....	1924	7	21	10.7	85.4	8.0	80.37	7.53	.941
Kentucky.....	1922	20	326	9.4	66.4	7.1	48.59	5.18	.731
	1924	69	1,017	8.4	71.5	8.5	38.02	4.54	.532
Ohio.....	1922	21	152	8.6	68.3	8.0	62.81	7.33	.919
	1924	36	213	8.9	73.3	8.3	63.48	7.17	.866
Pennsylvania.....	1922	42	923	10.3	87.5	8.2	56.18	5.63	.642
	1924	131	2,012	9.8	81.5	8.3	60.58	6.16	.744
Tennessee.....	1924	18	126	7.8	62.8	8.1	24.90	3.20	.396
Utah.....	1922	3	22	9.5	73.7	7.8	71.66	7.58	.973
Virginia.....	1924	12	98	7.6	61.5	8.1	23.84	3.12	.388
Washington.....	1922	4	58	10.7	85.1	8.0	59.19	5.55	.695
West Virginia.....	1922	40	461	9.4	76.8	8.1	47.91	5.08	.624
	1924	130	1,672	8.8	73.5	8.4	39.89	4.54	.543
Wyoming.....	1922	4	25	12.4	98.5	8.0	96.23	7.79	.977
Total.....	1922	181	2,967	9.9	80.8	8.0	56.30	5.73	.697
	1924	502	7,228	8.9	74.2	8.3	48.74	5.47	.657
<b>Motormen:</b>									
Alabama.....	1922	7	110	9.7	77.6	8.0	33.31	3.42	.429
	1924	21	158	10.1	91.9	9.1	43.00	4.27	.468
Colorado.....	1922	6	17	10.2	81.9	8.0	79.73	7.79	.973
	1924	11	57	8.9	73.6	8.3	71.61	8.05	.974
Illinois.....	1922	19	169	10.5	89.5	8.5	90.20	8.59	1.008
	1924	43	532	8.7	73.4	8.4	74.38	8.54	1.013
Indiana.....	1922	10	72	10.8	86.7	8.0	87.67	8.09	1.012
	1924	20	108	8.5	51.2	7.9	52.00	8.03	1.016
Kansas.....	1924	7	18	10.9	83.4	8.1	88.32	8.07	.999
Kentucky.....	1922	20	177	9.7	81.2	8.4	56.04	5.77	.690
	1924	76	486	9.9	86.1	8.7	53.46	5.39	.621
Ohio.....	1922	25	90	10.1	84.2	8.3	79.11	7.80	.940
	1924	57	221	9.6	79.4	8.2	73.19	7.59	.922
Pennsylvania.....	1922	42	314	10.0	86.3	8.4	71.48	7.03	.829
	1924	148	965	10.3	86.6	8.6	75.70	7.38	.854
Tennessee.....	1924	19	79	9.6	76.6	8.0	37.82	3.95	.494
Utah.....	1922	3	16	6.8	52.6	7.8	53.25	7.89	1.013
Virginia.....	1924	12	77	10.4	89.8	8.6	45.65	4.37	.508
Washington.....	1922	4	19	12.8	108.7	8.1	85.53	6.66	.825
West Virginia.....	1922	46	307	9.8	82.8	8.5	64.68	6.62	.781
	1924	134	1,060	10.0	86.4	8.6	53.83	5.35	.623
Wyoming.....	1922	1	5	13.8	110.4	8.0	109.13	7.91	.988
Total.....	1922	183	1,296	10.1	84.2	8.4	68.62	6.82	.815
	1924	548	3,761	9.7	83.6	8.6	62.89	6.46	.752

\* Not including data for 237 employees whose starts were not reported.

\* Not including data for 6 employees whose starts were not reported.

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued**

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>INSIDE MINE—continued</b>									
<b>Pumpmen:</b>									
Alabama.....	1922	9	62	10.9	92.5	8.5	\$32.70	\$3.01	\$0.353
	1924	32	105	10.2	100.1	9.9	36.67	3.61	.366
Colorado.....	1922	7	10	14.4	114.6	8.0	111.66	7.75	.974
	1924	15	27	12.3	103.9	8.4	96.54	7.83	.930
Illinois.....	1922	13	23	13.0	109.0	8.4	101.46	7.80	.931
	1924	17	40	13.1	108.8	8.3	100.91	7.73	.928
Indiana.....	1922	9	28	12.7	107.8	8.5	102.07	8.05	.947
	1924	17	33	12.2	99.2	8.1	93.65	7.69	.944
Kentucky.....	1922	15	39	12.6	110.9	8.8	73.59	5.86	.663
	1924	47	89	11.6	102.7	8.9	54.36	4.70	.529
Ohio.....	1922	21	43	14.0	115.7	8.3	106.27	7.62	.919
	1924	41	87	12.3	101.0	8.2	92.04	7.50	.911
Pennsylvania.....	1922	41	152	13.9	117.1	8.4	86.70	6.23	.740
	1924	127	352	12.2	105.5	8.7	83.82	6.88	.795
Tennessee.....	1924	10	16	9.8	91.6	9.4	39.86	4.09	.435
Utah.....	1922	3	6	12.8	102.2	8.0	99.17	7.73	.971
Virginia.....	1924	6	26	10.6	98.0	9.3	34.15	3.23	.348
Washington.....	1922	3	5	16.0	152.0	7.9	115.42	6.01	.759
West Virginia.....	1922	32	79	11.9	105.3	8.8	73.92	6.21	.702
	1924	90	240	11.4	103.7	9.1	59.73	5.25	.575
Wyoming.....	1922	4	5	14.8	122.2	8.3	120.42	8.14	.985
Total.....	1922	157	452	13.0	110.2	8.5	80.90	6.24	.734
	1924	402	1,015	11.7	103.4	8.8	70.38	6.02	.681
<b>Trackmen:</b>									
Alabama.....	1922	10	58	10.4	84.5	8.1	39.55	3.80	.468
	1924	37	131	9.6	84.1	8.8	38.84	4.05	.462
Colorado.....	1922	8	38	12.2	97.2	8.0	94.51	7.76	.972
	1924	17	90	10.6	85.2	8.0	81.66	7.70	.958
Illinois.....	1922	22	301	10.8	87.8	8.1	82.36	7.62	.938
	1924	46	670	9.0	71.8	8.0	67.47	7.49	.940
Indiana.....	1922	11	108	10.3	82.9	8.1	77.89	7.58	.939
	1924	22	153	7.1	57.1	8.0	53.58	7.53	.938
Kansas.....	1924	9	30	11.6	91.1	7.9	85.38	7.38	.938
Kentucky.....	1922	19	159	10.5	87.7	8.4	62.30	5.94	.710
	1924	77	579	9.6	81.8	8.5	50.11	5.22	.612
Ohio.....	1922	25	111	10.7	86.8	8.1	81.20	7.57	.935
	1924	54	213	10.3	84.1	8.1	78.26	7.57	.931
Pennsylvania.....	1922	44	287	11.0	91.2	8.2	68.34	6.29	.749
	1924	151	895	10.6	89.1	8.4	71.95	6.77	.807
Tennessee.....	1924	20	63	9.0	73.6	8.2	34.79	3.86	.473
Utah.....	1922	4	20	9.1	71.8	7.9	72.22	7.98	1.007
Virginia.....	1924	12	83	9.8	78.9	8.1	39.44	4.03	.600
Washington.....	1922	4	17	11.5	92.1	8.0	85.92	7.45	.933
West Virginia.....	1922	47	274	10.0	81.2	8.2	63.31	6.38	.780
	1924	142	1,119	9.7	82.7	8.5	50.89	5.23	.616
Wyoming.....	1922	4	20	14.9	119.5	8.0	118.13	7.93	.959
Total.....	1922	198	1,393	10.7	87.3	8.2	72.05	6.77	.826
	1924	587	4,026	9.7	81.2	8.3	59.83	6.14	.737

† Not including data for 30 employees whose starts were not reported.

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>INSIDE MINE—continued</b>									
<b>Trappers (boys):</b>									
Alabama.....	1922	5	29	8.3	66.9	8.1	\$15.44	\$1.87	\$0.231
.....	1924	18	60	7.5	64.4	8.6	14.05	1.96	.218
Colorado.....	1922	4	12	11.2	89.3	8.0	50.65	4.54	.567
.....	1924	9	31	8.1	64.8	8.0	32.66	4.03	.504
Illinois.....	1922	16	72	8.6	68.3	8.0	34.45	4.02	.504
.....	1924	25	132	7.4	54.2	7.3	30.04	4.04	.554
Indiana.....	1922	9	41	6.6	52.4	7.9	26.34	3.98	.503
.....	1924	16	65	6.0	47.6	7.9	23.65	3.93	.497
Kentucky.....	1922	6	15	10.5	79.6	7.6	37.75	3.58	.474
.....	1924	34	126	8.4	67.6	8.0	20.29	2.40	.300
Ohio.....	1922	22	84	9.2	72.1	7.8	36.96	4.02	.512
.....	1924	36	125	8.3	64.7	7.8	32.58	3.94	.504
Pennsylvania.....	1922	12	36	10.5	85.5	8.2	34.44	3.29	.403
.....	1924	37	77	10.2	84.3	8.3	42.95	4.22	.509
Tennessee.....	1924	15	49	7.4	58.4	7.9	14.92	2.02	.255
Virginia.....	1924	8	30	9.0	72.4	8.0	18.43	2.04	.254
West Virginia.....	1922	29	104	9.7	76.3	7.9	37.24	3.84	.485
.....	1924	75	230	9.2	75.7	8.2	28.76	3.11	.380
Total.....	1922	103	393	9.1	72.3	7.9	34.09	3.75	.472
.....	1924	273	925	8.3	66.7	8.0	27.24	3.27	.408
<b>Other employees:</b>									
Alabama.....	1922	8	144	10.7	87.8	8.2	38.81	3.61	.442
.....	1924	33	414	9.6	84.9	8.8	46.75	4.36	.551
Colorado.....	1922	8	54	12.3	98.6	8.0	95.22	7.77	.966
.....	1924	17	74	10.7	87.0	8.1	84.06	7.84	.966
Illinois.....	1922	22	376	11.5	94.7	8.2	95.93	8.33	1.013
.....	1924	46	659	10.4	85.8	8.3	85.93	8.27	1.002
Indiana.....	1922	12	105	10.8	86.5	8.0	88.42	8.21	1.022
.....	1924	22	129	9.3	74.7	8.0	78.58	8.45	1.052
Kansas.....	1924	9	60	10.8	88.9	8.3	103.08	9.57	1.159
Kentucky.....	1922	20	283	10.1	87.1	8.6	61.86	6.14	.710
.....	1924	76	701	10.1	88.5	8.8	65.39	6.50	.739
Ohio.....	1922	21	169	9.6	77.1	8.0	71.00	7.39	.921
.....	1924	47	254	10.7	87.8	8.2	78.62	7.36	.895
Pennsylvania.....	1922	44	791	*11.1	95.3	*8.4	72.36	*6.64	.759
.....	1924	137	1,593	11.2	94.6	8.5	82.00	7.35	.867
Tennessee.....	1924	18	97	9.0	81.5	8.2	48.94	4.93	.601
Utah.....	1922	4	54	9.1	71.8	7.9	71.29	7.84	.993
Virginia.....	1924	11	55	9.2	76.6	8.3	50.53	5.43	.680
Washington.....	1922	4	32	13.6	110.4	8.1	108.89	7.99	.987
West Virginia.....	1922	41	219	10.6	88.3	8.4	72.18	6.83	.818
.....	1924	122	720	10.5	92.6	8.8	63.70	6.08	.688
Wyoming.....	1922	4	67	13.3	107.3	8.1	107.61	8.11	1.003
Total.....	1922	188	2,294	*10.9	91.4	*8.3	75.49	*6.97	.826
.....	1924	538	4,786	10.5	89.7	8.5	73.32	6.97	.817

\* Not including data for 137 employees whose starts were not reported.

TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>OUTSIDE MINE</b>									
<b>Blacksmiths:</b>									
Alabama.....	1922	10	18	11.7	95.1	8.2	\$51.90	\$4.45	\$0.546
	1924	36	49	9.7	86.0	8.9	43.77	4.51	.509
Colorado.....	1922	8	14	12.5	114.8	9.2	104.66	8.37	.912
	1924	17	20	11.3	98.3	8.7	89.21	7.89	.908
Illinois.....	1922	22	56	13.1	116.2	8.9	112.38	8.57	.967
	1924	45	119	10.5	86.8	8.3	84.06	8.00	.968
Indiana.....	1922	12	18	12.6	113.4	9.0	99.93	7.96	.881
	1924	22	41	8.4	74.1	8.8	65.20	7.77	.880
Kansas.....	1924	9	11	11.7	109.3	9.3	107.98	9.21	.988
Kentucky.....	1922	18	29	11.2	94.4	8.4	72.18	6.44	.765
	1924	75	113	10.9	92.2	8.5	57.32	5.26	.622
Ohio.....	1922	25	43	12.0	100.0	8.3	96.00	8.02	.960
	1924	56	88	10.2	85.3	8.4	81.79	8.03	.959
Pennsylvania.....	1922	41	84	11.0	100.2	8.8	78.73	7.16	.786
	1924	151	285	11.2	98.1	8.9	80.85	7.32	.824
Tennessee.....	1924	20	24	10.7	86.7	8.1	43.19	4.05	.498
Utah.....	1922	4	5	11.4	91.4	8.0	92.41	8.11	1.011
Virginia.....	1924	12	14	10.9	90.4	8.3	54.13	4.99	.599
Washington.....	1922	4	6	14.2	115.2	8.1	95.13	6.72	.826
West Virginia.....	1922	43	61	10.6	90.0	8.5	76.12	7.17	.846
	1924	138	205	10.9	93.6	8.6	64.50	5.92	.689
Wyoming.....	1922	4	5	14.2	125.4	8.8	126.55	8.91	1.009
<b>Total.....</b>	1922	191	339	11.7	102.0	8.6	87.42	7.47	.857
	1924	581	969	10.7	92.0	8.6	71.75	6.72	.780
<b>Carpenters and car repairmen:</b>									
Alabama.....	1922	8	33	9.7	81.7	8.5	33.98	3.52	.416
	1924	32	83	9.7	87.4	9.0	34.88	3.58	.399
Colorado.....	1922	3	6	12.2	108.0	8.9	99.07	8.14	.917
	1924	12	34	9.9	87.6	8.8	74.42	7.51	.850
Illinois.....	1922	20	40	12.3	104.1	8.5	98.14	7.99	.943
	1924	38	143	10.2	84.4	8.2	77.80	7.59	.922
Indiana.....	1922	6	12	10.3	85.2	8.2	75.72	7.33	.889
	1924	8	13	7.8	68.0	8.8	59.57	7.67	.876
Kansas.....	1924	3	4	13.0	110.5	8.5	102.94	7.92	.932
Kentucky.....	1922	18	40	11.5	93.3	8.1	64.67	5.64	.693
	1924	61	178	10.1	84.5	8.4	49.71	4.94	.588
Ohio.....	1922	17	28	11.2	91.3	8.2	83.75	7.49	.917
	1924	37	59	9.7	79.1	8.2	71.80	7.43	.908
Pennsylvania.....	1922	37	166	10.9	96.7	8.5	67.15	6.18	.694
	1924	138	431	10.9	95.8	8.8	70.90	6.51	.740
Tennessee.....	1924	15	30	10.2	83.6	8.2	41.61	4.07	.498
Utah.....	1922	4	10	12.2	104.3	8.5	107.53	8.80	1.029
Virginia.....	1924	11	24	9.4	74.7	8.0	40.91	4.36	.548
Washington.....	1922	4	15	12.9	100.1	7.8	81.98	6.37	.819
West Virginia.....	1922	38	74	10.9	90.7	8.3	69.77	6.41	.769
	1924	119	355	10.7	91.4	8.6	57.12	5.35	.625
Wyoming.....	1922	2	3	13.0	107.0	8.2	107.00	8.23	1.000
<b>Total.....</b>	1922	157	427	11.1	94.7	8.4	71.23	6.42	.752
	1924	474	1,354	10.4	89.6	8.6	61.96	5.93	.691

<sup>9</sup> Not including data for 9 employees whose starts were not reported.

<sup>10</sup> Not including data for 22 employees whose starts were not reported.

TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and State	Year	Number of—		Average number of starts made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>OUTSIDE MINE—continued</b>									
<b>Engineers:</b>									
Alabama.....	1922	7	11	11.5	96.8	8.4	\$47.87	\$4.15	\$0.495
	1924	24	38	10.2	81.5	8.0	43.71	4.29	.537
Colorado.....	1922	8	20	13.6	117.5	8.6	107.02	7.90	.914
	1924	17	60	11.4	99.8	8.7	87.01	7.61	.872
Illinois.....	1922	22	68	15.0	122.1	8.1	116.63	7.75	.955
	1924	45	147	14.6	120.6	8.3	116.87	8.02	.969
Indiana.....	1922	8	16	15.4	135.5	8.8	121.34	7.86	.895
	1924	22	41	13.9	126.9	9.1	110.71	7.98	.872
Kansas.....	1924	9	13	12.1	116.6	9.7	104.70	8.07	.898
Kentucky.....	1922	7	8	12.8	108.2	8.5	84.24	6.61	.779
	1924	38	64	13.1	123.7	9.5	69.99	5.36	.566
Ohio.....	1922	18	23	12.5	111.3	8.9	95.29	7.61	.856
	1924	28	38	12.6	111.4	8.9	103.91	8.26	.933
Pennsylvania.....	1922	32	71	12.4	106.6	18.5	80.35	6.50	.754
	1924	103	246	12.6	112.8	8.9	91.96	7.27	.816
Tennessee.....	1924	5	7	11.3	97.3	8.8	49.48	4.38	.498
Utah.....	1922	3	3	13.7	114.7	8.4	111.30	8.14	.971
Washington.....	1922	4	14	15.9	129.9	8.2	113.42	7.12	.873
West Virginia.....	1922	16	28	15.0	165.1	11.0	100.88	6.71	.611
	1924	42	78	12.8	123.0	9.6	72.60	5.66	.590
Wyoming.....	1922	4	5	15.0	146.5	9.7	142.09	9.47	.977
Total.....	1922	129	267	13.9	121.3	18.7	99.50	17.21	.820
	1924	333	732	12.9	114.4	8.9	91.56	7.09	.801
<b>Firemen:</b>									
Alabama.....	1922	6	25	11.9	108.6	9.1	33.73	2.83	.311
	1924	12	30	11.4	114.8	10.1	38.02	3.35	.331
Colorado.....	1922	5	9	13.8	143.0	10.4	107.94	7.83	.755
	1924	13	30	11.1	98.4	8.9	80.19	7.22	.815
Illinois.....	1922	20	87	14.0	112.5	8.0	101.53	7.25	.902
	1924	39	130	12.5	102.7	8.2	92.90	7.45	.905
Indiana.....	1922	5	15	13.1	122.7	9.4	96.67	7.40	.716
	1924	21	41	11.2	113.0	10.1	80.91	7.23	.788
Kansas.....	1924	6	16	13.9	117.8	8.4	100.97	7.24	.857
Kentucky.....	1922	2	9	12.6	108.2	8.6	82.65	6.58	.764
	1924	24	53	12.5	114.5	9.1	60.46	4.82	.528
Ohio.....	1922	8	18	12.4	111.4	9.0	95.82	7.70	.860
	1924	14	31	13.5	114.2	8.5	99.31	7.38	.870
Pennsylvania.....	1922	18	114	14.2	113.2	11.8	82.50	6.34	.729
	1924	59	244	13.3	114.3	8.6	81.91	6.15	.717
Tennessee.....	1924	4	8	12.9	115.6	9.0	45.31	3.52	.392
Utah.....	1922	1	1	15.0	128.0	8.5	112.00	7.47	.875
Washington.....	1922	2	9	15.8	128.0	8.1	95.11	6.03	.743
West Virginia.....	1922	9	31	14.7	141.6	9.6	82.27	5.61	.581
	1924	20	53	11.5	108.6	9.5	55.58	4.85	.512
Wyoming.....	1922	3	9	15.6	124.3	8.0	115.35	7.42	.928
Total.....	1922	79	327	13.9	117.1	11.8	87.24	6.48	.745
	1924	212	636	12.6	110.7	8.8	78.83	6.25	.712

<sup>1</sup> Not including data for 8 employees whose starts were not reported.

<sup>11</sup> Not including data for 24 employees whose starts were not reported.

**TABLE B.—AVERAGE NUMBER OF STARTS (DAYS) AND AVERAGE HOURS AND EARNINGS OF EMPLOYEES OTHER THAN MINERS AND LOADERS, 1922 AND 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and State	Year	Number of—		Average number of starts (days) made in half month	Average hours worked		Average earnings		
		Mines	Em- ployees		In half month	Per start (day)	In half month	Per start (day)	Per hour
<b>OUTSIDE MINE—continued</b>									
<b>Laborers:</b>									
Alabama.....	1922	10	203	9.1	73.9	8.1	\$24.21	\$2.66	\$0.328
	1924	39	580	8.1	71.9	8.9	20.39	2.53	.284
Colorado.....	1922	8	97	11.6	101.0	8.7	77.40	6.64	.766
	1924	17	210	8.9	77.6	8.8	55.53	6.27	.716
Illinois.....	1922	21	337	10.3	85.8	8.3	73.69	7.13	.859
	1924	45	765	9.2	75.7	8.2	65.36	7.07	.863
Indiana.....	1922	12	115	9.4	77.6	8.2	68.88	6.98	.849
	1924	21	192	7.1	57.2	8.0	48.64	6.81	.850
Kansas.....	1924	9	37	10.1	88.8	8.8	76.77	7.62	.865
Kentucky.....	1922	20	198	10.2	83.5	8.2	43.82	4.29	.525
	1924	78	999	9.1	78.3	8.6	36.55	4.00	.467
Ohio.....	1922	24	227	9.3	74.1	8.0	63.24	6.80	.853
	1924	56	441	9.1	73.6	8.1	63.24	6.92	.859
Pennsylvania.....	1922	42	573	<sup>12</sup> 10.8	95.5	<sup>13</sup> 8.8	54.03	<sup>14</sup> 5.17	.566
	1924	152	2,017	10.2	89.8	8.8	56.20	5.51	.626
Tennessee.....	1924	20	157	8.8	70.2	8.0	26.64	3.03	.379
Utah.....	1922	4	71	9.9	77.7	7.8	68.11	6.85	.876
Virginia.....	1924	12	136	8.4	68.9	8.2	25.33	3.02	.367
Washington.....	1922	4	62	11.1	89.3	8.1	60.19	5.43	.674
West Virginia.....	1922	46	498	9.6	80.0	8.4	46.16	4.82	.577
	1924	142	1,980	9.9	84.8	8.6	40.44	4.08	.477
Wyoming.....	1922	4	26	11.9	95.1	8.0	82.69	6.96	.870
Total.....	1922	195	2,407	<sup>12</sup> 10.1	84.8	<sup>13</sup> 8.4	55.06	<sup>14</sup> 5.49	.649
	1924	591	7,514	9.5	81.2	8.6	46.73	4.93	.575
<b>Other employees:</b>									
Alabama.....	1922	10	185	11.1	93.7	8.5	36.85	3.32	.393
	1924	38	348	10.2	93.5	9.2	38.13	3.74	.408
Colorado.....	1922	7	68	12.9	115.2	8.9	97.53	7.56	.847
	1924	17	189	11.0	101.2	9.2	71.93	6.55	.711
Illinois.....	1922	21	247	12.5	104.5	8.4	90.15	7.24	.863
	1924	44	502	10.4	87.8	8.4	69.64	6.68	.793
Indiana.....	1922	12	87	12.7	106.7	8.4	93.16	7.32	.873
	1924	23	91	9.6	83.2	8.6	60.19	6.24	.724
Kansas.....	1924	7	18	12.0	107.5	9.0	95.51	7.96	.888
Kentucky.....	1922	20	258	11.1	93.7	8.5	59.46	5.38	.635
	1924	73	501	10.9	97.3	8.9	54.28	4.98	.558
Ohio.....	1922	25	160	11.6	95.1	8.2	73.94	6.36	.777
	1924	54	228	11.3	93.9	8.3	72.81	6.44	.775
Pennsylvania.....	1922	42	713	11.9	104.9	<sup>13</sup> 8.8	66.26	<sup>14</sup> 5.65	.631
	1924	151	1,596	11.9	106.7	9.0	72.06	6.08	.676
Tennessee.....	1924	20	125	9.2	76.5	8.3	34.33	3.72	.449
Utah.....	1922	4	45	10.1	78.5	7.8	63.68	6.39	.875
Virginia.....	1924	12	107	10.1	87.3	8.7	41.42	4.12	.475
Washington.....	1922	4	60	13.3	108.4	8.1	79.77	5.98	.736
West Virginia.....	1922	44	371	11.5	100.5	8.7	70.70	6.14	.703
	1924	139	1,118	11.2	101.4	9.1	59.02	5.29	.582
Wyoming.....	1922	4	48	13.7	110.5	8.1	96.73	7.07	.876
Total.....	1922	193	2,242	<sup>13</sup> 11.8	101.3	<sup>13</sup> 8.5	70.02	<sup>14</sup> 5.96	.691
	1924	578	4,823	11.1	99.1	8.9	62.73	5.64	.633

<sup>11</sup> Not including data for 51 employees whose starts were not reported.

<sup>12</sup> Not including data for 75 employees whose starts were not reported.

TABLE C.—NUMBER OF MINERS AND LOADERS IN EACH STATE WHOSE AVERAGE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924, BY OCCUPATION

BITUMINOUS COAL MINING

Occupation and classified earnings per hour	Number of employees whose average hourly earnings, based on time at face and time in mine, were within each classified amount																					
	Alabama		Colorado		Illinois		Indiana		Kentucky		Ohio		Pennsylvania		Tennessee		Virginia		West Virginia		Total	
	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine
<b>LOADERS, HAND</b>																						
Under 30 cents.....	157	259	24	33	34	42	5	7	254	348	19	23	418	563	108	139	73	94	71	103	1,158	1,604
30 and under 40 cents.....	780	1,044	48	66	42	59	5	7	595	729	35	70	830	1,164	185	209	131	158	196	317	2,847	3,823
40 and under 50 cents.....	998	938	86	91	104	164	13	17	979	1,225	207	312	1,691	2,336	224	220	230	230	547	906	5,055	6,439
50 and under 60 cents.....	560	420	76	108	230	352	23	25	1,420	1,549	433	651	2,738	3,404	141	129	126	138	1,074	1,768	6,821	8,966
60 and under 70 cents.....	273	202	111	143	389	531	58	81	1,240	1,211	916	1,320	3,368	3,750	84	59	134	134	1,411	1,768	7,984	9,199
70 and under 80 cents.....	128	80	173	167	592	948	132	206	988	852	1,301	1,398	3,225	2,967	40	44	115	96	1,629	1,630	8,323	8,388
80 and under 90 cents.....	53	43	188	241	998	1,353	247	313	669	520	1,190	1,218	2,501	2,023	35	27	59	48	1,538	1,412	7,478	7,183
90 and under \$1.....	47	36	197	131	1,391	1,666	377	415	394	314	999	803	1,747	1,229	13	5	49	56	1,167	1,031	6,381	5,686
\$1 and under \$1.10.....	26	15	113	86	1,512	1,627	441	458	273	211	710	493	1,072	691	11	11	32	24	831	695	5,071	4,311
\$1.10 and under \$1.20.....	17	9	59	37	1,566	1,239	411	369	195	136	472	269	626	398	8	11	22	12	581	403	3,897	2,853
\$1.20 and under \$1.30.....	7	9	21	33	1,162	840	307	238	106	88	260	141	330	225	4	1	13	5	383	224	2,603	1,804
\$1.30 and under \$1.40.....	8	8	30	15	819	558	180	143	73	36	131	53	214	112	2	2	5	3	246	144	1,708	1,066
\$1.40 and under \$1.50.....	1	3	13	7	540	328	111	96	30	27	71	38	104	61	1	3	1	1	133	75	1,007	636
\$1.50 and under \$1.60.....	1	1	7	5	340	143	73	38	29	13	35	15	53	38	3	3	2	4	106	51	649	311
\$1.60 and under \$1.70.....	3	3	8	5	165	116	36	33	13	4	16	15	39	26	1	3	3	3	55	33	339	232
\$1.70 and under \$1.80.....	1	1	3	3	109	42	30	17	4	1	18	6	28	15	1	1	2	2	35	18	227	105
\$1.80 and under \$1.90.....	1	1	3	2	60	38	11	9	1	1	10	5	14	11	1	1	1	1	29	13	130	74
\$1.90 and under \$2.....	1	1	2	3	30	13	11	3	1	1	5	1	12	8	1	1	1	1	20	8	81	36
\$2 and under \$2.50.....	1	1	6	2	52	24	4	2	1	1	2	4	19	14	1	1	2	2	29	12	117	57
\$2.50 and under \$3.....	1	1	4	1	4	1	1	1	1	1	1	1	9	5	1	1	1	1	4	5	18	11
\$3 and over.....	1	1	4	1	4	1	1	1	1	1	1	1	8	6	1	1	1	1	4	1	12	7
<b>Total.....</b>	<b>3,060</b>	<b>3,060</b>	<b>1,178</b>	<b>1,178</b>	<b>10,079</b>	<b>10,079</b>	<b>2,470</b>	<b>2,470</b>	<b>7,266</b>	<b>7,266</b>	<b>6,832</b>	<b>6,832</b>	<b>19,046</b>	<b>19,046</b>	<b>860</b>	<b>860</b>	<b>1,006</b>	<b>1,006</b>	<b>10,139</b>	<b>10,139</b>	<b>61,936</b>	<b>61,936</b>
<b>Average earnings, in cents, per hour.....</b>	<b>49.2</b>	<b>45.4</b>	<b>85.8</b>	<b>79.9</b>	<b>109.2</b>	<b>100.3</b>	<b>108.3</b>	<b>103.4</b>	<b>69.3</b>	<b>64.6</b>	<b>86.0</b>	<b>79.1</b>	<b>74.3</b>	<b>68.2</b>	<b>50.8</b>	<b>47.8</b>	<b>60.4</b>	<b>56.9</b>	<b>83.1</b>	<b>76.4</b>	<b>81.1</b>	<b>74.8</b>

ANTHRACITE AND BITUMINOUS COAL MINING

Number of employees whose average hourly earnings, based on time at face and time in mine, were within each classified amount

Occupation and classified earnings per hour	Alabama		Colorado		Illinois		Indiana		Kansas		Kentucky		Ohio		Pennsylvania		Tennessee		West Virginia		Other States		Total		
	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	
	<b>MINERS, HAND OR PICK</b>																								
Under 30 cents.....	97	133	16	22	24	40	11	12	24	26	14	23			157	198	85	142	11	24			439	620	
30 and under 40 cents..	178	260	21	24	111	130	12	16	28	39	23	36			225	332	174	197	55	89	2	3	834	1,126	
40 and under 50 cents..	336	394	42	56	136	165	20	23	47	86	45	60			531	740	212	212	182	308	2	1	1,553	2,045	
50 and under 60 cents..	344	306	53	79	220	268	23	46	108	154	57	93			994	1,345	169	128	395	479	1	4	2,364	2,902	
60 and under 70 cents..	231	171	104	149	338	409	53	66	174	219	113	133			1,301	1,477	87	72	457	495	4	1	2,862	3,192	
70 and under 80 cents..	127	84	143	170	439	561	80	94	222	260	141	130			2	1,394	1,411	57	53	429	422	2	3	3,034	3,190
80 and under 90 cents..	61	48	143	171	554	653	93	105	255	205	90	60	1	3	1,220	1,083	36	30	390	380	1		2,844	2,738	
90 and under \$1.....	31	27	155	162	643	618	94	83	187	152	56	45	3	7	876	594	21	16	323	306			2,389	2,010	
\$1 and under \$1.10....	23	19	141	93	486	392	82	72	135	117	40	30	7	1	521	380	12	5	268	198			1,715	1,307	
\$1.10 and under \$1.20..	16	10	94	72	334	288	55	47	85	69	28	18	1		335	216	4	7	191	159			1,146	886	
\$1.20 and under \$1.30..	9	7	67	43	235	156	50	42	69	53	15	13	1		191	109	7	4	135	83		1	779	511	
\$1.30 and under \$1.40..	5	5	44	37	163	104	38	33	45	28	14	2			122	56	4	3	103	43	1		539	311	
\$1.40 and under \$1.50..	7	3	39	21	85	78	35	35	25	18	1	3		1	58	30	1		38	21			289	210	
\$1.50 and under \$1.60..	2	2	20	12	75	28	30	31	17	15	3	5		1	36	15			22	12			205	121	
\$1.60 and under \$1.70..	1	3	20	17	34	13	29	25	14	11	7	2			18	7			14	5			137	83	
\$1.70 and under \$1.80..	4		12	9	19	6	29	25	13	5			1		9	8			9	7			96	60	
\$1.80 and under \$1.90..		1	13	3	10	5	23	19	8	5			1		4	2			4	5			63	40	
\$1.90 and under \$2.....		1	9	1	6	3	16	8	4	1	1	1			8	2			3	4			47	21	
\$2 and under \$2.50....	5	3	5	5	7	4	22	16	11	9	1				5	4			14	5			70	46	
\$2.50 and under \$3....		4	4		2		4	1	2	2					2	1			3	1			17	5	
\$3 and over.....			1						1														2		
<b>Total.....</b>	<b>1,477</b>	<b>1,477</b>	<b>1,146</b>	<b>1,146</b>	<b>3,921</b>	<b>3,921</b>	<b>799</b>	<b>799</b>	<b>1,474</b>	<b>1,474</b>	<b>654</b>	<b>654</b>	<b>15</b>	<b>15</b>	<b>8,010</b>	<b>8,010</b>	<b>869</b>	<b>869</b>	<b>3,046</b>	<b>3,046</b>	<b>13</b>	<b>13</b>	<b>21,424</b>	<b>21,424</b>	
<b>Average earnings, in cents, per hour.....</b>	<b>57.7</b>	<b>52.9</b>	<b>92.9</b>	<b>84.7</b>	<b>91.2</b>	<b>84.9</b>	<b>108.7</b>	<b>101.4</b>	<b>90.1</b>	<b>82.9</b>	<b>77.6</b>	<b>70.7</b>	<b>104.1</b>	<b>91.0</b>	<b>77.7</b>	<b>71.4</b>	<b>54.1</b>	<b>50.2</b>	<b>83.1</b>	<b>76.0</b>	<b>65.2</b>	<b>61.5</b>	<b>80.9</b>	<b>74.5</b>	

TABLE C.—NUMBER OF MINERS AND LOADERS IN EACH STATE WHOSE AVERAGE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924, BY OCCUPATION—Continued

## BITUMINOUS COAL MINING—Continued

Occupation and classified earnings per hour	Number of employees whose average hourly earnings, based on time at face and time in mine, were within each classified amount																						
	Alabama		Colorado		Illinois		Indiana		Kentucky		Ohio		Pennsylvania		Tennessee		Virginia		West Virginia		Total		
	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	At face	In mine	
<b>MINERS, MACHINE</b>																							
Under 30 cents.....	7	7							11	12			13	14		3				1	1	32	37
30 and under 40 cents.....	40	47							13	26	2	2	10	12	14	32	2	5	3	14	14	84	138
40 and under 50 cents.....	32	49		2	1	1			49	66	3	9	22	29	50	45	35	41	30	44	222	286	
50 and under 60 cents.....	69	74	2	3	1	6			118	105	7	10	50	64	40	24	25	16	80	103	392	405	
60 and under 70 cents.....	39	63	4	3	14	18			50	63	23	29	79	122	11	12	4	5	77	53	301	368	
70 and under 80 cents.....	61	23	2	4	22	27			82	101	29	44	119	177	2	1	3	3	55	69	375	449	
80 and under 90 cents.....	28	26	8	15	24	39	2	3	81	82	46	68	315	348		1	4	6	59	70	567	658	
90 cents and under \$1.....	19	12	25	18	35	57	14	29	102	102	63	88	199	202	1		6	3	68	72	532	583	
\$1 and under \$1.10.....	10	11	8	15	58	93	20	13	84	84	86	96	170	184			5	10	63	92	504	598	
\$1.10 and under \$1.20.....	12	9	15	7	92	125	15	13	77	62	98	75	170	165		3	5	1	81	84	565	544	
\$1.20 and under \$1.30.....	2	4	8	11	113	124	17	23	35	25	71	62	156	117	3				75	93	481	459	
\$1.30 and under \$1.40.....	6	7	5	8	108	164	15	18	32	24	49	62	115	110				1	83	58	413	452	
\$1.40 and under \$1.50.....	7	1	9	7	165	139	17	21	22	21	63	49	101	86			1	2	67	59	452	385	
\$1.50 and under \$1.60.....	1	1	9	8	121	113	25	13	13	10	49	33	77	59	2	2	2		50	41	349	280	
\$1.60 and under \$1.70.....	1		6	3	87	75	7	21	14	4	29	21	55	44					43	36	242	204	
\$1.70 and under \$1.80.....		2	3	4	106	57	28	18	4	5	28	31	60	31	2	2			41	26	272	176	
\$1.80 and under \$1.90.....	2	2	2	4	52	50	16	14	3	2	26	24	33	16					20	15	154	127	
\$1.90 and under \$2.....	1	3			56	41	10	11	3		22	20	26	26					20	15	144	116	
\$2 and under \$2.50.....	5	1	3	4	121	54	43	41	3	3	46	17	73	40					49	24	343	184	
\$2.50 and under \$3.....			3	3	14	11	22	17	1				7	6					8	5	55	42	
\$3 and over.....			1		6	2	9	5					2						2	1	20	8	
<b>Total.....</b>	<b>342</b>	<b>342</b>	<b>119</b>	<b>119</b>	<b>1,196</b>	<b>1,196</b>	<b>280</b>	<b>280</b>	<b>797</b>	<b>797</b>	<b>740</b>	<b>740</b>	<b>1,852</b>	<b>1,852</b>	<b>125</b>	<b>125</b>	<b>93</b>	<b>93</b>	<b>975</b>	<b>975</b>	<b>6,499</b>	<b>6,499</b>	
<b>Average earnings, in cents, per hour.....</b>	<b>83.6</b>	<b>77.5</b>	<b>133.6</b>	<b>124.6</b>	<b>150.0</b>	<b>137.6</b>	<b>168.4</b>	<b>160.9</b>	<b>92.7</b>	<b>87.4</b>	<b>127.4</b>	<b>117.5</b>	<b>114.2</b>	<b>105.3</b>	<b>54.9</b>	<b>51.4</b>	<b>65.7</b>	<b>62.6</b>	<b>113.4</b>	<b>105.5</b>	<b>116.3</b>	<b>107.9</b>	

**TABLE D.—NUMBER OF EMPLOYEES OTHER THAN MINERS AND LOADERS IN EACH STATE WHOSE AVERAGE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924****BITUMINOUS COAL MINING**

Place of work, occupation, and classified earnings per hour	Number of employees in each occupation whose average hourly earnings were within each classified amount											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE</b>												
<b>Brakemen:</b>												
Under 30 cents.....	7											7
30 and under 40 cents.....	134					14			27	3	5	183
40 and under 50 cents.....	78					256		3	53	68	143	601
50 and under 60 cents.....	1	2				101	1	43	5	11	759	923
60 and under 70 cents.....		10			5	48	3	196			117	379
70 and under 80 cents.....		3	3			8	11	83			18	126
80 and under 90 cents.....		1	22	1		110	4	65			46	249
90 cents and under \$1.....		61	729	133	21	2	141	584			96	1,767
\$1 and under \$1.10.....		2	7				1	4			3	17
\$1.10 and under \$1.20.....			1								1	2
\$1.20 and under \$1.30.....			2					1			1	4
\$1.30 and under \$1.40.....				1								1
<b>Total.....</b>	<b>220</b>	<b>79</b>	<b>764</b>	<b>135</b>	<b>26</b>	<b>539</b>	<b>161</b>	<b>979</b>	<b>85</b>	<b>82</b>	<b>1,189</b>	<b>4,259</b>
<b>Average earnings, in cents, per hour.....</b>	<b>38.4</b>	<b>91.2</b>	<b>93.5</b>	<b>94.4</b>	<b>86.5</b>	<b>57.0</b>	<b>91.1</b>	<b>82.3</b>	<b>42.2</b>	<b>43.9</b>	<b>58.3</b>	<b>71.0</b>
<b>Bratticemen and timbermen:</b>												
Under 30 cents.....	1									1		2
30 and under 40 cents.....	21					2		1	13		7	44
40 and under 50 cents.....	53					28		1	13	2	54	151
50 and under 60 cents.....	11					123		27	8	17	220	406
60 and under 70 cents.....	3	13				40		238	2	1	81	378
70 and under 80 cents.....						3	7	38			14	62
80 and under 90 cents.....						31		5			17	53
90 cents and under \$1.....		73	536	80	14	18	226	388			59	1,394
\$1 and under \$1.10.....		14	4				3	3			1	25
\$1.10 and under \$1.20.....			2				1	2				5
\$1.30 and under \$1.40.....											11	1
<b>Total.....</b>	<b>89</b>	<b>100</b>	<b>542</b>	<b>80</b>	<b>14</b>	<b>245</b>	<b>237</b>	<b>703</b>	<b>36</b>	<b>21</b>	<b>454</b>	<b>2,521</b>
<b>Average earnings, in cents, per hour.....</b>	<b>43.6</b>	<b>93.4</b>	<b>93.7</b>	<b>93.7</b>	<b>94.0</b>	<b>61.9</b>	<b>93.2</b>	<b>79.9</b>	<b>45.7</b>	<b>48.8</b>	<b>61.3</b>	<b>77.8</b>
<b>Drivers:</b>												
Under 30 cents.....	79								1			80
30 and under 40 cents.....	331					13			45			389
40 and under 50 cents.....	74					73		1	77	25	66	316
50 and under 60 cents.....	2					166		23	3	9	352	555
60 and under 70 cents.....		25				136		421			58	640
70 and under 80 cents.....		2				3	6	112			20	143
80 and under 90 cents.....			3		1	68	26	13	1		31	145
90 cents and under \$1.....		202	573	213	111	10	431	541			193	2,274
\$1 and under \$1.10.....		28	23	1			3	3			1	59
\$1.20 and under \$1.30.....							1	1				2
<b>Total.....</b>	<b>486</b>	<b>259</b>	<b>599</b>	<b>214</b>	<b>112</b>	<b>469</b>	<b>467</b>	<b>1,115</b>	<b>127</b>	<b>34</b>	<b>721</b>	<b>4,603</b>
<b>Average earnings, in cents, per hour.....</b>	<b>35.0</b>	<b>93.9</b>	<b>93.8</b>	<b>94.4</b>	<b>94.0</b>	<b>63.7</b>	<b>93.2</b>	<b>77.9</b>	<b>41.4</b>	<b>46.3</b>	<b>63.6</b>	<b>74.8</b>

\* Pieceworker.

**TABLE D.—NUMBER OF EMPLOYEES OTHER THAN MINERS AND LOADERS IN EACH STATE WHOSE AVERAGE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified earnings per hour	Number of employees in each occupation whose average hourly earnings were within each classified amount											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE—continued</b>												
<b>Laborers:</b>												
Under 30 cents.....	120					3		1	10	2		136
30 and under 40 cents.....	317					103		5	30	52	95	602
40 and under 50 cents.....	249					412		42	84	33	558	1,378
50 and under 60 cents.....	50	2				131		557	2	11	656	1,409
60 and under 70 cents.....		3				107	2	186			112	410
70 and under 80 cents.....			1			236	54	62			33	386
80 and under 90 cents.....		10	44	9		22	15	467			195	762
90 cents and under \$1.....		54	1,047	146	21	3	140	680			22	2,113
\$1 and under \$1.10.....			3	12			2	5				22
\$1.10 and under \$1.20.....			2					3			1	6
\$1.30 and under \$1.40.....								1				1
\$1.40 and under \$1.50.....								1				1
\$1.50 and under \$1.60.....								2				2
<b>Total.....</b>	<b>736</b>	<b>69</b>	<b>1,097</b>	<b>167</b>	<b>21</b>	<b>1,017</b>	<b>213</b>	<b>2,012</b>	<b>126</b>	<b>98</b>	<b>1,672</b>	<b>7,228</b>
<b>Average earnings, in cents, per hour.....</b>	<b>38.3</b>	<b>92.1</b>	<b>91.5</b>	<b>94.0</b>	<b>94.1</b>	<b>53.2</b>	<b>86.6</b>	<b>74.4</b>	<b>39.6</b>	<b>38.8</b>	<b>54.3</b>	<b>65.7</b>
<b>Motormen:</b>												
30 and under 40 cents.....	32					1			13			46
40 and under 50 cents.....	64					30			13	5	19	131
50 and under 60 cents.....	61					268		13	48	68	611	1,069
60 and under 70 cents.....	1					55		208	5	4	223	496
70 and under 80 cents.....						32	13	88			56	189
80 and under 90 cents.....		1				56	2	7			4	69
90 cents and under \$1.....		48	157	17	3	45	206	643			136	1,255
\$1 and under \$1.10.....		8	375	90	15			2			1	491
\$1.10 and under \$1.20.....				1				1				2
\$1.20 and under \$1.30.....								3				3
<b>Total.....</b>	<b>158</b>	<b>57</b>	<b>532</b>	<b>108</b>	<b>18</b>	<b>486</b>	<b>221</b>	<b>965</b>	<b>79</b>	<b>77</b>	<b>1,050</b>	<b>3,751</b>
<b>Average earnings, in cents, per hour.....</b>	<b>46.8</b>	<b>97.4</b>	<b>101.3</b>	<b>101.6</b>	<b>99.9</b>	<b>62.1</b>	<b>92.2</b>	<b>85.4</b>	<b>49.4</b>	<b>50.8</b>	<b>62.3</b>	<b>75.2</b>
<b>Trackmen:</b>												
30 and under 40 cents.....	44					9			16		4	73
40 and under 50 cents.....	53					57		1	16	8	47	182
50 and under 60 cents.....	33					322		40	27	75	697	1,194
60 and under 70 cents.....	1	5				66		251	4		167	494
70 and under 80 cents.....						8	6	95			44	153
80 and under 90 cents.....						72	2	9			22	106
90 cents and under \$1.....		76	609	152	30	45	205	493			138	1,808
\$1 and under \$1.10.....		8	1	1				3				13
\$1.10 and under \$1.20.....								2				2
\$1.20 and under \$1.30.....								1				1
<b>Total.....</b>	<b>131</b>	<b>90</b>	<b>670</b>	<b>153</b>	<b>30</b>	<b>579</b>	<b>213</b>	<b>895</b>	<b>63</b>	<b>83</b>	<b>1,119</b>	<b>4,026</b>
<b>Average earnings, in cents, per hour.....</b>	<b>46.2</b>	<b>95.8</b>	<b>94.0</b>	<b>93.8</b>	<b>93.8</b>	<b>61.2</b>	<b>93.1</b>	<b>80.7</b>	<b>47.3</b>	<b>50.0</b>	<b>61.6</b>	<b>73.7</b>

<sup>1</sup> Road cleaning or rock work at piece or yardage rate.

**TABLE D.—NUMBER OF EMPLOYEES OTHER THAN MINERS AND LOADERS IN EACH STATE WHOSE AVERAGE HOURLY EARNINGS WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified earnings per hour	Number of employees in each occupation whose average hourly earnings were within each classified amount											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-vania	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>OUTSIDE MINE</b>												
<b>Carpenters:</b>												
Under 30 cents.....	2											2
30 and under 40 cents.....	40								4		2	46
40 and under 50 cents.....	33					30		21	14	2	25	125
50 and under 60 cents.....	5	3				87	1	62	8	14	162	342
60 and under 70 cents.....	3	2				29		87	1	8	60	190
70 and under 80 cents.....						9		56	3		41	109
80 and under 90 cents.....		8	10	11	1	21	7	120			38	216
90 cents and under \$1.....		17	122	2	2	2	51	76			27	299
\$1 and under \$1.10.....		4	11		1			8				24
\$1.10 and under \$1.20.....								1				1
<b>Total.....</b>	<b>83</b>	<b>34</b>	<b>143</b>	<b>13</b>	<b>4</b>	<b>178</b>	<b>59</b>	<b>431</b>	<b>30</b>	<b>24</b>	<b>355</b>	<b>1,354</b>
<b>Average earnings, in cents, per hour.....</b>	<b>39.9</b>	<b>85.0</b>	<b>92.2</b>	<b>87.6</b>	<b>93.2</b>	<b>58.8</b>	<b>90.8</b>	<b>74.0</b>	<b>49.8</b>	<b>54.8</b>	<b>62.5</b>	<b>69.1</b>
<b>Laborers:</b>												
Under 30 cents.....	369					11		2	16	6	13	417
30 and under 40 cents.....	202	4				373		164	81	91	226	1,141
40 and under 50 cents.....	9	21		1		320		414	52	25	865	1,707
50 and under 60 cents.....		21	7	1		127	9	394	8	14	663	1,244
60 and under 70 cents.....		4	6	1		83	6	143			61	304
70 and under 80 cents.....		86	6	3		78	12	122			15	322
80 and under 90 cents.....		49	632	181	34	7	280	727			132	2,042
90 cents and under \$1.....		23	112	5	2		134	49			5	330
\$1 and under \$1.10.....		2	2		1			2				7
<b>Total.....</b>	<b>580</b>	<b>210</b>	<b>765</b>	<b>192</b>	<b>37</b>	<b>999</b>	<b>441</b>	<b>2,017</b>	<b>157</b>	<b>136</b>	<b>1,980</b>	<b>7,514</b>
<b>Average earnings, in cents, per hour.....</b>	<b>28.4</b>	<b>71.6</b>	<b>86.3</b>	<b>85.0</b>	<b>86.5</b>	<b>46.7</b>	<b>85.9</b>	<b>62.6</b>	<b>37.9</b>	<b>36.7</b>	<b>47.7</b>	<b>57.5</b>

**TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924**

**BITUMINOUS COAL MINING**

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group										Total	
	Ala-bama	Colo-rado	Illi-nois	In-diana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia		West Vir-ginia
<b>INSIDE MINE</b>												
<b>Brakemen:<sup>1</sup></b>												
Under 8 hours.....	2		4			1			1		9	18
8 and under 16 hours.....	3	2	16	1		24	2	12	1	2	27	90
16 and under 24 hours.....	4	1	8	5		23		10		5	40	96
24 and under 32 hours.....	8		13	16		15	5	10	1	3	34	105
32 and under 40 hours.....	12	3	46	16		19	7	25	1	2	56	187
40 and under 48 hours.....	13	5	37	10		24	7	31	3	5	58	193
48 and under 56 hours.....	16	5	69	17		25	14	35	10	7	72	270
56 and under 64 hours.....	17	9	133	21	1	19	22	45	7	4	79	357
64 and under 72 hours.....	10	9	103	23	6	33	22	75	10	4	79	374
72 and under 80 hours.....	13	13	94	9	5	64	26	96	14	9	104	447
80 and under 88 hours.....	22	5	91	10		54	13	152	14	11	111	483
88 and under 96 hours.....	22	14	80	4	5	66	19	142	11	7	155	525
96 and under 104 hours.....	36	12	47	3	4	79	10	122	9	12	145	479
104 and under 112 hours.....	20		10		4	48	6	109	3	6	115	319
112 and under 120 hours.....	10		6		1	26	4	48		2	52	149
120 and under 128 hours.....	6	1	3			10	1	40		2	21	84
128 and under 136 hours.....	3		3			5	2	17			11	41
136 and under 144 hours.....	1					5	1	8			7	23
144 and under 152 hours.....	2		1			1		2			6	11
152 and under 160 hours.....											3	3
160 and under 168 hours.....											3	3
168 and under 176 hours.....											1	1
192 hours and over.....											1	1
<b>Total.....</b>	<b>220</b>	<b>79</b>	<b>764</b>	<b>135</b>	<b>26</b>	<b>539</b>	<b>161</b>	<b>979</b>	<b>85</b>	<b>82</b>	<b>1,189</b>	<b>4,259</b>
<b>Average hours worked in half month.....</b>	<b>78.1</b>	<b>70.9</b>	<b>66.6</b>	<b>52.7</b>	<b>85.2</b>	<b>75.5</b>	<b>71.1</b>	<b>84.1</b>	<b>72.5</b>	<b>71.3</b>	<b>75.7</b>	<b>75.0</b>
<b>Bratticemen and timbermen:<sup>1</sup></b>												
Under 8 hours.....	1					1					4	6
8 and under 16 hours.....	2	2	8	1		7	4	4		1	11	40
16 and under 24 hours.....			7	4		8	1	4		1	9	35
24 and under 32 hours.....	1		19	4		2	8	10	2		12	58
32 and under 40 hours.....	2		14	5		8	4	10			19	62
40 and under 48 hours.....	5	5	25	2		10	2	16	3	1	18	87
48 and under 56 hours.....	2	2	17	4		5	9	10			14	63
56 and under 64 hours.....	11	7	52	13		6	39	16	3	1	31	179
64 and under 72 hours.....	4	11	69	13		19	13	28	5	1	28	191
72 and under 80 hours.....	15	21	62	4	2	23	17	72	4		24	244
80 and under 88 hours.....	7	10	106	14	2	25	37	90	6	9	35	341
88 and under 96 hours.....	9	16	66	5	1	31	26	99	5	2	68	327
96 and under 104 hours.....	8	13	48	5	4	44	28	123	4	1	65	343
104 and under 112 hours.....	14	3	25	1	1	30	21	123	1	1	53	273
112 and under 120 hours.....	5	8	19	5	3	11	8	45		2	31	137
120 and under 128 hours.....	2	1	5		1	11	14	25	1		12	72
128 and under 136 hours.....	1	2					5	12		1	7	28
136 and under 144 hours.....						1	1	7			2	11
144 and under 152 hours.....						1		5			1	7
152 and under 160 hours.....						2		3			5	10
160 and under 168 hours.....								1	1		3	4
168 and under 176 hours.....								1			2	3
<b>Total.....</b>	<b>89</b>	<b>100</b>	<b>542</b>	<b>80</b>	<b>14</b>	<b>245</b>	<b>237</b>	<b>703</b>	<b>36</b>	<b>21</b>	<b>454</b>	<b>2,521</b>
<b>Average hours worked in half month.....</b>	<b>79.8</b>	<b>79.2</b>	<b>73.0</b>	<b>65.3</b>	<b>99.1</b>	<b>81.3</b>	<b>80.3</b>	<b>89.7</b>	<b>75.3</b>	<b>79.1</b>	<b>81.1</b>	<b>81.1</b>

<sup>1</sup> The hours for this occupation are hours actually worked on time at face, exclusive of travel time in mine and lunch time.

**TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group											
	Ala-bama	Colo-rado	Illi-nois	In-di-anna	Kan-sas	Ken-tucky	O-hio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE—continued</b>												
<b>Drivers: 1</b>												
Under 8 hours.....	3		1					3	3		3	13
8 and under 16 hours.....	31	1	10	9		21	17	12	3	1	14	119
16 and under 24 hours.....	23	4	2	4		11	4	5	3		16	72
24 and under 32 hours.....	21	8	13	19		12	24	19	6	2	19	143
32 and under 40 hours.....	19	10	22	21	1	22	10	26	2		31	164
40 and under 48 hours.....	41	17	44	22	1	32	13	55	12		44	281
48 and under 56 hours.....	45	18	29	31		44	62	79	21	1	84	414
56 and under 64 hours.....	42	32	71	27	10	50	65	67	14	2	65	445
64 and under 72 hours.....	38	15	75	22	11	33	31	78	12	4	46	365
72 and under 80 hours.....	59	43	59	16	11	31	37	124	8	4	47	519
80 and under 88 hours.....	66	36	68	14	12	46	51	133	10	11	76	639
88 and under 96 hours.....	45	26	76	20	17	63	51	118	11	1	97	625
96 and under 104 hours.....	36	41	63	3	28	44	42	169	12	3	92	533
104 and under 112 hours.....	14	3	39	5	10	31	40	128	8	4	49	331
112 and under 120 hours.....	8	4	11		3	21	9	51	2		21	136
120 and under 128 hours.....	3	1	13	1	0	7	7	28		1	10	77
128 and under 136 hours.....	1		1				4	9			4	26
136 and under 144 hours.....			1			1					3	12
144 and under 152 hours.....					1			3				4
152 and under 160 hours.....	1		1									2
160 and under 168 hours.....								1				1
<b>Total.....</b>	<b>486</b>	<b>259</b>	<b>599</b>	<b>214</b>	<b>112</b>	<b>469</b>	<b>467</b>	<b>1,115</b>	<b>127</b>	<b>34</b>	<b>721</b>	<b>4,608</b>
<b>Average hours worked in half month.....</b>	<b>63.1</b>	<b>69.8</b>	<b>74.1</b>	<b>55.1</b>	<b>89.0</b>	<b>70.0</b>	<b>70.5</b>	<b>80.5</b>	<b>64.1</b>	<b>77.3</b>	<b>71.8</b>	<b>72.3</b>
<b>Laborers: 1</b>												
Under 8 hours.....	6		10			14	1	10	1		21	63
8 and under 16 hours.....	43		23	1		56	13	45	5	2	77	270
16 and under 24 hours.....	35	3	8	12		52	12	32	9	5	69	237
24 and under 32 hours.....	28	2	30	16	1	38	3	41	5	7	59	230
32 and under 40 hours.....	23		41	12	1	46	7	42	2	4	74	252
40 and under 48 hours.....	33	1	52	10	1	54	4	117	10	13	79	374
48 and under 56 hours.....	45		55	18		46	17	65	20	6	97	369
56 and under 64 hours.....	48	15	141	9	1	51	17	67	9	6	91	455
64 and under 72 hours.....	20	7	119	16	1	68	16	128	8	12	104	499
72 and under 80 hours.....	40	14	147	18		74	17	164	9	8	120	631
80 and under 88 hours.....	56	8	207	24	2	98	28	214	16	22	157	832
88 and under 96 hours.....	62	6	151	11	4	110	16	254	15	5	185	819
96 and under 104 hours.....	54	9	63	13	5	134	18	341	12	3	190	872
104 and under 112 hours.....	47	3	28	4	2	68	16	271	3	2	172	656
112 and under 120 hours.....	67	1	8		1	78	11	117	1	3	80	367
120 and under 128 hours.....	16		8	1	2	14	11	65			43	161
128 and under 136 hours.....	6		3	2		13	4	18			22	68
136 and under 144 hours.....	3		1			1	2	10			11	26
144 and under 152 hours.....	6		2					8			16	34
152 and under 160 hours.....	2							1			2	5
160 and under 168 hours.....	1							1			3	5
168 and under 176 hours.....								1				1
<b>Total.....</b>	<b>736</b>	<b>69</b>	<b>1,097</b>	<b>167</b>	<b>21</b>	<b>1,017</b>	<b>213</b>	<b>2,012</b>	<b>126</b>	<b>98</b>	<b>1,672</b>	<b>7,228</b>
<b>Average hours worked in half month.....</b>	<b>75.0</b>	<b>71.1</b>	<b>69.0</b>	<b>60.5</b>	<b>85.4</b>	<b>71.5</b>	<b>73.3</b>	<b>81.5</b>	<b>62.6</b>	<b>61.5</b>	<b>73.5</b>	<b>74.2</b>

**TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group											
	Ala-bama	Colo-rado	Illi-nois	In-diana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE—continued</b>												
<b>Loaders, hand:<sup>2</sup></b>												
Under 8 hours.....	27	7	24	11		98	47	88	6	13	160	481
8 and under 16 hours.....	122	30	100	81		214	144	274	30	44	230	1,329
16 and under 24 hours.....	123	31	159	148		262	246	385	40	35	411	1,840
24 and under 32 hours.....	115	49	379	487		299	384	565	42	54	586	2,940
32 and under 40 hours.....	172	68	850	138		449	421	669	50	50	823	3,690
40 and under 48 hours.....	264	142	806	158		510	474	1,040	81	63	918	4,456
48 and under 56 hours.....	198	81	790	360		608	813	936	107	70	1,159	5,092
56 and under 64 hours.....	289	82	1,265	555		706	875	1,266	127	98	1,102	6,360
64 and under 72 hours.....	235	124	1,537	367		569	704	1,450	110	130	964	6,220
72 and under 80 hours.....	233	119	1,341	76		770	685	2,007	101	131	975	6,443
80 and under 88 hours.....	276	113	888	57		720	693	2,106	72	124	899	5,848
88 and under 96 hours.....	251	131	1,196	30		845	705	2,484	50	81	835	6,658
96 and under 104 hours.....	143	94	477	1		638	451	2,189	21	50	491	4,545
104 and under 112 hours.....	294	57	169	1		385	97	1,819	21	34	301	3,178
112 and under 120 hours.....	173		97			83	121	1,185	1	29	181	1,840
120 and under 128 hours.....	73		1			46	21	388	1	5	59	554
128 and under 136 hours.....	4					5		148			8	165
136 and under 144 hours.....	34					48	1	89			5	127
144 and under 152 hours.....	4					3		6			1	14
152 and under 160 hours.....											1	3
160 and under 168 hours.....						2		1				3
168 and under 176 hours.....						2						2
176 and under 184 hours.....								1				1
184 and under 192 hours.....						2						2
<b>Total.....</b>	<b>3,060</b>	<b>1,178</b>	<b>10,079</b>	<b>2,470</b>		<b>7,266</b>	<b>6,832</b>	<b>19,046</b>	<b>860</b>	<b>1,006</b>	<b>10,139</b>	<b>61,936</b>
<b>Average hours worked in half month.....</b>	<b>70.4</b>	<b>66.8</b>	<b>66.2</b>	<b>47.4</b>		<b>67.8</b>	<b>64.3</b>	<b>78.7</b>	<b>60.1</b>	<b>65.4</b>	<b>61.4</b>	<b>68.6</b>
<b>Miners, hand or pick:<sup>2</sup></b>												
Under 8 hours.....	3	21	10	6	6	6		37	6	23		118
8 and under 16 hours.....	16	36	34	14	10	18	6	141	14	65		354
16 and under 24 hours.....	29	44	114	32	25	18		148	21	81		512
24 and under 32 hours.....	27	45	157	63	37	33	1	170	26	139		701
32 and under 40 hours.....	41	57	155	148	51	36		323	47	163		1,021
40 and under 48 hours.....	60	98	265	94	72	35	1	425	80	258		1,388
48 and under 56 hours.....	88	60	663	63	109	40		465	157	264		1,909
56 and under 64 hours.....	235	95	373	74	163	42	1	525	76	337		1,921
64 and under 72 hours.....	196	220	278	106	228	50		612	80	331	1	2,102
72 and under 80 hours.....	205	217	498	39	284	57	4	945	75	341		2,665
80 and under 88 hours.....	159	91	539	133	225	45	2	984	82	345	4	2,609
88 and under 96 hours.....	81	64	349	26	208	50		1,292	74	298	8	2,450
96 and under 104 hours.....	81	45	376	1	36	35		1,748	49	164		1,538
104 and under 112 hours.....	125	44	110		18	72		789	81	113		1,352
112 and under 120 hours.....	61	3			2	46		346	1	92		551
120 and under 128 hours.....	38					26		51		22		137
128 and under 136 hours.....	5					1		4		4		14
136 and under 144 hours.....	24					44		5		2		75
144 and under 152 hours.....	3									2		5
152 and under 160 hours.....										1		1
160 and under 168 hours.....										1		1
168 and under 176 hours.....										1		1
176 and under 184 hours.....										1		1
184 and under 192 hours.....										1		1
<b>Total.....</b>	<b>1,477</b>	<b>1,146</b>	<b>3,921</b>	<b>799</b>	<b>1,474</b>	<b>654</b>	<b>15</b>	<b>8,010</b>	<b>869</b>	<b>3,046</b>	<b>13</b>	<b>21,424</b>
<b>Average hours worked in half month.....</b>	<b>75.7</b>	<b>62.9</b>	<b>67.6</b>	<b>53.5</b>	<b>69.6</b>	<b>77.8</b>	<b>44.6</b>	<b>76.9</b>	<b>67.0</b>	<b>67.4</b>	<b>86.8</b>	<b>71.2</b>

<sup>2</sup> The hours for this occupation are total hours in mine, including hours actually worked, travel time in mine, and lunch time.

**TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—Continued.**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group										Total	
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia		West Vir-ginia
<b>INSIDE MINE—continued</b>												
<b>Miners, machine: <sup>3</sup></b>												
Under 8 hours.....	1	2				6		12	2		7	30
8 and under 16 hours.....	8	2	10	4		34	2	35	5	2	17	119
16 and under 24 hours.....	8	1	16	10		20	7	26	3	3	31	125
24 and under 32 hours.....	6	4	33	55		14	44	21	7		60	244
32 and under 40 hours.....	15	7	100	9		21	13	41	3		48	257
40 and under 48 hours.....	32	5	99	24		28	8	64	3	1	50	314
48 and under 56 hours.....	19	6	177	39		43	59	36	5	1	66	451
56 and under 64 hours.....	28	12	139	43		73	116	99	12	2	88	612
64 and under 72 hours.....	6	9	174	47		52	48	144	10	4	51	545
72 and under 80 hours.....	17	6	122	6		50	94	147	16	9	50	517
80 and under 88 hours.....	26	11	99	3		78	55	150	17	12	64	515
88 and under 96 hours.....	35	13	146	4		59	103	245	15	8	95	723
96 and under 104 hours.....	27	12	53	14		73	96	221	13	8	92	609
104 and under 112 hours.....	59	27	8	2		91	33	234	6	12	76	548
112 and under 120 hours.....	30		20			48	49	186	5	10	66	414
120 and under 128 hours.....	17	2				21	11	87	1	10	42	191
128 and under 136 hours.....	6					36	1	50	2	6	21	122
136 and under 144 hours.....	2					18		24		1	24	69
144 and under 152 hours.....						19	1	17		3	7	47
152 and under 160 hours.....						6		2		1	12	21
160 and under 168 hours.....						7		9			3	19
168 and under 176 hours.....								2			1	3
176 and under 184 hours.....											2	2
184 and under 192 hours.....											1	1
192 hours and over.....											1	1
<b>Total.....</b>	<b>342</b>	<b>119</b>	<b>1,196</b>	<b>230</b>		<b>797</b>	<b>740</b>	<b>1,852</b>	<b>125</b>	<b>93</b>	<b>975</b>	<b>6,499</b>
<b>Average hours worked in half month.....</b>	<b>81.6</b>	<b>77.5</b>	<b>65.5</b>	<b>51.7</b>		<b>83.3</b>	<b>77.1</b>	<b>88.3</b>	<b>73.1</b>	<b>96.7</b>	<b>78.7</b>	<b>78.6</b>
<b>Motormen: <sup>4</sup></b>												
Under 8 hours.....							1	1			2	4
8 and under 16 hours.....			11	4		18	4	4	2		12	55
16 and under 24 hours.....	3	1	4	5		3	2	7	2	2	20	49
24 and under 32 hours.....	2		4	14		6	6	11		1	27	71
32 and under 40 hours.....	2	1	22	13		14	6	17	1	1	23	100
40 and under 48 hours.....	3	3	17	5		11	6	25	1		41	112
48 and under 56 hours.....	9	3	37	11		18	13	29	6		41	167
56 and under 64 hours.....	8	6	53	15		15	18	41	4	1	64	225
64 and under 72 hours.....	4	6	94	21	3	24	21	50	8	3	64	298
72 and under 80 hours.....	8	20	69	8	3	39	23	96	14	9	67	356
80 and under 88 hours.....	17	5	68	5	2	50	24	120	10	16	90	478
88 and under 96 hours.....	19	1	65	4	3	72	27	143	16	10	118	478
96 and under 104 hours.....	28	6	54	1	2	77	23	143	8	15	166	523
104 and under 112 hours.....	21	2	19	2	4	71	25	140	7	9	111	411
112 and under 120 hours.....	18		10		1	23	8	56		3	83	202
120 and under 128 hours.....	8	1	1			23	8	40		3	47	131
128 and under 136 hours.....	6	2	1			11	3	17		2	32	74
136 and under 144 hours.....			2			4		9		2	21	33
144 and under 152 hours.....	1					5	1	12			8	27
152 and under 160 hours.....						1	1	2			3	7
160 and under 168 hours.....			1			1	1	1			4	8
168 and under 176 hours.....								1			2	3
176 and under 184 hours.....											3	3
184 and under 192 hours.....											1	1
192 hours and over.....	1										1	1
<b>Total.....</b>	<b>158</b>	<b>57</b>	<b>532</b>	<b>108</b>	<b>18</b>	<b>486</b>	<b>221</b>	<b>965</b>	<b>79</b>	<b>77</b>	<b>1,050</b>	<b>3,751</b>
<b>Average hours worked in half month.....</b>	<b>91.9</b>	<b>73.6</b>	<b>73.4</b>	<b>51.2</b>	<b>88.4</b>	<b>86.1</b>	<b>79.4</b>	<b>88.6</b>	<b>76.6</b>	<b>89.8</b>	<b>86.4</b>	<b>83.6</b>

<sup>3</sup>See footnote on p. 60.

TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—Continued

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group										Total	
	Ala-bama	Colo-rado	Illi-nois	In-diana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia		West Vir-ginia
<b>INSIDE MINE—continued</b>												
<b>Trackmen: <sup>3</sup></b>												
Under 8 hours		2	1			1		2	1		8	15
8 and under 16 hours	4		6	5		18	3	4	2	1	34	77
16 and under 24 hours	3		4	9		8	1	5	1	3	16	50
24 and under 32 hours	4		15	21		17	10	10	2	1	20	100
32 and under 40 hours	3		32	4		22	2	10	1		42	116
40 and under 48 hours	4	1	27	6		16	1	20	3		47	125
48 and under 56 hours	8	2	36	9	1	16	5	21	7	1	45	151
56 and under 64 hours	7	1	74	22	1	23	28	26	1	8	78	269
64 and under 72 hours	7	10	99	29		34	21	40	2	6	48	296
72 and under 80 hours	10	14	77	18	2	50	13	101	10	10	66	371
80 and under 88 hours	7	16	87	9	7	52	16	102	7	23	103	429
88 and under 96 hours	16	8	95	6	6	81	24	144	10	14	145	549
96 and under 104 hours	12	15	68	9	8	108	18	151	6	6	143	544
104 and under 112 hours	23	8	29	4	2	66	32	124	6	2	121	417
112 and under 120 hours	18	9	11	1	3	33	16	55	2	6	83	237
120 and under 128 hours	3	3	7	1		16	12	36	1		55	134
128 and under 136 hours	1	1	2			7	10	18	1	2	20	62
136 and under 144 hours						7		11			20	38
144 and under 152 hours	1					3		6			13	23
152 and under 160 hours							1	5			6	12
160 and under 168 hours						1		3			3	7
168 and under 176 hours								1			3	4
Total	131	90	670	153	30	579	213	895	63	83	1,119	4,026
Average hours worked in half month	84.1	85.2	71.8	57.1	91.1	81.8	84.1	89.1	73.6	78.9	82.7	81.2
<b>OUTSIDE MINE</b>												
<b>Carpenters: <sup>4</sup></b>												
8 and under 16 hours		2				2	2	3			3	12
16 and under 24 hours	1		1			4		3		1	4	14
24 and under 32 hours	2		2	1		2	4	1		1	4	17
32 and under 40 hours		1	4	3		9	2	3			4	26
40 and under 48 hours	4	1	1			6	3	8	2	1	15	41
48 and under 56 hours	9	1	9			8	1	15	2	1	9	55
56 and under 64 hours	7	1	13	1		7	6	10	1	2	13	61
64 and under 72 hours	4		13	2		5	1	11		1	20	57
72 and under 80 hours	5	5	9	1		13	6	32	1	5	26	103
80 and under 88 hours	9	2	17	1		15	3	32	7	5	28	119
88 and under 96 hours	5	2	32	1		25	9	78	8	3	36	199
96 and under 104 hours	10	7	7	2	1	34	8	58	5	1	64	197
104 and under 112 hours	11	8	12			26	7	63	4	2	51	185
112 and under 120 hours	7		8	1	1	10	1	54		1	23	106
120 and under 128 hours	2	3	8		1	4	4	33			27	82
128 and under 136 hours	3	1	2			6	2	11			11	36
136 and under 144 hours	1					2		7			11	21
144 and under 152 hours	1		5					3			3	12
152 and under 160 hours	1										2	3
160 and under 168 hours								4			1	5
168 and under 176 hours												
176 and under 184 hours	1							2				3
Total	83	34	143	13	4	178	59	431	30	24	355	1,354
Average hours worked in half month	87.4	87.6	84.4	68.0	110.5	84.5	79.1	95.8	83.6	74.7	91.4	89.6

<sup>4</sup> See footnote on p. 60.

TABLE E.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE HOURS OF WORK IN HALF MONTH WERE WITHIN EACH CLASSIFIED NUMBER OF HOURS, 1924—Continued

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and classified hours in half month	Number of employees in each occupation whose hours were within each classified group											Total
	Ala-bama	Colo-rado	Illi-nois	In-diana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	
OUTSIDE MINE—continued												
Laborers: <sup>4</sup>												
Under 8 hours.....	2		3	1		5	1	3			12	27
8 and under 16 hours...	30	3	19	7		30	3	30	4	2	39	167
16 and under 24 hours...	14	2	9	9	1	29	4	31	3	12	36	150
24 and under 32 hours...	21	11	11	28	1	29	26	36	2	4	51	220
32 and under 40 hours...	25	15	21	16	1	37	17	40	6	8	52	238
40 and under 48 hours...	55	15	42	9	2	40	15	46	10	11	82	327
48 and under 56 hours...	61	7	64	17	3	61	42	50	22	6	85	418
56 and under 64 hours...	56	11	80	10	2	47	35	86	8	11	125	471
64 and under 72 hours...	22	5	59	22	4	67	46	119	11	16	120	491
72 and under 80 hours...	48	31	70	21	1	74	49	212	30	15	128	679
80 and under 88 hours...	51	27	98	20	2	100	53	225	18	13	181	788
88 and under 96 hours...	39	10	101	19	4	119	52	226	13	6	250	839
96 and under 104 hours...	60	23	63	5	2	160	42	214	14	9	259	851
104 and under 112 hours...	31	22	57	5	1	106	31	220	11	12	184	680
112 and under 120 hours...	19	15	29	2	4	38	14	147	3	8	133	412
120 and under 128 hours...	17	8	12		4	27	4	140	1	3	86	302
128 and under 136 hours...	* 8	2	9		1	20	2	84			66	192
136 and under 144 hours...	5	2	8	1		5	1	48	1		36	107
144 and under 152 hours...	5		8		4	3	2	27			20	69
152 and under 160 hours...	4		2				1	14			16	37
160 and under 168 hours...	3						1	11			9	24
168 and under 176 hours...	2	1				2		3			6	14
176 and under 184 hours...	2							2			2	6
184 and under 192 hours...								2			1	3
192 hours and over.....								1			1	2
Total.....	580	210	765	192	37	999	441	2,017	157	136	1,980	7,514
Average hours worked in half month.....	71.9	77.6	75.7	57.2	88.8	78.3	73.6	89.8	70.2	68.9	84.8	81.2

<sup>4</sup> The hours for this occupation are hours actually worked.

**TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924**

**BITUMINOUS COAL MINING**

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group											Total	
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia		
<b>INSIDE MINE</b>													
<b>Brakemen:</b>													
Under \$5.....	5	1	4	-----	-----	12	-----	11	-----	2	-----	32	58
\$5 and under \$10.....	7	1	15	-----	1	24	-----	2	-----	6	-----	34	101
\$10 and under \$15.....	21	-----	3	-----	-----	19	-----	5	-----	3	-----	36	90
\$15 and under \$20.....	23	-----	5	-----	5	25	-----	9	-----	11	-----	39	124
\$20 and under \$25.....	22	3	8	-----	15	33	-----	4	-----	7	-----	67	178
\$25 and under \$30.....	28	3	12	-----	1	26	-----	3	-----	14	-----	79	201
\$30 and under \$35.....	38	3	36	-----	16	62	-----	5	-----	25	-----	99	270
\$35 and under \$40.....	22	-----	26	-----	8	64	-----	6	-----	31	-----	18	147
\$40 and under \$45.....	19	-----	22	-----	2	50	-----	4	-----	41	-----	11	137
\$45 and under \$50.....	25	-----	56	-----	14	64	-----	12	-----	46	-----	2	142
\$50 and under \$55.....	5	-----	88	-----	20	32	-----	18	-----	48	-----	3	139
\$55 and under \$60.....	2	-----	67	-----	3	1	-----	18	-----	11	-----	49	85
\$60 and under \$65.....	2	-----	62	-----	21	7	-----	17	-----	20	-----	78	57
\$65 and under \$70.....	1	-----	80	-----	8	4	-----	16	-----	20	-----	101	39
\$70 and under \$75.....	-----	-----	59	-----	3	4	-----	12	-----	7	-----	73	36
\$75 and under \$80.....	-----	-----	71	-----	10	-----	-----	17	-----	9	-----	119	24
\$80 and under \$90.....	-----	-----	92	-----	5	-----	-----	31	-----	17	-----	164	29
\$90 and under \$100.....	-----	-----	42	-----	3	-----	-----	13	-----	12	-----	92	24
\$100 and under \$110.....	-----	-----	8	-----	-----	-----	-----	4	-----	8	-----	44	3
\$110 and under \$120.....	-----	-----	4	-----	-----	-----	-----	-----	-----	13	-----	-----	2
\$120 and under \$140.....	-----	-----	4	-----	-----	-----	-----	3	-----	6	-----	-----	13
Total.....	220	79	764	135	26	539	161	979	85	82	1,189	4,259	
Average earnings in half month.....	\$29.99	\$64.70	\$62.14	\$49.72	\$73.65	\$43.01	\$34.77	\$59.24	\$30.58	\$31.27	\$44.10	\$53.25	
<b>Brattice-men and timber-men:</b>													
Under \$5.....	3	-----	-----	-----	-----	6	-----	-----	-----	-----	-----	13	22
\$5 and under \$10.....	2	-----	6	-----	1	9	-----	2	-----	4	-----	1	10
\$10 and under \$15.....	1	-----	2	-----	-----	2	-----	2	-----	2	-----	1	13
\$15 and under \$20.....	6	-----	6	-----	4	10	-----	2	-----	4	-----	1	9
\$20 and under \$25.....	5	-----	10	-----	4	12	-----	9	-----	10	-----	5	29
\$25 and under \$30.....	12	-----	14	-----	-----	9	-----	8	-----	5	-----	3	27
\$30 and under \$35.....	20	-----	7	-----	5	14	-----	4	-----	11	-----	5	27
\$35 and under \$40.....	12	-----	16	-----	2	14	-----	2	-----	16	-----	5	32
\$40 and under \$45.....	11	-----	16	-----	-----	22	-----	13	-----	2	-----	10	36
\$45 and under \$50.....	4	-----	10	-----	4	34	-----	7	-----	12	-----	4	38
\$50 and under \$55.....	4	-----	41	-----	8	26	-----	28	-----	32	-----	1	40
\$55 and under \$60.....	4	-----	26	-----	5	10	-----	13	-----	42	-----	1	51
\$60 and under \$65.....	2	-----	53	-----	12	15	-----	12	-----	86	-----	2	34
\$65 and under \$70.....	1	-----	55	-----	4	7	-----	16	-----	127	-----	1	22
\$70 and under \$75.....	1	-----	31	-----	1	9	-----	6	-----	52	-----	-----	17
\$75 and under \$80.....	1	-----	89	-----	14	10	-----	27	-----	46	-----	-----	17
\$80 and under \$90.....	-----	-----	77	-----	5	2	-----	25	-----	34	-----	98	1
\$90 and under \$100.....	-----	-----	63	-----	6	4	-----	8	-----	41	-----	73	24
\$100 and under \$110.....	-----	-----	20	-----	5	3	-----	1	-----	15	-----	34	-----
\$110 and under \$120.....	-----	-----	8	-----	-----	2	-----	13	-----	22	-----	-----	2
\$120 and under \$140.....	-----	-----	1	-----	-----	-----	-----	5	-----	8	-----	-----	1
\$140 and under \$160.....	-----	-----	-----	-----	-----	-----	-----	1	-----	3	-----	-----	4
Total.....	89	100	542	80	14	245	237	703	36	21	454	2,521	
Average earnings in half month.....	\$34.74	\$73.98	\$68.44	\$61.19	\$93.13	\$50.36	\$74.89	\$71.69	\$34.42	\$38.61	\$49.76	\$63.04	

**TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group										Total	
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia		West Vir-ginia
<b>INSIDE MINE—continued</b>												
<b>Drivers:</b>												
Under \$5.....	34					9		5	6	1	10	65
\$5 and under \$10.....	39	1	11	8		20	13	9	5		18	124
\$10 and under \$15.....	45	1		1		12	5	2	8	2	10	86
\$15 and under \$20.....	67	5	2	4		15	3	9	17		17	139
\$20 and under \$25.....	77	6	3	18		30	22	16	33	1	26	232
\$25 and under \$30.....	106		10	1		51	3	22	5	2	46	246
\$30 and under \$35.....	83	13	17	20	1	55	9	36	15	7	44	300
\$35 and under \$40.....	26	5	24	23	1	49	6	64	18	9	79	304
\$40 and under \$45.....	8	13	25			47	13	50	15	4	115	290
\$45 and under \$50.....	1	19	26	30		32	52	72	2	7	93	334
\$50 and under \$55.....		32	25	21	9	19	51	80	3	1	86	327
\$55 and under \$60.....		9	49	6	1	15	22	111			63	276
\$60 and under \$65.....		17	57	16	10	29	26	134			31	320
\$65 and under \$70.....		20	53	11	9	17	24	142			10	286
\$70 and under \$75.....		21	24	11	3	16	23	74			20	192
\$75 and under \$80.....		24	51	11	8	2	39	82			17	234
\$80 and under \$90.....		26	90	23	21	16	55	61			26	318
\$90 and under \$100.....		39	93	9	29	17	63	39			7	346
\$100 and under \$110.....		6	22		11	13	26	43			2	123
\$110 and under \$120.....		1	13	1	7	5	8	9			1	45
\$120 and under \$140.....		1	3		2		4	5				15
\$140 and under \$160.....			1									1
Total.....	486	259	599	214	112	469	467	1,115	127	34	721	4,603
Average earnings in half month.....	\$22.09	\$65.59	\$69.53	\$51.99	\$83.66	\$44.50	\$65.77	\$62.72	\$26.50	\$35.76	\$45.66	\$54.08
<b>Laborers:</b>												
Under \$5.....	51		9			48		18	6	2	83	217
\$5 and under \$10.....	63		21	1		67	8	41	10	11	70	292
\$10 and under \$15.....	47	1	7			59	14	37	15	14	80	274
\$15 and under \$20.....	58	3	4	12		52	4	25	20	12	74	264
\$20 and under \$25.....	79	1	24	14	1	58	4	49	18	10	92	359
\$25 and under \$30.....	85		36	3		92	3	44	9	18	129	421
\$30 and under \$35.....	79	1	8	11	1	118	6	57	13	16	107	417
\$35 and under \$40.....	72	2	40	8	1	96	5	108	17	6	191	546
\$40 and under \$45.....	73	2	46	2		103	6	117	15	4	221	589
\$45 and under \$50.....	50	2	21	18		58	12	132	1	1	180	475
\$50 and under \$55.....	55	11	108	5	1	36	17	212	1	4	111	561
\$55 and under \$60.....	13	2	120	3		40	15	152			78	424
\$60 and under \$65.....	8	8	38	22	1	39	13	170			59	353
\$65 and under \$70.....	1	7	126	7		54	15	141			49	400
\$70 and under \$75.....	1	4	183	7		20	18	113			49	395
\$75 and under \$80.....	1	8	115	20	2	24	11	129			18	328
\$80 and under \$90.....		4	117	14	4	50	16	266			58	529
\$90 and under \$100.....		10	46	15	7	3	23	113			14	231
\$100 and under \$110.....		3	14	2	1		8	49			4	81
\$110 and under \$120.....			7	2	2		12	28			3	54
\$120 and under \$140.....			4	1			3	11				19
\$140 and under \$160.....			1								1	2
\$160 and under \$180.....											1	1
Total.....	736	69	1,097	167	21	1,017	213	2,012	126	98	1,672	7,228
Average earnings in half month.....	\$28.73	\$65.46	\$63.08	\$56.89	\$80.37	\$38.02	\$63.48	\$60.58	\$24.90	\$23.84	\$39.89	\$48.74

**TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE—continued</b>												
<b>Loaders, hand:</b>												
Under \$5.....	135	16	28	8		229	53	226	39	39	198	970
\$5 and under \$10.....	186	40	65	40		336	113	403	63	56	284	1,586
\$10 and under \$15.....	192	42	98	85		341	181	535	80	67	391	2,012
\$15 and under \$20.....	263	59	145	93		438	259	658	99	64	512	2,590
\$20 and under \$25.....	351	54	232	118		590	328	824	124	95	585	3,301
\$25 and under \$30.....	373	64	294	201		580	352	972	98	91	692	3,717
\$30 and under \$35.....	377	85	443	195		635	435	1,118	82	103	733	4,206
\$35 and under \$40.....	306	71	539	181		574	520	1,270	70	99	818	4,453
\$40 and under \$45.....	228	75	572	184		583	645	1,374	58	72	840	4,631
\$45 and under \$50.....	213	58	573	196		505	632	1,385	52	78	766	4,458
\$50 and under \$55.....	143	51	690	193		444	570	1,383	41	55	758	4,328
\$55 and under \$60.....	90	66	716	185		336	595	1,462	16	47	715	4,228
\$60 and under \$65.....	63	83	803	187		319	466	1,383	13	32	621	3,970
\$65 and under \$70.....	50	76	744	207		223	437	1,207	13	29	530	3,516
\$70 and under \$75.....	26	81	705	113		166	330	1,080	1	23	460	2,985
\$75 and under \$80.....	28	65	617	77		142	234	935	4	18	281	2,401
\$80 and under \$90.....	19	96	866	122		270	279	1,222	3	17	474	3,368
\$90 and under \$100.....	8	37	580	35		230	172	744	3	11	232	2,052
\$100 and under \$110.....	5	16	498	36		139	98	413		5	126	1,336
\$110 and under \$120.....	3	16	413	9		87	50	230			58	866
\$120 and under \$140.....		14	373	4		72	60	175		5	47	750
\$140 and under \$160.....		7	65	1		19	14	32	1	1	11	151
\$160 and under \$180.....	1	4	16			7	7	5		1	5	46
\$180 and under \$200.....		1	4				2	3			2	12
\$200 and under \$220.....		1										1
\$240 and under \$260.....						1		1				2
Total.....	3,060	1,178	10,079	2,470		7,266	6,832	19,046	860	1,006	10,139	61,936
Average earnings in half month.....	\$31.93	\$53.41	\$66.40	\$49.05		\$43.78	\$50.87	\$53.68	\$28.73	\$37.24	\$46.91	\$51.29
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	West Vir-ginia	Other States	Total
<b>Miners, hand or pick:</b>												
Under \$5.....	21	20	24	13	16	14		94	29	29		260
\$5 and under \$10.....	41	24	32	22	14	18	2	147	46	66		412
\$10 and under \$15.....	58	27	55	20	21	26	3	179	77	85		551
\$15 and under \$20.....	112	46	86	22	36	26	1	218	127	112		786
\$20 and under \$25.....	141	46	130	33	45	44	1	291	77	167		975
\$25 and under \$30.....	137	55	194	32	60	37		373	78	157	2	1,125
\$30 and under \$35.....	141	68	201	50	74	30		474	73	209		1,320
\$35 and under \$40.....	166	74	249	52	89	29		543	65	230	2	1,499
\$40 and under \$45.....	150	62	261	65	117	53	1	573	80	253		1,615
\$45 and under \$50.....	117	102	363	67	130	36	1	621	61	270	3	1,771
\$50 and under \$55.....	100	107	368	55	115	31		616	35	240	1	1,674
\$55 and under \$60.....	72	83	315	50	133	37	1	650	26	236	1	1,604
\$60 and under \$65.....	49	81	270	65	102	29		559	27	205		1,387
\$65 and under \$70.....	49	84	245	55	94	34	1	574	19	178	2	1,335
\$70 and under \$75.....	28	71	221	37	91	38	2	451	9	144	1	1,093
\$75 and under \$80.....	16	47	186	34	70	27	1	413	9	90		893
\$80 and under \$90.....	37	61	356	52	119	57	1	554	18	159		1,414
\$90 and under \$100.....	15	34	178	28	80	32		333	3	83		786
\$100 and under \$110.....	12	28	81	18	36	24		183	4	59		445
\$110 and under \$120.....	3	11	52	14	20	17		94	3	36	1	241
\$120 and under \$140.....	3	5	47	13	9	10		62	3	25		177
\$140 and under \$160.....	2	6	5	2	3	5		13		11		47
\$160 and under \$180.....		2	2					1		1		6
\$180 and under \$200.....	1	2						2				5
\$200 and under \$220.....								2		1		3
Total.....	1,477	1,146	3,921	799	1,474	654	15	8,010	860	3,046	13	21,424
Average earnings in half month.....	\$40.07	\$53.31	\$57.38	\$54.28	\$57.70	\$55.00	\$40.54	\$54.91	\$33.60	\$51.18	\$53.38	\$53.06

**TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group											
	Alabama	Colorado	Illinois	Indiana	Kansas	Kentucky	Ohio	Pennsylvania	Tennessee	Virginia	West Virginia	Total
<b>INSIDE MINE—continued</b>												
<b>Miners, machine:</b>												
Under \$5.....	4	2				20		14	6		7	63
\$5 and under \$10.....	7	1	5	1		24		25	5	5	14	87
\$10 and under \$15.....	9	1	4	1		20	5	15	7		14	76
\$15 and under \$20.....	13		2	4		14	6	25	5	1	11	81
\$20 and under \$25.....	12		13	5		17	8	18	11	1	17	102
\$25 and under \$30.....	22	2	14	2		23	14	23	11	4	30	145
\$30 and under \$35.....	29	4	25	11		17	21	25	11	4	36	183
\$35 and under \$40.....	28	7	20	7		32	16	40	13	2	51	216
\$40 and under \$45.....	26	2	12	2		40	21	31	18	10	42	228
\$45 and under \$50.....	27	7	34	17		41	17	44	10	11	40	243
\$50 and under \$55.....	14	8	26	8		42	15	72	16	10	50	261
\$55 and under \$60.....	25	5	48	17		56	29	61	3	11	44	299
\$60 and under \$65.....	33	1	68	17		45	37	83		6	38	323
\$65 and under \$70.....	12	4	56	11		35	27	100		6	48	299
\$70 and under \$75.....	13	2	86	16		43	38	100	3	1	46	343
\$75 and under \$80.....	15	2	82	11		35	50	93	1	1	39	329
\$80 and under \$90.....	24	11	145	24		62	88	174	1	5	65	599
\$90 and under \$100.....	10	15	135	18		50	73	180		7	68	556
\$100 and under \$110.....	3	5	95	21		31	62	139	2		63	421
\$110 and under \$120.....	3	6	59	11		37	55	153			49	373
\$120 and under \$140.....	8	16	132	17		44	86	171	2	6	87	569
\$140 and under \$160.....	4	3	95	14		36	43	122			43	360
\$160 and under \$180.....	1	3	19	7		15	18	79			28	170
\$180 and under \$200.....		6	5	4		12	7	27		2	27	90
\$200 and under \$220.....		2		4		3	2	28			10	49
\$220 and under \$240.....			2			3	2	2			5	14
\$240 and under \$260.....		2						4			2	8
\$260 and under \$280.....								2				2
\$280 and under \$300.....		2						2			1	5
Total.....	342	119	1,196	260		797	740	1,852	125	93	975	6,499
Average earnings in half month.....	\$63.29	\$96.56	\$90.10	\$83.15		\$72.79	\$90.62	\$92.95	\$37.56	\$60.53	\$83.09	\$84.79
<b>Motormen:</b>												
Under \$5.....						5	1				6	12
\$5 and under \$10.....	4		8	3		13	4	4	2		19	57
\$10 and under \$15.....	5		3	1		6		3	3	2	17	36
\$15 and under \$20.....		1	2	5		11	2	5	4	2	22	59
\$20 and under \$25.....	11		2	9		11	5	12	5		32	87
\$25 and under \$30.....	11		4	5		23	1	5	4	1	47	101
\$30 and under \$35.....	9	1	2	12		21	5	20	11	2	53	136
\$35 and under \$40.....	23		20	1		24	7	17	6	10	54	162
\$40 and under \$45.....	18	3	12	4		57	4	19	13	18	52	205
\$45 and under \$50.....	17		10	9		71	8	37	13	16	108	291
\$50 and under \$55.....	28	6	25	3		50	12	32	8	13	130	307
\$55 and under \$60.....	17	1	33	14		33	11	42	4	4	134	333
\$60 and under \$65.....	10	4	48	1	3	35	16	68	1	5	87	278
\$65 and under \$70.....	2	14	42	20		23	21	53		3	80	238
\$70 and under \$75.....		6	54	6	2	15	8	100		1	58	250
\$75 and under \$80.....	1	7	40	2	1	7	20	78			44	200
\$80 and under \$90.....		1	101	8	3	37	30	185			56	421
\$90 and under \$100.....		6	63	2	3	29	37	149			38	327
\$100 and under \$110.....	1	2	43	3	5	13	14	63			11	155
\$110 and under \$120.....		1	14		1	2	10	29				57
\$120 and under \$140.....		2	4				3	13			2	24
\$140 and under \$160.....			2				2	1				5
Total.....	158	57	532	108	18	486	221	965	79	77	1,050	3,751
Average earnings in half month.....	\$43.00	\$71.61	\$74.38	\$52.00	\$88.32	\$53.46	\$73.19	\$75.70	\$37.82	\$45.65	\$33.83	\$62.89

TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued

## BITUMINOUS COAL MINING—Continued

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-va-nia	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>INSIDE MINE—continued</b>												
<b>Trackmen:</b>												
Under \$5	3		1			10		2	3	1	33	53
\$5 and under \$10	5	2	6	4		14	3	4	1	2	22	63
\$10 and under \$15	5		1	1		13		3	2	2	18	45
\$15 and under \$20	8		3	5		22	1	6			29	81
\$20 and under \$25	9		4	25		23	10	11	5		49	136
\$25 and under \$30	14		14			25		10	10	8	36	117
\$30 and under \$35	16		26	4		30	2	7		7	68	160
\$35 and under \$40	11	1	21	4		53	1	20	7	11	63	192
\$40 and under \$45	20	2	16	2		58	1	13	9	33	77	231
\$45 and under \$50	7	1	26	9	1	68	2	31	8	9	114	276
\$50 and under \$55	9	1	53	19		51	22	49	5	2	140	351
\$55 and under \$60	6	1	33	3	1	42	8	55	3	5	128	285
\$60 and under \$65	8	11	84	29		29	21	87	2	2	85	358
\$65 and under \$70	8	6	70	16	2	20	13	120	1		60	316
\$70 and under \$75		8	21	1		20	2	79		1	54	186
\$75 and under \$80	1	11	77	9	6	32	13	89			26	264
\$80 and under \$90		11	108	7	7	39	30	145			57	405
\$90 and under \$100		14	83	13	8	19	40	99			39	315
\$100 and under \$110		14	10	1	5	9	20	31			19	109
\$110 and under \$120		5	10	1		2	12	15			1	46
\$120 and under \$140		2	3				11	13			1	30
\$140 and under \$160							1	5				6
\$160 and under \$180								1				1
Total	131	90	670	153	30	579	213	896	63	83	1,119	4,026
Average earnings in half month	\$38.84	\$81.66	\$67.47	\$53.58	\$85.38	\$50.11	\$78.26	\$71.95	\$34.79	\$39.44	\$50.89	\$59.83
<b>OUTSIDE MINE</b>												
<b>Carpenters:</b>												
Under \$5						1						1
\$5 and under \$10	2	2				2	2	1			4	13
\$10 and under \$15						4		3		1	6	16
\$15 and under \$20	6		1			11		3	4	1	1	27
\$20 and under \$25	13					8	4	3		2	8	38
\$25 and under \$30	7		6	3		7		5	1		10	39
\$30 and under \$35	12	1		1		10	3	9	4	1	15	56
\$35 and under \$40	12	1	1			10	2	7	5	6	18	62
\$40 and under \$45	11		6			24		16	7	1	36	101
\$45 and under \$50	5		3			16	1	19	6	5	35	90
\$50 and under \$55	8	1	13	2		24	5	28		5	44	130
\$55 and under \$60	2	3	4			9	2	33		2	34	89
\$60 and under \$65	2	2	8	2		10	1	49			34	108
\$65 and under \$70	1	7	8			11	4	32			18	81
\$70 and under \$75		1	12			4	3	48			23	91
\$75 and under \$80			18	2		7	6	36			17	86
\$80 and under \$90		2	24	2	1	15	8	50	3		24	129
\$90 and under \$100		8	16		1	5	10	49			14	103
\$100 and under \$110		4	5	1			3	28			11	53
\$110 and under \$120		1	10		1		3	6			2	23
\$120 and under \$140		1	6				2	4			1	14
\$140 and under \$160			2					2				4
Total	83	34	143	13	4	178	59	431	30	24	355	1,354
Average earnings in half month	\$34.88	\$74.42	\$77.80	\$59.57	\$102.94	\$49.71	\$71.80	\$70.90	\$41.61	\$40.91	\$57.12	\$61.96

**TABLE F.—NUMBER OF EMPLOYEES IN EACH SPECIFIED OCCUPATION IN EACH STATE WHOSE EARNINGS IN HALF MONTH WERE WITHIN EACH CLASSIFIED AMOUNT, 1924—Continued**

**BITUMINOUS COAL MINING—Continued**

Place of work, occupation, and classified earnings in half month	Number of employees in each occupation whose earnings in half month were within each classified group											
	Ala-bama	Colo-rado	Illi-nois	Indi-ana	Kan-sas	Ken-tucky	Ohio	Penn-syl-vania	Ten-nes-see	Vir-ginia	West Vir-ginia	Total
<b>OUTSIDE MINE—continued</b>												
<b>Laborers:</b>												
Under \$5-----	36		2	1		35	1	12	4	2	40	133
\$5 and under \$10-----	46	2	18	3		39	3	31	6	10	50	208
\$10 and under \$15-----	121	3	8	11		63	3	37	16	19	69	350
\$15 and under \$20-----	81	6	4	3	1	70	3	36	24	12	69	309
\$20 and under \$25-----	98	7	10	28	1	78	22	60	25	23	137	489
\$25 and under \$30-----	105	17	14	15		111	18	66	22	23	163	554
\$30 and under \$35-----	42	13	24	6		91	9	92	20	15	215	527
\$35 and under \$40-----	27	16	25	4	2	128	16	170	15	19	251	673
\$40 and under \$45-----	9	6	47	17	3	99	30	180	15	6	245	657
\$45 and under \$50-----	11	17	63	5	1	74	34	161	3	5	211	585
\$50 and under \$55-----	1	23	54	14	3	57	18	172	7	2	165	516
\$55 and under \$60-----	3	13	37	12	3	34	32	150			118	402
\$60 and under \$65-----		11	49	18		23	24	158			71	354
\$65 and under \$70-----		15	77	12	1	22	36	157			39	359
\$70 and under \$75-----		16	40	11	2	29	55	109			50	312
\$75 and under \$80-----		4	94	17	4	14	31	112			40	316
\$80 and under \$90-----		25	82	9	2	22	61	146			40	387
\$90 and under \$100-----		10	67	5	3	10	22	101			5	223
\$100 and under \$110-----		2	20	1	7		16	46			2	94
\$110 and under \$120-----		4	13				1	17				35
\$120 and under \$140-----			17		4		5	3				29
\$140 and under \$160-----							1	1				2
<b>Total-----</b>	<b>580</b>	<b>210</b>	<b>765</b>	<b>192</b>	<b>37</b>	<b>999</b>	<b>441</b>	<b>2,017</b>	<b>157</b>	<b>136</b>	<b>1,980</b>	<b>7,514</b>
<b>Average earnings in half month-----</b>	<b>\$20.39</b>	<b>\$55.53</b>	<b>\$65.36</b>	<b>\$48.64</b>	<b>\$76.77</b>	<b>\$36.55</b>	<b>\$63.24</b>	<b>\$56.20</b>	<b>\$26.64</b>	<b>\$25.33</b>	<b>\$40.44</b>	<b>\$46.72</b>

TABLE G.—NUMBER AND PER CENT OF EMPLOYEES MAKING EACH SPECIFIED NUMBER OF STARTS (DAYS) IN HALF MONTH, 1924, BY PLACE OF WORK, OCCUPATION, AND STATE

BITUMINOUS COAL MINING

Place of work, occupation, and State	Number of		Average number of starts (days) in half month	Employees whose starts (days on which they worked) in the half month were—																																									
	Mines	Em- ploy- ces		Number																Per cent																									
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16										
<b>INSIDE MINE</b>																																													
<b>Brakemen:</b>																																													
Alabama	24	220	8.6	5	3	8	13	13	19	17	11	26	25	36	28	13	3	2	1	4	6	6	9	8	5	12	11	16	13	6	1	2	1	4	6	6	9	8	5	12	11	16	13	6	1
Colorado	16	79	8.8	2	1	3	3	5	4	9	5	18	6	10	13	2	3	1	1	4	6	5	11	6	23	8	13	16	3	1	3	1	1	4	6	5	11	6	23	8	13	16	3	1	
Illinois	43	764	8.1	19	8	8	48	34	64	124	117	98	120	66	41	9	2	1	1	6	4	8	16	15	12	16	9	5	1	1	2	2	1	1	6	4	8	16	15	12	16	9	5	1	
Indiana	19	135	6.6	1	5	16	13	10	15	20	24	13	7	8	3	1	4	12	10	7	11	15	18	10	5	6	2	1	4	12	10	7	11	15	18	10	5	6	2						
Kansas	9	26	10.7	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
Kentucky	75	539	8.9	21	26	14	18	21	32	16	31	80	66	79	70	52	10	3	3	3	3	3	3	3	3	3	3	3	3	3	4	5	3	3	4	6	3	6	15	12	15	13	10	2	1
Ohio	48	161	8.8	2	4	7	6	6	19	29	25	18	23	8	8	3	3	1	2	4	4	4	12	18	16	11	14	5	5	2	2	2	1	1	2	4	4	12	18	16	11	14	5	5	
Pennsylvania	147	979	9.9	11	8	10	23	34	35	45	90	84	146	197	161	96	21	15	3	1	1	1	2	3	4	5	9	9	15	20	16	10	2	2											
Tennessee	20	85	9.1	2	1	1	2	9	6	10	9	17	18	8	3	2	2	1	2	1	2	1	7	12	11	20	21	9	4	2	2	1	1	2	1	7	12	11	20	21	9	4			
Virginia	12	82	8.4	3	5	3	5	3	7	3	4	8	15	9	10	3	4	4	6	4	6	4	9	4	5	10	18	11	12	4	5	4	6	4	6	4	9	4	5	10	18	11	12	4	5
West Virginia	134	1,189	9.0	34	28	44	43	61	66	84	80	111	130	176	188	103	25	10	6	3	2	4	4	5	6	7	9	11	15	16	9	2	1	1											
<b>Total</b>	<b>547</b>	<b>4,259</b>	<b>8.9</b>	<b>100</b>	<b>84</b>	<b>108</b>	<b>173</b>	<b>189</b>	<b>257</b>	<b>344</b>	<b>407</b>	<b>469</b>	<b>552</b>	<b>625</b>	<b>533</b>	<b>298</b>	<b>74</b>	<b>35</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>13</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>(1)</b>										
<b>Brattice men and timbermen:</b>																																													
Alabama	24	89	9.2	3	1	2	5	2	9	6	20	9	7	16	8	1	3	1	2	6	2	10	7	22	10	8	18	9	1	3	1	2	6	2	10	7	22	10	8	18	9	1			
Colorado	17	100	9.8	2	5	2	5	2	7	10	22	11	14	13	3	7	4	2	1	1	4	2	7	15	12	20	12	10	6	2	1	2	1	1	4	2	7	15	12	20	12	10	6	2	
Illinois	43	542	9.1	6	5	13	19	20	21	39	79	65	107	63	54	32	12	7	1	1	2	4	4	7	15	12	20	12	10	6	2	1	1	1	2	4	4	7	15	12	20	12	10	6	2
Indiana	18	80	8.2	1	4	3	5	3	3	7	19	3	16	5	4	3	4	1	5	4	6	4	9	24	4	20	6	5	4	5	1	5	4	6	4	9	24	4	20	6	5	4	5		
Kansas	6	14	11.9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Kentucky	63	245	9.5	7	9	2	7	12	4	8	17	19	38	54	37	26	5	3	4	1	3	5	2	3	7	8	16	22	15	11	2	3	4	1	3	5	2	3	7	8	16	22	15	11	
Ohio	44	237	9.8	2	2	9	4	2	6	33	23	17	25	34	32	23	21	2	2	1	1	4	2	1	3	14	10	7	11	14	14	10	9	1	1										
Pennsylvania	131	703	10.7	4	4	8	8	18	12	18	31	72	93	116	138	132	29	18	2	1	1	1	3	2	3	4	10	13	17	20	19	4	3	(1)											
Tennessee	18	36	9.0	2	1	3	2	1	3	5	4	4	7	5	2	6	3	8	8	14	11	11	19	14	6	6	3	8	8	14	11	11	19	14	6										
Virginia	10	21	9.3	2	2	1	1	1	1	1	1	1	10	3	1	2	10	5	5	5	5	5	5	5	48	14	5	10	10	5	5	5	5	5	5	5	48	14	5	10					
West Virginia	110	454	9.6	15	9	10	17	18	17	28	32	24	40	79	81	48	24	6	6	3	2	2	4	4	6	7	5	9	17	18	11	5	1	1											
<b>Total</b>	<b>484</b>	<b>2,521</b>	<b>9.8</b>	<b>40</b>	<b>35</b>	<b>48</b>	<b>63</b>	<b>87</b>	<b>67</b>	<b>153</b>	<b>223</b>	<b>247</b>	<b>356</b>	<b>382</b>	<b>383</b>	<b>287</b>	<b>103</b>	<b>37</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>(1)</b>										



TABLE G.—NUMBER AND PER CENT OF EMPLOYEES MAKING EACH SPECIFIED NUMBER OF STARTS (DAYS) IN HALF MONTH, 1924, BY PLACE OF WORK, OCCUPATION, AND STATE—Continued

BITUMINOUS COAL MINING—Continued

Place of work, occupation, and State	Number of—		Average number of starts (days) in half month	Employees whose starts (days on which they worked) in the half month were—																																			
	Mines	Em- ploy- ees		Number															Per cent																				
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
<b>INSIDE MINE—con.</b>																																							
<b>Loaders, hand:</b>																																							
Alabama.....	32	3,060	7.6	113	127	101	169	297	272	308	305	449	300	337	199	76	6	1	---	4	4	3	3	6	10	9	10	10	15	10	11	7	2	(1)	(1)	---			
Colorado.....	15	1,178	8.0	20	31	39	42	122	84	142	88	152	239	118	107	---	---	---	---	2	3	3	3	4	10	7	12	7	13	20	10	9	---	---	---	---			
Illinois.....	35	10,079	7.6	69	143	266	898	594	903	1,692	1,858	1,082	1,739	589	245	1	---	---	---	1	1	2	5	9	6	9	17	18	11	17	6	2	(1)	---	---	---			
Indiana.....	15	2,470	6.0	72	142	473	119	86	279	345	739	84	63	67	---	---	---	---	---	3	6	16	5	7	3	11	14	30	3	3	3	---	(1)	---	---	---			
Kentucky.....	78	7,268	8.1	192	231	277	378	508	609	637	733	746	922	1,024	681	253	5	---	---	3	3	4	5	7	8	9	10	10	14	14	9	3	(1)	---	---	---			
Ohio.....	56	6,332	7.7	120	179	354	278	358	894	956	718	635	964	836	161	231	8	---	---	2	3	5	6	6	13	14	11	9	14	12	2	3	(1)	---	---	---			
Pennsylvania.....	128	19,046	8.9	231	295	546	623	997	1,153	1,373	2,151	2,235	2,653	3,506	2,288	911	61	3	---	1	2	3	3	5	6	7	11	12	14	18	12	5	(1)	(1)	---	---			
Tennessee.....	17	860	7.5	22	32	39	41	69	67	111	142	126	108	73	22	8	---	---	---	3	4	5	5	8	8	13	17	15	13	8	3	1	---	---	---	---			
Virginia.....	12	1,006	8.2	25	48	44	46	45	60	81	113	142	171	96	66	24	45	---	---	2	5	4	5	4	6	8	11	14	17	10	7	2	---	---	---	---			
West Virginia.....	127	10,139	8.2	208	272	449	554	756	952	935	795	991	1,115	1,275	1,206	549	68	9	5	2	3	4	5	7	9	9	8	10	11	13	12	5	1	(1)	(1)	---			
<b>Total.....</b>	<b>514</b>	<b>61,936</b>	<b>8.1</b>	<b>1,092</b>	<b>1,500</b>	<b>2,588</b>	<b>3,248</b>	<b>3,872</b>	<b>5,273</b>	<b>6,580</b>	<b>7,642</b>	<b>6,642</b>	<b>8,333</b>	<b>7,921</b>	<b>4,975</b>	<b>2,054</b>	<b>193</b>	<b>13</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>8</b>	<b>3</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>---</b>			
<b>Loaders, machine:</b>																																							
Ohio.....	2	15	11.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
West Virginia.....	5	46	10.8	1	---	---	---	2	2	3	1	2	3	8	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Other States.....	3	41	7.0	4	4	3	---	4	2	4	---	5	5	9	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Total.....</b>	<b>10</b>	<b>102</b>	<b>9.4</b>	<b>5</b>	<b>4</b>	<b>3</b>	---	<b>6</b>	<b>4</b>	<b>7</b>	<b>1</b>	<b>7</b>	<b>16</b>	<b>17</b>	<b>10</b>	<b>13</b>	<b>8</b>	<b>1</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Miners, gang:</b>																																							
Illinois.....	18	573	7.7	5	11	26	23	40	76	118	54	43	76	78	23	---	---	---	---	1	2	5	4	7	13	21	9	8	13	14	4	---	---	---	---	---			
Indiana.....	6	98	7.0	---	3	7	5	15	6	38	8	4	4	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pennsylvania.....	8	282	9.2	2	---	1	6	6	12	27	36	34	74	65	19	---	---	---	---	1	---	(1)	2	2	4	10	13	12	26	23	7	---	---	---	---	---			
West Virginia.....	6	43	10.0	---	---	1	3	1	1	---	---	---	7	6	9	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Other States.....	2	40	5.9	---	1	2	2	10	5	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>Total.....</b>	<b>40</b>	<b>1,036</b>	<b>8.1</b>	<b>10</b>	<b>19</b>	<b>36</b>	<b>37</b>	<b>74</b>	<b>100</b>	<b>204</b>	<b>98</b>	<b>88</b>	<b>160</b>	<b>153</b>	<b>56</b>	<b>1</b>	---	---	---	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>20</b>	<b>9</b>	<b>8</b>	<b>15</b>	<b>15</b>	<b>5</b>	<b>(1)</b>	---	---	---	---			



TABLE G.—NUMBER AND PER CENT OF EMPLOYEES MAKING EACH SPECIFIED NUMBER OF STARTS (DAYS) IN HALF MONTH, 1924, BY PLACE OF WORK, OCCUPATION, AND STATE— Continued

BITUMINOUS COAL MINING—Continued

Place of work, occupation and State	Number of		Average number of starts (days) in half month	Employees whose starts (days on which they worked) in the half-month were—																																	
	Mines	Em- ploy- ees		Number													Per cent																				
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
<b>INSIDE MINE—con.</b>																																					
<b>Pumpmen:</b>																																					
Alabama	32	105	10.2	5	2	3	3	4	3	2	3	6	11	16	15	17	5	10	5	2	3	3	4	3	2	3	6	10	15	14	16	5	10	4			
Colorado	15	27	12.3	1						1	1	1	1	2	6	5	4	5	1	4					4	4	4	7	22	19	15	19					
Illinois	17	40	13.1								1	2	4	3	5	4	14	2							3	5	10	8	13	13	10	35	5				
Indiana	17	33	12.2				1	1	1	1	3			2	6	10	1	3						3	3	9		6	18	30	3	24					
Kentucky	47	89	11.6			1		1	2	4	1	7	10	13	19	7	11	13			1			3	3	9		15	21	8	12	15					
Ohio	41	87	12.2	2				2	1	2	4	1	2	4	6	12	7	12	11	24	3	2		1	2	1	1	2	5	7	14	8	14	13	28		
Pennsylvania	137	352	12.2	2	6	3	4	7	13	8	6	14	15	37	38	32	46	105	16	1	2	1	1	2	4	4	4	4	11	11	9	13	30	5			
Tennessee	10	16	9.8	1	1			2	1	1		1	1	3	5	3								6	6		6	13	38	6	13	6					
Virginia	6	26	10.6	2	1			2	1					1	2	6	1	2	1					6	6		6	13	38	6	13	6					
West Virginia	90	240	11.4	6	4	3	3	5	9	10	8	15	11	19	34	30	30	38	15	2	2	1	1	2	4	4	3	6	5	8	14	12	12	16	6		
<b>Total</b>	<b>402</b>	<b>1,015</b>	<b>11.7</b>	<b>19</b>	<b>14</b>	<b>10</b>	<b>15</b>	<b>19</b>	<b>29</b>	<b>27</b>	<b>21</b>	<b>54</b>	<b>61</b>	<b>113</b>	<b>136</b>	<b>123</b>	<b>113</b>	<b>222</b>	<b>39</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>22</b>	<b>4</b>		
<b>Trackmen:</b>																																					
Alabama	37	131	9.6	2	5	4	2	5	7	8	11	8	10	19	20	27	3																				
Colorado	17	90	10.6	2				1	1	2				10	12	18																					
Illinois	46	670	9.0	7	4	4	36	25	40	52	118	81	90	90	68	38	11	5	3																		
Indiana	22	153	7.1	4	6	25	4	10	16	1	35	18	11	7	6	4																					
Kansas	9	30	11.6																																		
Kentucky	77	579	9.6	14	10	18	20	22	11	24	44	51	70	105	112	65	8	4																			
Ohio	54	213	10.3	2	1	10	1	3	2	23	30	12	10	23	20	40	17	17																			
Pennsylvania	151	895	10.6	4	7	8	12	18	20	30	49	87	112	167	188	116	48	29																			
Tennessee	20	63	9.0	3	1	2	1	3	6	2	1	11	6	11	9	6	1																				
Virginia	12	83	9.8	1	2	1	1			6	7	14	19	14	9	1	8																				
West Virginia	142	1,119	9.7	37	18	25	37	50	54	68	56	70	112	168	175	145	68	27	9	3	2	2	2	2	4	7	6	5	6	10	15	16	13	6	2	1	
<b>Total</b>	<b>587</b>	<b>4,026</b>	<b>9.7</b>	<b>76</b>	<b>54</b>	<b>97</b>	<b>114</b>	<b>131</b>	<b>151</b>	<b>232</b>	<b>360</b>	<b>366</b>	<b>462</b>	<b>617</b>	<b>631</b>	<b>461</b>	<b>175</b>	<b>86</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>16</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>(1)</b>		

ANTHRACITE AND BITUMINOUS COAL MINING









## APPENDIXES

### APPENDIX A.—AGREEMENT BETWEEN ANTHRACITE MINERS AND OPERATORS

The agreement between the United Mine Workers of America, Districts 1, 7, and 9, and the anthracite operators, in force in 1924 at the time of this study and until August 31, 1925, covering wages and conditions of employment in the Pennsylvania anthracite fields, ratified and confirmed the award of the Anthracite Coal Strike Commission and subsequent agreements, as well as the rulings and decisions of the board of conciliation, except in the following particulars:

(1) The contract rates at each colliery shall be increased 10 per cent over and above the rates established under the award of the United States Anthracite Coal Commission of 1920.

(2) The hourly, daily, or monthly rates of outside and inside company men, working on the basis of an 8-hour day, shall be increased 10 per cent over and above the rates established under the award of the United States Anthracite Coal Commission of 1920.

(3) The hourly, daily, or monthly rates of pumpmen and engineers formerly working a 12-hour cross shift, and changed to an 8-hour basis under the award of the United States Anthracite Coal Commission of 1920, shall be increased 10 per cent over and above the rates established by the board of conciliation in conformity with said award.

(4) The hourly or daily rates of consideration miners and consideration miners' laborers shall be increased 10 per cent over and above the rates established under the award of the United States Anthracite Coal Commission of 1920.

(5) The rates paid contract miners' laborers shall be increased 10 per cent over and above the rates established under the award of the United States Anthracite Coal Commission of 1920, said increase to be paid by the operator and miner by adding 10 per cent to the portion of the rate now assumed by each.

(6) Outside and inside company men working on the basis of a day in excess of 10 hours, shall be placed on the basis of an 8-hour day. The rate of pay for an 8-hour day shall be adjusted in the same manner as rates were adjusted for hoisting engineers and pumpmen, who were changed from a 12-hour day to an 8-hour day in 1920, subject to the same increase of 10 per cent provided for other company men under clause 2 hereof.

(7) Outside and inside company men working on the basis of a 9-hour or 10-hour day shall be placed on the basis of an 8-hour day. The rates of pay for the 8-hour day shall be the rates for the 9 or 10 hour day paid under the agreement of 1916, plus \$1.80 per day for outside employees and \$2 per day for inside employees, plus 17 per cent and subject to the same increase of 10 per cent provided for other company men under clause 2 hereof.

(8) Monthly men coming under the agreement of September 2, 1920, and working on a basis in excess of 8 hours per day shall be placed on the basis of an 8-hour day. The monthly rates for the 8-hour basis shall be the monthly rates paid under the agreement of May 5, 1916, plus \$54 per calendar month for outside employees and \$60 per calendar month for inside employees, plus 17 per cent (except where modified by ruling of the board of conciliation) and subject to the same increase of 10 per cent provided for other company men under clause 2 hereof.

(9) The colliery rate sheets of the different collieries shall be brought up to date, shall be signed by the company officials and the mine committees, and shall then be filed with the board of conciliation. In case of dispute as to the correctness of any rate the rate shall be determined by the board, after hearing. In such cases the burden of proof shall rest with the party taking exception to the filed rate.

(10) A grievance referred to the board of conciliation shall be answered within 15 days and shall be heard within 30 days from date of filing with the board. Decisions shall be rendered by the board, or case shall be referred to an umpire, within 30 days after hearing. In case of reference to an umpire, the decision of said umpire shall be rendered within 30 days from date of reference.

(11) Rates for new work, such as opening a seam of coal, shall be made collectively as between the mine committee and the company officials on the basis of the standard recognized rates paid for similar conditions in the mine in question or adjacent mines. In case of disagreement the matter shall be adjusted through the board of conciliation in the manner now customary. Pending decision by the board, work shall proceed at rates set by the foreman and which shall not be less than the standard recognized rates aforesaid. No contracts shall be made with individual employees at less than the prescribed scale rates or not in keeping with customary practices. This section shall not be construed to deny to the operator the right to change the method of mining.

(12) The board of conciliation is hereby authorized to undertake and complete a thorough study of all wage scales before the expiration of this contract and submit the same to the next joint conference. If the board of conciliation shall, by unanimous vote, recommend the adjustment of any inequities or inequalities in wage rates during such study, the adjustment shall take effect on a date set by the board.

#### APPENDIX B.—AGREEMENT BETWEEN BITUMINOUS MINERS AND OPERATORS

The agreement between the United Mine Workers of America and the coal operators of the Hocking District of Ohio, effective from April 1, 1923, to March 31, 1924, and continued in force during the period of this study by the Jacksonville agreement is given below. This is the basing district of Ohio and part of the central competitive field, consisting of Illinois, Indiana, Ohio, and Western Pennsylvania.

##### SUBDISTRICT No. 1

#### DETAILED MINING SCALE FOR HOCKING VALLEY (SUBDISTRICT 1 OF DISTRICT 6)

Effective from April 1, 1923, to March 31, 1924

This agreement, by and between the respective duly authorized representatives of the coal operators and miners of the Hocking District of Ohio.

Witnesseth, That pursuant to the agreement entered into at New York, N. Y., January 24, 1923, the following shall be the prices, rates of wages, rules and conditions to govern the production of coal in the Hocking district.

We, the members of the scale committee representing the operators and miners of the Hocking district, submit the following prices and conditions as the wage scale for said district for the period beginning April 1, 1923, and ending March 31, 1924.

<i>Pick mining</i>		
Run of mine.....	per ton..	\$1. 1164
Entries, dry.....	per yard..	3. 6217
Break throughs, in entries.....	do.....	3. 6217
Break throughs, in rooms.....	do.....	2. 5110
Room turning.....	per room..	5. 4896
<i>Inside day labor</i>		
Tracklayers.....	per day..	7. 50
Tracklayers' helpers.....	do.....	7. 25
Trappers.....	do.....	4. 00
Trappers (where old men are employed).....	do.....	5. 41
Bottom cagers, drivers, trip riders.....	do.....	7. 50
Water haulers, machine haulers.....	do.....	7. 50
Snappers on gathering locomotives.....	do.....	7. 50
Timbermen.....	do.....	7. 50
Pipemen for compressed-air plants.....	do.....	7. 42
Wiremen.....	do.....	7. 50
Motormen.....	do.....	7. 50
Motormen (minimum).....	do.....	7. 50
Other inside day labor.....	do.....	7. 25
Spike team drivers, extra.....	do.....	. 25

*Machine cutting*

By Jeffrey machine in room.....	per ton..	\$0. 14
By Jeffrey machine in entry.....	do.....	. 1790
By punching machines in room.....	do.....	. 1744
By punching machines in entry.....	do.....	. 1905

*Loading*

In rooms with hand drilling.....	per ton..	. 80
In entry with hand drilling.....	do.....	. 9290
Break throughs in entries (entry price).....	do.....	. 9290
Break throughs in rooms.....	do.....	( <sup>1</sup> )

*Outside day labor*

First blacksmith.....	per day..	7. 77
Second blacksmith.....	do.....	7. 45
Blacksmith helpers.....	do.....	7. 25
Mine carpenters.....	do.....	7. 45
Dumpers.....	do.....	7. 25
Trimmers.....	do.....	7. 25
Greasers and couplers.....	do.....	5. 06

When engineers and firemen are employed by the day, the minimum rate shall be \$7.25 for 8 hours' work. This shall not apply to men employed at a monthly rate. This rule shall also apply to coal washers.

First. That the 8-hour day of 48 hours of 6 days per week is hereby reaffirmed.

The following holidays are recognized:

- New Year's Day.
- Lincoln's Birthday.
- Washington's Birthday.
- April 1.
- Decoration Day.
- Fourth of July.
- August primary day.
- Labor Day.
- November general election day.
- Thanksgiving Day.
- Christmas.

Second. That an 8-hour day means 8 hours' work in the mines at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from same at night.

(A) Regarding drivers, they shall take their mules to and from the stables and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such car at the point named.

(B) The company shall harness and unharness all stock. Drivers shall unhalter and bridle stock in the morning and halter them in the evening at quitting time. At mines having 15 head of stock or less the stable boss shall harness and unharness all stock and at mines having over 15 head of stock the company shall have the privilege of employing a regular employee 1 hour extra each morning and 1 hour extra each evening to assist the stable boss in harnessing and unharnessing stock. Night drivers shall unharness their stock when taken in stable at night.

Third. That when the men go into the mine in the morning they shall be entitled to 2 hours' pay whether or not the mine works the full 2 hours. But after the first 2 hours the men shall be paid for every hour thereafter by the hour for each hour's work or fractional part thereof. If for any reason the regular routine work can not be furnished the labor for a portion of the first 2 hours, the operators may furnish other than the regular labor for the unexpired time.

INTERPRETATION

The interpretation of this rule is that day men working on idle days or extra time are entitled to their regular wage, unless called upon to perform work carrying a higher rate, for which such rate shall apply.

<sup>1</sup> Entry price.

## TURNS

SEC. 4. The operators shall keep a square turn, and it shall be the duty of the superintendent to see that this rule is properly carried out and that at least each 2 weeks the turn for all sections of the mine shall be made uniform.

There shall be no free turns allowed to either rooms or entries. The entries shall be driven as fast as operators desire or conditions permit, but in no case shall entry miners be allowed more cars per week than room miners. If however, the regular turn will not allow cars enough to drive the entries as fast as desired, the operators shall increase the number of miners in each entry, so that by giving to each the regular turn the entries shall be driven as fast as two miners could drive them with full work. But should the room men decline to take their places in the entries when requested to do so by the operators, then the entry men shall have free turns until the entries are driven the required length. Nothing in the foregoing to prevent fast turns.

This rule shall apply to the machine men as well as loaders and the company agrees to use every effort to the end that the number of men on each machine will be equalized.

## PREPARATION OF COAL

SEC. 5. Both miners and operators recognizing the importance of getting clean and merchantable coal to insure the sale of the same, it is understood and agreed that the miners will produce their coal in such a way as not to increase the percentage of fine coal, either by carelessness or reckless shooting, and will load clean and merchantable coal free from impurities.

In order to secure the above results it is agreed as follows:

(A) When necessary to snub coal, snubbing must be done in a practical and workmanlike manner so as to keep the quality of the output uniform and produce the largest amount of lump coal.

(B) The loader or loaders shall not drill any hole on the solid of the rib, nor deeper than the undercut.

(C) Unless otherwise required by operator, the fine coal and cuttings must not be loaded out separately, but must be loaded and distributed throughout the balance of the coal in order to keep the product of the mine uniform.

(D) Any loader or loaders found breaking up the loading bone, soft coal, or other impurities with his coal, shall be laid off 5 days for the first offense and 10 days for each succeeding offense.

## DOCKING

SEC. 6. The operator may designate one man at each mine, who shall be recognized as inspector, and whose duty it shall be to inspect the coal. The miners may also designate one man at each mine to inspect the cleaning of the coal and the weighing of the impurities. Should a loader willfully, carelessly, or otherwise fail to load clean, merchantable coal, the inspector shall estimate or cause to be weighed the impurities, and when 100 to 150 pounds of dirty coal has been loaded, 10 cents shall be taken for the 100 or 150 pounds.

For from 150 pounds to 250 pounds of dirty coal 20 cents shall be taken.

For from 250 to 500 pounds of dirty coal, 30 cents shall be taken.

For the third car of dirty coal from any one working place in any one day, or where 500 or more pounds of dirty coal is found in any one car, 50 cents shall be checked off.

If upon investigation by the mine boss and committee, the man or men are found to have an average working place, he or they shall be suspended 1 or 2 days, at the discretion of the mine boss and mine committee. But should a place be found below an average working place then the above penalties shall not apply.

Whenever the provisions of this contract are not observed the operator has the right to close down the mine until the miners will observe the contract to produce clean, merchantable coal.

It is understood that the operators have a right to clean the coal before weighing.

The moneys checked off shall be placed in the burial fund and shall not be refunded and shall only be used by miners and operators for the purpose for which such fund was created.

## CLAY VEINS

SEC. 7. Where clay veins, rolls in bottom, or horsebacks exist, the price for removing the same shall be determined between the loader and mine boss. If loader and mine boss fail to agree, the same to be referred to loader, mine boss and mine committee.

## SLATE

SEC. 8. The company shall remove the slate from the working places of the miners; and if the company fails after being notified, the miners shall be employed to remove such slate and be paid therefor at the price agreed upon between the mine boss and the miner, based on the price of inside day labor. This refers to all kinds and conditions of roof only and not to bone coal.

## BOTTOM, SPRAGE, ETC.

SEC. 9. All machines shall be fitted with suitable skids, and machine men must cut coal level and close to bottom; and in no case shall thickness of bottom exceed 4 inches, except in case of pots or other extreme variations. Machine men leaving more bottom than above, and when upon investigation it is proven that the machine men are at fault, must lift the same, or it shall be lifted at their expense. Where the bottom is sulphurous and unmarketable, the miner may call the attention of the mine boss to it and endeavor to arrive at an agreement for its removal or retention. If the mine boss and miner fail to reach an agreement as to compensation or otherwise, the matter shall be submitted to the superintendent and mine committee for adjustment. In case of sprags being left by machine men they shall be notified by the loader, and if they refuse to remove the same the loader shall remove the same and be allowed 50 cents for so doing, the said 50 cents being deducted from machine men. When machine men leave six or more sprags in one pay, they shall be removed from machine and their services be dispensed with.

The company shall provide shields for covering cutter head of machine. The machine men shall be required to remove the bits from the chain on cutter head, or place the shield over cutter head to make the machine safe to be moved. Any machine men failing to carry out this rule may be removed from machine without question.

Where machine men are required to repair or replace parts on machines they shall be compensated for the same.

## STICKY BOTTOMS

The question of what constitutes sticky bottom shall be determined by the mine boss and loader in the following manner: When the bottom has been sheared along the rib, to the face, and is open on the end, and two wedges are driven through the bottom coal (wedges to be driven 18 and 36 inches from shearing and 18 inches from the front of the bottom coal), and the coal still clings and adheres to the floor, it shall be termed sticky bottom and the loader shall not be required to lift same without compensation based on tracklayers' wage scale. This, however, shall not prevent the mine boss and loader from making a mutual agreement to lift same, or in case of their failure to agree to have it lifted by any one by paying the tracklayers' wage scale, nor shall it prevent the mine committee and superintendent from making investigation in case of disagreement under the above rule.

## WIDE ROOMS

SEC. 10. All rooms shall be 24 feet wide or over except under river bottoms where the same may be driven 20 feet wide without extra compensation. All other rooms from 24 to 18 feet \$2.76 extra shall be paid. Rooms under river bottoms where necessary to be driven from 20 feet to 18 feet, \$2.76 extra shall be paid. Rooms less than 18 feet wide shall be paid for at entry price. Where rooms are driven 30 feet wide, same shall have two tracks if practical. Each two men shall be given two rooms where practicable. Slabs to be left to men and mine boss.

The operators shall designate the width of all working places and same shall be paid for at the width ordered cut.

In working pillars and stumps, all places over 15 feet wide shall be paid for at wide price to cutter and loader. Fifteen feet or less with two tight ends, entry price. Fifteen feet or less open end shall be paid for at entry price to cutter and wide price to loader.

## INTERPRETATION

Wherever a place is closed in by a fall or an excessive gob to such an extent that one can not walk or work around the same conveniently, it shall be considered a tight end.

## PUTTING ON CARS

SEC. 10½. When the miner has properly laid his track and a car jumps the track, the same shall be put on by the company, and the miner shall not be discriminated against in the way of regular turn.

## CLEARING TRACK

SEC. 11. Men other than drivers and trappers, motormen and motormen helpers, cagers and incline men, employed to gather up coal along working roads and cleaning up track shall receive pay for such work at narrow-work prices per ton with cutting added.

Any such man found taking down or loading other than the coal already down and along track shall be removed from his position. In the event that no other class of labor is available, the company shall have the right to employ day men to clean up tracks.

## BLACKSMITHING

SEC. 12. Blacksmithing shall be three-fourths of 1 cent on the dollar for pick mining.

All tools of machine miners, including axes, shall be sharpened without charge.

## PICK MINE NECKS

SEC. 13. In opening rooms in pick mines where narrow work exceeds 18 feet before widening rooms, all in excess of 18 feet shall be paid for at entry price.

## LOST COAL

SEC. 14. If the company insists upon the machine men cutting places, then the company shall pay for all coal lost by places falling in. Coal so lost shall be paid for within 30 days.

## WET PLACES

SEC. 15. Where the mine boss and miners fail to agree as to whether the working place is wet and entitled to extra pay, it shall be referred to the committee and mine boss or superintendent; if judged wet 3.60 cents per ton additional shall be paid.

Fifteen cents per barrel shall be paid for bailing water; sufficient barrels to be furnished to miners to keep their places dry. The said barrels shall be common oil barrels. In the event of the management failing to provide empty barrels as required by miners, then 3.60 cents per ton extra shall be paid for wet places. Where a place is decided wet all the coal that comes out of the place shall be paid for at wet price, so long as the place remains wet.

It shall be optional with the company to work wet places. It is agreed and understood that in wet places the miner to be entitled to wet price must first take the matter up with the mine boss for adjustment.

## ENTRIES REGULAR AND DEFICIENT

SEC. 16. It is understood and agreed that in entries of regular height and where no horseback, clay vein, or other foreign substance exists, no average will be paid.

In deficient entry, where it is necessary to take down slate for height of roadway, the loader will shoot and load the same.

Where rock is encountered the same shall be drilled and shot down by the company and loaded by the loader. Where such deficient entry is driven and rock or slate is handled by the loader the established average tonnage of said entry or mine will be paid.

Each crossing shall be cut full width and depth, unless otherwise ordered by the company; and the manner of counting said crossing shall be the regular depth of machine as determined by tape measure.

The coal to be mined in a workmanlike manner, so as to produce the greatest amount of lump coal, and each car shall be checked with a check of the man doing the work.

Where the company wishes to drive deficient entry by the day, the price per day to be \$8.70; the company to have the right to select their men but the man working the place is to have the preference.

It is understood and agreed that in isolated territory where not more than six men can be employed, when necessary, men shall be permitted to cut, load, and haul their coal; cutting and loading to be paid for at tonnage rates, the men doing the work to agree with mine boss on pay for hauling.

Where rock drilling and shooting in deficient entries is done by hand, the rate per day shall be \$8.70. Where done by electric drill, the minimum rate per day shall be \$7.50.

In working deficient wet entry by the average, the wet price shall apply to the average tonnage paid the loaders. When paid by the day, the equivalent of the average tonnage per cut, wet price, shall be paid day men driving deficient entry by the day.

#### ENTRIES, DOUBLE-SHIFT

SEC. 17. Forty-eight cents per yard shall be paid for driving double-shift entries, and break throughs between entries.

#### DAY LABOR ON IDLE DAYS

SEC. 18. When necessary day men shall work on idle days, or, in case of emergency, overtime; but such work shall be distributed as equally as possible among employees entitled to said extra work. The operators reserve the right to work skilled labor upon days when mine is idle, or, in case of emergency, extra shift.

#### DAY LABOR TRANSFERRED

SEC. 19. Drivers and other day men shall work under the direction of the mine boss or superintendent and shall perform such labor as may be required by mine boss or superintendent; provided that the scale of wages is paid for such labor required to be performed.

#### UNWARRANTED ABSENCE OF EMPLOYEES

SEC. 20. When any employee absents himself from duty for two days except in case of sickness, and without giving advance notice to the mine boss, if possible, he forfeits his position.

#### WAITING ON CARS

SEC. 21. Where cars are promised and are on the way between the yards and mine at starting time in the morning, the men shall wait up to and not less than 30 minutes; provided, however, that where satisfactory local arrangements exist for waiting for cars, the same shall remain in force and be observed.

#### INTERPRETATION

When the men go to work in accordance with the above rule, the mine committee have the right if they so elect to call up the railroad yards to ascertain if cars will be at the mine within the provisions of the rule. Should they be informed that cars are on the way and will be there on time, then the men will go into the mine and all inside daymen will be paid for or furnished at least 2 hours' work. The outside daymen will take their regular positions and should cars fail to come on time they will be paid at least 1 hour's pay, whether they perform any labor or not.

#### NOON HOUR VARIATION

SEC. 22. In case of emergency, the company shall have the right to vary the noon hour to one-half hour earlier. All daymen affected shall be notified in advance of such variation in noon hour.

#### MEETINGS AT MINE

SEC. 23. Where necessary to hold meetings at mine where miners so desire, one afternoon each month shall be allowed for the purpose of holding such meetings. Such afternoon to be agreed upon between the management and miners at the different mines.

No other meetings than as herein provided shall be held at any mine during working hours.

## LOCAL RULES AND ORDERS

SEC. 24. No local rules or orders shall be made or given by either miners or operators, or their agents, that interfere with the provisions of this contract.

## DRIVER'S, DAYMEN'S, OR MACHINE MEN'S ABSENCE

SEC. 25. In case a machine man, driver, or other dayman fails to appear for duty, a man may be taken from a working place; the man taking either's place to get such turn for one day each pay.

## OUT OF CUTTING

SEC. 26. Under normal conditions, if 4 men are out of cutting or rails on any one territory at work time in the morning and upon investigation by mine boss and committee it shall be found to be the fault of the company, the men shall be furnished work by the operator, but in no case shall a breakdown or unavoidable accident be considered the fault of the company. It is understood, however, that all mine superintendents and mine bosses shall make every effort to have all working places in working condition at starting time in the morning and no man shall be required to lose two days' work in succession.

## SETTLEMENT OF DISPUTES

SEC. 27. It is agreed that in case of any local grievance at any mine the aggrieved party or parties and mine boss shall first make an earnest effort to adjust the dispute.

In case they fail to agree the matter in dispute shall be referred to the mine foreman or superintendent and mine committee. If they fail to agree it shall then be referred to the general manager of the company involved, or his representative, and the president of subdistrict 1, of district 6, U. M. W. of A., or his representative. In case they fail to agree the matter shall be referred to the president of district 6, of U. M. W. of A., or his representative and the representative of the Southern Ohio Coal Exchange, or the operator's affected thereby.

All controversies arising under the terms of this agreement shall be taken up for adjustment as herein provided without delay.

## STOPPING OF MINES

SEC. 28. No strike or stoppage of work shall occur at any mine except for failure to pay upon regular pay day without explanation, or breakdown of weight scales, until the matter has been taken up with the subdistrict officers of subdistrict No. 1 of district No. 6, of U. M. W. of A., and the company affected, and they have taken the matter up as provided in section 27.

(A) Should any local officer, or officers of any local union or any member thereof, employed at any mine cause the mine to shut down in violation of this rule, each member of the United Mine Workers of America employed at said mine, except those who continue at work, shall have deducted from his earnings the sum of one dollar (\$1) per day for each day or part of day he remains idle.

(B) Should any operator or his representative lock the men out for the purpose of forcing a settlement of any grievance, or cause the mine to shut down in violation of this rule, he shall be fined one dollar (\$1) per employee so idle, for each day or part of a day the mine is thus thrown idle. It is agreed that the stoppage of the mine as provided for in section 6 of this contract shall not constitute a violation of this rule.

(C) All moneys assessed against the employees under this rule shall be collected from the pay for the half month in which the violation of the rule occurs, or from the first moneys due thereafter, and said moneys so collected shall be turned over to the proper officers of subdistrict No. 1, district No. 6, U. M. W. of A. All moneys assessed against the operators for violation of this rule shall be paid over to the Southern Ohio Coal Exchange; provided that money assessed against operators not members of the above-named exchange shall be paid to the secretary-treasurer of the subdistrict.

Under no circumstances shall the money so paid be refunded by either the subdistrict or the Southern Ohio Coal Exchange.

The company shall furnish the local secretary a list of money so collected and paid over. It is understood that the collection of all fines shall take precedence over all other collections.

## BOYS

**SEC. 29.** Sons of members of the United Mine Workers of America, when becoming of proper age, shall be allowed the preference of going into the mines.

## LIMIT ON MINE CARS

**SEC. 30.** No limit of weight shall be placed on loading mine cars, and, in case of loss in transit, the company shall not be held responsible except where cars are broken by employees, or where a wreck occurs, the average weight shall be made good by the company. In order that miners can not take advantage of this cause, the mine manager and committee of any mine where complaint is made of loading cars over their capacity shall mutually agree on a standard height of loading cars.

## ENGINEERS AND FIREMEN

**SEC. 31.** In case of local or general suspension of mining, either at the expiration of this contract or otherwise, the engineers, firemen, pumpers, fire bosses, and other men necessary to keep mines in shape, shall not suspend work but shall, when mine is suspended, fully protect and keep in repair all of the company's property under their care, and operate fans and pumps, and lower and hoist such men or supplies as may be required to keep up steam at the company's coal plant; but it is understood and agreed that the operators will not ask them to hoist any coal produced by nonunion labor for sale on the market. The rates to be paid for such work to be those in effect at the time of suspension, subject to any subsequent settlement.

## CHECK OFF

**SEC. 32.** The system of checking off for the United Mine Workers' organization remains in force and must be observed; the same to be checked off by per cent of earnings. The above to include all dues and assessments for burial fund and United Mine Workers' organization.

No fines shall be collected except it is ordered by a majority vote of the members present at a regularly called local meeting.

However, should either the operator, the local union or the party upon whom the fine is imposed object to such fine, each of them shall have the right to appeal to the subdistrict officers and the operator or the operators' commissioner for final ruling.

In order to be honored, check-off figures must be furnished to the company by noon of the 1st and by noon of the 16th of each month.

## DIVISION OF WORK

**SEC. 33.** It is understood that companies operating two or more mines will work all mines on turn as near as possible or as near as market conditions will permit. When it is necessary for any one company to close one or more mines down on account of market conditions it is agreed that the men employed at said mines shall be entitled to work at mines remaining in operation and the company shall distribute the men proportionately to the mines remaining in operation. It is understood that all classes of labor agreed upon by the mine foreman and committee shall under these circumstances share their work. Nothing in the foregoing to interfere with or affect the efficiency of the mine or the quality of the output.

## FIRE BOSSES

**SEC. 34.** We agree that fire bosses shall be entitled to a full day's pay for inspecting the mines on Sundays and all holidays.

## CONTRACT WORK IN MINES

**SEC. 35.** There shall be no contract work in any mine in this subdistrict.

## HOUSE COAL

In keeping with the award of the Coal Commission, 27 per cent shall be added to the price of house coal, prevailing October 31, 1919.

## POWDER

The price of powder to be \$2.30 per keg delivered as provided for in contract.

## SPECIAL CONDITIONS AND LOCAL CONCESSIONS

SEC. 36. Conditions governing all employees in and about the mines prevailing during the years 1916 and 1917 and not specifically covered in the above rules and conditions shall remain unchanged, but any local concession made heretofore by any miner or operator at any mine shall be open to him for adjustment.

## APPENDIX C.—DEFINITIONS OF OCCUPATIONS

Each of the occupations for which figures are presented in this report is briefly defined below.

If a definition applies to an inside occupation the word "inside" follows the name of the occupation. Example—"Brakemen, inside." If it applies to outside work the word "outside" follows the name. Example—"Ash men, outside." If the occupation is found both inside and outside the mine no modifying word is used. Example—"Blacksmiths."

A similar rule has been followed to indicate anthracite and bituminous mine occupations.

*Ash men, outside, anthracite.*—Remove ashes from beneath the fire box of boilers by flushing or by shoveling the ashes into cars.

*Blacksmiths.*—Do general blacksmithing, nearly all repair work.

*Brakemen, inside.*—Also known as trip riders, trailers, and tailers. In anthracite mines they are called motor brakemen. They operate or throw switches, couple and uncouple cars, assist motormen in the transportation of loaded coal cars from switches or sidings in the mines to the shaft, and of empty cars from the shaft to the switches or sidings. Loaded cars are hauled by mules from rooms in which coal is mined to the switches and empty cars from the switches to the rooms.

*Brattice men, inside.*—Sometimes also called airmen. They usually work under the supervision of the fire boss, whose duty it is to see that the mine is prepared for ventilation and for protection against fire. They construct brattices of wood, canvas, stone, brick, or cement. This work is of great importance in mines affected by gas, as such mines must be thoroughly ventilated.

*Cagers.*—Also called bottomers and dumpers. They are stationed at the shaft inside the mine and at the top of the shaft outside the mine. Those inside the mine place loaded coal cars in the cage and take empty cars out of it. Those outside the mine take loaded cars from the cage and place empty cars in it.

*Carpenters, outside.*—Do general carpentry repair work.

*Car runners, inside, anthracite.*—In some mines cars are run by gravity from rooms or chambers in which coal is mined to switches or sidings, or to shafts, or from switches or shafts to rooms or chambers. Cars so run are in charge of car runners who control their speed or stop them by brakes or sprags.

*Car runners, outside, anthracite.*—Transfer empty railroad cars to breaker chutes and loaded cars from chutes over a section of the railroad track where scales for weighing cars are installed.

*Door tenders (boys), inside, anthracite.*—Also called trappers. They open ventilating doors to let cars through them to and from the shaft and close them as quickly and securely as possible as soon as the cars have passed. In some mines there are no door tenders as the doors are opened and closed automatically.

*Drivers, inside.*—Drive mules into and out of rooms in which coal is mined, hauling loaded coal cars from rooms to switches or sidings where cars are assembled for transportation by motor to the shaft, and empty cars from switches to the rooms. In mines where the distance from the rooms to the shaft is short, the haul is from the room to the shaft and return, no motor being used.

*Dumpers, outside, anthracite.*—Dump loaded coal cars at the tippie by hand or by operating mechanical apparatus.

*Engineers.*—Operate and repair ventilating fans inside the mines and breaker machinery outside the mines. Operate and inspect hoisting machinery which is used in lifting employees and loaded coal cars in cages to the top of the shaft and in lowering employees, empty cars, and material from the top of the shaft into the mines.

**Firemen, outside.**—Keep fires burning under boilers to produce steam by shoveling coal into the fire box as needed and by keeping the fire box clear of ashes and clinkers.

**Jig runners, outside, anthracite.**—Operate a jig, a mechanical contrivance or part of the breaker machine, which cleans coal by removing slate, rock, and waste material.

**Laborers.**—Do various kinds of unskilled inside and outside work. They push cars, assist trackmen and timbermen, shovel dirt, and handle material, and do other necessary unskilled work about the mines. In anthracite mines company miners' laborers and consideration miners' laborers are not included with these laborers, because they are paid a higher wage than is paid to these.

**Laborers, company miners', inside, anthracite.**—Load cars and assist company miners in drilling holes into stone or coal for explosives. The drilling is done with electric or compressed-air machines. Company miners' laborers seldom mine any coal, it being their duty to remove obstructions and prospect for new chambers or rooms. These laborers are paid a time rate which is a little lower than that of "Laborers, consideration miners'."

**Laborers, consideration miners', inside, anthracite.**—Load cars and assist consideration miners in drilling holes into coal or stone for explosives. The drilling is done with electric or compressed-air coal-mining machines. They become contract miners' laborers when working conditions improve and miners are able to earn on a tonnage basis more than the fixed or specified time rate of consideration miners. They are paid a time rate when working as consideration miners' laborers, the rate being a little higher than that of company miners' laborers and are paid on a tonnage basis when working as contract miners' laborers.

**Laborers, contract miners', inside, anthracite.**—Load cars and assist contract miners in operating electric or compressed-air coal-mining machines which are used in drilling holes into coal for explosives. They become consideration miners' laborers when mining or working conditions are abnormal, due to obstructions, such as stone, slate, and dirt, and when contract miners are thereby unable to earn on a tonnage basis more than the fixed or specified rate of consideration miners. They are paid on a tonnage basis when contract miners' laborers and a time rate when consideration miners' laborers. The rate as consideration miners' laborers is a little higher than that of company miners' laborers.

**Loaders, hand, contract, inside, bituminous.**—Do same work as loaders, hand, but employ one or more helpers whom they pay out of their earnings, while the loaders, hand, have no helpers.

**Loaders, hand, inside, bituminous.**—Shoot or blast coal from seams or beds after it has been undercut by machine miners and then load the coal into cars, using hand shovels. In some mines they do the timbering; that is, set props or timbers to prevent the falling of slate, stone, and earth into the rooms of the mines; also lay tracks in rooms of mines and keep rooms in good working condition.

**Loaders, machine, inside, bituminous.**—Operate electric driven coal loading machines which load, by endless chain scoop method, the coal, into mine cars, after it has been blasted from the face or seam. The operator keeps the loading chain of the machine against the loose coal bed and uses a hand shovel to assist in keeping the coal in contact with the loading device.

**Loaders, outside, anthracite.**—Load coal into railroad cars and refuse into mine cars.

**Machinists, anthracite.**—Install and repair machines and machinery.

**Masons, inside, anthracite.**—Construct necessary air bridges and walls to conduct or force air into all parts of the mine.

**Miners, company, inside, anthracite.**—These employees very seldom mine coal. They operate electric or compressed-air machines, drill holes into stone or coal for explosives, and load cars. They are usually engaged in removing obstructions in the mines and in prospecting for profitable mining chambers. They are paid a time rate which is a little less than that of the consideration miner and are called "company miners" to distinguish them from the consideration miners.

**Miners, consideration, inside, anthracite.**—Operate electric or compressed-air coal-mining machines, drill holes into coal or stone for explosives, and also load coal into cars. These employees are regular contract miners who, in consequence of obstructions in their working chambers or rooms, such as stone, slate, dirt, or of bad working conditions, are unable to earn on a tonnage basis an amount equal to or in excess of a certain specified rate per day. They are paid the specified rate, which is a little more than that of company miners, until they are able to earn more on a tonnage basis.

*Miners, contract, inside, anthracite.*—Operate electric or compressed-air coal-mining machines, drill holes into coal for explosives, and also load coal into cars. They are paid on a tonnage basis. A contract miner becomes a consideration miner when, owing to obstructions in his working chamber or room, such as stone, slate, or dirt, he is unable to earn an amount in excess of a fixed or specified rate per day. He then becomes a consideration miner and is paid the fixed rate per day until he is able to earn more on a tonnage basis.

*Miners, gang, inside, bituminous.*—These employees work in groups dividing their earnings equally regardless of the kind of work performed. Some of them operate electric or compressed-air coal-mining machines undercutting seams of coal and drilling holes into coal for explosives, while others are placing the explosives and loading by hand into mine cars the coal which has already been blasted from the seam. Only a few of a gang operate the undercutting machines, but all do loading, etc.

*Miners, hand or pick, inside, bituminous.*—Undercut coal with pick, cutting some distance from the face of the seam, separate it from seams with pick or explosives, and load the coal into cars.

*Miners, machine, inside, bituminous.*—Operate electric or compressed-air coal-mining machines, undercutting seams of coal and drilling holes into coal for explosives.

*Motormen, inside.*—Operate motors which are used in the transportation of loaded cars from switches or sidings in the mines to the shaft and of empty cars from the shaft to the switches or sidings. Loaded and empty cars are hauled to and from the switches by mules.

*Motor brakemen, anthracite.*—See Brakemen, inside, bituminous.

*Oilers, outside, anthracite.*—Oil and clean machines and engines.

*Other employees.*—Include employees of all occupations in the industry other than those specified and defined in this bulletin.

*Plate men, outside, anthracite.*—Work at the platform of the breaker machine sizing coal and removing stones from the coal before it enters the conveyors.

*Pump men, inside.*—Operate, repair, and look after pumps used in pumping water from the mines.

*Repair men, outside, anthracite.*—Repair chutes and breakers and other machinery.

*Timber cutters, outside, anthracite.*—Cut and load props or timbers into cars for transportation into the mines. They also load cars with other supplies for use in mines.

*Timbermen, inside.*—Cut and set timbers or supports in mines to prevent falls of slate, stone, and dirt.

*Trackmen.*—Lay and repair tracks used in transportation in and about the mines. At some mines outside trackmen repair tracks on the mine property.

*Slaters (boys), outside, anthracite.*—Also called pickers. They pick slate from the coal as it passes over the automatic conveyors or down the coal chutes.

*Trappers (boys), inside, bituminous.*—See Door tenders, inside, anthracite.