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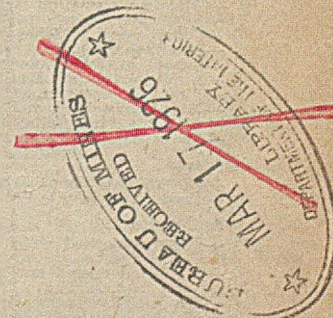


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COAL AGE

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Devoted to the Operating, Technical and Business
Problems of the Coal-Mining Industry

R. Dawson Hall
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Number 1

Will Anthracite Men Strike?

A STRIKE in the anthracite fields would be distinctly unfortunate this fall as many labor leaders and anthracite operators fully realize. A strike of any length would immediately start up many a bituminous mine now idle. Soft coal would plunge into anthracite markets. Smokeless coal, especially, would find new opportunities to nick "natural" hard coal territory. Anthracite operators already are harassed sufficiently by loss of markets, without suffering this new impending loss, even temporarily.

Anthracite miners already receive higher average wages than are paid to men in most other industrial groups. Their proposed demand for more pay certainly should not be a fighting point. It is no excuse for a strike and is merely trading ground on which to enter the joint negotiations. Neither does a demand for the check-off justify a strike. Mr. Lewis' possible demand for a long-term agreement comes nearer being a *casus belli*. But, as a matter of fact, none of these will rouse any public sympathy for the miners. They can work up outside support only by a resistance against an actual wage cut, and even that is doubtful in view of the position of anthracite wages, illustrated forcibly in an article in this issue.

No matter what the cause, a strike this fall is bound to damage the entire coal industry involving the public attitude toward miners and operators alike just at a time when the industry as a whole is making actual progress toward sanity and health. If the miners insist upon quitting work in defence of any principle at all, Lewis will be charged with shutting down anthracite to give his starving bituminous men a chance to get in a little work so as to save his union from collapse.

To the average American, a short strike will look like collusion between miners and operators and a long strike like base incompetence calling for congressional action next winter such as nobody in the coal industry wants. Therefore, the joint anthracite negotiations starting soon after this week's tri-district miners' conventions in Scranton, should be a "battle for peace." We hope it need not be "peace at any price."

Illinois Should Choose Technical Man

AN OUTSTANDING man recently has passed away in Illinois, Martin Bolt, the head of the Department of Mines and Minerals. The state has cause to regret his loss and will have to look carefully for his successor, and when it is being done we would counsel the authorities respectfully that they look for some good man with technical education. Mining men have succeeded without college training, but there is no reason to suppose that they would not have been far more successful with it.

We need character, ability and education, these three. Why be contented with only two of them? The first two are characteristics as to the possession of which

there may be some question. The third is a matter of fact that readily can be determined. There is no question but what a man of trained mind at the head of the department will do much to make the work of the bureau effective. Hitherto it has seemed that in most states men with degrees were not wanted, no matter how excellent their other characteristics. Surely it is time for a change of attitude.

Market Prices

WHAT BRIGHT MIND conceived the idea that market prices should be secret and not quoted? What Dark-Age intellect wanted to deprive the buyer of a knowledge of the current price? Who desired that the consumer should hesitate to buy because he didn't know if a fair price was offered to him?

The basis of good business is recorded prices. The public should favor market quotations as a protection to the small inexperienced buyer, as a means of preventing dishonesty in dealings between agents and as a source of preventing waste in selling expenditure. Open and above-board prices are a refreshing flood-light in industry, but all the people who favored smelling committees and dark-cellar practices prayed for secret prices, condemned the stock and commodity exchanges and the quotations of trade associations and delighted in favoring gum-shoe methods of operation. Waste in merchandising will be largely eliminated when both buyer and seller know the market rate of commodities. Not for any particular industry's advantage are recorded prices to be advocated but for the benefit of all industry and for the advantage of the public.

Mail Order Coal

RETAILERS in the Midwest and Northwest are reported tremulous over the entrance of a mail order house into the coal business. Of course there are retailers who will feel this competition, at least for a time, but it seems to us highly probable that there is more grief in store for others than for legitimate coal dealers.

The country is full of men who tried to sell coal on a club plan—as somebody in each community must do for mail order houses—and who have rued the day they made their start. In Springfield, Mass, for instance, it was tried under most auspicious conditions. But, strangely enough, trucks were hard to get when the coal cars arrived. Demurrage sometimes rolled up or coal had to be dumped on the ground. The "high grade lump" had a habit of degrading so that a lot of people who paid for lump got slack. Fifty-ton cars often started full and arrived with 45 tons. Somebody had to collect in advance and have the freight charges in hand at the station. "Members" occasionally left the "financial officer" holding the sack. Scales were hard to find. There was trouble all along the line.

Most of these worries are not faced by the mail order firm. All that concern purposes is to furnish the coal

after the "financial officers" have sent in the money. Its price quotations are attractive and it is reasonably sure of some business at a small profit. It may get into arguments over weights and quality, but most of the troubles are in store for those unfortunates who undertake to handle the mail order house's carload lots locally. These individuals will disturb the peace of retail dealers for awhile but probably not for long. It is to be fervently hoped they disturb retailers who believe in excessive margins of profit. They may thus perform a service for their communities and for the coal industry generally. But in general, tears, argument and grief immeasurable will be their lot.

Machines Always Defeat Prejudice

WHENEVER mechanical devices have been developed to take the place of human muscles in the performance of useful work in the service of mankind, the people possessing the muscles displaced have raised strenuous opposition. This has been true of the spinners, the weavers, the iron and steel workers, the miners, and even the slate pickers in the anthracite breakers. But how men do change!

When it was sought to introduce the first mechanical slate picker a few decades ago its inventor narrowly escaped personal injury or possibly even a lynching at the hands of an irate mob that strongly resented his attempt "to rob the little boys of their living." Yet, today mechanical picking is all but universal and the breaker boy of twenty or thirty years ago, as a race, is almost as extinct as the bison or the great auk—he is now in school where he belongs, and everybody is happier because of that fact.

While the opposition of the laboring man to mechanical devices that supplant the work of his hands is poignant at the outset it soon turns to favor when he reaps his share of the benefits that accrue from the change. Would the spinners of today willingly revert to the hand-operated spindle? Would modern weavers voluntarily go back to the old foot looms? Would the anthracite workers like to see the old picking chutes revived?

Economic laws are as inexorable as are those of nature. Both may be dodged or even successfully opposed for a time but in the end they always triumph over the designs of men—and to the benefit of all concerned. Each advance of mechanical devices in industry, while it may temporarily throw men out of employment, soon creates a bigger and better demand for their services either in the same industrial field or elsewhere.

Instances of this kind were particularly striking during the past hundred years. Railroads were opposed by the farmers because they believed that they would destroy the market for horses to be used in "teaming" goods and grain. Inevitably the iron horse won over its four-footed rival, yet the market for horses was never more active than today. The farm hands of the past opposed the reaper and the threshing machine because they believed these devices would render their services unnecessary. The reaper has long since totally supplanted the cradle even as this device supplanted the sickle; the threshing machine long ago sent the flail to the discard, yet farm owners were never more sorely in need of help than today. And the farm hand can now sell his services for \$50 to \$70 per month with board and washing to boot, whereas in the old days

he was fortunate if he could get \$8 or \$10 for a similar period of time.

It is by no means strange that the miners of today oppose the introduction of shoveling machines, power drills and other mechanical labor-saving devices within the mines. A few years ago they similarly opposed the introduction of mining machines and explosives. But where, today, can a miner be found who would gladly return to the practice of pick undercutting and bringing the coal down by means of sledge and wedges? Not much! The present-day miner in most instances, if deprived of the services of a mining machine, would unhesitatingly shoot the coal off the solid, state laws and company rules to the contrary notwithstanding. There is plenty of evidence to back this statement.

Man is a lazy sort of a creature! Having once learned to load coal mechanically he rebels at the idea of going back to the old hand shovel. The fact that certain coal operators who encountered severe opposition from their men when they sought to introduce loading machines are now encountering almost equal difficulty from the same source when they suggest that these machines be removed and that those who ran them go back to hand loading, is a decidedly encouraging symptom.

Beyond shadow of doubt mechanical loading has come to stay. It will be difficult for any man or any group of men to fly for long in the face of economic necessity and prevent its adoption. And when mechanical loading has once become an accepted fact, woe be unto him who even suggests a reversion to hand methods!

Going South Again

CVILIZATION had its origin in tropic climes. In the tropics the growth of vegetation was rapid, and man could live without toil. The ground gave its fruits without cultivation. But the progress of agriculture opened the way toward Northern exploitation and the Northerner found he could warm himself in the winter by wood and later by coal and not being enervated by heat he was a more active individual than the inhabitant of the tropics and soon gained political mastery.

If the houses of the South could be made cool and endurable, your southern farmer would be the better producer for he would have all the rapidity of growth that has made the South rich and all the energy that goes with a relief from the heat. The cooling of houses will redistribute mankind. A siesta in a well-tempered atmosphere when the sun is hottest and work in the cool of morning and evening lightened by machinery will make an ideal condition of living. The growing season will last twelve months. Not only will there be less seasonal industry but there will be more equal distribution of the world's peoples on the face of the earth.

Artificial cooling will make the South as suitable for living as artificial heating has made the North, and southern markets for coal will be as active as northern. The promotion of air cooling by refrigeration will solve many of the problems of coal—seasonal inequalities in industrial demand as well as like inequalities in the domestic market. The next move of the people of the United States, which has already started for other reasons, is and will be, down South. Great movements in population have occurred before in history and for reasons not so readily apparent.

Old Ben Coal Corporation Effects Large Savings With Modern Electric Equipment

Replacement of Efficient Steam Hoists by Electrified Units Justifies Itself—Benefits of Diversity Factors Are Realized by Transmission Line Linking Up Mines

By A. W. Spaht* and G. E. Marble†

THE COST OF POWER at coal mines is an important item of expense. In order to reduce it and thus lower the cost of producing coal the Old Ben Coal Corporation with twelve mines in southern Illinois has changed its equipment at eleven of the twelve from steam to electric operation. Complete new equipment was used. The change is striking because it is one of the largest electrifications ever made in the coal industry.

It is not possible to measure the exact dollars-and-cents economy wrought throughout the company by the electrification because of irregularity of operation at so many of the mines during the past winter but the indications are the saving at one mine will be in the neighborhood of \$50,000 and no doubt economies at the others will be comparable. The company is convinced, however, that idle-day power costs under electric operation are much less than those borne in the days of steam. The principal equipment installed was hoists.

Of the twelve mines operated by the Old Ben Coal Corporation in the Franklin County field, mines Nos. 8, 9 and 15 were sunk by the Old Ben Co. The other mines were purchased. With the exception of one, all were originally steam operated. At the No. 11 mine an electric hoist of 1,150 hp. was installed in 1912 when the mine was sunk. Power for this mine was supplied from a 5,000-kva. plant located at the mine and owned and operated by the coal company. The only steam for mining purposes was used in operating a material hoist at the air shaft and for heating.

The surplus power generated by this mine plant was supplied to its other mines, as emergency power, and to a public utility company. All of the power taken was carefully metered and a permanent record of the requirements was kept from the beginning. The power required for the various operations, such as hoisting, ventilating, cutting and hauling, and for the tipples was also measured on separate meters.

A graphic wattmeter gave a continuous record of the total load, hence this company had accurate data, over a period of several years, covering the exact power requirements of an electrically operated mine in all stages of development.

The twelve mines had been connected electrically by means of a 33,000-volt transmission line originally intended to supply power to the various mines in case of trouble with the local steam plants. Motor-generator sets and a spare motor drive for the fans had been installed at each mine. The substations at mines where no alternating-current energy was generated consisted of two or three 200-kva. transformers, making banks of 400 or 600 kva. capacity.

At the No. 9 mine there was also a 2,500-kva. turbine-generator which was operated in parallel with the No. 11 plant. Thus the alternating-current power system consisted of 7,500 kva. in turbine driven generator capacity, with 43 miles of 33,000-volt transmission lines and a number of 33,000-to-2,300-volt step-down substations. Metering equipment at all points made it possible to determine the line and transformer losses in the system. The location of the mines and the transmission system is shown in Fig. 1.

Most of the twelve power plants were better equipped than the average mine plant. The plant at mine No. 11 had water-tube boilers, stokers, superheaters, soot blowers, feed-water treating and filtering plant, coal and ash conveyors and a 225-ft. stack. No. 9 plant had water-tube boilers, traveling grate stokers burning No. 5 coal, forced draft, and coal and ash conveyors. Two of the ten remaining plants had water-tube boilers and stokers and water treating plants; two had low pressure turbines utilizing the exhaust steam from the hoisting and fan engines; nine had brick or concrete

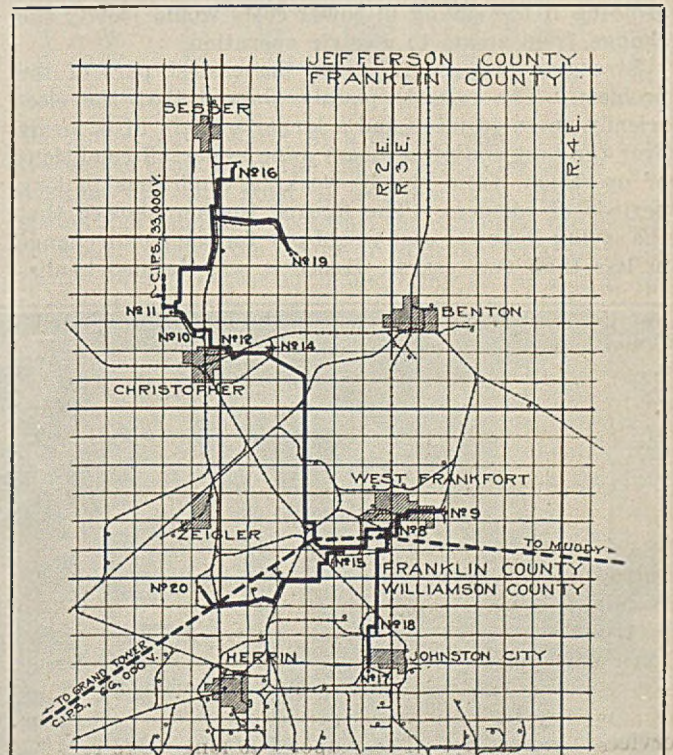


Fig. 1—Map of Old Ben Properties in Southern Illinois

The dots represent the 66,000-volt line from a power company. The solid black traces the course of the coal company's 33,000-volt transmission lines from the main substation to the mines.

*Electrical engineer, Old Ben Coal Corporation, Christopher, Ill.
†General Electric Co., Chicago, Ill.

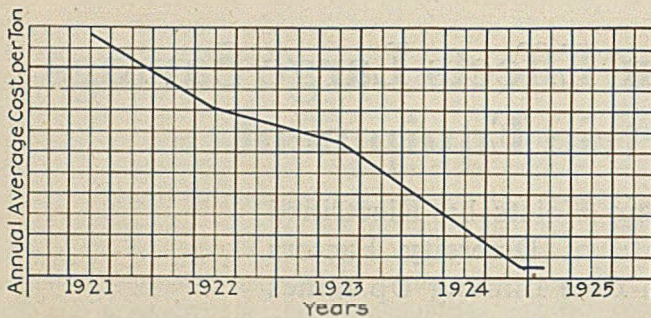


Fig. 2—Large Savings Are Effected by Electrification

The way the energy cost per ton has been lowered from year to year by changing steam-operated equipment to electric drive is apparent by this curve. Now that the electrification has been practically completed, note that the cost curve has flattened out.

stacks of ample capacity. All of the fire-tube boilers were hand fired.

Six of the plants had ash conveyors, and all had coal conveyors taking coal from the tippie direct to the boiler rooms. The twelve plants had a total of 18,430 rated b.hp., and 14,300-kw. rated generator capacity. All had high-grade, first-motion hoisting engines and fan engines and all had ample water supply from surface reservoirs.

An accurate accounting system gave thoroughly dependable power cost records at every plant. The cost of the alternating current generated in the turbine-driven units was known. The transmission and distribution losses were known, as was the cost of operating each local steam plant. It was possible to make close estimates of the kilowatt-hour requirements of each mine and the maximum demand if all were operated electrically. The rate at which power could be purchased was known. It was simply a matter of deciding if the saving in power costs would justify the change from steam to electric operation.

Strangely enough, this was the easiest part of the problem. The records plainly showed that the electrically operated mine had a larger margin of economy over the best equipped steam mine under all conditions of operation, from steady working conditions to long periods of idleness. The figures further showed that the saving in power cost would pay for the entire change in less than two years. Hence it was decided to dis-

continue the use of steam in all cases except at one mine, No. 10, which is so nearly worked out that it will be finished with the steam hoist.

The question of purchased power was then investigated. First to be considered was the dependability of the power supply, second, the necessary capacity, and third, the cost. The size and arrangement of the Central Illinois Public Service Co.'s power plants and steel tower transmission lines left no room for doubt as to the first two points. In the case of the third item the cost records showed that purchased power would cost practically the same as when generated in the company's own plants. Hence it was decided that, inasmuch as the main object of the Old Ben Coal Corporation was to mine and distribute coal, the generation of power would be left to the power company, and therefore, purchased power was decided upon.

All of the power is taken at 33,000 volts and measured on one meter. This gives the coal company the benefit of the diversity factor, and consequently a comparatively high load factor.

The power factor of the system is maintained well above 0.9 by means of synchronous motor-generator sets with motors rated at 0.8 power factor leading. There are twenty-six motor-generator sets in all; two of these are of 200-kw., nineteen are of 300-kw., and five are of 500-kw. capacity.

It was necessary to rearrange the transformer substations to suit the mine loads. The 200-kva. transformers were grouped in banks of three and the banks operated in parallel.

In the selection of hoists for the other mines each duty cycle was treated as a separate case. It was found, however, that in some instances the equipment required did not vary greatly from that necessary at another mine. In such cases duplicate equipment of the largest size required was purchased. Four of the mines had steam hoists at the material handling shafts. These were changed to geared, alternating-current, motor-driven hoists. Fifteen electric hoists were required. All changes from steam to electric hoisting were made without interfering with the regular operation of the mines. Table No. 1 gives interesting data pertaining to the main shaft hoists.

It will be observed by referring to this table, that the

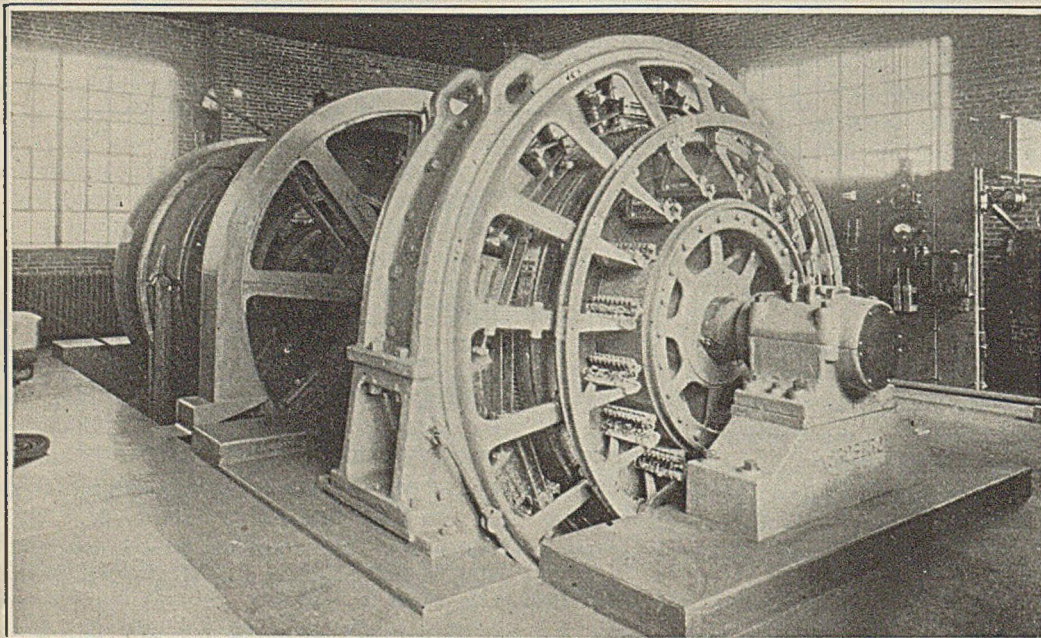
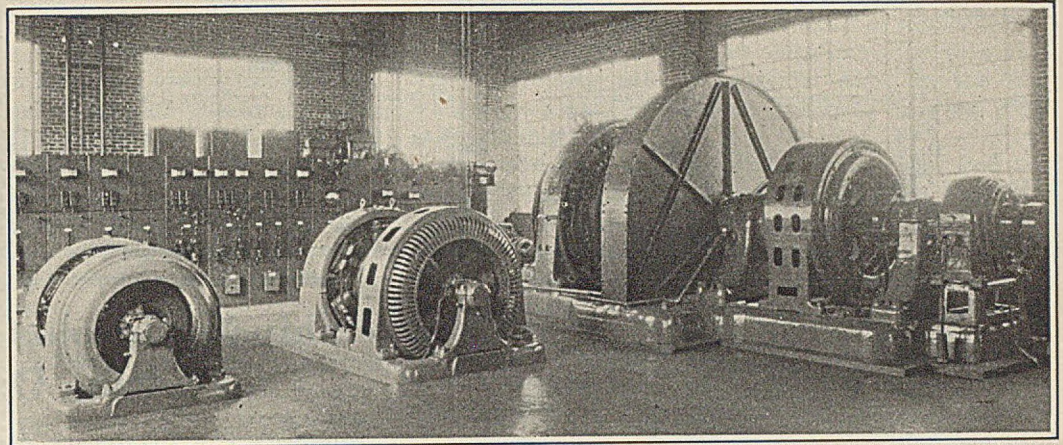


FIG. 3
There's Power
Here

Accurate speed control and high operating efficiency is obtained by this 2,200-hp. direct-current hoist motor—one of the largest single-motor hoists in the coal mining industry. Alternating-current is converted to direct-current by means of a large flywheel type motor-generator set located in the same room as this hoisting equipment.

FIG. 4
A Giant Unit

The 500-kw. and 300-kw. synchronous motor-generator sets used to supply direct current for mine service, look small alongside this 1,500-kw. flywheel set in the hoist house at mine No. 8 at West Frankfort, Ill.



hoists at mines Nos. 8, 9 and 15 are duplicates. A brief description of one of these outfits should be of interest, particularly because of the size of the equipment and the heavy duty cycle. The hoist motor is rated 2,200 hp. at 110 r.p.m. and is directly connected to the drums. A motor-generator set furnishes the power for the hoist. It consists of an induction motor rated 1,000 hp., 2,200 volts, 514 r.p.m.; a direct-current generator rated 1,500 kw., 600 volts; an exciter rated 37 kw., at 250 volts, and a 45,000-lb. steel plate flywheel. By means of a slip regulator and torque motor the heavy peak loads are automatically taken by the flywheel and the input to the induction motor of the motor-generator set does not vary more than 7 per cent above or below the average.

The drums of the hoist are of the cylindro-conical type with a small diameter of 7 ft. and a large diameter of 11 ft. The small diameters are in the middle with the brake ring between them. Take-up drums holding 100 ft. of rope are provided inside the large drums. The brake, which is oil operated, is set by gravity and released by oil pressure furnished by an accumulator having geared pumps.

The hoist is equipped with a geared auxiliary alternating-current motor drive, for use on night work or idle days.

The duty cycle on which the hoist operates is as follows:

Average weight of coal per trip, lb.	8,400
Total lift, ft.	520
Number of trips per hour	200
Time of rest period for caging, sec.	3.5
Time of acceleration, sec.	5
Time of full speed run, sec.	4.5
Time of retardation and dumping, sec.	5
Maximum rope speed, ft. per minute	3,800
Total weight of moving parts to be accelerated, tons	75

It was realized that such severe requirements could not be met by ordinary hand control and that automatic control must be used. If the equipment had failed to meet the cycle by one second per trip, it would have meant a loss of 350 tons per day. Hence it was impera-

tive that the duty cycle be met, and the present equipment does it nicely.

Automatic acceleration is accomplished by means of a system of current-limiting and counter-electromotive force relays in connection with the contactors governing the generator field. The operator simply throws the master controller to full running position and the hoist accelerates automatically at the predetermined rate.

Automatic retardation is effected by means of cams geared to the drum shaft working in connection with

Table II—Fan Data

Mine No.	Size in Ft. Diam.	Face	R.p.m.	Volume Cu.Ft. per Minute	Pressure In., Water Gage	Driving Kw. Input	Motor Kw.-Hr. per Day
8	16	6	120	160,000	4.00	118	2,840
9	16	6	120	165,000	3.50	106	2,541
10	14	5	170	167,000	2.50	111	2,660
11	12	6	104	193,000	1.00	64	1,540
12	13.5	7	185	200,000	3.75	153	3,676
14	16	8	131	241,000	3.25	180	4,309
15	16	6	44	49,600	0.40	24	581
16	10	6	134	134,240	2.00	47	1,132
17	12	4.5	160	85,000	2.25	45	1,071
18	16	5	106	180,000	2.00	101	2,423
19	16	5	75	90,000	2.00	31	754
20	16	5.5	130	120,000	1.60	39	938

the master controller. At a certain point in the cage travel, the cams move the master controller to the "off" position and the hoist is automatically stopped. A spring link connection between the cams and the master controller allows the operator sufficient controller capacity for any necessary maneuvering at the end of the trip, such as redumping.

All braking is dynamic and of the necessary value to bring the hoist to a stop at the proper point regardless of the weight of the load. The mechanical brakes are used only for holding the drums after they are stopped. The kilowatt-hours per ton taken by this equipment, when hoisting in accordance with the duty cycle, is given in Table I.

Because the power taken by the fan is usually a large part of the total requirements of a mine, Table II is included to show what the twelve fans are doing. The

Table I—Main Hoist Data

Mine No.	Ft. Total Lift	Lb. Coal per Trip	Trips per Hour	Type of Hoist	Hp. of Motor on Drums	Size of Drums	Kw.-Hr. per Ton	Manufacturer
8	500	8,400	200	Illgner-Ward-Leonard	2,200	7'x11'	0.874	General Electric Co.; Nordberg Mfg. Co.
9	520	8,400	200	Illgner-Ward-Leonard	2,200	7'x11'	0.916	General Electric Co.; Nordberg Mfg. Co.
10	574	6,500	140	Steam	28"x42" no motor	8' cylinder	.....	Litchfield Foundry & Machine Co.
11	667	9,000	125	Illgner-Ward-Leonard	1,150	7' cylinder	1.12	General Electric Co.; Ottumwa Iron Works
12	564	6,500	150	Illgner-Ward-Leonard	1,100	6 1/2'x11 1/2'	0.975	Allis-Chalmers Mfg. Co.
14	519	8,500	165	Illgner-Ward-Leonard	1,100	6 1/2'x11 1/2'	0.845	Allis-Chalmers Mfg. Co.
15	484	8,400	200	Illgner-Ward-Leonard	2,200	7'x11'	0.853	General Electric Co.; Nordberg Mfg. Co.
16	707	7,600	150	Illgner-Ward-Leonard	1,400	7'x11'	1.105	General Electric Co.; Nordberg Mfg. Co.
17	249	4,500	144	Geared a. c. Motor	350	6'x10'	0.520	General Electric Co.; Nordberg Mfg. Co.
18	335	10,000	180	Illgner-Ward-Leonard	850	7'x11'	0.512	General Electric Co.; Nordberg Mfg. Co.
19	636	7,000	126	Illgner-Ward-Leonard	700	7'x11'	0.971	General Electric Co.; Nordberg Mfg. Co.
20	259	6,000	156	Geared a. c. Motor	350	7'x11'	0.525	General Electric Co.; Nordberg Mfg. Co.

Table III—Distribution of Daily Kilowatt-Hours Among Various Mine Operations

Mine No.	Underground—		Fan		Hoisting—		Above Ground—		Total Kw.-Hr.	Tons Hoisted	Total Kw.-Hr per Ton
	Total	per Ton	Total	per Ton	Total	per Ton	Total	per Ton			
8	7,610	1.42	2,870	0.534	4,600	0.856	520	0.097	15,600	5,370	2.91
9	18,290	1.64	2,550	0.503	4,800	0.946	2,060	0.406	17,700	5,063	3.50
11	6,010	1.420	1,540	0.364	5,130	1.21	1,020	0.241	13,700	4,246	3.24
12	4,398	1.43	3,700	1.21	3,100	1.01	490	0.160	11,688	3,074	3.80
14	5,400	1.31	4,290	1.04	3,850	0.932	860	0.208	14,400	4,108	3.49
18	*8,460	1.507	2,400	0.427	3,020	0.537	*	*	13,820	5,621	2.46
20	3,010	1.329	930	0.410	0,270	0.360	370	0.163	5,580	2,266	2.46

* D. c. motors in tippie are included in underground power. † This figure includes power taken by rock dust mill.

figures given are not the results of short tests but are the monthly kilowatt-hour consumption averaged over several months and divided by the number of days in the month, thus representing normal operating conditions.

It will be noted that the over-all efficiency of the No. 15 fan and drive is low. This is due to the operation of a large fan at a small fraction of its rated output, and brings up the question whether it would not pay to install a smaller fan when sinking a new mine and replace it with a larger one when required. The fans are all belt-driven by General Electric Co. squirrel-cage motors. Motor pulleys are changed when different fan speeds are required.

Table III shows the kilowatt-hours taken by the various mine operations during a 24-hr. day, when coal is hoisted only 8 hr. Thus, the figures include the fans and pumps for a full day of 24 hr. as well as the power taken by the auxiliary motors on the hoists, and by the flywheel sets when running but not hoisting coal. The latter condition occurs at noon and when handling men before and after the regular hoisting period.

By comparing these figures with Table I, the power taken by the hoist, in addition to that required for hoisting coal, can be determined. Also, by the use of these tables, it is possible to make estimates of idle-day requirements. This table covers only mines that were operating during the past winter. The others are temporarily shut down due to market conditions.

The curve in Fig. 2 shows the proportionate decline in power cost per ton during the transition period from steam to electric operation, covering a period of four years. The points on the curve were obtained by dividing the total annual power cost for the system by the total output in tons of coal. The point in 1925 represents the January results, this being the first month in the four years when no steam was used for mining purposes. This last figure gives an average for the twelve mines very close to the cost that has prevailed at No. 11 mine, and agrees with the estimated results.

"Ship No Unsold Coal," Says Ord To Mine Operators

Suggests Big Producers Aid Small Ones in Sales Thus Reducing Number of Agencies—Asks for More Complete Coal Data Reports

Coal shippers too often have stabbed their own business in the back by moving unconsigned coal toward markets, W. D. Ord, president of the Empire Coal & Coke Co., of Landgraft, W. Va., told the National Coal Association at Chicago, June 18. He introduced the subject "Open Consignment of Coal" with a statement by Judge Elbert H. Gary made in his address to stockholders of the U. S. Steel Corporation at their annual meeting on April 21, 1924. "We could sell," said the judge, "a great deal more temporarily, perhaps, at any time if we would make our prices low enough. That, in my judgment, would be the worst policy in the world, because it would be only temporary, others would do the same thing and the result would be to risk and hazard our profits for the future." "That," said Mr. Ord, "is the direct antithesis of the policy pursued by our industry."

Mr. Ord brought out the difference between farming and coal mining. "Farming," said he "in all its branches is perhaps the only other industry approaching our own in troubles, and yet the farmer has so succeeded in presenting his plight to the public that he is not only specifically exempted from anti-trust laws, but remedial laws for his benefit have been passed and others suggested and discussed. He can by concerted action so reduce or change his crop acreage each year as to bring the volume of his product within the anticipated consumption. In our own industry no two or more of us may confer together with the purpose of curtailing or limiting future production."

"Among the serious symptoms," said Mr. Ord, "accompanying and contributing to the weakness of the industry, is the practice, of operators who are in need

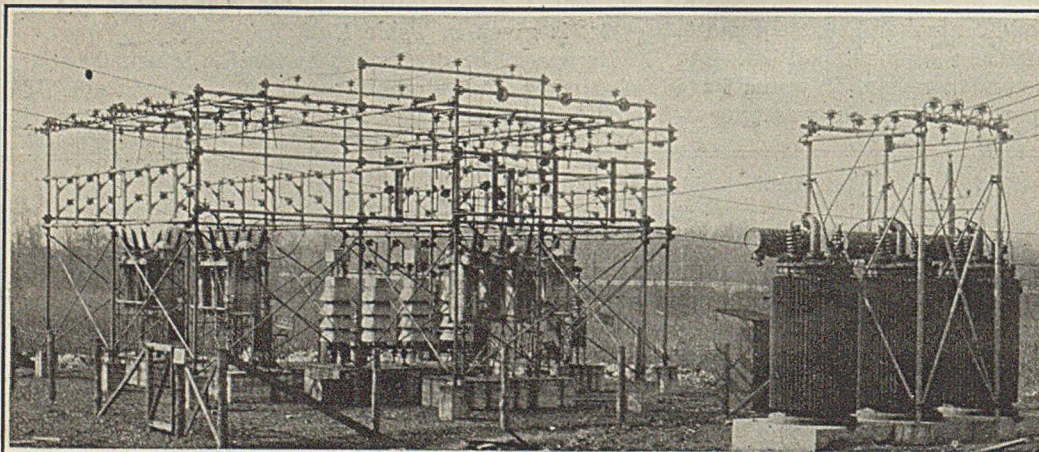


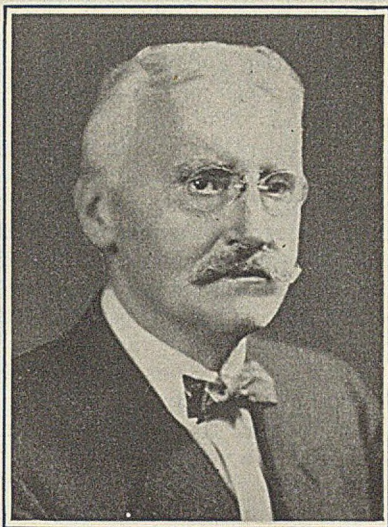
FIG. 5

Old Ben's Outdoor Substation

A 33,000-volt line from the power company's huge substation 800 ft. away delivers current to the coal company here for distribution to the mines. All of the coal company's power is measured on one meter at 33,000 volts. This gives the coal company the benefit of the diversity factor and, consequently, a comparatively high load factor.

of orders, of shipping coal before it has been sold. Information is lacking as to the exact extent of this practice. In some of the fields the associations do get information as to the unsold tonnage standing on the tracks of originating railroads in their own territory, but who has any information as to the unsold tonnage standing upon tracks in Chicago, Cincinnati or Detroit? Though definite information on the subject is lacking, it is a matter of common knowledge that in times of depression like the present a considerable volume of coal goes out unconsigned.

"This is not the worst of it. When ten such cars of coal arrive, let us say, at Chicago, demurrage charges soon begin to confront the operator. Not only does he reduce his price by degrees as the demurrage pressure increases, but he offers that coal to ten different brokers each of whom proceeds to try to market it.



W. D. Ord

President, Empire Coal & Coke Co., who assailed the practice of shipping coal on open consignment.

The effect on the market is that by this simple process the ten cars have grown to one hundred.

Mr. Ord presented a chart showing together the average daily stocks of coal on hand on the Lamberts Point, Newport News and Sewalls Point docks for each week during the year 1924 and the average weekly price of pool No. 1 smokeless coal on board vessels as quoted in *Coal Age*. To this were added lines showing the average daily price for the year and the average quantity of coal left standing on the piers daily. He showed that whenever the line representing average stocks crossed on its ascent the line of annual averages for that line the price declined; perhaps not that week but at least within the week following.

Mr. Ord asserted that a contract of sale should be a sale and should be made on such terms as to be irrevocable. He quoted an article by a purchaser of coal in which it was said that "The coal salesmen who come around trying to sell me are the least on their selling toes of all the many who infest my office" and that the coal salesmen try to sell wholly on price and not on merit and so are soon set bidding against each other.

This purchaser said that, owing to this tendency of coal salesmen he could easily make the coal salesman pay him money for buying his coal. The purchaser declared he had found a coal that would make him steam

at a lower price than any other easily available but the salesman who sells him this coal lets him have it at the price being paid for inferior coals on the same market and pats himself on the back for his clever salesmanship.

"A large part of the total output" Mr. Ord said "comes from mines too small to maintain their own sales departments. Such mines frequently unite in groups and sell through some common agency, which may or may not be financially interested in the production. The evils of this system are largely due to the ignorance of the producer and to the prevalent unhealthy practice of basing the seller's compensation on the quantity of coal sold rather than on the price obtained. Moreover, if such an agency is conducted legally, the operators using the same agency cannot get together as a group to discuss the market and fix the selling price for their agent. Each operator must arrange individually with the common selling agent. Imagine the diversity of opinion among these operators as to the market, about which they have no information, the resulting embarrassment to the agent, and his difficulty in equitably distributing the business under such conditions.

"This situation in some instances is further complicated because of ownership by the agent of auxiliary facilities, boats, docks, etc., which represent heavy investments on his part and which must move tonnage to avoid ruinous overhead whether the operator makes any profit or not.

"At times of heavy demand for coal, buyers have been known to send representatives among coal operators offering inordinate prices in order to bribe them to divert to their uses coal already sold under contract to others. This reprehensible practice begot a situation that is expensive and intolerable to both operators and consumers. Many of these agents, trained in such unscrupulous methods, and finding the coal operator an easy mark, set up their own selling agencies. Some of them were without experience, connection, resources or stability, and many of these are being carried by the coal industry even today. I have in mind an instance where approximately 35,000,000 tons of coal are being sold through fifty-three different general agencies with a veritable army of sub-agents, etc. What business can possibly stand such extravagance as this?

"In conclusion may I submit the following recommendations:

"(1) That we discontinue the practice of shipping any unsold coal to any market;

"(2) That because wrong sales practices, in however small a part of the bituminous coal industry, harm the whole industry, and because for that reason it is to the interest of the larger producers to assist smaller producers in marketing their coal properly, the members of this Association give serious thought to the problem of reducing the number of sales agencies and developing a sane, profitable method of selling coal;

"(3) That in view of the recent Supreme Court decisions, to the effect that the collection and publication of market statistics about closed transactions is not in violation of the provisions of the Anti-Trust law, operators, through their Associations, inaugurate the practice of gathering and disseminating such statistical information as will give them the facts they need in wisely directing the operation of their plants and the marketing of their product;

"(4) That every proper effort be made to secure such modification of the Anti-Trust law as will permit the practice of co-operative joint selling of coal at least from each individual coal district."

In the discussion that followed it was said that the evils described by Mr. Ord had been in existence for over thirty-five years and had made the fortunes of the jobber. He had traded profitably in distress coal. In other words the coal scalper had made the profit. Why buy of the producer when he would market coal the jobber could sell for less?

Union Fields Have Reached the Turning Point

High Wages Have Them Against the Wall Says Observer—
Cut to \$5 a Day Would Largely Solve Their Problem for Un-
organized Regions Cannot Go Lower than They Are Now

By C. E. Leshner

Assistant to the president, Pittsburgh Coal Co.,
Pittsburgh, Pa.

WHEN A TON of soft coal can be bought at the mines for \$1.30 why pay more? All over the states of West Virginia and Kentucky, and in parts of Pennsylvania, mines are pouring forth thousands of cars of coal each day, eager for a market at prices ranging from \$1.25 to \$1.60 per ton; good coal for making steam, firing locomotives, melting iron or making coke. In the Northern fields, where the United Mine Workers are in power, the Jacksonville wage scale holds the operators to a cost for labor alone which equals or exceeds the selling prices of the Southern non-union coal.

This in a word tells the story of the present difficult situation in which the union fields find themselves. Of these union fields Pittsburgh is hardest hit. The majority of the mines here are closed and non-union coal is pouring into our markets. The conditions that have prostrated the commercial operators and vitally affect the industrially owned or captive mines are not the result of any sudden or precipitate action. They are the outcome of a long series of related events. It is rather that the situation has reached a climax—a crisis, if you will. In the economic warfare that has driven in the market frontiers of Pittsburgh district coal a turning point has been reached. Pittsburgh has its back to the wall.

The war time demand for coal, the 1920 industrial boom and the coal shortage following the 1922 strike of nearly half a year all contributed to the expansion of the soft coal industry. The easy profits of those unusual periods enticed much new capital into the mining game and the recurring shoftages caused many large

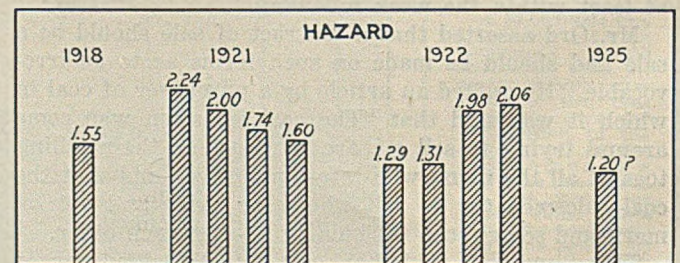
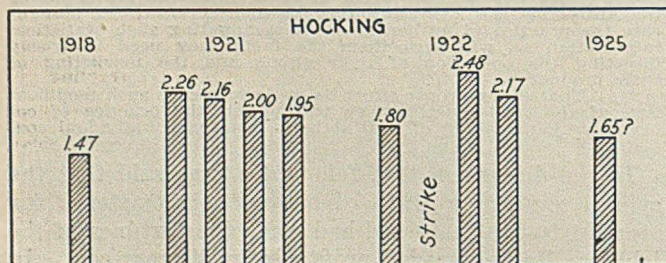
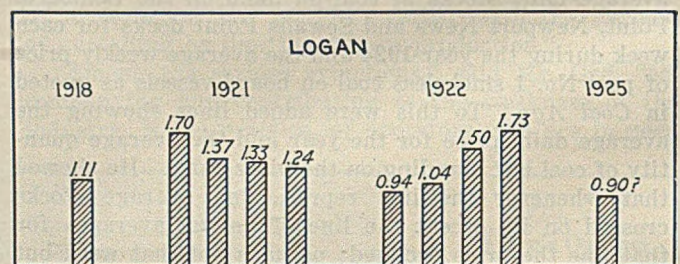
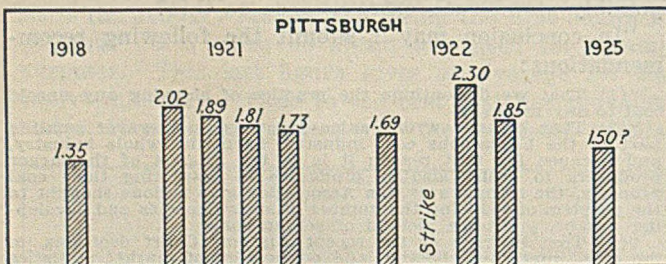
consumers, as steel companies and utilities, to open new large mines of their own. The high wages attracted thousands of men into the ranks of the coal mine workers.

A fuel hungry country took all the coal the railroads could move in the first few months after the 1922 strike. Every operator had a chance to produce and sell at a profit until finally by the middle of 1923 stock piles were replenished and demand and prices dropped. The decline that set in then followed through 1924.

Today and for a year past competition has ruled the soft coal business. The pace was set early in 1924 by the non-union operators. The price of soft coal dropped a dollar a ton almost as soon as the urgent demand of 1923 was satisfied. As the price dropped the non-union fields reduced wages and by thus cutting costs, were able to stay in the game. The Island Creek Coal Co. is the outstanding example of large scale non-union coal production. That company in 1923 produced 3,000,000 tons. By reducing wages and costs it was able to set a low price. Sales were nearly 5,000,000 tons in 1924 and have recently attained a monthly rate of 600,000 tons, or more than 7,000,000 tons per year. This is expansion with a vengeance.

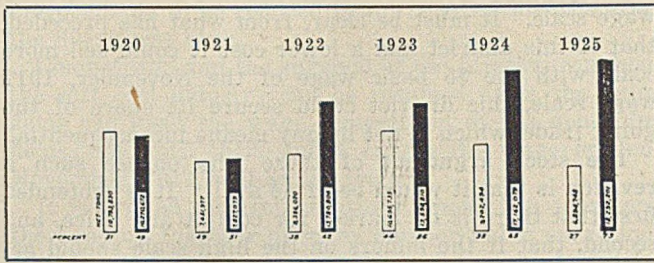
While the union miners were on strike through nearly half of 1922, the non-union fields, eager and willing to meet the urgent demand of industry for coal, succeeded so well in expanding their capacity that they reached a weekly output of nearly 6,000,000 tons, hampered though they were by car shortage and with a portion of the non-union territory on strike. The expansion thus under way has proceeded so that today these non-union operations, mainly in the South, may easily produce 7,000,000 tons of soft coal a week.

From a paper delivered on June 16 before the Engineers' Society of Western Pennsylvania.



Comparison of Labor Costs in Two Union and Two Non-Union Highly Competitive Fields

Except for boosts in wages in 1922 following the strike settlement in the union regions, the labor costs per ton in the Logan and Hazard fields, have steadily diminished below union wages to 1925 levels of 90c. and \$1.20. This illustrates the wage advantage the non-union fields have always had.



Non-Unionism Prevails in Appalachian Region

This chart traces the flow of coal from Appalachian districts by railroad to destinations between Erie, Pa., and Milwaukee, Wis., on the north, and the Ohio River and St. Louis, Mo., on the south. It includes revenue coal only. The figures are for three-month periods, Jan. 1 to March 31, 1920 to 1925. The white blocks in each pair represent union coal and the black blocks non-union coal.

Whereas, in the general strike of 1919, the union closed down 71 per cent of the bituminous coal mine production, leaving less than 30 per cent in operation as non-union, and cut production from more than 12,000,000 tons to less than 4,000,000 tons per week, to such an extent has the United Mine Workers lost ground and non-union mine capacity been increased, that today the unorganized fields can produce, not 30 per cent of the required soft coal for this country, but more than 70 per cent.

Indeed, measured not in capacity but in production, the figures are even more striking. In May, 1923, 47 per cent of the soft coal produced was non-union, in May, 1924, 54 per cent was non-union, and in May, 1925, the lower-priced coal from the unorganized fields represented 70 per cent of the total output of the country. Throughout 1924 the union producers sought to retain their trade; they produced coal at union wages and, selling it at prices set by the non-union producers, took substantial losses. There is very little consuming territory that the non-union mines cannot reach at freight rates but slightly higher than from the nearby union coals.

The bituminous coal industry is overdeveloped. It has had rapid and wide fluctuations in production. But the iron and steel industry, the rubber, automobile and machine tool industries, to mention but a few, are overdeveloped; they suffer from cyclic variations in output; they are subject to booms and depressions as is coal.

Viewing the bituminous coal industry as a whole—taking into consideration the many fields in the United States—it is well said that there can be no stability and no profits until the capacity is deflated; until thousands of operators and mines and hundreds of thousands of mine workers are eliminated. It would be a most satisfactory condition were there but mines and mine workers sufficient to produce say 10,000,000 tons of coal each week, and then that the demand could be so regulated that 10,000,000 tons would be produced each week throughout the year. That indeed would be ideal for thus capital and labor would both be regularly and completely employed.

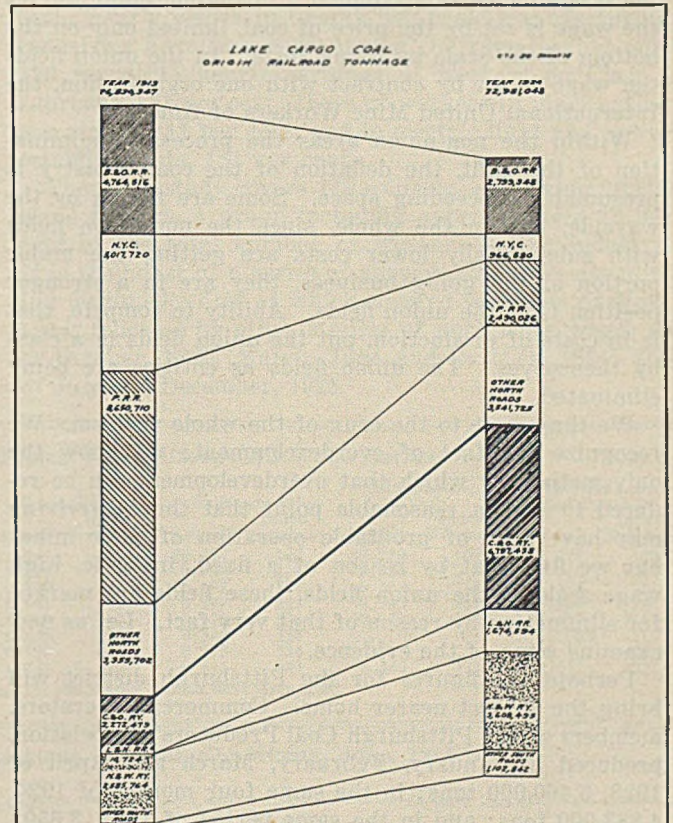
The anthracite industry has approximated that happy state, but only after a quarter century of struggle comparable to that now taking place in the bituminous coal industry and not until the entire undeveloped resource had been taken into ownership by the producing companies. How idle it is to anticipate such a solution in the soft coal fields, vast as they are and widespread. There are now too many tons of coal ready to be produced and constantly offered for any but the very favored few to realize a profit in the operation.

Yes, the bituminous coal industry is overdeveloped; it must be deflated but it cannot be deflated to the extent or in the manner our great idealist in Indianapolis hopes. What is involved in wiping out overdevelopment? How is deflation of coal mine capacity to be accomplished? The reverse of inflation, of course. Instead of adding mines and jobs for mine workers, it means subtracting mines and jobs for mine workers.

Closing a mine, discharging the men, shutting off air and stopping pumps does not, however, permanently subtract a mine from the list, for the mine may be reopened. Complete abandonment, destruction of the facility for production and writing off the capital invested is the only real method of deflation.

No reasonable, thinking coal man refuses to admit the logic of this. All know that some, many in fact, must be forced out through sheer inability to compete. That is American business. But the competition for business, the struggle of the fittest to survive must be governed by rules of the game that will equalize the opportunity. Other things (such as quality of coal) being equal, it is cost of production and freight rates to consumers that fix the limits of competition. There is a fair tribunal before which the coal operator may take his questions of freight rates. There are definite ways, certain well defined procedures that mark the settlements of freight rate controversies. This tribunal, the Interstate Commerce Commission, has constantly before it the complaints of coal operators.

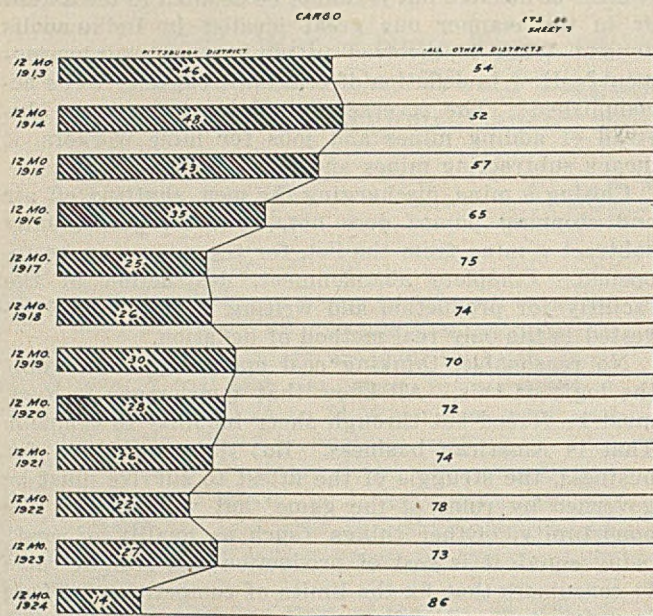
With respect to the other largest item in cost of put-



Coal Traffic of Railroads to the Lakes

The carriers serving mines in non-union fields have made substantial gains in tonnage of coal as between 1919 and 1924. On the other hand the three major roads hauling from union fields in the East have had a slump. The Baltimore & Ohio R.R., since April 1, 1925, has been retrieving much of the business because of the growth of non-union tonnage from northern West Virginia.

PERCENT BITUMINOUS CARGO COAL DUMPED AT LAKE ERIE PORTS
JANUARY 1ST TO DECEMBER 31ST 1913 TO 1924



Decline of Lake Coal from Pittsburgh District, 1913-1924

Over this 12-year period there has been a gradual falling off of coal from western Pennsylvania mines to Lake Erie ports. This loss of business, as between extremes, amounts to 34 per cent. Thus far in 1925, except for the coal shipped from the Steel Corporation mines, the tonnage originating in the Pittsburgh district is practically negligible.

ting coal to the consumer, the labor cost of mining, there is no such fair tribunal. In the non-union mines the wage is set by the price of coal, limited only on the bottom of the scale by living costs. In the union fields the wage is set by contract with one organization, the International United Mine Workers of America.

Within the non-union areas the process of elimination of the unfit, the deflation of the coal industry is presumably proceeding apace. Some are falling by the wayside, but on the whole, since the non-union fields with substantially lower costs are getting the major portion of the going business, they are in a stronger position than the union fields. Ability to compete, that is in costs of production, put the union fields in a class by themselves. The union fields as entities are being eliminated.

We thus come to the crux of the whole problem. We recognize the fact of overdevelopment; we know the only method by which that overdevelopment can be reduced to such a reasonable point that those surviving may have hope of profitable operation of their mines but we find that by reason of a fixed, inelastic, high wage scale in the union fields, these fields are marked for elimination by reason of that very fact. Let us now examine some of the evidence.

Perhaps the figures for the Pittsburgh district will bring the subject nearer home. Commercial operators, members of the Pittsburgh Coal Producers' Association, produced in January, February, March and April of 1923, 5,460,000 tons; in the same four months of 1924, 4,383,000 tons; and in the same period of 1925, 3,650,000 tons. The decrease this year below 1923 was 1,810,000 tons or 33 per cent. The drop from last year was 733,000 tons or 17 per cent. In May of this year production by these companies was 335,483 tons compared with 878,000 tons in May of 1924 and 1,620,000 tons in May of 1923.

To help correct this situation the union operators would like to have the miners agree to a revision of the

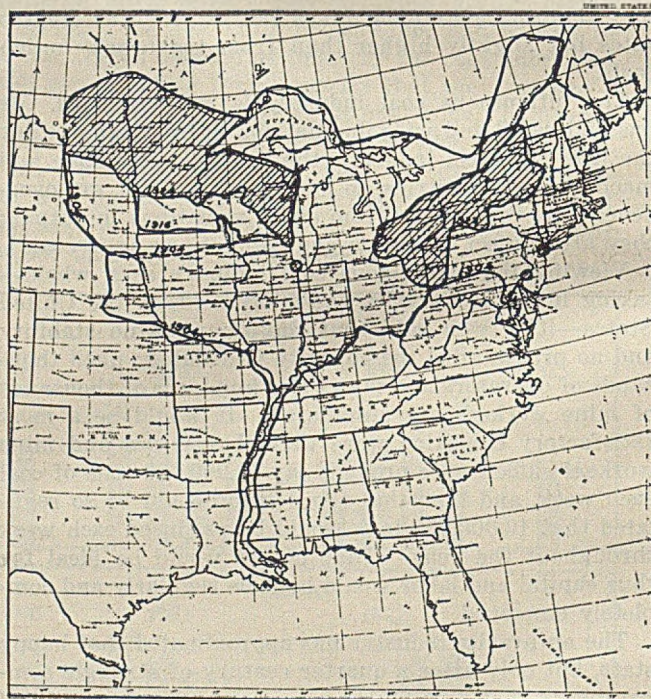
wage scale. It must be clear, from what has preceded, that if this district had a lower cost it could sell more coal; with the \$5 basic wage of the November, 1917 wage scale, this district could secure its share of the going trade, which is not by any means inconsequential.

The stock argument of those who oppose such a revision is that it would be of no avail. It is contended first that there is no market for coal at any price, and second, that if the miners on the high scale should accept a reduction to the November, 1917, level, the operators in the non-union fields would cut their rates still lower and thus nullify any advantage of a cut here.

If that were substantially true it would be a pertinent argument. If the other fields could follow down any reductions in the union fields then it would be a hopeless matter for this field. That is not the case, however. A few there are among the non-union producers who have not cut to the bone, but they are few and far between.

Remember that since the present active competition began early in 1924, the non-union operators have been fighting among themselves for the business—not only for their own trade but for the union operators' normal trade. This fight has been fast and furious. They have already gone the limit in cutting wages and prices. The competition among themselves has long since resulted in wage scales representing rock bottom levels. Only by keeping their mines in full operation six days a week, have they been able to hold labor at those low rates.

The non-union wage situation is sensitive. Recall the history of last winter in the Connellsville region. Independents had cut wages in the summer of 1924 but the Steel Corporation had not. In the winter there was a flurry in demand for labor. Up went the wages of the



Shrinkage of Pittsburgh District Markets

Twenty years ago Pittsburgh seam Youghiogheny gas coal was the widest known standard, high-volatile coal in the United States. It was marketed by the million of tons down the Mississippi Valley to New Orleans. It was used in St. Louis gas plants. It was sold through the Midwest and Northwest and throughout the East. It shared the New England market with Irwin basin gas coal from the same Pittsburgh seam. But its frontiers have been driven steadily back. The line shown here for 1924 is not a solidly held line. Non-union coal is filtering through in every route.

independents to be reduced again in a few months after the flurry was over.

Competition and the survival of the fittest throughout the soft coal industry can be resumed when the union fields can meet the wage competition of the non-union fields, not until then, and a cut to the wage level of November, 1917, will do the trick.

It is argued that combinations among the operators, the banding together of many smaller union operations with few large corporations is the solution for the union fields. Adequately financed, such large companies may be able to weather the depression to better advantage than smaller concerns, but they cannot produce coal cheaper. Those who look to combination as a solution are dreaming of strength to put the price up. And how can they do that with the disparity in labor costs with the South? How, for instance can a combination of independents in the Pittsburgh district increase the price of coal? And how can it otherwise make a profit against non-union competition?

Again it is argued that the coal operators should

modernize their mining practices; that if the coal producers would use loading machinery they could cut costs without cutting wages. It is hardly necessary to advise mining engineers of the progress that is being made in that direction or of the practical difficulties that beset every installation of loading machinery or face conveyors. Time and money will mechanize coal mining, but don't forget that the non-union fields can be and are as active in that direction, in fact more active, than the union fields. The non-union operator has no union to fight when he installs labor-saving machinery.

When a business concern finds itself unable to sell its goods, when the market price drops and a huge inventory remains, that concern either cuts the price and stays in the market, or it goes bankrupt. The union coal industry—operators and miners—are in that condition now. The union theorizes about the situation. The operators are dealing with it in a practical way. The operators tried alone to handle the situation in 1924. They failed. The union refuses to co-operate this year.

Should Anthracite Miners Ask Higher Wages?

Their Pay Rose 192 per Cent in 10 Years Without Decreases Shown in All Other Industries, Says the National Industrial Conference Board After Survey

WITH THE PRESENT wage contract between the anthracite mine operators and the United Mine Workers of America expiring on Aug. 31, this year, considerable interest attaches to a study of wages in the anthracite field made by the National Industrial Conference Board, 247 Park Ave., New York.

If the mine workers insist upon further pay increases on expiration of the existing contract, which was arrived at in 1923 after a five months' strike in 1922, they will do so in face of the fact that their wages have risen considerably more during the past ten years than those of workers in the manufacturing industries, the railroads or the public utilities.

Anthracite mine workers' average hourly earnings, according to the Conference Board's analysis, from

June, 1914, until December, 1924, have risen 192 per cent; hourly wages in twenty-five basic manufacturing industries have increased during the same period only 129 per cent; hourly earnings of workers on Class I railroads, 141 per cent; those of workers in illuminating gas plants, 111 per cent, and in electric light and power establishments, 121 per cent.

The wage study covers 140 collieries employing 96,226 wage earners, a group including approximately 62 per cent of the total number of workers in the industry. It is the latest of a series of surveys of anthracite mining wages, the first of which covered wages as of June, 1914, followed by other studies of anthracite wages as of October, 1920, March, June and October, 1921, and of July and December, 1923.

Table I—Average Hourly Earnings—Typical Labor Groups All Wage Earners

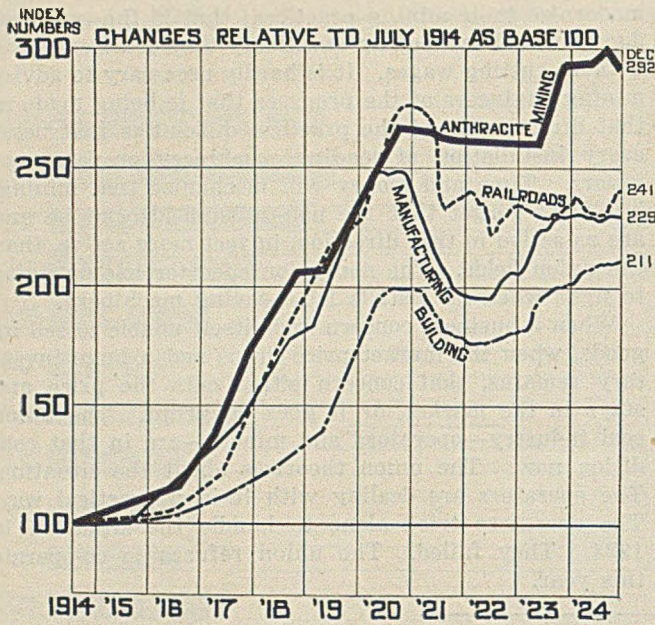
Period	Anthracite		Manufacturing		Railroads (a)		Illuminating Gas (a)		Electric Light and Power (a)	
	Actual	Index Numbers	Actual	Index Numbers	Actual	Index Numbers	Actual	Index Numbers	Actual	Index Numbers
June, 1914.....	\$0.284	100	\$0.245	100	\$0.254	100	\$0.270	100	\$0.278	100
October, 1920.....	0.758	267	0.611	249	0.702	276	0.580	215	0.566	204
March, 1921.....	0.756	266	0.549	224	0.697	274	0.568	210	0.558	201
June, 1921.....	0.747	263	0.521	213	0.597	235	0.545	202	0.546	196
October, 1921.....	0.744	262	0.487	199	0.595	234	0.520	193	0.539	194
July, 1923.....	0.754	265	0.546	223	0.580	228	.....(b)	.....	.....(b)	.....
December, 1923.....	0.832	293	0.559	228	0.595	234	.....	.....	.....	.....
December, 1924.....	0.829	292	0.561	229	0.611	241	0.569	211	0.615	221

(a) In some cases figures for the exact month indicated are not available and those for the nearest month have been used.

(b) Public Utility figures for 1923 not available.

Table II—Index Numbers, Average Hourly Earnings in Anthracite Mining, June, 1914-100

Period	All Wage Earners (Less Contract Miners' Laborers)	All Wage Earners (Less Contract and Miners' Laborers)	All Inside (Less Contract Miners' Laborers)				Outside Labor				
			Common Labor	Semi-Skilled Labor	Skilled Labor	Contract Miners	All Outside	Common Labor	Semi-Skilled Labor	Skilled Labor	
June, 1914	100	100	100	100	100	100	100	100	100	100	100
Oct., 1920	267	265	259	270	267	241	270	284	289	262	246
March, 1921	266	266	265	271	267	245	268	284	287	264	246
June, 1921	263	267	261	271	269	249	260	284	289	262	246
Oct., 1921	262	266	259	271	267	246	258	284	289	263	246
July, 1923	265	270	264	277	276	257	261	283	290	253	247
Dec., 1923	293	298	291	305	307	281	288	312	318	288	270
Dec., 1924	292	291	291	298	292	272	294	309	315	285	265



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NEW YORK CITY

Hourly Wages in Four Industrial Groups

This illustrates the increase of wages in anthracite mining as compared with fluctuations in railroading, manufacturing and building in the United States since July, 1914.

While other industrial wages decreased somewhat since the peak year, 1920, it is significant that wages in the anthracite mines show practically no recessions, increasing steadily from pre-war days, when the average hourly wage was 28.4c. to December, 1924—the month upon which the present study is based—when the hourly earnings per worker averaged 82.9c. Hourly earnings of contract miners, who, however, make up by far the largest single group, showed an even greater increase, reaching \$1.20 in December, 1924, a total net gain of 194 per cent over June, 1914.

With the exception of contract miners, a slight decrease was suffered by anthracite workers between December, 1923, and December, 1924, the composite figure for all anthracite wage earners other than contract miners' laborers dropping from 83.2c. to 82.9c. per hour.

The average daily earnings, or earnings "per start," of contract miners do not show as large an increase for

the ten-year period since pre-war days, owing to the shortened working hours. However, the anthracite mine workers, who in June, 1914, drew an average of \$3.46 per day, when the day averaged 9 hr., now draw an average of \$9.11 for a day averaging 7.6 hr., representing a gain of 163 per cent in earnings per start. Average earnings per start from December, 1923, to December, 1924, increased from \$9.05 to \$9.11.

The increase in "real" earnings, that is of wages in terms of purchasing power, owing to the increase in cost of living, of course, is somewhat less than the increase in money wages. However, average "real" hourly earnings of all anthracite mine workers in December, 1924, show an increase of 76 per cent over those of pre-war days, as against an increase of 45 per cent in real hourly earnings of railroad workers, and a 38 per cent increase in real hourly earnings of wage earners in manufacturing industries.

Real earnings per start (or day) of contract miners were 58 per cent higher in December, 1924, than in June, 1914.

In a way, the results of the different surveys referred to are not strictly comparable since they are not based throughout upon returns from identical operating units. To compensate for this, the figures are weighted.

The weighting was on the following basis: It was assumed that because of the broad coverage of the first study, the totals in that study represented the normal proportion of each class of worker in the average operating company. This proportion was obtained not as of one month, but the average of the five periods covered was taken, in order to allow for any seasonal differences which might exist. Consequently, in arriving at the four composite averages, (1) all wage earners, less contract miners' laborers; (2) all wage earners, less contract miners and miners' laborers; (3) all inside, less contract miners' laborers; (4) all outside labor, a weight was given to the earnings of each class of labor included in each group, equal to the representation of that group as ascertained by the method described.

This prevented an unduly large proportion of certain types of labor in the companies reporting for any one of the surveys from carrying too much weight in arriving at composite figures for the industry or group.

Table III—Average Hourly Earnings in Anthracite Coal Mining—All Wage Earners and Classified Groups, June, 1914, to December, 1924

Period Last Half of	All Wage Earners (Less Contract Miners' Laborers)	All Wage Earners (Less Contract Miners and Miners' Laborers)	All Inside (Less Contract Miners' Laborers)	Inside Labor			Outside Labor				
				Common Labor	Semi-Skilled Labor	Skilled Labor	Contract Miners	All Outside	Common Labor	Semi-Skilled Labor	Skilled Labor
June, 1914	\$0.284	\$0.225	\$0.321	\$0.220	\$0.232	\$0.275	\$0.410	\$0.200	\$0.183	\$0.220	\$0.265
Oct., 1920	0.758	0.596	0.833	0.594	0.619	0.664	1.106	0.567	0.528	0.576	0.652
March, 1921	0.756	0.598	0.851	0.596	0.620	0.674	1.097	0.567	0.525	0.580	0.652
June, 1921	0.747	0.600	0.838	0.596	0.625	0.685	1.065	0.567	0.528	0.576	0.652
Oct., 1921	0.744	0.599	0.833	0.596	0.620	0.677	1.058	0.568	0.528	0.579	0.653
July, 1923	0.754	0.608	0.849	0.609	0.640	0.707	1.070	0.565	0.531	0.557	0.654
Dec., 1923	0.832	0.671	0.935	0.670	0.713	0.773	1.179	0.524	0.582	0.633	0.716
Dec., 1924	0.829	0.655	0.935	0.655	0.678	0.747	1.204	0.617	0.577	0.628	0.701

Average hourly earnings of contract miners' laborers, Dec., 1924 = \$0.914.

Prior to the present study, contract miners' laborers were not included in the tabulations. So many companies reported data for this group in the present survey that the average hourly earnings of the group were computed, but because of their absence from earlier studies they could not be included in the composite averages for December, 1924. Otherwise figures for that month would not be comparable with those for earlier periods. Consequently, the hourly earnings of contract miners' laborers for December, 1924, are shown independently.

Contract miners are the most important group of anthracite labor and in their case the earnings per start have also been computed. This appears to be a more satisfactory method of arriving at a measure of actual earnings than to attempt to compute average weekly earnings, since there is considerable controversy over the best method of arriving at an accurate figure

for weekly earnings in this industry. This is due to the frequent changes in personnel between mines so that although a man may have been employed almost continuously during a pay period, he may have appeared on two or more payrolls, and it is manifestly impossible to trace each man through the various payrolls to arrive at his actual earnings for the period. In the few cases where the hours of the contract miners were not given, the contract miners' starts were multiplied by 7.6 to obtain the actual hours. In some instances contract miners' starts were not given and in such cases the contract miners' hours were divided by 7.6 to obtain an estimated figure on contract miners' starts. The figure 7.6 was used because according to the latest available study of the anthracite industry by the United States Bureau of Labor Statistics, contract miners averaged 7.6 hr. per start or per day worked.

Graphic Charts Enable Mine Heads and Higher Ups to Watch Every Factor in Coal Costs

Mining Needs Intelligent System of Checking Items as Total Cost Is Not a Reliable Criterion — Graphs Make Comparison Easy and Disclose Exact 'Sore Spots'

By W. L. Affelder*
Pittsburgh, Pa.

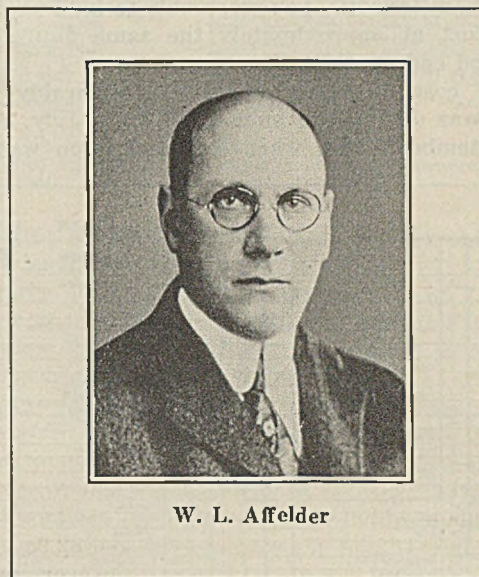
SELDOM, if ever, has any industry been in a state that required as *intelligent* cost reduction as the coal industry demands at the present time. The word "intelligent" requires special emphasis, because cost reductions in this industry are too frequently made without proper regard for the resultant condition of the property and are often effected without adequate knowledge concerning what particular elements constituting the total cost are at fault. In this discussion, it is my intention to confine myself almost entirely to that portion of the cost of production covered by payroll labor.

It might be well to state that inasmuch as I am not an accountant, but am in active charge of the operating details of twenty-three bituminous coal mines, located in six Pennsylvania counties, this subject will be treated from an operating, rather than an accounting standpoint.

Too many operating officials fail to look beyond their *total labor cost*. If a mine produces the same tonnage in two cost periods, and in the latter of the two does so at a decline of say 5c. per ton, the satisfaction occasioned by this accomplishment too frequently prevents that minute degree of cost analysis which a corresponding increase would have occasioned. Such reductions in total labor cost may have included gratifying decreases in some of the constituent items and entirely unwarranted increases in others, which, on account of the resultant aggregate having been lowered, were overlooked.

Inasmuch as each of our mines submits a semi-monthly distribution of payroll, along lines suggested several years ago by the National Coal Association, on sheets made up as shown in Fig. 1, data are readily available from which to tabulate semi-monthly labor costs under the captions of "Mining," "Yardage & Deadwork," "Timbering," "Drainage," "Ventilation," "Haulage & Hoisting," "Tipple," "Preparation," "Railroad Car Loading & Yard Expense," "Structural Maintenance & Repairs," "Equipment Maintenance & Repairs," "Sundry Labor," "Superintendence," "Mine Office," and "Power Plant."

The figures constituting these fifteen sub-divisions, as well as the tonnage and total costs, for 23 mines, were so numerous and confusing that it was found impossible to appreciate their value properly during a semi-monthly period alone, to say nothing of being able to benefit by comparing them with previous costs, under similar conditions as to outputs and wage rates. It was, decided, therefore, at the beginning of the year 1924 to plot all semi-monthly labor costs on graphic



W. L. Affelder

charts especially designed to serve for a period of three years. These charts are 12 $\frac{3}{4}$ by 22 in. in dimensions, with the horizontal and vertical spacings $\frac{1}{4}$ and $\frac{1}{8}$ in. respectively. Outputs are plotted 1,000 tons to the space, total labor costs 5c. to the space, and the various sub-divisions 1c. to the space. The charts are ordinarily "white prints" made in our own blue print room.

At mines where explosives are furnished free and where an adjustment in the mining rate is made to offset their price, an item of "Free Explosives" cost is also shown, and is included in the "Total Labor Cost." Under the "Haulage & Hoisting" sub-division, "Animal & Motor Haulage" is shown separately, as well as being included under "Haulage & Hoisting."

CHARTS KEPT UP TO DATE

As all figures used on the charts had to be prepared even for the inefficient method of cost interpretation already in use, little additional work and no extra expense was incurred by the adoption of the charts. It goes without saying that much of the value of any comparative cost system depends upon the promptness with which the necessary data are available. Charts, therefore, are extended as soon as possible after the middle and end of each month.

In order to make this discussion practical, I will confine myself almost entirely to certain analytical discussions of payroll costs of some of our mines, using actual reproductions of our cost charts with only the names of the mines and the total cost scales eliminated. Actual letters passing between our operating officials will be used to illustrate the manner in which costs can

This article is an abstract of paper delivered before the American Mining Congress, Cincinnati, Ohio, May 28, 1925.
*Assistant to the President, Hillman Coal & Coke Co.

readily be interpreted, and, if necessary, corrected. Certain vertical lines on these charts have been made heavier than others, thus rendering it easier to follow the discussion. Mines will be designated by number instead of by name.

Fig. 2 is a reproduction of the cost charts of "Mine No. 2." On March 11, 1925, the assistant general superintendent wrote to the superintendent of this operation as follows:

"I have before me the graphic cost charts for your mine for the period ending Feb. 28.

"I note that your production for the period ending Feb. 28 was approximately 4,000 tons under the production for the period ending Feb. 15. With this reduction in tonnage, you were able to hold your Total Labor Cost at approximately the same figure as for the period ending Feb. 15.

"Your cost, however, is still considerably higher than it was during the months of June, July, August, and September, 1924, when the production was much

under that for the period ending Feb. 28 of this year.

"Yardage & Deadwork cost for the period ending Feb. 28 shows a decrease of approximately 2c. per ton from that of the period ending Feb. 15. Timbering, Drainage, and Ventilation have shown practically no change this year.

"Haulage & Hoisting costs for the period ending Feb. 28 show a slight increase over the period ending Feb. 15. This particular division of your costs has increased slightly over 6c. per ton since the first half of January of this year, and should receive vigorous attention. Costs must be carefully watched and reductions made where possible."

On April 2, 1925, he wrote the superintendent as follows:

"The graphic cost charts for the period ending March 15, 1925, show that with an increased production of approximately 1,200 tons over the previous period, you were not able to make any reduction in your labor cost, but show rather an increase of 1c. per ton.

PLANT. DISTRIBUTION OF PAY ROLL ENDING														
1	COAL LABOR	MAN	41	COAL LABOR	MAN	161	COAL LABOR	MAN	321	COKE LABOR	MAN	481	COAL LABOR	MAN
2	MINING	DATE	42	Brought Forward	DATE	162	Brought Forward	DATE	322	Yard Work	DATE	482	Brought Forward	DATE
3	(Tons or Wagons)		43	TIMBERING		163	R. R. UNLOADING AND		323	Charge		483	R. R. UNLOADING AND	
4	PICK COAL		44	Timber Men		164	YARD EXPENSE		324	Leveling Machine Ovens		484	Leveling Machine Ovens	
5			45	Cross Bars		165	Car Cleaning		325	" " " "		485	" " " "	
6			46	Posting up & Drawing Posts		166	Car Dryers & Blockers		326	" " " "		486	" " " "	
7			47	Handling Material Ins.		167	Trimmers		327	" " " "		487	" " " "	
8			48			168	Box Car Loading		328	Dashing		488	Box Car Loading	
9	Total Account 41		49			169	Yard Cleaning & Track Rep.		329	Watering Ovens		489	Yard Cleaning & Track Rep.	
10	MACHINE COAL		50	Total Account 61		170	Larry Men		330	Drawing Machine Ovens		490	Larry Men	
11	Loading		51	DRAINAGE		171			331	" " " "		491		
12			52	Pumps & Ballers		172			332	" " " "		492		
13			53	Drain Cutting & Cleaning		173			333	" " " "		493		
14	Cutting		54	Pipe Men		174			334	" " " "		494		
15			55	Equipment Repairs		175	Total Account 67		335	" " " "		495	Total Account 67	
16			56			176	STRUCT. MAINTEN.		336	Cleaning Ovens		496	STRUCT. MAINTEN.	
17	Scrapping		57	Total Account 62		177	AND REPAIRS		337	Door Men		497	AND REPAIRS	
18			58	VENTILATION		178	Power Buildings		338	Adm.		498	Power Buildings	
19			59	Bratticemen		179	Substation		339	Coke Houses		499	Substation	
20	Plugs out		60	Overruns and Stoppings		180	Tipple		340	Packing Coke		500	Tipple	
21	Runs		61	Sprinkling		181	Fan Building		341	Loading Stock Coke		501	Fan Building	
22			62	Cleaning Aircoases		182	Machine Shop		342	Carrying Coke		502	Machine Shop	
23	Cutting at Day Work		63	Fan Engineers		183	Stable		343	Coke and Coal Crushing		503	Stable	
24	Drilling holes		64	Equipment Repairs		184	Other Sdy. Plant Bldgs.		344	Watering Coke Cars		504	Other Sdy. Plant Bldgs.	
25	" " " "		65			185			345	Firing Ovens		505		
26	" " " " At Day Work		66			186			346			506		
27			67	Total Account 63		187	Total Account 68		347	Total Account 101		507	Total Account 68	
28			68	HAULING & HOISTING		188	EQUIPMENT MAINTEN.		348	Masons & Helpers		508	EQUIPMENT MAINTEN.	
29			69	Parting Bows		189	AND REPAIRS		349	Mason Carters		509	AND REPAIRS	
30	Total Account 42		70	Bow Driver		190	Electrician, M. Mechan.		350	Coke Machinery Repairs		510	Electrician, M. Mechan.	
31	Company Coal		71	Drivers		191	Armature Winder		351	Oven & Larry Track Repairs		511	Armature Winder	
32	Shorters		72	Breaking in Stock		192	Wiremen		352	Five Lanes		512	Wiremen	
33	Moving Machines		73	Motormen		193	Blacksmiths		353	Carpenters Yard Work		513	Blacksmiths	
34	Bit Sharpeners		74	Snappers		194	Carpenter (Gen'l Wk.)		354	R. R. Track Repairs		514	Carpenter (Gen'l Wk.)	
35	Machine Bow & Helpers		75	Bottommen, Switchers		195	Machine Shop Labor		355			515	Machine Shop Labor	
36	Bit Carrier		76	Cagers and Hookers on		196			356			516		
37			77	Grip men		197			357			517		
38			78	Haulage Engineers		198	Total Account 69		358	Total Account 102		518	Total Account 69	
39	Total Account 43		79	Check Men		199	SUNDRY LABOR		359	Car Shifters		519	SUNDRY LABOR	
40	YARDAGE		80	Hoys Rider		200	Choking out		360	Car Trimmers (Loaders)		520	Choking out	
41	Extra		81	Trappers		201	Haul & Handling Mat. (Outside)		361	Hauling & Handling Yd. Sup.		521	Haul & Handling Mat. (Outside)	
42	Loading tons		82	Greasers		202	First Aid		362	Cleaning up around Coke Plant		522	First Aid	
43	Cutting "		83	Sand Dryers		203	Check Boy		363	Coke Samples		523	Check Boy	
44	Pick yds.		84	Rollermen		204	Rivermen		364	River Coke Loading		524	Rivermen	
45			85	Topman (Loadingman)		205	River Pumps		365	Sundry Labor		525	River Pumps	
46	Loading & Cutting "		86	Rowdmen (Tracklayers)		206			366			526		
47	At Daywork		87	Cleaning Roads		207			367			527		
48	Breakthroughs		88	Pi Car Repairs		208			368			528		
49	Loaders & Cutters		89	Shaf't Repairs		209	Total Account 70		369	Total Account 103		529	Total Account 70	
50	Roomturning		90	Rope Haulage Repairs		210	SUPERSTENDENCE		370	TOTAL COKE LABOR		530	SUPERSTENDENCE	
51	Loaders & Cutters		91	Motor		211	Mine Foreman		371	" " " "		531	Mine Foreman	
52	Room Break Throughs		92	Man Trips		212	" " " " Asst.		372	" " " "		532	" " " " Asst.	
53	Loaders & Cutters		93	Stable Man		213	Night Foreman		373	" " " "		533	Night Foreman	
54			94	Crosscutting		214	Outside Foreman		374	" " " "		534	Outside Foreman	
55			95	Bonding		215	Fire Bosses		375	" " " "		535	Fire Bosses	
56	Total Account 51		96			216	Ribb Boss		376	" " " "		536	Ribb Boss	
57	DEAD WORK		97	Total Account 64		217	Safety Lamps		377	" " " "		537	Safety Lamps	
58	Pick Cuts		98	TIPPLE		218	Watchmen (Police)		378	" " " "		538	Watchmen (Police)	
59	Clay Veins & Spars		99	Weighmaster		219			379	" " " "		539		
60	Horsebacks (Halls)		100	Top Cager		220			380	" " " "		540		
61	Thick Slate		101	Dumppers		221			381	OTHER LABOR		541		
62	Ships, Slabbing		102	Pushers & Hitchers		222	Total Account 81		382	(Not chargeable to operating)		542	Total Account 81	
63	Ripping Roof		103	Pan Puller		223	MINE OFFICE		383	House Repairs & R. E. Masteis.		543	MINE OFFICE	
64	Lifting Bottoms		104	Conveyor (River Coal)		224	Pay Roll Clerks		384	Farm Labor		544	Pay Roll Clerks	
65	Rockwork		105			225	Supply		385			545	Supply	
66	Unloading Slate (inside)		106			226	Janitor Service		386			546	Janitor Service	
67	" (outside)		107			227	Total Account 82		387			547	Total Account 82	
68	Cleaning up Falls		108	Total Account 65		228	POWER PLANT		388			548	POWER PLANT	
69	Drillholes		109	PREPARATION		229	Engineers		389			549	Engineers	
70	Allowance for Water		110	Site Pickers		230	Firemen		390			550	Firemen	
71	Watchmen		111	Coal Inspector		231	Coal & Ashmen		391			551	Coal & Ashmen	
72	Digging out Machines		112	Bin Labor		232	Sub-Station Attendants		392			552	Sub-Station Attendants	
73	Art Wagons		113	Coal Samples		233	Water Supply		393			553	Water Supply	
74	Extra Work		114			234	" " " " Repairs		394			554	" " " " Repairs	
75			115			235	Equipment		395			555	Equipment	
76			116			236			396			556		
77			117			237			397			557		
78			118			238			398			558		
79	Total Account 52		119	Total Account 66		239	Total Account 91		399			559	Total Account 91	
80			120	Forward		240	TOTAL COAL LABOR		400			560	TOTAL COAL LABOR	

Fig. 1—Form Used in Making Semi-Monthly Distribution of Pay Roll

Fifteen subdivisions of the expense of coal production are here shown. These furnish abundant data for plotting the curves that show at a glance just how the various items rise or fall. Tendencies or trends thus are discernible immediately and faults may be corrected before they gain momentum

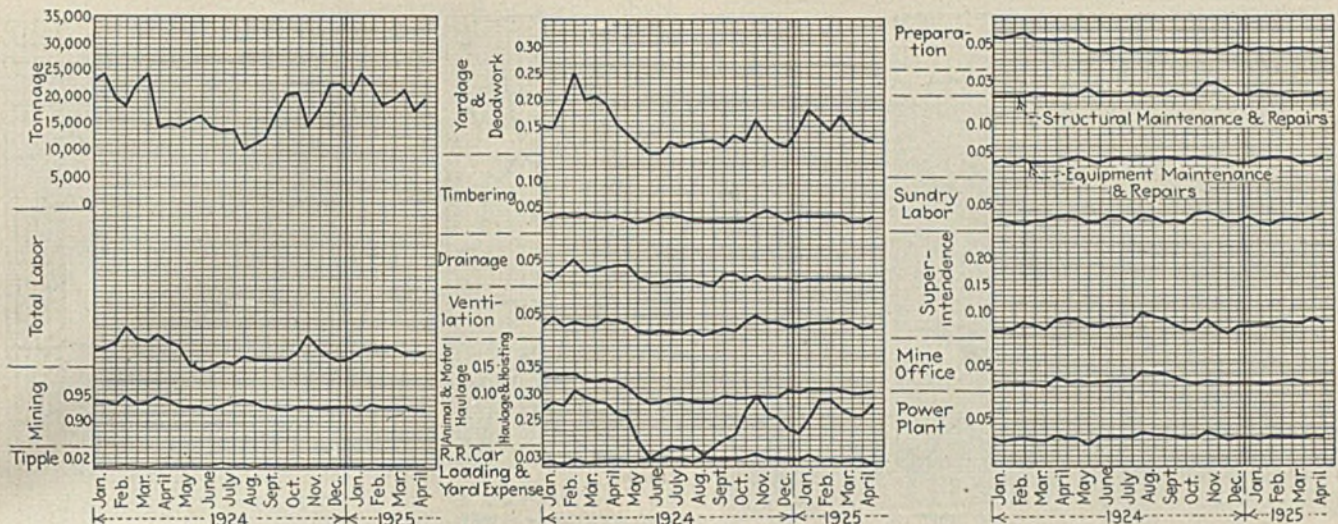


Fig. 2—Costs at Mine No. 2

These charts enable the assistant general superintendent, as brought out in the correspondence in this article, to place his

finger at once on the exact items that showed unwarranted increases in costs.

"A reduction of approximately 2c. per ton in your Haulage & Hoisting cost was more than offset by an increase of 3c. per ton in your Yardage & Deadwork cost.

"Please watch your costs carefully and make every possible reduction."

On May 9 I wrote to the general superintendent and the assistant general superintendent as follows:

"It is disappointing to note that the labor cost at Mine No. 2 in the second half of April was \$0.020 higher than in the first half of April in spite of the fact that the tonnage increased 14 per cent. It is true that although the tonnage was the same in the last half of April as in the first half of March, 1925, and in the first half of February, 1924, the labor cost was \$0.060 less than in the first half of March, and \$0.110 less than in the first half of February, but this does not seem to be any justification for the increase as shown between the two halves of April.

"Although decreases occurred in a number of the sub-divisions, I wish to call your special attention to the following increases: Timbering \$0.008, Ventilation \$0.006, Haulage & Hoisting \$0.020, Equipment Maintenance & Repairs \$0.006, and Sundry Labor \$0.008. Please investigate these increases."

"Increases are especially acute in Yardage & Deadwork, Timbering, Drainage, and Haulage & Hoisting. This is one of the few mines which shows a very marked increase in cost since the advance in wages, as compared with the cost under the same scale of wages early in 1924."

Attention is especially called to the fact that in spite of a marked decrease in tonnage in the four semi-monthly periods which preceded the next wage scale reduction, a reduction in labor cost of 15 cents was accomplished between the first half of January and the first half of March.

Fig. 3 is a reproduction of the cost charts of Mine No. 5. Here wages were reduced to the 1917 scale on May 27, 1924, the 1920 scale was restored on Dec. 16, 1924, and the 1917 scale re-established on March 16, 1925. Charts are exceedingly valuable in comparing costs under such fluctuations in wage scales. A discussion of the costs of this mine are especially interesting because replies to letters calling attention to increases are submitted. Early in February, 1925, I wrote to

the operating officials of the district in which this mine is located as follows:

"Mine No. 5's cost for the second half of January does not compare favorably with the first half of May, on the same scale of wages, as the increase in cost for exactly the same tonnage is \$0.060.

"I wish to call your attention especially to an increase in Timbering cost from \$0.095 to \$0.125, in Mining cost from \$0.617 to \$0.646, (probably due to a drop of nine points in the wagon), and in Haulage & Hoisting cost from \$0.312 to \$0.409, part of which, at least, probably is due to the haulage extension work now under way."

The assistant general superintendent replied with the following letter:

"Replying to your memorandum regarding Mine No. 5, I beg to state that I have gone into the matter in detail with the superintendent.

"We compared the costs during the first half of May with those in the second half of January, and found that in Timbering the increase was due entirely to the employment of additional timbermen, made necessary by the intensive work that was done in C Flat.

"Mining costs increased from \$5,836.95 to \$6,375.44, largely on account of the increase in the amount of pick coal.

"Haulage & Hoisting increased from \$2,946.76 to \$4,036.74, on account of an increase in drivers from \$922.97 to \$1,114.57, plus \$58.16 for men employed in breaking in stock. The use of so much new stock resulted in a decrease in efficiency of both drivers and horses. There was an increase in the cost of snappers from \$7.55 in May to \$85.87 in January, due to the fact that last May the boss driver was helping out with the work of the snappers, whereas in January he was not able to do that work.

"Cleaning Roads increased from \$32.75 to \$128.67.

"Haulage Repairs increased from \$27.20 to \$1,024.45. The new haulage road was accountable for \$852 of this increase. This new haulage road will soon be completed, and as the day force has been reduced and the weight of the wagon increased, the costs in the immediate future should be considerably better than those that were mentioned in your memorandum."

It is needless to state that the preparation of the foregoing reply entailed such a thorough investigation

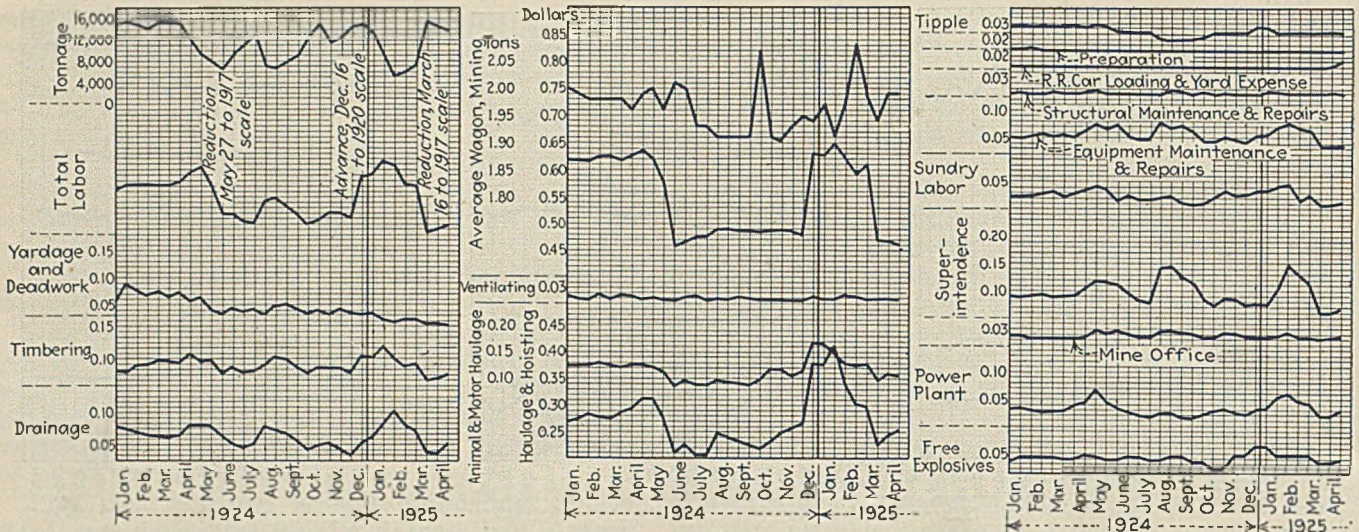


Fig. 3—Fluctuating Wage Scales Charted

Even though the scale of wages changed several times in a few months, yet costs under the different rates are entirely comparable. Note in the accompanying correspondence how quickly an increase of 6c. in total cost was traced to its two chief con-

stituent elements of mining and timbering. In self defence the superintendent had to seek the reasons for these increases and when found it required but little time for him to have them properly adjusted.

of the cost at this mine from many angles, that the eyes of both the assistant general superintendent and the superintendent were opened to possible reductions in expense. That the investigation bore fruit is evident from the fact that, although the tonnages in the remaining three semi-monthly periods under the then existing wage scale were considerably less than in the last half of January, there was a continuous reduction in the total labor cost, aggregating 23c. Not a single

December and \$3,425.10 in the second half of October. A large part of the increase in April as compared with October is accounted for by the fact that Motor Haulage Repairs increased from \$14 to \$528.88, due to the construction of the new haulage road to the North headings. Other sub-divisions of the cost are more in keeping with what might have been expected, although Pit Car Repairs increased from \$116.10 to \$200.75, and Drivers from \$1,095.07 to \$1,159.47."

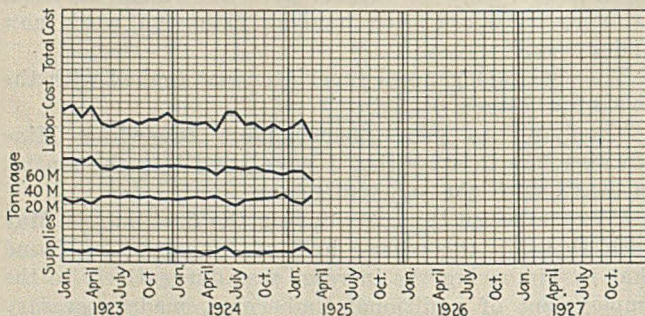


Fig. 4—Five-Year Monthly Cost Chart

This is intended for an entirely different purpose from the previous graphs. Although it may be used for other purposes, it is particularly useful in estimating what price must be obtained in order to make a profit when production is at any certain rate.

sub-division mentioned in my letter failed to respond well to the corrective treatment to which it was subjected.

In spite of the consistent reduction in Total Labor Cost, I found it necessary in the latter part of April to write as follows:

"Mine No. 5 in the first half of April had practically the same tonnage as in the first half of December and in the last half of October, but it is interesting to note that the total labor cost in the first half of April was \$0.110 less than in the first half of December, and \$0.080 less than in the last half of October.

"The Haulage & Hoisting sub-division, however, is \$0.011 above what it was in the last half of October. It seems to me that this former figure should be duplicated."

The reply to this letter read as follows:

"In the first half of April, Haulage & Hoisting cost, \$3,567.71, compared with \$3,823.59 in the first half of

Even though the principal item of increase, namely, the construction of an authorized haulage extension, was an entirely legitimate expense, the investigation disclosed an increase in expense for Animal Haulage, which is now well on its way toward correction.

A more recent letter regarding the same plant, dated May 9, 1925, reads:

"Although Mine No. 5 had practically the same production in the last half of April as in the first half of December, the labor cost dropped \$0.070 per ton. In view of this drop, how do you account for the fact that the Drainage cost increased \$0.020?"

This letter emphasizes my earlier statement that even with favorable reductions in Total Labor Costs, unfavorable increases in certain sub-divisions can only be detected by proper means of comparison and interpretation.

I might continue with a burdensome number of actual illustrations of the method of cost analyses under consideration, but I feel that sufficient examples have already been given regarding payroll costs. The impression should not be gained that this system entails a great multiplicity of letters. On the contrary, weaknesses are detected so readily and so specifically that correspondence is reduced to an absolute minimum. Most of the investigations made necessary by the apparent irregularities in costs are taken up by the operating officials directly with the superintendents on their numerous visits to the plants.

An entirely different type of graphic cost chart, designed to cover a period of five years, in monthly intervals and showing Supplies, Labor, Total Cost (including all overhead expenses) and Tonnage, can be made to serve many useful purposes. These charts are made 10 by 18 in., with 1/2 in. vertical and 1/4 in. horizontal

spacings. Fig. 4 shows a reproduction of such a chart.

An inspection of this chart reveals, among other things, that the total cost for July, 1924, for a production of 19,000 tons, was about 40c. per ton higher than in March, 1925, when the production was approximately 33,000 tons. These charts are of great value in conferences between the operating department and the sales department when the question comes up, as it frequently does, as to what selling price must be approached with a mine operating at a certain tonnage. On the theory that "what man has done, man can do," the operating department is able to predict with a fair degree of accuracy, where the dividing line between profitable and unprofitable business lies.

There are many other ways in which graphic charts can be used to advantage by operating officials as an aid in controlling, through proper interpretation, their costs. The method of application will necessarily differ somewhat with the individual problems of various companies, but the construction and use of graphic charts is simple enough to enable any operating official worthy of the name, to obtain surprising benefits from them.

Combination Loader Reduces Breakage at the Tipple

Arrangement Provides for Putting Coal Into Either Box or Flatcar—Improves Preparation in Highly Competitive Field

By Charles M. Schloss
Denver, Colo.

In the Rocky Mountain region competition is keen and as a result coal preparation is exacting. The plant of the Sunnyside Coal Mining Co., Strong, Colo., was considered a fairly efficient preparator, but difficulty was experienced in loading the lump product. Separation into the various sizes was made on a horizontal screen, open-top cars were loaded by means of a curved, hinged, telescoping chute on a comparatively slight inclination and closed cars were filled by a steep chute delivering to a box-car loader. The open-car equipment was set on approximately the critical angle for the material handled and as a result the coal sometimes required "bucking." The box-car chute, on the other hand, was so steep that the lumps attained high velocity in their descent and struck the side of the box-car loader with such force that many of them were shattered, thus nullifying the effect of the screening that previously had been administered.

After careful consideration by officials of the company it was decided to remedy these evils. Accordingly,

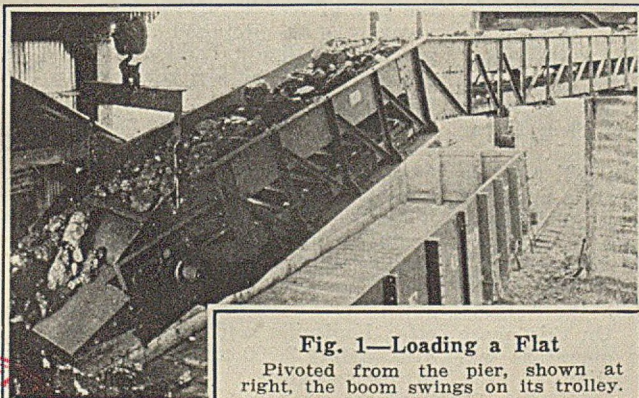


Fig. 1—Loading a Flat
Pivoted from the pier, shown at right, the boom swings on its trolley.

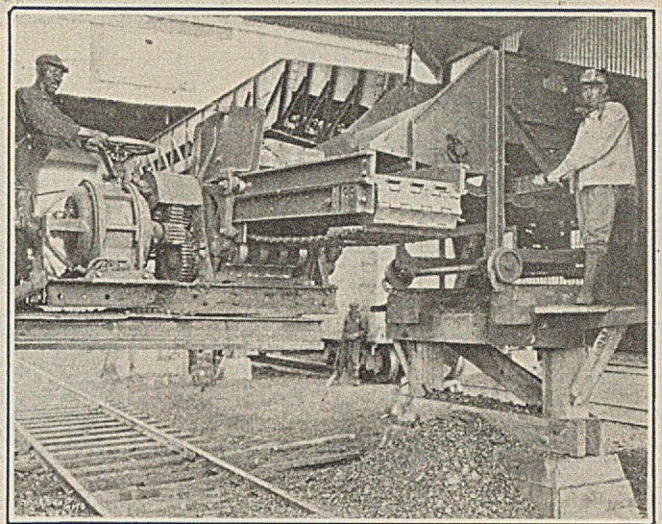


Fig. 2—In Position to Load a Box Car

When a closed car is to be filled the box-car loader is pushed through the car door in the usual way. The boom is swung to a position parallel to the lump track discharging to the short transverse conveyor. This latter is pushed forward on its rails until it will deliver to the box car loader which is pedestalled on the opposite side of the car. Note the small coal on the ground. This drops through a narrow opening between the transverse conveyor belt and its delivery plate. This opening thus frees the large coal from small pieces that may have ridden the lumps across the screen. Supt. R. T. Bell, boss of the mine at Strong, Colo., where this installation was made, stands at the right.

a loading boom was installed. This device, which is the invention of Glenn A. Knox, superintendent of the Gunn Quealy Coal Co., is intended to load both open-top and box cars on the same track. It much resembles an ordinary boom except that it is mounted on a universal joint at the screen end and suspended from a trolley at the delivery end. This arrangement permits not only a raising or lowering of the delivery end but a swinging of the entire boom from a position parallel to the loading track to one extending diagonally across it.

The Sunnyside installation consists of a Knox boom 36 in. wide and 37 ft. 6 in. long between centers. This is supported at its delivery end by a 4-ton hoist on an I-beam trolley. A right-angle chute attached to the end of the main screen delivers the coal to the boom with a minimum drop.

METHOD OF LOADING BOX CARS

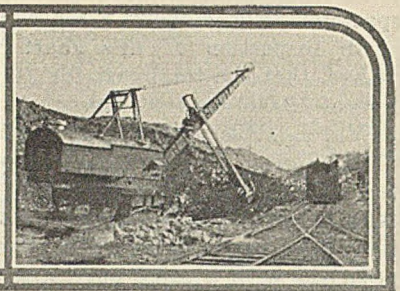
When loading box cars the boom is swung to a position parallel to the track and delivers to a short transverse conveyor which extends into the car, there discharging its burden to the box-car loader. The transverse conveyor is supported on wheels and may be moved forward or back by the operation of a hand crank.

As is well known, passing coal over a screen does not give perfect sizing, as some small pieces will invariably "ride" the lumps and be delivered with them. At Strong, measures have been taken to surmount this difficulty. The plate on the discharge end of the transverse conveyor is placed with its edge about 1 in. from the apron where it rounds the head sprockets. Any small material accompanying the lumps falls through this opening into a chute and is delivered onto the ground outside the car. A test showed that three tons of fines were thus removed from the lump in the course of a day's run, the capacity of the mine being 600 tons. An elevator and bin are being installed to take care of this material.





News Of the Industry



Lewis Threatens Nationwide Strike To Enforce Jacksonville Agreement; Will Refuse Cut in Hard-Coal Wages

Scranton, Penna., June 30.—A national suspension of coal mining to bring about the enforcement of the Jacksonville agreement of 1924 in the bituminous field was threatened today by John L. Lewis, international president of the United Mine Workers, in his first address to the Tri-District Anthracite Miners' Convention in this city.

The International president enumerated three instances in which this three-year working contract was alleged to have been broken and scathingly condemned several of the nation's leaders of industry, who he declared were responsible for the abrogation of the contract. These were Andrew W. Mellon, Secretary of the Treasury and part owner of the Pittsburgh Coal Co., Col. C. S. Watson, former Senator, and John D. Rockefeller, Jr., of the Consolidation Coal Co., and Charles M. Schwab, president of the Bethlehem Steel Corporation, which controls the Bethlehem Mines Corporation. The three companies mentioned were charged by Lewis with "scrapping" the Jacksonville agreement, which he likened to Germany's treatment of the Belgian treaty. This agreement, which was signed by the union officials and operators in February, 1924, covered a three-year period.

The union chief declared that the Bethlehem, Consolidation and Pittsburgh companies have not only cancelled their agreement but have employed non-union workers to operate their mines. After reviewing the conditions Lewis declared: "If this situation continues it may be necessary at a later date to authorize a national shutdown of the mines of the country while the government, operators and miners discuss the question of the enforcement of the Jacksonville agreement."

This declaration brought the convention to its feet in applause. The union leader in the course of his address made it clear that the anthracite workers would be firm in their refusal to accept any wage reduction. He discussed reports in the press to the effect that the anthracite operators would demand a 17 to 20 per cent reduction and declared: "Let me say now to the anthracite operators that the United Mine Workers of the hard-

coal region will not under any circumstances accept a reduction of 17 or 20 per cent or of 1 per cent."

Further indication of the accepted belief that the anthracite mine workers, whose representatives assembled at the convention, will demand an increase in wages above the rates provided for in the present contract was manifested in a statement issued by Secretary-Treasurer Thomas Kennedy previous to the opening session. "I can say that sentiment is unalterably opposed to any backward step and is equally in favor of progress whenever and wherever possible," was Mr. Kennedy's statement to the press.

Following the opening convention formalities Chris. J. Golden, president of District 9, was elected temporary chairman of the convention. He was succeeded by International President John L. Lewis. Mr. Lewis was not present at the opening session.

The convention was addressed on Monday by Mr. Golden, Mayor John Durkan and a representative of a New York State labor college. A credential committee, composed of district union secretaries, was appointed, in conformance to custom. The business of the convention, that of formulating wage and working condition demands, will not be completed before Friday of this week, it is indicated. The convention will hear many speeches and motions and, as in the past, promptly forget them.

The scale committee, which will consist of the presidents, vice-presidents and secretary-treasurers of the three anthracite districts, and international officers, will be formally named in a day or two and it will prepare and present to the delegates the demands to be submitted to the operators. These demands will include a 15 to 20 per cent wage increase, a long-term contract and the "check-off." They will be met by counter demands from the operators for a decrease in wages of 10 or 15 per cent.

The negotiating parties will meet in Atlantic City early next week, probably Wednesday. It is generally understood that, in spite of demands to the contrary, the miners will be satisfied with a renewal of the present agreement; they will, however, make the "check-off" a prominent issue. On this phase of the negotiations the operators will manifest a united opposition.

Strike Settlement Urged By Empire Steel Corp.

The British Empire Steel Corporation has submitted to James Murdock, federal Minister of Labor, a proposal for the settlement of the Cape Breton coal strike. The terms include a reduction of the 1924 wage scale by approximately 10 per cent and the abolition of the check-off system. The company states that it is ready to enter into a contract with the United Mine Workers on the understanding that no corporation official shall be required to meet an officer of the district board who is a Communist, a member of the Workers Party, or is known to profess Communistic principles and that none of the men who have been guilty of lawlessness will hereafter be employed by them in any capacity.

This proposal was submitted to the officials of District 26, U. M. W., and laid before the locals for consideration. Up to June 23, ten locals had voted to reject the proposal. At New Waterford the document was publicly burned. The New Waterford power plant, which was damaged during the fight between the police and the strikers on June 11, is again partly in operation, but it will be some time before it can operate at its normal capacity.

Colorado Miners Still Work For Existing Scale

Miners in the northern Colorado fields will remain at work under the existing scale of wages until a definite decision is made by the Colorado State Industrial Commission. A cut in the day wages from \$8.25 to \$5.50 and in the pay of loaders of 10 to 15c. a ton recently was proposed by the companies, but definite action will not be taken until the case is reviewed by the commission.

It was reported that the mines would close following hearings on the new wage scale by the State Industrial Commission, but the companies state that if the mines are closed it will be due to a falling off of business and not to changes in the wage scale.

The northern Colorado coal fields include Boulder, Frederick, Erie, Lafayette, Louisville and Dacona, and approximately 2,000 miners are employed in this territory.

Mining Men Urge Repeal of Hoch-Smith Resolution

Repeal of the Hoch-Smith resolution, passed at the last session of Congress, was demanded by representatives of the coal and metal mining industries in a meeting held at the Hotel La Salle, Chicago, June 23. About 40 men attended the meeting, which was called by James F. Callbreath, executive secretary, American Mining Congress, and agreed that the resolution condemned was an impediment to the efficient administration of the Transportation Act of 1920.

The Hoch-Smith resolution has been a storm center since its passage last January and many directly conflicting views as to its meaning have been offered. Apparently its intent is to have the Interstate Commerce Commission give full weight to the principle of what the traffic will bear and to extend special consideration to the rates on agricultural products.

In opening the meeting, Mr. Callbreath expressed the fear that the general inquiry begun under the resolution, *Rate Structure Investigation*, I. C. C. Docket No. 17,000, might result in increasing the rates on products of the mines. The resolution, he declared, asserted nothing new, but merely questioned whether the commission, in the exercise of its authority, was following the underlying principles of the organic law from which it derived its powers.

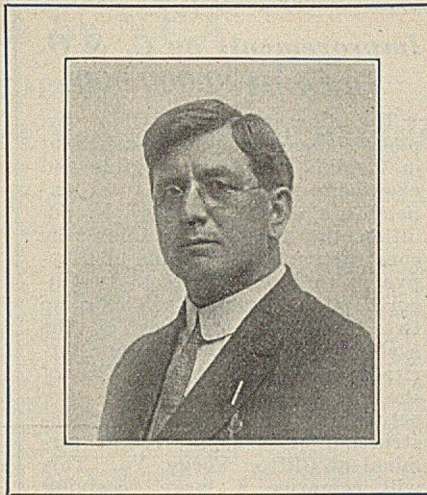
D. C. Yeats, Homestake Mining Co., said that the commission, upon learning that Colorado and New Mexico wanted to place their coal in the Dakotas, made such a move possible by increasing the rate on Wyoming coal. D. F. Hurd, secretary, Pittsburgh Vein Operators' Association; Jonas Waffle, traffic manager, Indiana Bituminous Coal Operators' Association, and C. J. Goodyear, commissioner, Pittsburgh Coal Producers' Association, all stated their desire to refrain from action till the purposes of the Interstate Commerce Commission were made plain.

After discussion the meeting passed the resolution urging Congress to repeal the Hoch-Smith resolution in the interests of efficient transportation, sound business and industrial development and that the proper administration of the Transportation Act be left to the Interstate Commerce Commission.

Virginian Pier Starts Work

The new \$3,000,000 coal pier of the Virginian Ry. at Sewells Point, Va., was formally opened by C. H. Hix, president of the Virginian, before about 200 spectators, June 2. The pier loaded 9,000 tons of coal in the American steamer Sewalls Point, for Boston, for demonstration purposes.

The new pier, regarded as the most modern in the world, has an hourly dumping capacity of 7,200 tons. It is operated by electricity throughout, electric trimmers eliminating much hand labor and speeding the service to ships. Two car dumpers are operated simultaneously, loading two ships at one time. The new pier is not being operated regularly, but is ready for use.



Martin G. Bolt

Martin Bolt, 54, of Springfield, Ill., state director of the Department of Mines and Minerals of Illinois, died June 23, after three weeks' illness following an operation. He began working in the mines at Oglesby, Ill., at the age of 12. For two years he was secretary-treasurer of the Ladd Local Union, United Mine Workers, and was later elected president of the local. He also was secretary-treasurer of the sub-district union for two years. He became secretary of the Mining Board in April, 1907, under Governor Deneen, and remained in the department until his death. He was appointed director of the Department of Mines and Minerals Dec. 1, 1923, and was reappointed by Governor Small, the appointment being confirmed by the Senate only a few days ago.

B. & O. Revenues Last Year Hurt by Coal Slump

The Baltimore & Ohio Railroad Co. reports total railway operating revenues for May, 1925, of \$18,687,410, compared with \$18,360,021 for May, 1924; operating expenses of \$14,248,007, against \$13,838,697, and net railway operating income of \$3,184,866, compared with \$2,389,509 the year before. The accumulation for the first five months of this year shows total railway revenues of \$90,901,961, compared with \$93,557,897 the previous year; operating expenses of \$72,567,206, compared with \$75,373,847 in 1924, and net railway operating income of \$12,379,808, compared with \$12,624,811.

The company's report for 1924 states that "With the exception of products of agriculture, which showed a slight increase, the decrease in traffic was general. Especially notable was the large decrease in bituminous coal, which is the largest single item of traffic handled by the company. The explanation for this decrease, however, lies in the fact that the bituminous coal industry in the Northern bituminous coal fields has been handicapped in the Eastern markets by the lower mining costs prevailing in the Southern Pocahontas, New River and other fields. This condition was partly offset by the company handling a larger proportion of coal traffic from connecting lines and finding a market for it on or via its lines. Notwithstanding the reduction in coal traffic, the revenues of the company were generally sustained owing to increased commercial and industrial activities in the territory served by its lines."

Say Mines in Kansas Merger Are Overvalued

New figures on the valuation of the properties of nineteen coal companies in the Kansas-Missouri field, as a necessary step before a sale or merger of the holdings can be effected, were ordered prepared, at a meeting of the interested companies in Pittsburg, Kan., Tuesday, June 23.

W. C. Shank, prominent Pittsburg (Kan.) coal man, was assigned to make the new appraisement, with the power to choose assistants as he sees fit. Valuations already prepared, it was agreed, are too high in most instances, comparison of figures showing some to be out of all proportion to others.

As soon as the reappraisal is completed, another meeting will be called by Ira Clemens, Pittsburg coal operator, whose efforts have had much to do with bringing the scheme for a pooling of interests to a head and who is slated for president of the new company, to be known as the Basin Strip-ping Corporation.

From this second meeting is expected to come final action. Mr. Clemens said he was unable to state whether the plan finally will terminate in a merger, with all the companies retaining their interests under one management, or whether the original project of outright purchase by a single corporation would be carried out.

"Our object now is to get down to a definite working basis," Mr. Clemens said. "We cannot do that until we have the revaluation figures before us."

It is possible, he said, that the properties will be bought outright if the valuation figures are pared down to where they will appeal to Graham-Parsons & Co., of New York, proposed purchasing agents.

Mr. Clemens explained that although options to buy the holdings of the nineteen companies expire July 1, virtually all the companies have expressed willingness to extend the time of the options, if necessary. The first valuation figures were about 35 per cent too high, as reckoned by Leslie, Banks & Co., New York accountants, he said. Carefully prepared data show that the proposed merger would save 27c a ton in the overhead expense of producing coal and would have much to do with restoring the Kansas coal market. First announcement concerning the consolidation was made in Chicago, June 18, following a series of conferences.

Class I railroads from Jan. 1 this year to June 1 placed in service 70,949 freight cars, according to the Car Service Division of the American Railway Association. This was an increase of 12,394 cars over the number installed during the corresponding period last year. Of the total number installed from Jan. 1 to June 1, this year, 25,117 were coal cars, or 6,295 more than during the same period in 1924. During the month of May alone, freight cars installed totaled 13,023, which included 4,313 coal cars. Freight cars on order on June 1 totaled 36,515, compared with 61,256 on June 1 last year.

Gould Asks Co-operation To Increase Strength of National Coal Association

In addressing the New River Coal Operators' Association at Mount Hope, W. Va., Saturday night, June 27, Morton L. Gould, Indianapolis, made his first public utterance since his election, June 19, to the presidency of the National Coal Association. Mr. Gould sounded the keynote of his administration in these words:

"You and I know that frequently most auspicious occasions are not of our own design. They just happen—at the right time, at the right place and with the right people. Truly, it seems to me that this meeting is such an occasion. If it is within my power to rise to this occasion, my administration as the president of the National Coal Association will surely have been launched upon a sea of service with prevailing winds of certain promise that we shall reach our port.

"A fact always to be remembered concerning fundamental principles is that we are all in the same boat, which means that if an association of the far West, for instance, rocks the boat, the interests of West Virginia and other sections are jeopardized. If one association isn't keeping in stroke or isn't putting its very best prowess and technique behind every turn of the oars, 'the whole crew' suffers, in more or less degree.

"None of us, if we want to get anywhere, can 'paddle our own canoe' when it comes to national work. We all have our own local interests, but, if we attempted to operate on a national scale through the canoe method, we would soon be capsized.

"I trust this is not a mixed metaphor and that through this interpretation of a general truth I may give to the bituminous operators of the United States the real reason of by abiding conviction of the vital need for universal co-operation as regards all problems of nation-wide scope.

"Because this is the way I feel, I am here to extend offer of co-operation and make pledge of support. You, along with others, have asked me to be the captain of the crew and hence am I not justified in confidence that the New River operators, the operators of other sections of your state and those of other states will always keep in stroke?"

"You appreciate the extent of the preliminary work involved in the formulation of a program looking toward the collection and dissemination of trade information. Work along this line is already under way in our Washington office and very shortly a meeting of a special committee will be called to whip preliminary plans into final form.

"Let me call to your attention the optimism of Robert K. Cassatt that this industry is headed for better times, and his assertion that the stronger we build the National, through increased membership and through deeper realization of the responsibilities of membership, the sooner will we come into our own. I can visualize the day when every bituminous operator will give financial support to the belief which

Improvements on C. & O. To Cost \$20,000,000

The Chesapeake & Ohio Ry. plans expansion and development in Virginia and West Virginia and elsewhere, involving a total expenditure of \$20,000,000. In addition the road is planning the construction of a new line of fifty-five miles from Stonecoal to Gilbert, W. Va., which will link up two important branches of the system and will open up new territory in the coal fields. One of the principal improvements, now actually under way, is the construction of a large freight terminal at Clifton Forge, Va. This will comprise a large receiving yard as well as a classification and forwarding yard for east-bound traffic.

Other items in the program include construction of a third track near Russell, Ky., and the construction of a large coaling station at that place.

all operators now undoubtedly share, namely, that the growth and the influence of the National have a direct bearing on the welfare of each operator. In the next twelve months I am going to induce as many people as I possibly can to translate belief into membership. I conceive this to be the duty of the president of this association. It won't be long, however, before this association will be all-embracing, and when that time comes the efforts of all can be devoted almost entirely to the definition and the conduct of constructive programs.

"Help me, will you, in every way you can to advance this effort? Lend me a hand in your own territory so we may recruit to maximum. Support me to the greatest extent in the National so our work may be productive of such substantial results as to win for this industry the place in the sun to which it is entitled. And ever remember that I do not chant empty words when I declare your interests are my interests and my time is as at your service."

Russian Coal Output Gaining

Official figures of coal production in the Soviet Union in the first quarter of the current fiscal year ending Oct. 1 next, as received by the Russian Information Bureau in Washington from Moscow, show an increase of 7.4 per cent over the gross production for the corresponding period last year. The comparative figures of output are as follows, in millions of poods*:

	1st Quarter 1924-25	1st Quarter 1923-24
Don Coal Basin	154.5	135.4
Moscow Coal Fields	8.0	13.6
Urals	20.0	17.3
Siberia	18.0	20.4
Total	200.5	186.7

*About sixty poods equals one ton.

The coal shipped from the mines during the quarter totaled 168,400,000 poods as compared with 116,900,000 poods in the same quarter last year.

Indiana Coal Men to Fight Boost in Short-Haul Rates

Coal operators and Chamber of Commerce officials of Evansville, Ind., have joined hands in initiating a fight on the proposed 25 per cent increase in short-haul freight rates in Indiana and neighboring states.

At a meeting of leading operators of the southern Indiana district and the transportation committee of the Evansville Chamber of Commerce held in Evansville June 16, resolutions condemning the proposed increase were adopted and Leslie LaCroix, traffic manager of the Chamber of Commerce, was commissioned to present the matter at the rate hearing held before the Interstate Commission Commission at Indianapolis June 29. Authorization also was given LaCroix and a committee of coal operators and consumers to co-operate with other organizations throughout the state to defeat any increase in short-haul rates.

Those chosen to officially represent the coal interests of the state at the Indianapolis hearing are LaCroix, R. I. Pierce, traffic manager of the Terre Haute Chamber of Commerce; Jonas Waffle, Terre Haute, representing the Indiana Bituminous Coal Operators Association; R. B. Coapstick, traffic manager of the Indiana State Chamber of Commerce, and A. B. Cronk, Indianapolis, attorney for the Indiana Public Service Commission.

LaCroix was accompanied to Indianapolis by two southern Indiana operators, Walter Korff and E. J. Myerhoff, both of Evansville.

The proposed rates per ton are:

	Cents
One to twenty miles	75
Twenty to thirty miles	80
Thirty to fifty miles	95
The present rates per ton are:	
One to ten miles	55
Ten to thirty miles	59
Thirty to fifty miles	80

Railroad Fuel Cost Lower

The cost of coal used by Class 1 railroads in locomotives in transportation train service during last April decreased from the average for the month before, according to figures prepared by the Bureau of Coal Economics of the National Coal Association from monthly reports to the Interstate Commerce Commission. The average cost per net ton for such coal for the entire country was \$2.79; for the Eastern district, \$2.85; for the Southern district, \$2.34, and for the Western district, \$3.09.

In comparison with March there is a decrease in these averages of 3c. per ton in the entire country; 1c. in the Eastern district; 7c. in the Southern district and 2c. in the Western district. These averages, however, when compared with those of April, 1924, show much larger differences. Thus for the United States as a whole there was a drop in the average of 40c. per net ton; in the Eastern district, 43c.; in the Southern district, 50c., and in the Western district, 22c. The term "cost," as used in connection with these figures, represents the invoice price paid by the railroads for the coal at the mine, plus freight charges paid, if any.

Expansion of Statistics by N.C.A. Commands Widespread Attention; Weak Support from Union Fields

By Paul Wooton

Washington Correspondent of *Coal Age*

That prospects for thoroughgoing bituminous coal statistics never were brighter is the opinion of the staff of the National Coal Association and others who attended the convention in Chicago. The resolution concerning statistics hardly seems to convey the enthusiasm for the revival of statistical work that was indicated by the expressions of the individual coal operators in attendance. It reflects the thought of a conservative committee which believes in being slow and sure.

It will be recalled that the resolution adopted recited that the legality of collecting and disseminating trade information had been established by recent decisions of the Supreme Court and that a plan for the association's future statistical activities should be worked out by a committee and submitted to the Board of Directors. The executive secretary lost no time in choosing for this committee a list of operators especially familiar with the statistical needs of the industry. Some days must elapse before acceptances can be received and the announcement made. Some delay in getting the statistical work going will be occasioned because the Board of Directors will not meet until October.

There is little doubt, in view of the sentiment in evidence at Chicago, that the committee will advise the continuance of the statistical program which was just getting under way in 1920, when its progress was interrupted by the first of the trade statistics decisions. Some expansion of that program is probable but the policy will be to encourage the local associations, where needed, to strengthen their statistical work. From these various sources the National will recruit such figures as may be of countrywide interest.

The presence at the convention of C. P. White, of the coal division of the Department of Commerce, is an indication that the resources of the department can be counted upon for application to this program in so far as they are desired by the association. There already have been indications that the industry is desirous that the government continue the collection of production figures, an activity now likely to be conducted under Mr. White's direction in the Department of Commerce.

The convention served to emphasize strikingly that the National is not receiving the support from the union fields that it has reason to expect. Despite the fact that the preponderance of its support long has come from the non-union areas there has been no departure from the custom of awarding half of the offices and committee places to representatives of the union districts. This balance of control never has been disturbed and at this convention the association went to union territory for its president. In the selection of Mor-

ton L. Gould for that office the association chose a man who has been engaged uninterruptedly in the production of coal for thirty years. The scale of his operations has not been large, which means that he has kept in intimate contact with all the problems of production—experience frequently denied the presidents of larger companies.

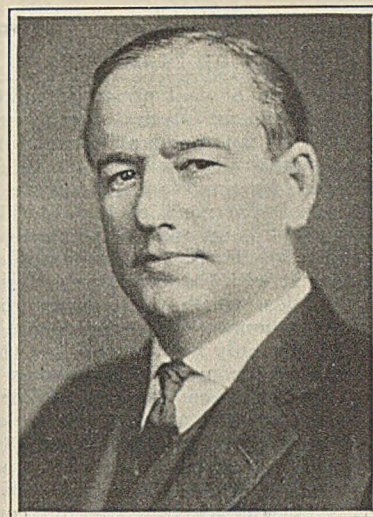
No president of the National Coal Association has contributed more to organization than did the retiring president, S. Pemberton Hutchinson. Plans are in the making which will enable the association to continue to have the advantage of his active service.

There were encouraging membership additions at the convention and others have come in since. The large non-member attendance at Chicago is thought to indicate the probability that further acquisitions may be expected.

Those in attendance liked the way in which the program was made up within the industry and the opportunities that were offered for discussion of the topics presented. There was general agreement that the program was one of the most successful ever staged by the association.

Thirty-nine Organizations Present

The complete list of local associations and individual companies answering the roll call at the convention was: Alabama Fuel Association, Coal Operators' Association of Thick Vein Freeport Seam of Pennsylvania, Harlan County Coal Operators' Association, Hazard Coal Operators' Exchange, Indiana Bituminous Coal Operators' Association, Indiana Coal Producers' Association, Kanawha Coal Operators' Association, Logan Coal Operators' Association, New River Coal Operators' Association, Northeast Kentucky Coal Association, Northern West Virginia Coal Operators' Association, Operators' Association of Williamson Field, Pittsburgh Vein Operators' Association, Pocahontas Operators' Association, Somerset County Coal Operators' Association, Southern Appalachian Coal Operators' Association, Southern Wyoming Coal Operators' Association, Southwestern Interstate Coal Operators' Association, Tri-State Coal Stripping Association, Virginia Coal Operators' Association, Washington Coal Producers' Association, West Kentucky Coal Bureau, Winding Gulf Operators' Association; Chicago, Wilmington & Franklin Coal Co., Colorado & Utah Coal Co., J. K. Dering Coal Co., Double-day Coal Co., Elk River Coal & Lumber Co., Gulf Smokeless Coal Co., Hillman Coal & Coke Co., Madeira, Hill Coal Mining Co., Miami Coal Co., Mt. Savage George's Creek Coal Co.; Rockhill Coal & Iron Co., Roundup Coal Mining Co., Sheridan-Wyoming Coal Co., Edward Soppitt & Sons, Spring Valley Coal Co. and Westmoreland Coal Co.



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Harry L. Gandy

Re-elected executive secretary of the National Coal Association at its annual meeting, held at the Edgewater Beach Hotel, Chicago, June 17-19.

I. C. C. Receives Few Ideas for General Rate Revision

Few suggestions, and none of them from any large organization, have been received by the Interstate Commerce Commission in response to its request for ideas as to how it should proceed with the study of the freight rate structure and make readjustments, as it is instructed to do under the Hoch-Smith resolution adopted by the last Congress.

Indications are that most of the interested parties, including the Commission, are at a loss to interpret the resolution. It was opposed, before adoption, by the Commission and vigorously opposed by the National Industrial Traffic League, which represents the large majority of shipping interests of the country, the latter's opposition being based on the ground that the resolution was an entering wedge for political rate-making.

The Traffic League has made no suggestions, thus far, to the Commission. Neither have the carriers. The National Coal Association, which is deeply interested in rate readjustments, has adopted a policy of watchful waiting. There is a widespread feeling that an effort will be made when Congress meets again to repeal or amend the resolution.

The resolution declares that "it is hereby declared to be the true policy in rate making to be pursued by the Interstate Commerce Commission in adjusting freight rates, that the conditions which at any given time prevail in our several industries should be considered in so far as it is legally possible to do so, to the end that commodities may freely move." Many observers believe that to make flexible rates, such as this would appear to mean, would be impossible. The resolution further instructs the Commission to make a study of the entire rate structure to determine various matters and in readjustments to give "due regard" among other factors to comparative market values.

Finds Miners' Homes Below American Standards

The women of coal miners' families, their employment status, employment opportunities, and home and community environment are the subject of a report just issued by the Women's Bureau of the U. S. Department of Labor. This report, which is an analysis of data collected by the U. S. Coal Commission, reveals that with the exception of lighting facilities, which were fairly good in miners' homes, this was generally speaking not only *not* the case but that the home and community resources in both company-owned and independent mining towns were too often far below what are termed American standards.

Especially conspicuous was the lack of adequate water facilities. Over eighty thousand dwellings in 811 communities were covered in the investigation. Of these little more than one-fifth had running water, about 3 per cent had a bathtub or shower, and less than 0.4 per cent inside flush toilets.

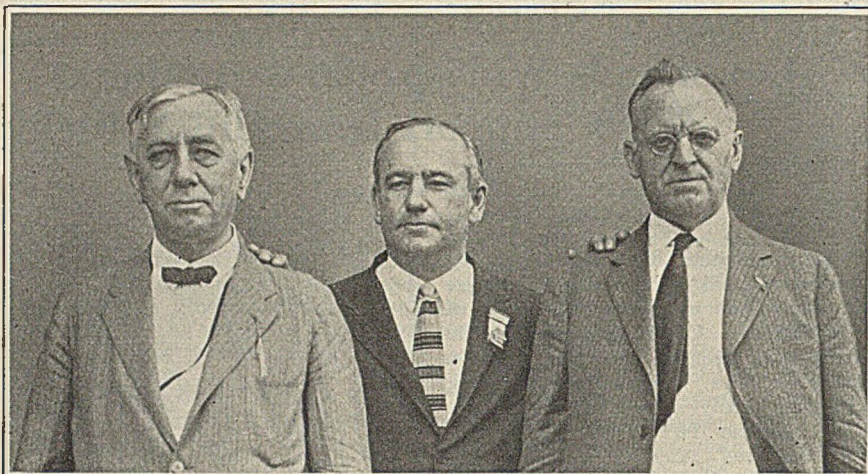
While the anthracite region was far in the lead in the number of dwellings equipped with running water, "running water in the house," the report points out, usually meant one faucet in the kitchen, and the prevailing rates for additional faucets were so high as to penalize in an illogical and unnecessary way the use of labor-saving devices. For instance, the miner's wife might carry all the water she needed from the faucet to the stove, the tub, or the sink, but if she used the same amount of water, drawing it through another faucet, or through a hose attached to the kitchen faucet, additional charge would be made.

The sewerage system in the great bulk of the mining communities was totally inadequate, company-owned bituminous camps showing the worst record in this respect, with only 4 per cent of them having complete systems.

In the matter of community resources, outstanding facts shown by the investigation were that the majority of miners' wives and daughters were living in regions strikingly devoid of facilities which are necessary in the recreation and improvement for women—public parks, reading rooms, libraries, rest rooms and girls' clubs—and that most of the institutions that are considered as playing an important part in American community life usually were lacking in mining camps distant from towns and were absent also from many of the independent communities.

In a communication addressed June 25 to James J. Davis, Secretary of Labor, by Harry L. Gandy, executive secretary, National Coal Association, the statement is made that the report is solely designed to prejudice public opinion against coal operators.

"It is quite possible, as the Department of Labor notes, that in some coal mining communities, there is a shortage of 'public parks, reading rooms, libraries, rest rooms and girls' clubs.' However, actual comparison of living conditions in coal mining communities, on the one hand, with living conditions in agricultural or industrial communities, on the other hand, favors the homes of coal miners and reflects credit



Big Men of the National Coal Association Convention

At the left is Gov. D. R. Crissinger of the Federal Reserve Board; in the center Harry L. Gandy, executive secretary of the association, and at the right Gen. Herbert M. Lord, director of the budget. The two government officials were prominent on the program.

on the personal efforts of coal operators to promote the well-being of the miners.

"Let me call your attention to the following statement made two months ago by the Acting Director of the U. S. Bureau of Mines on the occasion of the issuance of an order eliminating the term 'mining camp' from the lexicon of the Bureau: 'The Bureau believes the term "mining camp" gives the public an entirely incorrect impression of conditions prevailing at points where coal is mined; in other words, that it is not a true picture, inasmuch as established communities, complete and attractive homes, with excellent educational facilities and fine sanitary conditions are to be found where coal is mined. The coal operators of this country are to be complimented for the real interest and personal concern which they evidence in the physical, intellectual and moral welfare of the miners and their families.'"

Shipping Board Bids Are Low

Bids opened at New York on June 23 and June 24 by the U. S. Shipping Board for furnishing and delivering coal to vessels in New York harbor are considered low for the quality required. The coal called for must be guaranteed by the bidder to be equal to or better in analysis than the following: Maximum volatile, 23 per cent; minimum fixed carbon, 69 per cent; maximum ash, 8 per cent; maximum sulphur 1.5 per cent; minimum B.t.u., 14,450 dry coal. The coal must contain at least 30 per cent lump.

Bids for supplying the "George Washington" with 3,500 gross tons were as follows:—W. A. Marshall & Co., \$5.93 t.i.b.; Seiler Coal Co., \$6.30 t.i.b.; W. H. B. Haff, \$6.11 t.i.b.; Russell Norton, \$5.99 t.i.b. On a net ton basis f.o.b. mine the bids ranged, approximately, from \$1.92 to \$2.27 per ton.

On 1,200 gross tons for the freighter "Anaconda" the following bids were received: W. A. Marshall & Co., \$5.76 t.i.b.; Imperial Coal Corp., \$5.47 t.i.b.; W. H. B. Haff, \$5.92 t.i.b.; Seiler Coal Co., \$5.93 t.i.b. On a net ton basis the range is approximately \$1.65 to \$2.05 f.o.b. mine.

Strikers Burn Mine Works And Blow Up Ferry

Violence again broke out June 26 in the Pomeroy Bend (Ohio) coal fields, where union miners have been on strike more than a year and where several coal companies recently resumed operations under the 1917 scale. The outer workings of one of the mines was burned, a river ferry and an automobile were dynamited and lesser disturbances took place.

Fifty deputies were put on guard at the mining properties last Saturday and Judge Miller made permanent the temporary injunction against picketing of the mines by union workers.

The burning of the outer workings of Mine No. 17 of the Pittsburgh Coal Co., near Racine, formerly known as the Thomas Mine, occurred in the early morning hours. The destruction was complete, forcing indefinite suspension of work and causing damage estimated at \$50,000. About 150 miners were employed at the shaft.

A few hours previously the ferryboat on which most of the miners employed at the shaft are transported across the Ohio from their homes in West Virginia was dynamited and sunk.

Common Pleas Judge A. P. Miller last week granted a temporary restraining order against picketing of three mines of the Pittsburgh Coal Co. and one mine, No. 7, of the Stalter Essex Coal Co., which have been operating in the Pomeroy field under the 1917 scale. This action followed many threats of violence on the part of union miners and was the culmination of a number of acts of violence. Among these was the blowing up of a launch which transferred miners across the Ohio River and the burning of the tippie at Mine No. 5 of the Stalter Essex Coal Co. Judge Miller had received a letter threatening that in case of an injunction his home would be dynamited. The order named Lee Hall, president, and G. W. Savage, secretary of Ohio District No. 6 of the United Mine Workers, as well as Rich Campbell, local president; William Fennell, A. N. Bengel, Robert Marshall and about 200 miners in the Pomeroy field.

United Mine Workers Plan Extension Of West Virginia Strike Area in Campaign to Unionize Entire State

Is the Baltimore agreement a pact between the United Mine Workers and the Northern West Virginia Coal Operators' Association or is it a joker? Is the agreement still in effect if the officers signed for the association and not for individual companies? Is there an existing agreement, if the members withdrew from the association to clear their legal skirts and the association peters out of existence quietly with the union miners holding the bag? Have the United Mine Workers lived up to their gentlemen's agreement to completely organize northern West Virginia, and if they haven't made good why is any part of the agreement binding, although this phase of the question was never reduced to writing?

These and many other questions are being raised as a result of the labor controversy which started last week as to who actually signed the Baltimore agreement and who did not. The argument was started by the United Mine Workers when the organization printed a page advertisement in Morgantown, Fairmont and Clarksburg, with sections of the contract. The advertisement asks the pertinent question, "shall the coal operators treat contracts with the United Mine Workers of America as mere scraps of paper?" Then the charge is made that the following concerns abrogated their contract: Consolidation, Hutchinson, Fairmont & Cleveland, Edna Gas, Brown, Blockey-Pittsburgh, Dawson, Rosehill, Fairmont Big Vein, Fairmont-Chicago, Pittsmt, the Virginia & Pittsburgh Coal & Coke Co., Bethlehem Mines Corporation, Clark Coal & Coke Co., Jamison Coal & Coke Co. and Soper-Mitchell Coal Co.

An attack has been leveled at Frank R. Lyon, vice-president of the Consolidation Coal Co., in the advertisement, for a statement he made that the miners of the company have petitioned to return to work.

Clark Denies Contract Break

According to John A. Clark, Jr., president of the Northern West Virginia Coal Operators' Association, "the men who signed that agreement were coal operators, but they were not at the meeting to represent their companies. They were there as the scale committee of the Northern West Virginia Coal Operators' Association. They signed the agreement as members of that committee and not as representatives of their companies. Consequently, what Mr. Bittner designates as 'abrogation of contract' was merely dropping of those various companies from the operators' association. The agreement was not signed between the United Mine Workers and the coal companies. It was an agreement between the association and the union. It was binding only as long as the operators stayed in the association and as long as the miners remained members of the union."

This opinion, however, is at variance with the statement issued by Van A. Bittner, chief international representa-

tive of the United Mine Workers, who comments as follows:

"Of the twenty-four men representing the United Mine Workers who signed the Baltimore agreement, only one was a representative of the international union and that was Percy Tetlow. The other twenty-three were officers of District No. 17, West Virginia, and members of the scale committee who worked in various mines in northern West Virginia.

"Mr. Clark says relative to his signing the Baltimore agreement, 'My act was in the manner of a notary public. I affixed my name to the document which showed that an agreement on wages had been reached between the United Mine Workers and the Northern West Virginia Coal Operators' Association. The agreement was signed by the scale committee of the association and by myself as president of the association.'

"This statement made by the president of the Northern West Virginia Coal Operators' Association proves to every fair-minded man in our country that Mr. Clark's company and the other coal companies mentioned have certainly abrogated their agreement with the United Mine Workers. Since Mr. Clark in his statement fully substantiates the position of the United Mine Workers, I have nothing more to say except that the fight in northern West Virginia will be continued indefinitely."

Non-Union Output Climbs

Non-union coal production in the 12½ counties of northern West Virginia totaled 5,045 cars in the first four days of last week. On an average 155 mines worked daily. A new daily production peak of 1,267 cars of non-union coal was established June 23. With open-shop mines producing 653 cars a new daily coal loading record was attained along the Monongah Division, B. & O., June 22. While non-union tonnage was holding firm last week the daily union loading was of a downward trend; 835 cars of coal was produced by union mines in the first four days of last week. Ten mines were working on a union basis.

Extension of the organization of the United Mine Workers into southern West Virginia is being seriously considered and according to reports preliminary arrangements were made for the proposed organization campaign at a meeting held in Charleston early last week. Further plans were made at a conference held in Philadelphia on Monday, June 29, attended by International President John L. Lewis, International Vice-President Philip Murray and International Secretary and Treasurer Thomas Kennedy, as well as W. A. Glasgow, chief counsel for the union, and attorneys Henry Warrum, T. C. Townsend and Earl E. Houck.

Definite plans were considered at the meeting for the issuance of a general strike call of all the non-union miners in the entire State of West Virginia.

Edmonton Miners Strike

Coal miners of the Edmonton district in Canada voted on June 28 to strike on July 1. Their contract with the operators expired on the night of June 30. In some of the other districts of western Canada the men have accepted reductions in wages.

Especial attention will be given to the prosecution of the strike in Logan County. Just when this strike order will be issued was not definitely determined. That is a matter that will be left entirely in the hands of International President John L. Lewis.

A great number of miners in northern West Virginia who are working in non-union mines have informed the officers of the organization that just as soon as they receive a pay they will again join the ranks of the strikers. The conference in Philadelphia was intended to mark the beginning of the greatest drive the United Mine Workers has ever made to thoroughly organize the entire State of West Virginia.

The South Penn Coal Co., in the Scott's Run section, resumed operation under the Baltimore agreement last week, according to reports.

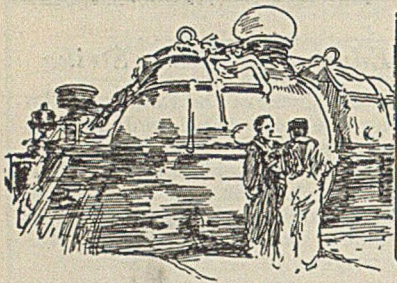
Toward the close of last week the Consolidation Coal Co. was producing 3,500 net tons of coal a day at the mines it was working, which include Owings, Columbia, Pinnickinnick, Carolina and Gypsy.

Ten thousand miners of eastern Ohio, Pennsylvania and the Panhandle section of West Virginia attended a large rally held at Bellaire Ball Park, at Bellaire, Ohio, Friday, June 26. The speakers were International Vice-President Philip Murray, Lee Hall, president, William Roy, vice-president, and G. W. Savage, secretary-treasurer of the Ohio miners. The meeting was held on the Ohio side of the river to escape injunctions, but was staged especially for the striking West Virginia miners.

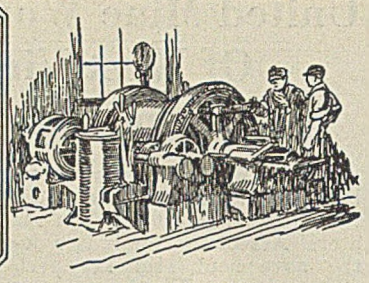
In federal court of northern West Virginia at Elkins, June 22, Federal Judge W. E. Baker withheld his decision on granting a temporary injunction to nineteen Panhandle coal companies against the United Mine Workers and continued in force for another 10-day period the temporary restraining order which he first issued June 2.

In a statement issued June 27 Van A. Bittner comments on the notice given by the Consolidation Coal Co. that it will evict union miners from its houses at Wyatt. Bittner says that the company threatens eviction suits unless the men return to work on the 1917 scale. "Coercion, intimidation and force are being used to compel the miners to sign petitions asking the company to reopen the mines," he adds, "notwithstanding the fact that the Consolidation Coal Co. has an agreement with the United Mine Workers."

Miners' mass meetings were held at Osage, Farmington, Rivesville and Kingmont on June 28, which were addressed by international representatives in the field.



Practical Pointers For Electrical And Mechanical Men



Small Welding Outfit for Bonding Also Makes Strong Air Line Joints

The use of electric welding equipment at some mines has only started but at others it is no longer limited to service inside the mine where tracks must be bonded. Modern repair shops find the electric welder particularly suitable for building up worn spots on machinery, making patches and securing bolts or nuts which might come loose in service.

Every once in a while one sees interesting examples which illustrate both the general utility of an electric welding outfit and the growing confidence placed in the kind of work

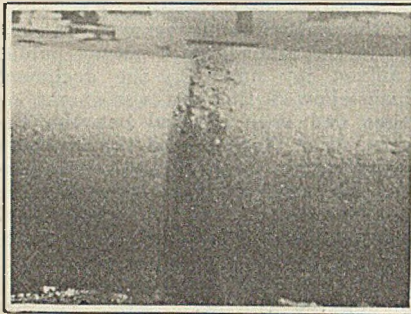


Fig. 2—No Reducer Necessary Here

One piece of pipe was slipped into another and the joint made with an electric arc welding outfit.

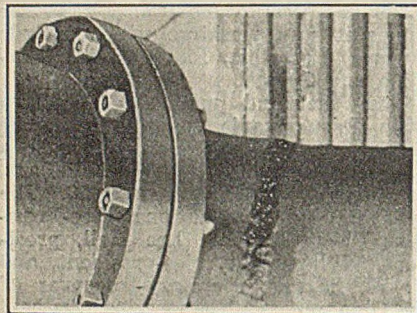


Fig. 1—Home-Made T Connection

This fitting was made by welding pieces of pipe with an electric track welding outfit.

it can do. Fig. 1 shows a picture of a T joint made out of sections of iron pipe. This T is in a 125-lb. compressed air line at the Bear Valley operation of the Williamstown colliery, owned by the Susquehanna Collieries Co., an anthracite producer.

This T stands between two large receiver tanks outside the compressor station. The main supply line thus is connected to both tanks which serve the air-driven equipment inside the mines.

Near the shaft where the air line passes into the mines it was necessary to use a smaller size pipe. Here again the electric welding outfit was used and a reducing flange was not necessary. The small pipe was entered into the large one and the

fit employed for applying rail bonds.

Fig. 3 shows this outfit in use at its regular job. Such a lightweight unit as this is easily transported. As men get a better knowledge of its general utility it comes into greater demand.

E. J.

Illuminate Dangerous Spots

The fact that there are still plenty of opportunities to install electric lights around mine tipples is made evident by the accompanying illustration. This picture was taken in bright sunny weather from a point near the bottom of a coal tippie.

In the darkest part of the picture is a set of crushing rolls driven by means of a chain and sprockets. Unless properly guarded, such devices are dangerous. When a man steps from the sunlight to a position under this tippie it is almost impossible for him to see anything until his eyes adjust themselves to the shade.

There is a feeling at most mines that all outside lights should be turned off whenever there is any daylight. Consequently, lighting circuits are often designed with this idea in mind and no thought given to the arrangement of lamps. Often lights in dark corners, which should always be lighted during working

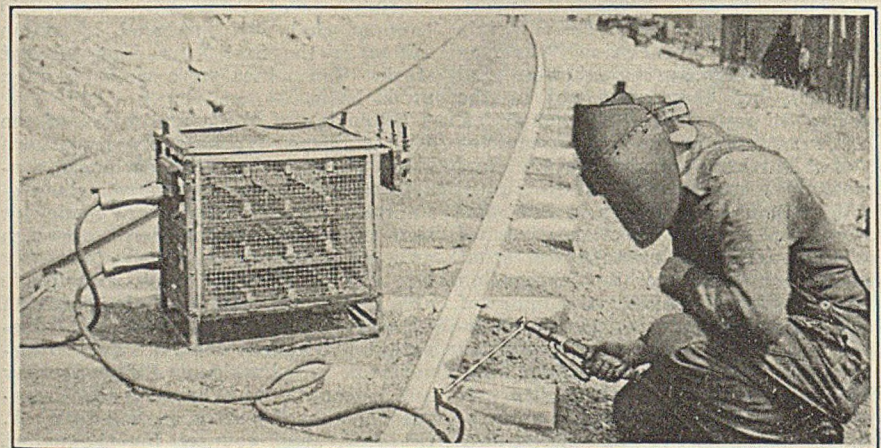
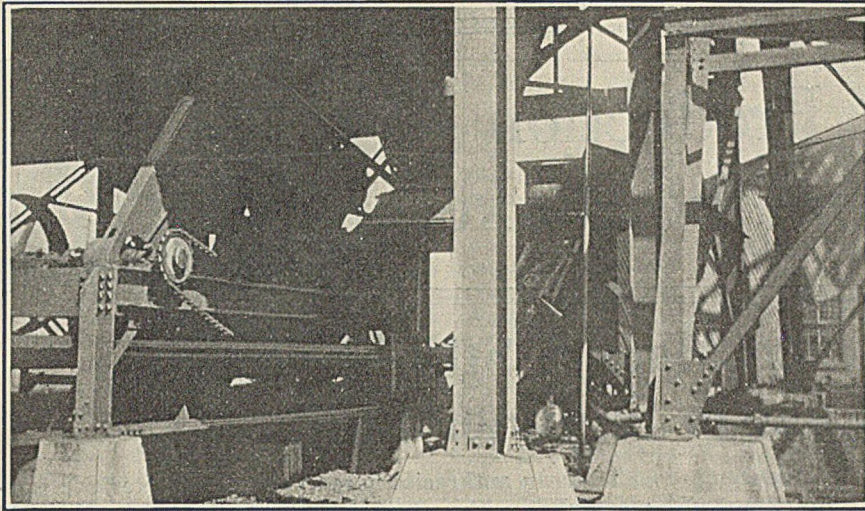


Fig. 3—Electric Welding Machine Which Is Used to Make High Pressure Air Line Joints

This isn't the only kind of work this outfit can perform. It is light and compact. The compressed air pipe joints used on a 125-lb. pressure line were made with this device. Sometimes it is used to apply bonds but frequently it is doing its bit repairing machine parts.



A Dangerous Place Is Often Made Safe by Light

Lights which should be turned on during bright sunny days, should not be placed on the same circuit as lamps which are needed only at night. Here is a spot that is dark even when the sun shines. Its lamps should be separately controlled from the mine yard circuit.

periods, are on the same circuit as mine yard lights. As a result, when the yard lights are turned off from a point controlling the whole circuit, the lights in the dark spots are out of service too. One small accident often costs more than a large number of lights. It pays to lay out circuits so that lights in dangerous spots can be turned on whenever they are needed.

Drum-Controller Trouble Can Do Big Damage

Several days ago one of our mechanics called me up and inquired if I would help him out of a little trouble that he was having with a slip-ring motor controller operating a small mine hoist. The controller was of the hand-operated, rheostat type, with external grids. The motor was a 50 hp. wound-rotor machine with a 550-volt stator winding. The controller handled two wires of the three-phase circuit and thus was reversible. The break was in air, the frame of the controller was cast iron and the cover was sheet steel. The finger board was on the left side facing the cover.

The mechanic had dismantled the controller and filed all the segments and contact fingers. While it was disassembled, I tested the motor and control wiring and also the drum segments for shorts, open and grounds. The lead-sheathed cable leading to the controller from an oil circuit breaker was also tested. Everything showed "clear" with a 50,000-ohm magneto.

The controller was then assembled and the hoist engineer put the controller handle on what was presum-

ably the first point. There followed a flash and a loud report similar to that caused by a "dead short" on a circuit carrying a large amperage. After seeing the action of the controller in operation we tested again with similar results. All circuits tested "clear."

I then made a careful examination of the controller and found that there were no adjusting screws in a number of the contact fingers and that the star-wheel pawl spring had been disconnected. The star-wheel pawl spring was fastened and adjusted but there were no finger adjusting screws, so we robbed the grid contact fingers and put them on the primary fingers. Of course this is allowable only in an emergency. Then the primary contacts were carefully adjusted. The switch was closed and the controller drum was

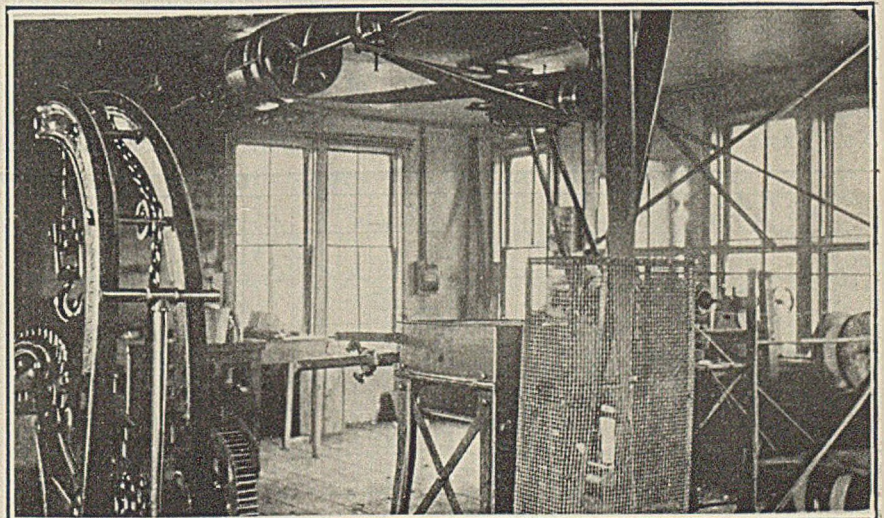
set on one point. The hoist engine started smoothly and the contacts did not flash at all.

This trouble, which was simple, could have become a serious one and hard to locate, as I know of a number of controllers that are operating without any adjusting screws on the contact fingers. The fact that this particular controller handled heavy currents and broke in air, coupled with the fact that an arc travels upward, caused an arcing, short circuit across the primary contacts which burned the lid and wooden finger board of the controller. Another reason for the arcing was that the engineer could not locate the first point of the drum with any certainty, probably because of the absence of the star wheel, and he unknowingly caused slight arcing that started the main trouble.

Careless maintenance of drum controllers and other switching devices has burned up more motors than any other one cause. The average electrician will solder all joints inside the motor and all lead wiring outside the motor and to the controller but will leave the controller with burned and pitted contacts and segments. This is almost equivalent to making an open circuit. Still he expects the controller to give perfect satisfaction. The controller operator often fails to oil the drum shaft until it is hard to turn and then, instead of oiling it, he will disconnect the star wheel spring, excusing himself by saying that it was so tight that he could not turn the controller handle.

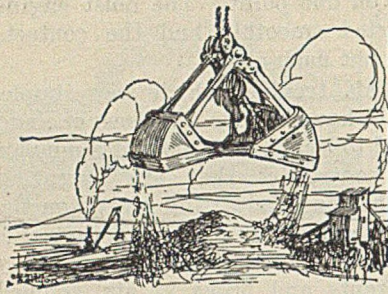
GRADY H. EMERSON.

Acmar, Ala.

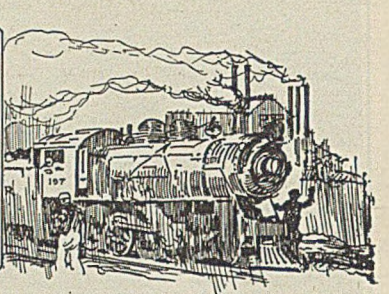


Electric Repair Shop Has Manufacturing Facilities

Efficient operation depends upon good machinery. This shop is equipped so that expert repairs can be done quickly. Thus the useful life of apparatus is greatly increased.



Production And the Market



Bituminous Coal Market Still Sluggish; Hard Coal in Summer Lull

Despite the belief of most authorities that consumption of bituminous coal has been well in excess of production since about the middle of February there is no sign of a dearth. On the contrary, soft coal continues to go begging just as it has been doing in recent months. Consumers seem to be indifferent to figures or arguments and continue to hold off purchases on the chance that prices will go still lower. The situation in the Midwest was further upset last week when over two hundred cars of smokeless arrived in Chicago on consignment. Prices have been slipping since and the bulk of it is still unsold.

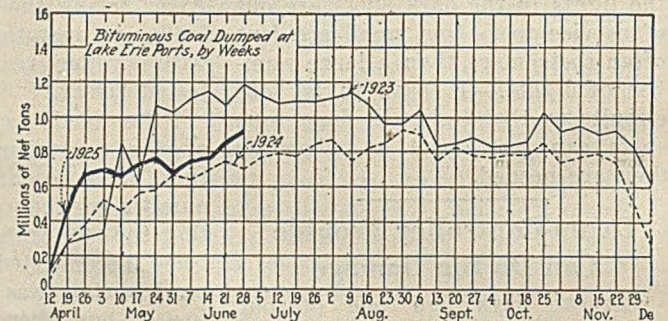
Western Kentucky suffers from overproduction and strip-mine competition, which have weakened prices. Favored with lake trade, some railroad contracts and scattered industrial demand, eastern Kentucky is busier and commands better prices. Business at the head of the lakes has run against a snag, consumers holding off for lower prices, which remain steady, however. Domestic business has fallen off in Utah, industrial demand being unchanged, though the outlook is somewhat brighter. The situation is somewhat better in Colorado, but in Kansas and the Southwest scarcely anything is moving.

Cincinnati Trade Lacks Buoyancy

Buoyancy is lacking in the domestic market at Cincinnati, where chief interest centers in the lake movement. July circulars are being shaded, it is said, screenings being somewhat weaker. Southern Ohio holds its recent improvement in steam business, but eastern Ohio is very quiet. Pittsburgh fears the menace of Fairmont coal, which through recent declines can be brought in by rail at the price of the local product. Demand shows no pickup, however. Trade in New England and other Eastern markets is still flat.

Trade in anthracite is marked by characteristic summer dullness, though it is probable that consumers will show more interest when news of the coming wage conferences spreads. Stove moves best, but independents are having trouble with chestnut. Egg is doing fairly well and pea is easy. Steam sizes, except barley, are hard to move. The companies are expected to add 10c. to the prices of the larger domestic sizes for July.

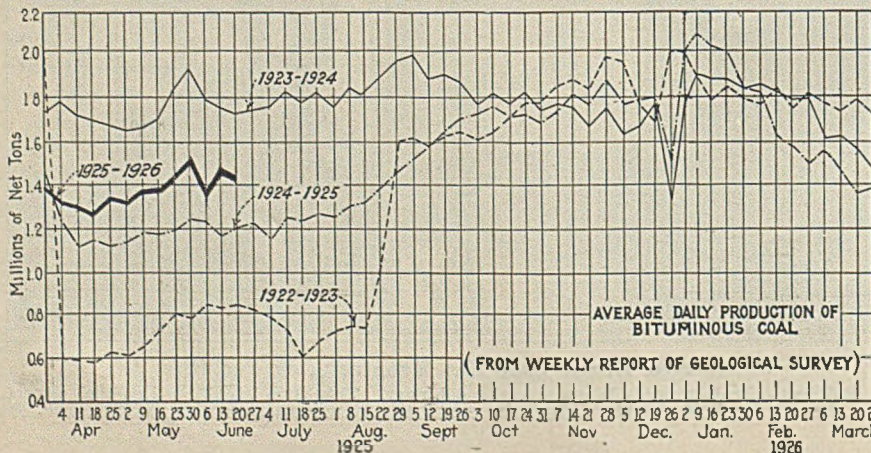
Bituminous coal output in the week ended June 20 is estimated by the Geological Survey at 8,434,000 net



tons, compared with 8,621,000 tons in the previous week, as shown by revised figures. Anthracite production in the week ended June 20 was 1,788,000 net tons, compared with 1,870,000 tons in the preceding week.

Coal Age Index of spot prices of bituminous coal fell one point during the past week, standing on June 29 at 160, the corresponding price for which is \$1.94.

Dumpings at Lake Erie ports in the week ended June 28, according to the Ore & Coal Exchange, were: Cargo, 864,164 net tons; steamship fuel, 48,781 tons—a total of 912,945 net tons, compared with 828,798 tons in the preceding week. Hampton Roads dumpings in the week ended June 25 totaled 447,290 net tons, compared with 489,944 tons in the previous week.



Estimates of Production

(Net Tons)		
BITUMINOUS		
	1924	1925
June 6.....	7,615,000	8,375,000
June 13 (a).....	7,385,000	8,621,000
June 20 (b).....	7,434,000	8,434,000
Daily average.....	1,239,000	1,406,000
Cal. yr. to date..... (c)	222,164,000	223,148,000
Daily av. to date.....	1,533,000	1,537,000
ANTHRACITE		
June 6.....	1,846,000	1,674,000
June 13.....	1,823,000	1,870,000
June 20.....	1,823,000	1,788,000
Cal. yr. to date..... (c)	43,227,000	42,591,000
COKE		
June 13 (a).....	131,000	136,000
June 20 (b).....	131,000	130,000
Cal. yr. to date..... (c)	5,879,000	5,103,000

(a) Revised since last report. (b) Subject to revision. (c) Minus two days' production to equalize number of days in the two years.

Midwest Trade Weakens Further

The Chicago coal market, instead of showing signs of improvement as the month draws to a close, has shown very definite evidences of weakness. Screenings from southern Illinois, central Illinois, Indiana and western Kentucky have slipped off from 5c. to 10c. a ton and more. The reason is found in that the industries have curtailed buying rather than any increase in production. The contract situation is still stagnant, with no signs of activity anywhere.

Operators are still oppressed by the thought that present price levels cannot net them much business in competition with non-union coals from western Kentucky, and that if they are to live reductions in the wage scale will have to take place. Those operators who still have the financial ability are concentrating operating energies on coal loaders and other means of producing cheaper fuel.

The domestic market continues to be uniformly unsatisfactory. The retail trade in Illinois, Iowa and Wisconsin refuses to be interested in coal at any price, confident that they can put off their fuel purchases for another month or two without the slightest possibility of an increase in cost. Whether or not they are right remains to be seen. The domestic situation in Chicago was badly upset last week and prices on smokeless mine-run were shot to pieces, owing to the fact that smokeless operators on the Virginian

Ry. consigned two or three hundred cars of coal to Chicago. This coal arrived early in the week and today the bulk of it is still unsold, with prices slipping rapidly. It is anticipated that these operators will book a pretty heavy loss before the coal is out of the way.

The situation in southern Illinois shows no change. A few mines throughout Williamson and Franklin County are working from one to three days a week. Most of them are crushing coal for their steam contracts and not much domestic sizes are moving. Railroad tonnage continues light from the shaft mines although the strip mines seem to ship railroad coal and the bulk of the steam coal and some of them also are crushing mine-run. It is understood that the Missouri Pacific R.R. is arranging to put in some storage coal from mines on its line. There has been no change in prices.

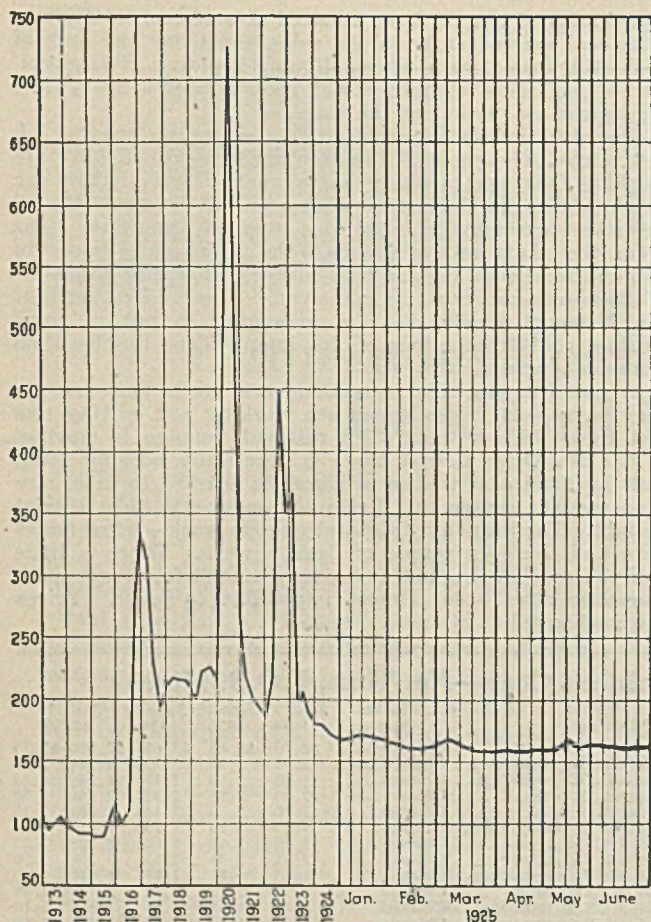
In the Duquoin field conditions are much the same as they have been. Two mines are working and getting two and three days a week. No railroad tonnage is moving. In the Mt. Olive district there is practically nothing doing and the little coal that is produced is crushed to take care of screening contracts. Railroad tonnage in this district is light. The Standard field continues to work—a few mines here and there—a couple of days a week. There is little railroad coal moving out and a fair demand for steam sizes. Domestic sizes seem almost impossible to move. Prices are unchanged.

Current Quotations—Spot Prices, Bituminous Coal—Net Tons, F.O.B. Mines

Low-Volatile, Eastern				Midwest				High-Volatile, Eastern			
	Market Quoted	June 30 1924	June 15 1925	June 22 1925	June 29 1925†		Market Quoted	June 30 1924	June 15 1925	June 22 1925	June 29 1925†
Smokeless lump.....	Columbus....	\$3.85	\$2.85	\$2.85	\$2.75@ \$3.00	Franklin, Ill. lump.....	Chicago.....	\$2.75	\$2.60	\$2.60	\$2.50@ \$2.75
Smokeless mine run.....	Columbus....	2.20	1.85	1.85	1.75@ 2.00	Franklin, Ill. mine run.....	Chicago.....	2.35	2.35	2.35	2.25@ 2.50
Smokeless screenings.....	Columbus....	1.30	1.30	1.30	1.25@ 1.40	Franklin, Ill. screenings....	Chicago.....	1.80	2.10	2.10	1.75@ 2.25
Smokeless lump.....	Chicago.....	3.60	3.10	3.10	3.00@ 3.25	Central, Ill. lump.....	Chicago.....	2.35	2.35	2.35	2.25@ 2.50
Smokeless mine run.....	Chicago.....	2.00	1.95	1.95	1.85@ 2.10	Central, Ill. mine run.....	Chicago.....	2.10	2.10	2.10	2.00@ 2.25
Smokeless lump.....	Cincinnati..	3.85	2.85	2.85	2.75@ 3.00	Central, Ill. screenings....	Chicago.....	1.65	1.75	1.75	1.65@ 1.90
Smokeless mine run.....	Cincinnati..	1.80	1.85	1.85	1.75@ 2.00	Ind. 4th Vein lump.....	Chicago.....	2.85	2.60	2.60	2.50@ 2.75
Smokeless screenings.....	Cincinnati..	1.10	1.25	1.20	1.20@ 1.30	Ind. 4th Vein mine run.....	Chicago.....	2.35	2.35	2.35	2.25@ 2.50
*Smokeless mine run.....	Boston.....	4.30	4.25	4.25	4.15@ 4.40	Ind. 4th Vein screenings....	Chicago.....	1.80	1.85	1.85	1.65@ 2.00
Clearfield mine run.....	Boston.....	1.95	1.75	1.75	1.65@ 2.00	Ind. 5th Vein lump.....	Chicago.....	2.35	2.25	2.25	2.15@ 2.40
Cambria mine run.....	Boston.....	2.50	2.10	2.10	1.95@ 2.25	Ind. 5th Vein mine run.....	Chicago.....	2.10	1.95	1.95	1.85@ 2.10
Somerset mine run.....	Boston.....	2.15	1.95	1.95	1.75@ 2.10	Ind. 5th Vein screenings....	Chicago.....	1.60	1.50	1.50	1.40@ 1.60
Pool 1 (Navy Standard)..	New York...	3.70	2.55	2.55	2.40@ 2.75	Mt. Olive lump.....	St. Louis....	2.85	2.50	2.50	2.50
Pool 1 (Navy Standard)..	Philadelphia.	3.00	2.60	2.60	2.45@ 2.75	Mt. Olive mine run.....	St. Louis....	2.50	2.25	2.25	2.25
Pool 1 (Navy Standard)..	Baltimore...	.....	1.85	1.85	1.80@ 1.95	Mt. Olive screenings....	St. Louis....	2.00	1.75	1.75	1.75
Pool 9 (Super. Low Vol.)..	New York...	2.20	2.00	2.00	1.85@ 2.15	Standard lump.....	St. Louis....	2.15	2.25	2.25	2.25
Pool 9 (Super. Low Vol.)..	Philadelphia.	2.20	2.00	2.00	1.85@ 2.20	Standard mine run.....	St. Louis....	1.80	1.80	1.80	1.75@ 1.90
Pool 9 (Super. Low Vol.)..	Baltimore...	1.85	1.75	1.75	1.65@ 1.85	Standard screenings....	St. Louis....	1.45	1.70	1.70	1.65@ 1.75
Pool 10 (H.Gr. Low Vol.)..	New York...	1.85	1.85	1.85	1.75@ 2.00	West Ky. block†.....	Louisville..	2.00	1.50	1.50	1.25@ 1.50
Pool 10 (H.Gr. Low Vol.)..	Philadelphia.	1.85	1.70	1.70	1.60@ 1.85	West Ky. mine run.....	Louisville..	1.60	1.15	1.25	1.25@ 1.50
Pool 10 (H.Gr. Low Vol.)..	Baltimore...	1.65	1.60	1.60	1.55@ 1.65	West Ky. screenings....	Louisville..	1.25	1.15	1.05	1.00@ 1.15
Pool 11 (Low Vol.).....	New York...	1.60	1.55	1.55	1.45@ 1.70	West Ky. block.....	Chicago.....	1.85	2.00	2.00	1.90@ 2.15
Pool 11 (Low Vol.).....	Philadelphia.	1.50	1.55	1.55	1.50@ 1.60	West Ky. mine run.....	Chicago.....	1.60	1.30	1.35	1.15@ 1.60
Pool 11 (Low Vol.).....	Baltimore...	1.55	1.40	1.40	1.35@ 1.45						

Current Quotations—Spot Prices, Anthracite—Gross Tons, F.O.B. Mines											
		Market Quoted	Freight Rates	June 30, 1924		June 22, 1925		June 29, 1925†			
				Independent	Company	Independent	Company	Independent	Company	Independent	Company
Broken.....	New York...		\$2.34		\$8.00@ \$8.85		\$8.10@ \$8.70		\$8.10@ \$8.70		\$8.10@ \$8.70
Broken.....	Philadelphia.		2.39		8.70@ 8.85		8.60		8.60		8.60
Egg.....	New York...		2.34		8.75@ \$9.00		8.45@ 8.75		\$8.50@ \$8.75		8.45@ 8.70
Egg.....	Philadelphia.		2.39		8.80@ 8.85		8.70@ 9.30		8.50@ 8.70		8.50@ 8.70
Egg.....	Chicago.....		5.06		7.86@ 8.00		7.86@ 8.50		7.44@ 8.18		7.44@ 8.18
Stove.....	New York...		2.34		9.00@ 9.25		8.45@ 9.10		8.95@ 9.20		8.95@ 9.20
Stove.....	Philadelphia.		2.39		9.15@ 9.80		8.95@ 9.65		8.95@ 9.20		8.95@ 9.20
Stove.....	Chicago.....		5.06		8.17@ 8.30		8.22@ 8.70		8.95@ 9.10		8.95@ 9.10
Chestnut.....	New York...		2.34		8.75@ 9.00		8.35@ 8.65		8.45@ 8.70		8.45@ 8.70
Chestnut.....	Philadelphia.		2.39		8.85@ 9.70		8.70@ 9.55		8.60@ 8.70		8.60@ 8.70
Chestnut.....	Chicago.....		5.06		8.00@ 8.13		8.14@ 8.35		7.69@ 8.00		7.69@ 8.00
Pea.....	New York...		2.22		4.50@ 5.50		4.75@ 5.50		5.00@ 5.70		5.00@ 5.70
Pea.....	Philadelphia.		2.14		5.13@ 5.45		5.00@ 5.75		5.00@ 5.40		5.00@ 5.40
Pea.....	Chicago.....		4.79		5.75@ 6.25		4.91@ 5.36		4.91@ 5.36		4.69@ 5.00
Buckwheat No. 1.....	New York...		2.22		2.00@ 2.75		2.00@ 2.40		2.00@ 2.40		2.50
Buckwheat No. 1.....	Philadelphia.		2.14		2.50@ 3.00		2.15@ 2.75		2.50		2.50
Rice.....	New York...		2.22		1.50@ 2.15		1.75@ 2.00		2.00		2.00
Rice.....	Philadelphia.		2.14		2.00@ 2.25		1.85@ 2.00		1.85@ 2.00		2.00
Barley.....	New York...		2.22		1.00@ 1.50		1.40@ 1.50		1.50		1.50
Barley.....	Philadelphia.		2.14		1.50		1.40@ 1.50		1.50		1.50
Barley.....	New York...		2.22		1.60		1.60		1.60		1.60

* Net tons, f.o.b. mines. † Advances over previous week shown in heavy type; declines in italics.



Coal Age Index of Spot Prices of Bituminous Coal F.O.B. Mines

Index	1925			1924
	June 29	June 22	June 15	June 30
Weighted averaged price	\$1.94	\$1.95	\$1.94	\$2.01

This diagram shows the relative, not the actual, prices on fourteen coals, representative of nearly 90 per cent of the bituminous output of the United States, weighted first with respect to the proportions each of slack, prepared and run-of-mine normally shipped, and, second, with respect to the tonnage of each normally produced. The average thus obtained was compared with the average for the twelve months ended June, 1914, as 100, after the manner adopted in the report on "Prices of Coal and Coke; 1913-1918," published by the Geological Survey and the War Industries Board.

Domestic movement of coal has not started in St. Louis. A little stuff is coming in, but it is not a factor in the local situation, with the exception of some apartment-house contract storage coal at below cost. Preparations are being made to put in school coal. Local wagonload steam is unusually quiet and carload steam is just active enough to keep the small amount of steam coal offered going. Country steam is quiet and country domestic active in spots. The Illinois business that is usually active about this time, seems to be going to east Kentucky coal entirely. In other parts of Illinois and Missouri the bulk of coal moving is from the western Kentucky field. No change in prices.

West Kentucky Weak; Eastern Field Busy

Overproduction in western Kentucky and competition of strip-mine coal have caused further weakness. It is reported that \$1.50 a ton represents the top of the market for best prepared coal and much is selling as low as \$1.25, with some off-grade stuff reported as low as \$1.10 a ton. Mine-run and screenings are reported at around \$1@1.25, with screenings stiffer as a result of lack of prepared orders.

Eastern Kentucky is in much better condition, with a range from \$1 on screenings to \$2.25 on 4-in. block, with just a little fine domestic block quoted at higher than \$2.25, but without much movement. Eastern Kentucky is favored with lake business, some railroad contract business and scattered industrial movement, the mines being busier and getting a better price. Efforts to force June prices to \$2.50 a ton on block were unsuccessful; the operator had to accept \$2@2.25 or leave his coal in the mine, as too many competitors were glad to accept the offered price.

Mine-run has been stronger than had been anticipated, gas and better grades bringing \$1.35@1.75. Egg and lump have been in very good demand at from \$1.75 to as high as \$2.10. Not much nut is produced, and this is selling at \$1.50@1.75, or at about the price of best mine-run.

Northwest Trade Hits Snag

The coal trade is on the rocks again at the Head of the Lakes. Forty cargoes arrived at the local docks last week, of which five were hard coal, and fifteen are reported on the way from lower lake ports, but there is practically nothing going out from the docks at present. Buyers are holding back expecting a revision in prices and a general adoption of the 1917 wage scale before long.

On June 1 there was 2,848,892 tons of bituminous on the docks as against 3,118,722 at the same time last year. Of anthracite there was 436,354 tons as against 199,528 at this time last year.

Bituminous is not so plentiful as last year mainly because there was not a large stock on docks at the beginning of navigation, but hard coal is here because people will not buy, and what comes up remains here. The anthracite situation looks serious. There is no call for it at price levels now current. A big trade is expected in Pocahontas.

Prices of both hard and soft are steady, except that there is very little \$7 Pocahontas left on the docks. Most of the docks are getting \$7.50 for lump, stove, and egg at present.

At the Twin Cities soft coal is not moving to any extent. A quiet volume is moving for domestic and steam purposes, indicating no advance preparation of any tonnage. Steam buyers continue their waiting policy and seem likely to prolong it to the utmost. It is good as long as it lasts, and all the predictions of its downfall are but so many words—until something happens to either production or transportation.

The price schedule remains as it has been for some time, with little distress coal in the market most of the time and prices nominally as they have been; southern Illinois lump around \$2.75; central illinois, \$2.25; Indiana, \$2.50; western Kentucky, \$1.75; Hocking at the dock, \$5.25, as before, and Youghioghney, \$5.75.

Summer dullness continues in the Milwaukee coal trade. Dock managers say that coal is going out very slowly just now, but they are looking for a rush of orders soon from dealers at interior points. During the past week cargo receipts totaled 95,600 tons—13,400 tons of anthracite and 82,200 tons of bituminous coal. This brings the total for the season thus far to 1,063,673 tons—305,855 tons of anthracite and 757,818 tons of bituminous coal.

Prices Sag in West

Kansas shaft screenings, which for several weeks had been fairly firm at \$2.75, have joined shovel screenings and crushed mine-run at \$2.50. With the exception of some contract coal and a little for threshing, nothing is moving in the Southwest. There has been little storage, and no relief is expected from this source before late in July or in August. Operators and miners continue to dally with the subject of wage readjustments, but with little effect, except in Oklahoma, where all production is under the 1917 scale.

There has been little change in the situation in Colorado since last week. Some improvement is shown in consumption of slack by industries, but no betterment in the domestic trade for lump, nut and pea coal. Mines are operating about 2½ days per week, which accounts for the substantial decrease in output compared with a year ago.

Hot weather in Utah last week caused the domestic business to fall off considerably. Industrial demand for coal is about the same as it has been for the past two or three weeks, though the announcement that the Southern Pacific R.R. desired bids for 600,000 tons of mine-run annually is encouraging. It is thought that a bid of \$2.50 per ton will be made. There is very little contracting at present outside of small ones, and storage orders are hanging fire. Prices remain as firm as ever and the labor situation is excellent.

Buoyancy Missing at Cincinnati

Through its very lack of buoyancy and activity the domestic market is the most interesting of the Cincinnati list now. July prices on smokeless are going out on lump at \$3, but it is an open secret that the spot market is more around \$2.75 and good stuff can be had for that price, though this is the quotation on egg. High-volatile lump,

after showing a disposition to seek an upward level, has fallen into lassitude. For a time in June it looked as if the market was \$2.25@\$2.50, but a fair quantity can be had now around \$2@\$2.25. Kentuckians are asking \$2.40 for July deliveries, but even their market on block sizes seems to be closer to \$2.25 than the new figures.

Most interest now attaches to the lake movement and with the steady grind on 2-in. and mine-run, some bolstering is necessary in filling out cargoes and for straight shipments by the lake people, who buy in the open market rather than on contract. Two-inch has a steady pull at \$1.65@\$1.75 with egg about 10c. higher. Steam mine-run while lagging a little still has a range of \$1.25@\$1.40 with the gas and byproduct bringing from 10c. to 20c. higher. Screenings have dropped a little. Too much "cats and dogs" on the market has caused a sagging lately but on other occasions there has been a rebound this season, so while lower grades can be picked up around \$1, generally speaking the spot market still remains \$1.10@\$1.15.

Retail business in Cincinnati is going into the new month without any advance in price. Smokeless lump is \$7.50; mine-run, \$5.75@\$6; bituminous lump, \$5.75@\$6.50; slack, \$4@\$4.25.

River business continues in fair shape with the stage running at a good depth. Most of the coal coming in is either for home or nearby delivery or for transshipment by rail. Stocking here has about reached its limit, unless there should be a tumble in prices in the next month that would make this course advantageous.

The slight improvement noticeable lately in steam circles in the Columbus trade still continues. Buying is more widespread although the greater bulk is spot business. Contracting is still in abeyance, as purchasing agents can fill their requirements on the open market for less money. There is still some distress coal on the market, but the tonnage has been reduced because shippers and producers are not sending out cargoes on consignment to such an extent as formerly. As reserves are being gradually reduced the tone is slightly improved and both producers and shippers believe that better things will develop soon.

There has been no improvement in prices in the last few weeks and cheap coal continues to come out in large quantities. Railroads that have not contracted are buying on the open market and this applies largely to utilities also. Screenings are rather firm because of reduced lump production, but other grades are weak.

Domestic trade is slow. Retailers have sufficient stocks to take care of the small business coming in and consequently are waiting until the public shows a disposition to start winter stocking. Pocahontas, splints and Kentucky block are moving in small quantities while Ohio mined grades are dull and featureless.

The eastern Ohio market is exceedingly dull. There are practically no inquiries, but despite the extreme dullness there is no disposition to cut prices any further, operators preferring to close down their mines rather than do so, because in many instances prices approximate or are actually below cost of production. Strip-mine coal, however, is still coming in in rather large quantities and is selling from 15c. to 25c. per ton lower than deep-mine coal.

Steam consumers apparently are not giving any consideration to storage programs and feel safe with hand-to-mouth buying. It is too early for the retail yards to begin their activities in the matter of storage except to lay by small lots procured at bargain prices.

Unless a decision in the lake cargo rate case is forthcoming soon Ohio mines will be almost completely shut out of participation in the lake trade this season.

Output of eastern Ohio mines during week ended June 20 registered a decrease of 9,000 tons from the preceding week.

Pittsburgh Sees New Menace

A new epoch in the Pittsburgh coal situation has been brought about by recent declines in Fairmont coal, a well-posted authority having figured that with rail shipment Fairmont coal can be brought to the city at the same delivered price as Pittsburgh coal.

Pittsburgh district production is only about 20 per cent of capacity. A good deal of it is coming in by river, and considerable is moved by truck.

A report was current last week, but cannot be verified, that a number of operators have had such success with plans that they count on opening quite a number of mines soon on an open-shop basis, with the scale of November, 1917. Market prices and demand show no change.

The Buffalo market continues quiet. Quotations are \$1.60@\$1.75 for Fairmont lump, \$1.40@\$1.50 for mine-run and \$1.25@\$1.40 for slack; \$2.25@\$2.50 for Youghiogheny gas lump, \$2@\$2.25 for Pittsburgh and No. 8 steam lump, \$1.30@\$1.50 for slack; \$1.75@\$2 for Allegheny Valley mine-run; Cambria County smokeless at curb, retail, \$6.

Uncertainty as to whether or not the agreement between the hard-coal operators and the miners will be renewed in September, and the possibility of a strike, is responsible for brisk buying on the part of Toronto householders. During the past two weeks a marked improvement has taken place in the hard-coal market, and this activity is expected to continue for some time. Supplies are coming in regularly, and no scarcity is anticipated in the near future. Prices are unchanged as follows: Anthracite, \$15; Welsh anthracite, \$16; coke, \$12; Pennsylvania smokeless, \$5.85; steam lump, \$6.40; slack, \$5.60.

New England Market Weakens Further

If anything, the steam coal market in New England is more depressed than a week ago. Shippers are saying something about a better demand on the line and in the West with prices on prepared that compare with \$4.40 per gross ton, f.o.b. vessel at Hampton Roads for mine-run, but it is noticed that the same interests are keen to make spot sales of No. 1 Navy Standard Pocahontas and New River mine-run at \$4.25.

It is evident there is a good deal of whistling to keep up appearances, but the fact is that practically every agency takes its turn during each fortnight in having surplus coal at the piers that it is under pressure to move. So long as this condition prevails there will be few indications of firmness and fewer sales at the \$4.40 extreme price that any first grade coal can now command.

On cars Boston receipts continue light, a circumstance that favors rehandling factors with facilities of their own. Several sales of 500-ton and 1,000-ton lots in the past few days have been at \$5.35, and it is generally understood that one large buyer was obliged to pay this figure for delivery spread over three months, high-grade low-volatile mine-run being the coal that was sought for power-house use.

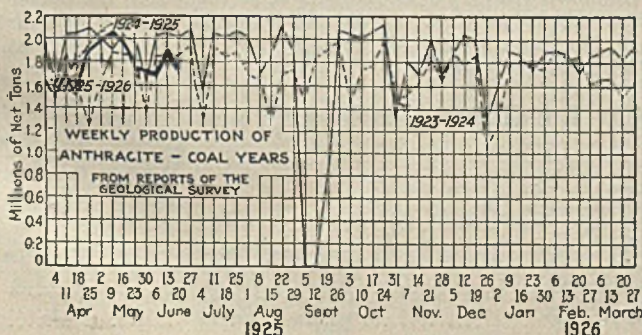
At Providence, R. I., about the same basis prevails, although a few factors are getting \$5.40@\$5.50 there for special coal that is guaranteed to be mine-run. So much nut-and-slack has been worked off this season that buyers are becoming insistent that they be supplied with what they have been accustomed to buy.

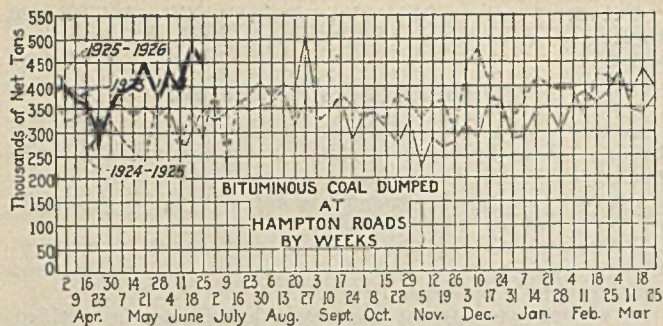
Owing to public statements made by state fuel officers since June 15 there has been better request at retail for anthracite, and this has had a favorable effect also upon consumers who the past year or so have used bituminous for ordinary household uses.

All-rail from central Pennsylvania the steam-coal traffic is in no wise improved. Shutdowns are spotted over a wide area, and no one is in position to say when or what the end will be.

New York Trade Dull but Optimistic

The New York market for soft coal remains dull, buying is slow and where ten cars formerly was the minimum order, one car is now taken, with frequent requests that it be rushed. Consumers evidently are getting to the point where they will soon be forced to buy heavier, as inquiries are more numerous.





There is not much encouragement among the shippers although some optimism is found occasionally. Better buying is looked for by the end of July or early August.

The few bids received by the U. S. Shipping Board for bunker supplies do not indicate that the market is overcrowded, as the prices submitted are in keeping with open-market conditions.

Official records indicate that soft coal is on the upgrade, but it is difficult to discern this by observing the Philadelphia trade. The increase, however, is not such as to create any air of activity. Production of non-union coal has increased until it is doubtful if any considerable quantity of union coal is coming here.

Intimations are that once the anthracite proposition is settled trouble can be looked for from the union in the soft-coal region.

There was something of a stir in slack last week. Buying seemed to stop almost simultaneously from a number of large concerns usually interested. For a while shippers expected to have coal on their hands, but it was almost as quickly absorbed by other interests, without the least semblance of a break in prices, and now all buyers seem to be back in the market for as much as ever.

The Baltimore coal trade is beginning to wonder when the promised prosperity is to begin. Consumption is not up to the mark, and coal buying of every kind is on a hand-to-mouth basis. In the past month there has been no improvement in the situation either as to demand or prices. First-class coals are still obtainable in almost any quantity at prices so close to actual production cost that there is little in the business for anyone. The export situation fails to show the activity that marked the month of June in some other years, although there were two shipments last week.

The market at Birmingham is very quiet. Inquiry is light and bookings are pretty well restricted in the spot trade to a few cars for prompt shipment. There are few new contracts being made, most all agreements negotiated being renewals. Industrial demand is on about the same scale it has been for several weeks, with the exception that power companies are consuming an increasing amount as the dry weather continues to make the hydro-electric plants less efficient to meet power requirements. The Western Alabama Railroad bought about 48,000 tons of Mary Lee washed nut coal to be delivered through the next twelve months. Bunker trade is reported quiet and featureless.

Domestic conditions show very little improvement. High-grade coals are moving fairly satisfactorily on contracts, but there is some surplus available for the open market, which is being disposed of, but not without some effort.

Quotable prices on steam grades have not changed in the past week, and all domestic grades have maintained stable schedules with the exception of the cheaper qualities of lump and other sizes, which always sell off during dull periods. Big Seam lump can be bought for \$1.80@2.25 mines at present. The schedules on domestic coal will advance July 1, Carbon Hill lump going to \$2.95; Cahaba, \$3.85@4.60; Black Creek, \$4.10; Corona, \$3.20; Montevallo seam, \$4.35@5.10 per net ton mines.

Production is running around 340,000 tons per week, mines operating on a basis to meet anticipated trade requirements to a more marked extent than before during periods of depression.

Hard-Coal Business Disappoints

While the anthracite trade at New York is not totally flat there is no great activity. Coal is moving in fair shape but there is not the "pep" to the buying that dealers ex-

pected in view of the wage negotiations about to begin. It is expected, however, that the publicity attending the wage conferences will have a wholesome effect on consumers.

There is no delay in moving company coals but independent producers find it difficult at times to keep all sizes going. The greatest difficulty is with chestnut, which continues to pile up and at times causes distress. Retail dealers will not pay more than company prices unless in need of the size wanted.

It is expected that the line companies will add the usual 10c. per ton to their June prices for July, but no official announcement has been made.

Demand for coal at Philadelphia has declined further and the consumer seems to have eliminated himself entirely as a factor.

The operators have had difficulty in moving their production, even though it has been lessened by shortened working time. Some of the independents have tried to move blocks of prepared coal at a price concession, but have met with very little success, principally because most dealers are filled up.

Due to the change in sizes some dealers are figuring that the demand for pea is going to be very light and are utilizing some of the storage space usually taken by the small size, to accumulate a nut stock.

Steam sizes are still difficult to care for and considerable independent coal is selling off price. The call for barley is good, but it does not take up the production, and the other sizes are even slower than that. Large users have not begun to store up in case there is a suspension.

It is taken for granted that the companies will add the usual 10c. for July except on pea and smaller.

Baltimore hard-coal dealers find business slow—delayed because customers either have not the money to lay out for coal on storage or are unwilling to lay out money for such fuel. Retailers are still uncertain what July wholesale prices are to be, although it is likely that operators will increase prices 10c. per ton. It seems not at all unlikely that July retail prices will remain the same as they were for June.

The Buffalo anthracite trade is about as close to a standstill as it ever is. Dealers say that they have never sold so little during the open season as they are selling now and they look for a slow movement all summer. The lake trade is still moderate in volume. Shipments for the week were only 44,900 tons, of which 34,400 tons cleared for Duluth and Superior and 10,500 tons for Chicago. Lake freight rates continue at 55 to 60c. to Chicago and 40c. to Duluth and Superior.

Some of the docks here are running pretty slow as coal does not move readily from the upper lake docks.

Inquiries Light for Connellsville Coke

The merchant furnace at Standish, N. Y., making low-phosphorus pig iron, has contracted for Connellsville coke for third quarter. All that is stated positively about the price is that it lay between \$3 and \$3.25. As particularly good coke is required there is no indication that standard furnace coke could not be bought at \$3 for the quarter, this having been the price in several contracts. In fact, it is intimated that for July, and perhaps for July and August, \$3 could be shaded a trifle. There is no test, however, as there is no inquiry in the market. Some recent inquiries have been withdrawn, as the inquirers have concluded not to run their furnaces.

The spot furnace coke market remains at \$2.75@2.85, being very narrow in point of turnover.

Standard foundry coke remains at \$3.75@4.25, with sales light, chiefly at close to the lower figure. Some 48-hour coke has been going for foundry use for weeks past at \$3.50 or thereabouts.

Car Loadings, Surpluses and Shortages

Week ended	Cars Loaded	
	All Cars	Coal Cars
June 13, 1925	987,196	157,559
Previous week	994,874	151,666
June 14, 1924	902,592	138,240

Date	Surplus Cars		Car Shortage
	All Cars	Coal Cars	
June 14, 1925	313,494	117,496	
June 8, 1925	318,805	125,785	
June 14, 1924	362,961	169,133	

Foreign Market And Export News

British Coal Market Marks Time Pending Wage Settlement

Business in the Welsh coal market has perked up a little since the Whitsun holidays, but is still very bad. There are now 5,000 fewer miners at work in Wales than three weeks ago and production is still in excess of demand. Coal salesmen are all out to prevent further pit stoppages but cannot get their wagons cleared. Anxiety regarding a national strike has somewhat abated, so that buyers are waiting for prices to drop further before placing orders; they also hope to take advantage of any revision in the wage agreement.

In the face of German competition there is no chance of prices rising any further and salesmen are making concessions to immediate buyers so as to clear their wagons, though no reductions are obtainable on later deliveries. Prices have dropped 3d. to 6d. and buyers are able to get a further 3d. to 6d. concession for immediate delivery. Notices have been given at another

pit to 350 men, though one of the Merthyr collieries is to be reopened, giving employment to 900 of the former 2,500 employees.

The Newcastle market is slightly better as far as inquiry is concerned, though there is no improvement in contracts actually placed. There is little inquiry for forward business, as buyers seem to be awaiting the outcome of the present wage trouble. Notices have been given to the men at four important collieries, at another, work is continued from day to day only, and at another the men have divided the work by working alternate weeks.

There are one or two contracts out for gas coals up to 8,000 tons at 19s. 4d. per ton c.i.f., but otherwise there is no business.

Output by British collieries in the week ended June 13, a cable to *Coal Age* states, totaled 4,980,000 tons, compared with 3,000,000 tons in the previous week.

French Coal Market Almost At Standstill

In the French coal market both industrial and home fuels have hardly any demand and stocks are accumulating at the mines. And clearances will not be quickened by the fact that traffic on the waterways is virtually at a standstill.

The question of salary is still pending. After having conferred several times with the public authorities, the North and Pas-de-Calais mine owners have decided to grant their men up to June 30, an increased rate of 20 per cent on the prime of high cost living (instead of 40 per cent up to May 15) conditionally on the immediate institution of a reduced freight tariff on the Nord, State and Orleans Railways, for the transport of coals to the west of France, and on the re-establishment of import licenses for German coals, in order to avert being swamped by German fuels.

From May 1 to 23, the Office des Houillères Sinistrées received from the Ruhr 407,800 tons of indemnity fuels, including 178,000 tons of coal, 207,700 tons of coke, 22,100 tons of lignite

briquets, a daily average of 17,700 tons. In the first ten days of June, the O.R.C.A. received from the Ruhr 87,353 tons of indemnity coke. The price is unchanged.

Seasonal Dullness Prevails At Hampton Roads

The market at Hampton Roads was weak last week, with Canadian shipments falling down somewhat and other foreign business negligible. Bunker trade was temporarily slack, the bulk of shipping failing to call for coal.

Inquiries were rather dull and a seasonal slackness appeared to have settled on the trade. A fair supply of coal was on hand at the piers, and some cargoes were being offered below the market in distress.

Belgian Demand Better

The general situation in the Belgian coal market shows no change, but there is some difficulty with regard to clearances. Demand, however, is slightly better, and as production in the Center and Charleroi Basin is much reduced stocks are being drawn upon. In the

Liège region stocks remain very high. With the rise of sterling competition from the British side is less pressing.

Export Clearances, Week Ended June 27, 1925

FROM HAMPTON ROADS	
For Canada:	
Br. Str. Manchester Spinner, for Quebec	7,179
Br. Str. Heslone, for Montreal	6,149
Br. Str. Rose Castle, for Quebec	10,553
Br. Str. Phillip T. Dodge, for Three Rivers	6,712
Br. Str. Daghlid, for Quebec	11,374
For Nave Scotia:	
Br. Str. Kamouraska, for Sydney	7,400
Amer. Schr. Jean, for Yarmouth	1,301
Amer. Str. Hampden, for Halifax	7,523
Br. Str. Twickenham, for Sydney	7,516
For Newfoundland:	
Br. Schr. Jean McKay, for Grand Bank	337
Nor. Str. Thorgerd, for Humbermouth	3,676
For Brazil:	
Br. Str. Roquelle, for Rio de Janeiro	5,400
For France:	
Fr. Str. P. L. M. 22, for Rouen	8,041
Fr. Str. P. L. M. 27, for Rouen	8,031
Br. Str. Bankdale, for Marseilles	5,004
For British West Indies:	
Amer. Schr. Lieut. Sam Mengelm for Salt River	1,161
For Canal Zone:	
Amer. Schr. Achilles, for Cristobal	12,058
Amer. Barge Darlen, for Cristobal	7,276
For West Africa:	
Ital. Str. Enrichetta, for Dakar	7,251
For French West Indies:	
Br. Str. Gibraltar, for Fort de France	6,559
For Italy:	
Ital. Str. Labor, for Genoa	5,913
Ital. Str. Concordia, for Porto Ferrajo	9,533

FROM PHILADELPHIA

For New Brunswick:	
Br. Schr. Nettle C., for St. Johns	—

FROM BALTIMORE

For Canada:	
Nor. Str. Marie Nielsen, for Halifax	2,061
Br. Str. Penrose, for Levis	5,913

Hampton Roads Pier Situation

N. & W. Piers, Lamberts Pt.:	June 18	June 25
Cars on hand	1,498	1,388
Tons on hand	92,947	83,752
Tons dumped for week	169,755	126,653
Tonnage waiting	22,000	15,000
Virginian Piers, Sewalls Pt.:		
Cars on hand	1,332	882
Tons on hand	93,500	52,250
Tons dumped for week	83,460	94,666
Tonnage waiting	8,657	4,728
C. & O. Piers, Newport News:		
Cars on hand	3,108	3,187
Tons on hand	161,270	163,325
Tons dumped for week	184,235	178,047
Tonnage waiting	12,260	7,370

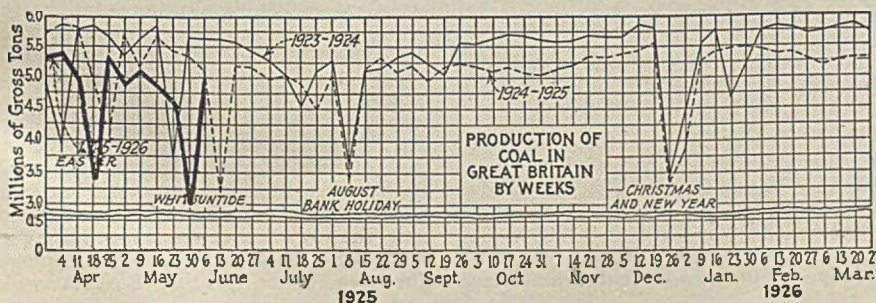
Pier and Bunker Prices, Gross Tons

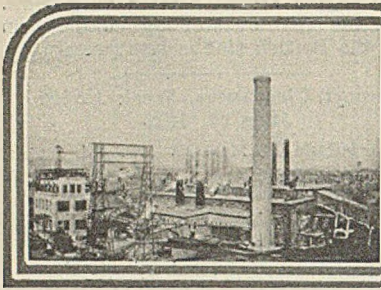
	PIERS	
	June 20	June 27†
Pool 1, New York	\$5.40@ \$5.75	\$5.40@ \$5.75
Pool 9, New York	4.75@ 5.00	4.75@ 5.00
Pool 13, New York	4.70@ 4.65	4.50@ 4.60
Pool 11, New York	4.50@ 4.65	4.25@ 4.60
Pool 9, Philadelphia	4.65@ 4.90	4.65@ 4.90
Pool 10, Philadelphia	4.35@ 4.55	4.35@ 4.55
Pool 11, Philadelphia	4.25@ 4.30	4.25@ 4.30
Pool 1, Hamp. Roads	4.20@ 4.35	4.25
Pool 2, Hamp. Roads	4.10	4.10
Pools 5-6-7, Hamp. Rds.	4.00	4.00
BUNKERS		
Pool 1, New York	\$5.65@ \$6.00	\$5.65@ \$6.00
Pool 9, New York	5.00@ 5.25	5.00@ 5.25
Pool 10, New York	4.75@ 4.90	4.75@ 4.85
Pool 11, New York	4.50@ 4.75	4.50@ 4.75
Pool 9, Philadelphia	4.80@ 5.05	4.80@ 5.05
Pool 10, Philadelphia	4.60@ 4.80	4.60@ 4.80
Pool 11, Philadelphia	4.45@ 4.65	4.45@ 4.65
Pool 1, Hamp. Roads	4.35	4.30
Pool 2, Hamp. Roads	4.20	4.20
Pools 5-6-7, Hamp. Rds.	4.10	4.10

Current Quotations British Coal f.o.b. Port, Gross Tons

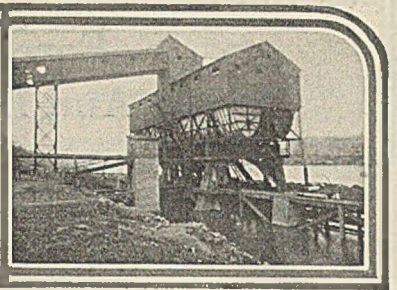
Quotations by Cable to <i>Coal Age</i>		
Cardiff:	June 20	June 27†
Admiralty, large	25s. 6d.	25s. 6d. @ 26s.
Steam smalls	15s.	15s.
Newcastle:		
Best steams	16s. 9d.	16s. 9d.
Best gas	18s. 3d.	18s. @ 18s. 6d.
Best bunkers	16s. 6d.	16s. 6d.

†Advances over previous week shown in heavy type; decline in italics.





News Items From Field and Trade



ALABAMA

The Tennessee Coal, Iron & Railroad Co. has under consideration extensive improvements and betterments at its No. 8 colliery, near Fairfield, which will include the installation of a long conveyor belt for carrying the washed coal from the mine to the byproduct coke plant, and other modernization work, the details of which have not been announced.

The Deepwater Coal & Iron Co., with headquarters in Jasper, will begin the extensive development of its coal and ore properties in Jefferson, Walker and other counties in the mineral district at an early date, according to a recent statement by L. B. Musgrove, executive head of the corporation, which was organized several years ago with a capitalization of \$15,000,000.

ARKANSAS

The W. J. Francis Coal Co., Bates, has put on a night crew to fill its contract for coal with the Kansas City Southern R.R. The mine was closed for five years until recently.

More than 1,000 union coal miners marched June 26 from Ozark to Russellville, as a peaceable demonstration against any mine operations in the Arkansas fields except under the terms of the 1924 wage agreement. Four Arkansas mines in the Spadra field now are operating on an "open shop" basis. A similar demonstration last week was followed by one mine resigning the 1924 contract after announcing it would operate under the 1917 wage scale.

COLORADO

The Moffat Coal Co., which has long been operating extensive bituminous coal mines near Oak Creek, is making preparations to start work in earnest upon the development of its anthracite property, known as the Crawford tract, in the Elkhead district, 22 miles northwest of Steamboat Springs, where preliminary work has been in progress for the past two years. The Moffat company will this summer establish an extensive camp and push development work, to have a mine open and ready to ship coal by the time the Moffat tunnel is completed next year.

ILLINOIS

The Springfield District Coal Mining Co. has decreased its stock from \$1,000,000 to \$50,000.

Replacement of the tippie and sur-

face plant will be completed about July 15 at Industrial Mine No. 18, Sesser. The plant, including all buildings, was totally destroyed by the tornado that passed over southern Illinois March 18.

The Spring Valley Coal Co., Spring Valley, has decreased its capital stock from \$2,500,000 to \$500,000.

The Majestic Mine, owned by the Equitable Coal & Coke Co., Duquoin, has closed down for repairs, including the retimbering of the main shaft.

The Buckley Coal Co. has closed a transaction with John Bontsche, Peoria, by which it will assume control of Mine A of the Citizens Coal Co., at Springfield, for a period of ten years. The mine, located just west of Springfield, has been closed down for some time, but will be reopened in a short time. The Buckley Coal Co., composed of George W. Schwaner, Edward H. Buckley and Carl H. Elshoff, also operates the Cantrall mine. The A mine of the Citizens' Coal Co., which has been taken over by the Buckley company, is generally considered one of the best equipped in the Springfield territory. It has an output of 2,000 tons daily. The company has entered into contracts and hopes to have the mine in operation practically all of the time.

Arthur Williams, Oswald Thomas and Robert Bartham have purchased a coal mine near St. Augustine, seven miles from Abingdon, which they will operate.

It is stated that the Bush Company contemplates the sinking of a new coal shaft on its land about six miles east of Zeigler.

The Assumption Coal & Mining Co., Assumption, has cleaned its mine and will begin to hoist coal within a few days. The company operates two mines at Pana, and one at Moweaqua, both of which are near Assumption.

INDIANA

The Joan Coal Co. property, at Riley, has been deeded to M. E. Lowish, of Indianapolis, by J. W. Marby, president of the company. The coal property was deeded in an exchange of real estate.

The Keeley Coal Co. of Dugger, Ind., has filed a certificate of final dissolution with the Secretary of State.

J. B. Orr, coal operator, and Oren M. Ragsdale were appointed receivers for the Vandalia Coal Co. by Judge Mahlon E. Bash, June 19 in probate court. Bond was fixed at \$25,000. The assets of the coal company comprise chiefly a number of coal mines near

Sullivan valued at \$5,000,000. The suit for receivership was brought by Alfred M. Ogle and Harold T. Dyer, stockholders in the company, who said that although the company was solvent, it was unable to operate and meet its obligations in the ordinary course of business.

The Big Four Coal Co., New Albany, has filed a preliminary certificate of dissolution.

A deal representing an investment of more than half a million dollars has just been completed by the United Electric Coal Co. It is said that the deal involves 2,500 acres of mineral land lying east of Farmersburg, in Jackson township, and 1,400 acres in the southern part of Vigo County. The purchasers contemplate the establishment of a large strip-mining enterprise. Nearly 1,200 acres of the coal land has been purchased in fee simple and on 1,300 acres the coal has been purchased outright, with option to buy the surface. One-half of the \$500,000 represented in the deal will be expended for the coal, while the balance will be spent in equipping the large strip-mining plant on the new holdings.

IOWA

The Riverville coal mine, near Albia, has been closed indefinitely, probably for the summer. Another mine, the Hocking, was closed April 1. The two mines employed 600 men. The Gold Goose mine has reduced output to one-fourth because of floods from recent rains.

James Mitchell, Knoxville, has been named a member of the board of examiners of mine inspectors of Iowa, succeeding the late John Caldwell.

KANSAS

One hundred and two men on seventeen teams representing the largest mines in Kansas participated in the seventh annual state first-aid and mine-rescue meet, at Pittsburg, June 13. A team from No. 20 mine of the Western Coal & Mining Co., at Arma, with Captain Louis Trego at the helm, won first place with a perfect score of 100 per cent. Two teams tied for second honors, and the flip of a coin gave second place to the Jackson-Walker Coal & Mining Co.'s team, and third to the Dittman-Wachter Coal Co.'s entry. Both scored 99½ per cent. All but two of the teams scored more than 90 per cent, the lowest average being 84½ by a team with only four weeks' training. The two teams placing highest will

represent Kansas in the international mine safety meet at Springfield, Ill., in September.

KENTUCKY

Announcement was made at Frankfort on June 18 that the Workmen's Compensation Board had increased the basic compensation insurance rates for underground coal mining to \$4.57 instead of \$3.75 and minimum \$3.72 instead of \$2.85.

The Thrifty Household Coal Buyers Association, Lexington, capital \$10,000, has been chartered by W. McC. Johnston, D. C. Johnston and J. T. Johnston.

A. H. Stepp, formerly manager of the Louisville office of the Southern Coal Co., who was succeeded a few weeks ago by Emore Manning, has returned to his old home at Birmingham, Ala., where he plans to re-enter the coal business.

Under foreclosure action J. B. Torbett, former owner of the Phenix Coal Mining Co., Drakesboro, recently took back the mining plant, the buyers failing to meet their notes. The property has since been sold to the Potter interests of Nashville, controllers of the Nashville Coal Co., who on June 10 started the plant operating on a non-union basis. This plant was the only one that tried to operate on a union basis last year following the strike in western Kentucky. A few months of steady losses resulted in its being closed down. There isn't a union operated plant in the western Kentucky field today.

The Universal Coal Co., Owensboro, acquired the holdings of Jennings Coal Co., including about 200 acres of land, at Basket, the early part of June.

State Senator James R. Rash, of Madisonville, who is connected with the St. Bernard division of the West Kentucky Coal Co., has announced that he seeks re-election. While opposing coal tonnage taxation, Mr. Rash favors

legalized betting on races and voted that way in the last Legislature. Unfortunately coal tonnage taxation and the question of legalized betting are being linked as the two big issues before the legislature.

The Consolidation Coal Co. recently filed suit against the Kentucky State Tax Commission, seeking an order to prevent the commission from increasing tax assessments for Letcher County beyond totals certified to by the County Board of Supervisors.

James R. Rash, prominent coal operator of Madisonville, former head of the St. Bernard Mining Co., now with the West Kentucky Coal Co., which absorbed the St. Bernard, has announced his candidacy on the Democratic ticket for re-election as state Senator from the Sixth District, composed of Hopkins and Christian counties.

One of the old Jewett, Bigelow & Brooks mines—the J-B Jellico Coal Co.—has been rehabilitated at Shafer, Ky., and is shipping coal again under the firm style of the Commodore Jellico Coal Co. J. T. Bradley, of Pineville, is in active charge and directing operations. New acreage adjoining has been acquired and the property will be put into first-class shape by Knoxville and Cincinnati bankers and coal men, who purchased it. New picking tables have been installed and other new equipment is to be added.

MONTANA

Albert Gatley, superintendent of the Republic Coal Co., of Roundup, has been appointed by the state Industrial Accident Commission a member of the state board of coal mine inspectors. Mr. Gatley, whose term is for one year, was named in place of Thomas Good, who was unable to qualify because of illness.

MINNESOTA

The State of Minnesota has just reorganized its bureaus and departments

by which the purchasing will be handled through a single department. This will include coal for all state institutions.

MISSOURI

William Mitchell, a coal operator of Huntsville, was elected president of the Missouri Mine Safety Association following a state first-aid meeting held at Moberly recently. Frank W. Fenix, of Joplin, state mine inspector, was named as vice-president, and George Happle, of Moberly, secretary. The first-aid team from Huntsville won first prize, and will represent Missouri in the national meet to be held in Springfield, Ill., Sept. 10, 11 and 12.

At a meeting in Kansas City, June 3, to discuss methods for saving fuel, officials of the Kansas City Southern Ry. revealed that the road spends \$2,000,000 a year for fuel. This, it was said, constitutes 35 per cent of the total operating cost of the system.

NEW YORK

Koppers Seaboard Coke Co., Inc., New York City, has filed a certificate in the office of the Secretary of State at Albany increasing its capital from \$300,000 to \$600,000.

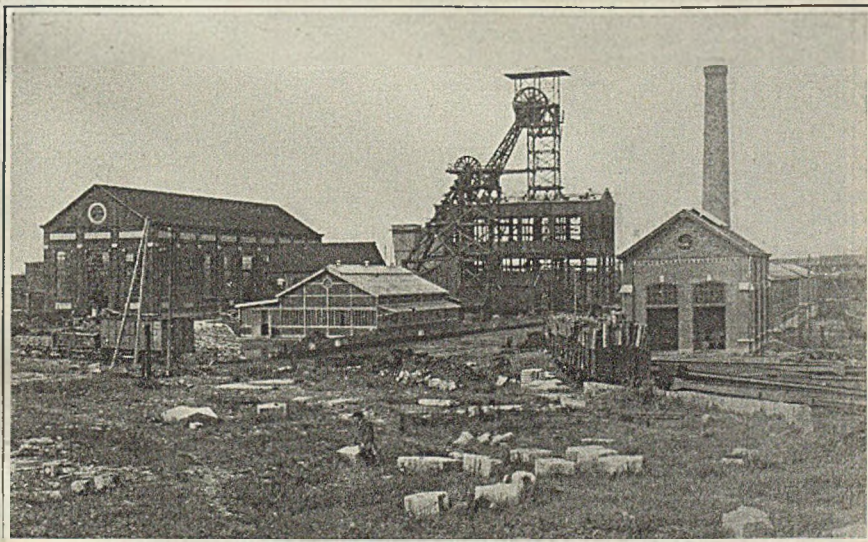
OHIO

The Cleveland office of the Philadelphia & Cleveland Coal Co., which was the main office of the concern, has been consolidated with the Columbus office, located on North Front St., as of July 1. A. C. Ingersoll, president of the company, has purchased a home in Columbus and will remove there. The company is a large distributing concern with offices at Cincinnati, Indianapolis, Huntington, W. Va., and Pittsburgh. The concern operates a large storage plant at Groveport, on the Hocking Valley, where about 100,000 tons of slack is in storage.

Petitioners in the involuntary bankruptcy proceedings against the Blanchard Zanesville Mining Co., which operates large mines north of Zanesville, have united in a request to the federal court that the receivership be lifted. C. M. Maxwell, who has been acting as receiver, has joined in the request. It is averred that the company is solvent and that it should be made free to carry out large fuel contracts with the Ohio Power Co., which operates a large plant at Philo, south of Zanesville.

Leonard Johnson, sales manager of the Lorain Coal & Dock Co., of Columbus, resigned that position June 1 to become associated with the C. W. Claslin Coal Co., of Boston, Mass. The Claslin company does a general wholesale coal business.

Since two addresses were made recently in Ohio by John L. Lewis, president of the United Mine Workers, coal operators in the southern Ohio field report a much more radical feeling among the miners of the state. For this reason the likelihood for a compromise on the Jacksonville scale, which might



Plant No. 4 of the Coal Mining Co. of Liévin, France

This illustration was made from a photograph taken as the plant neared completion. As the mines are essentially hand operated below ground, the power houses are not imposingly big structures even at large establishments.

make it possible for operators in the southern Ohio field to open mines, is not as great now as formerly.

The Hocking Valley R.R. Co. has placed orders for coal for its 1925 requirements. Only Ohio mined coal is to be used. Several bidders asked for the award but the contract was let to smaller Ohio operations at \$1.65 per ton, f.o.b. mines.

Noel L. Mahan, Western agent for the General Coal Co., is moving general Western headquarters of the company to Cincinnati. The Detroit office will still be maintained. Elmer Weirhake, who has been resident manager in Cincinnati, will become assistant general Western sales agent.

The Ohio & West Virginia Coal Co., a large jobbing house, with offices formerly located at 16 E. Broad St., (Columbus,) may be liquidated, according to a report. The company has not been active in business for over a year, when the offices were closed, and the way things stand now liquidation seems mighty favorable. David Armstrong, of Jackson, is head of the company.

Stanley Johnson, for the past six years assistant general manager of the Lorain Coal & Dock Co., has been named second vice-president to succeed his cousin, Leonard Johnson. Leonard has been serving in this capacity for five years, but recently severed his connections to take a position with the C. W. Clafin Co., a wholesale coal concern of Boston.

OKLAHOMA

If something is not done about the non-union operation of the Crowe Coal Co. in the Henryetta field, union miners working under the 1924 scale for the same company in Kansas will be asked to call a strike, William Dalrymple, president of the district 21, United Mine Workers, says. It is rumored that a petition is being circulated asking Gov. M. E. Trapp to recall the troops, which, according to Chief of Police Stormont, still are on duty, although there is no indication of any trouble at the mines.

PENNSYLVANIA

The Glen Alden Coal Co. is planning the establishment of a large coal-storage plant, the largest in north-eastern Pennsylvania, near the Wyoming monument, Wyoming, it is reliably reported in Scranton. The company is said to be negotiating for the purchase of a farm located between Wyoming and Dickville for this purpose. The farm contains 50 acres and it is understood will change hands for the sum of \$30,000. The Delaware, Lackawanna & Western R.R., the Glen Alden coal carrier, runs through the farm. According to reports the plant will have a capacity of 100,000 tons of coal and will consist of two sections.

The Coy mine of the Brush Creek Coal Mining Co., which has been leased by the Rochester & Pittsburgh Coal & Iron interests of the Jefferson &

Indiana Coal Co., began operations on June 22 with more applicants for work than could be used.

The Connellsville Central Coke Co. is resuming operations at the Herbert plant after being idle for several months. There are 210 rectangular ovens at this plant.

The Temple Iron Co. will hold a meeting at Reading on Thursday, Sept. 3, to wind up its affairs. At one time it was commonly known as the "Hard Coal Trust," as its stockholders were the hard coal carrying railroads. The company has been inactive since 1914, when the U. S. Supreme Court declared it a monopoly.

Federal Judge Robert M. Gibson on June 23 denied the application of the United Mine Workers for an injunction to restrain the Jefferson & Indiana Coal Co. and Sheriff John M. Malcolm, of Indiana County, from interfering with union meetings near the company's mine in Indiana County.

William Geary has resigned as superintendent of the Sunshine plant of the Baton Coal & Coke Co., at Martin. Mr. McDowell, superintendent of the Linn plant, near Braznell, has been placed in charge of both plants.

The Pennsylvania Coal & Coke Co. reports May gross at \$349,382, compared with \$430,046 in the same month last year and deficit after all charges, except federal taxes, of \$61,419 against a deficit of \$49,540. For the five months of the year gross totaled \$2,269,244, against \$2,629,398 a year ago and deficit after charges \$282,752, compared with \$86,513.

The Ridgeview Coal Co., of which Jesse K. Johnston is president, has let contracts with the Link Belt Co. for one slack conveyor, one sand and slate conveyor for conveying coal from the mine to the tippel and for two mechanical loading machines, with a capacity of 500 tons daily. Charles E. Craig

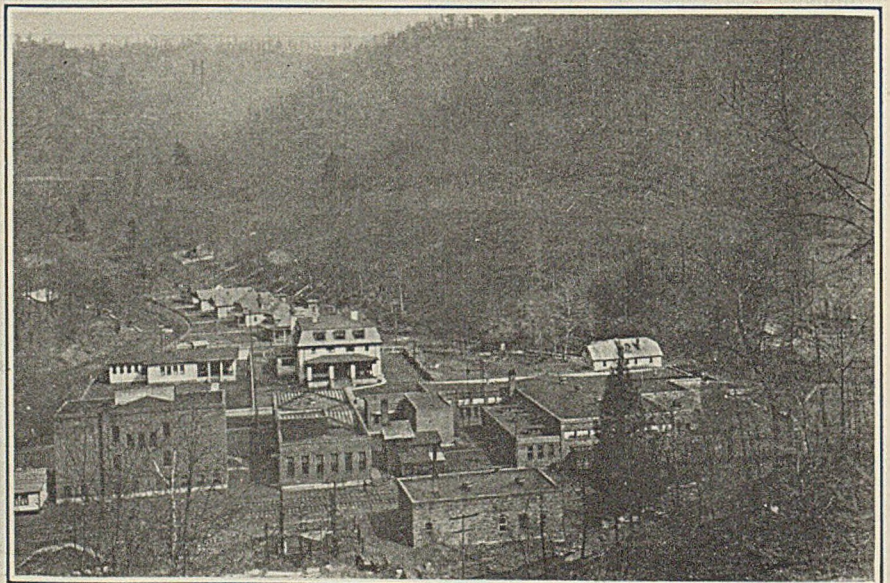
of Morgantown, W. Va., has accepted the position of superintendent of the Ridgeview company and is now in complete charge of operations.

Officials of the Kingston Coal Co. have decided to sell a number of their houses to employees of the concern. The company owns more than 100 houses in Kingston and Edwardsville boroughs and some of their employees have been renting them for years. The homes are being sold at between \$6,000 and \$7,000. All are improved and on improved streets.

Workmen in the employ of the Philadelphia & Reading Coal & Iron Co. have started to raze the frame tower over the Bear Valley shaft. The tower was erected more than 25 years ago and is being torn down as a result of a recent discovery showing faulty construction. The tower will be replaced by one of steel construction. Four weeks will be required to complete the work.

The Penn-Lackawanna Coal Corporation, organized in April of this year, with executive offices at 35 Wall St., New York City, has taken over under long-time leases the 600-ton Simpson Breaker and the Lackawanna Mines, in the vicinity of Carbondale; the Tipperary Mines, located at Jermyn, and the Ansley Mines, located near Archbald. This corporation is now operating the Simpson Breaker, near Archbald, and the Lackawanna Mine. It also has plans for the erection of an additional breaker at or near the Ansley Mines and for extensive development of both the Ansley and Tipperary Mines. The officers of the corporation are: President, M. B. Courtright of Philadelphia; vice-president, Wm. J. Jegen; secretary and treasurer, J. F. Limbach, of Hoboken, N. J.

A new electric fan recently put in operation at No. 3 shaft of the Lehigh Coal & Navigation Co., in the Nesquehoning district, has a capacity of circulating 200,000 cu.ft. of air per minute.



Coalwood, McDowell County, W. Va.,

Looking Up Snake Root

This is part of the village attached to plant No. 252, Consolidation Coal Co., Pocahontas-New River division, a few miles over the hills from Gary and Welch, about 5 miles as the crow flies from each.

Steel work has been placed about the new device to protect it from being damaged by falls.

The State Mine Examining Board cannot legally grant a certificate of qualifications to a candidate for the office of mine inspector who has reached his fiftieth birthday, even though he possesses all the other qualifications required by the laws of Pennsylvania. This is the decision of Frank I. Gollmar, a Deputy Attorney General in an opinion to Joseph J. Walsh, State Secretary of Mines, just made public. The opinion cites the laws bearing upon the question which was asked by the mining department head.

Coal mining in the Pigeon Creek Valley, Washington County, where 10 large mines are located, virtually came to a standstill June 25 when the Bethlehem Mines Corp., a subsidiary of the Bethlehem Steel Corp., closed its Marianna and Ellsworth properties. Notices posted said the closing was because of the high production cost. Normally each mine employed about 750 men. For the last few months the mines had been working about three days a week. Eight other mines in this district closed down some time ago.

Continuation of the commissions of the following mine inspectors was announced June 25 by Governor Pinchot: Anthracite—P. J. Moore, Carbondale; L. M. Evans and D. T. Williams, Scranton; Augustus McDade, Taylor; E. C. Curtis, John B. Corgan and T. J. Williams, Kingston; D. T. Davis, Wilkes-Barre; Frank Kettle, Nanticoke; D. J. Roderick and J. J. Stickler, Hazleton; M. J. Brennan, Pottsville; P. C. Fenton, Mahanoy City; William Reid, Centralia; B. I. Evans, Mt. Carmel; P. F. Friel, Shamokin, and Charles J. Price, Lykens. Bituminous—John F. Bell, Dravosburg; C. P. Byrne, Charleroi; P. J. Callaghan, Bridgeville; F. W. Cunningham, Somerset; Nicholas Evans, Johnstown; Edward E. Girod, Masontown; W. H. Howarth, Bridgeville; William Langan, DuBois; Thomas S. Lowther, Indiana; Alexander McCanch, Monongahela; Thomas A. Mather, Tyrone; John I. Pratt, Pittsburgh; C. B. Ross, Latrobe; Thomas B. Williams, Johnstown, and David Young, Freeport.

TENNESSEE

The twelfth annual field day and miners first-aid contest will take place Sept. 26 at the East Tennessee Fair at Knoxville, under the auspices of the Southern Appalachian Coal Operators' Association, Tennessee Mine Inspectors, Knoxville Chamber of Commerce, U. S. Bureau of Mines and the East Tennessee Fair Association. Valuable prizes will be given the winning teams and there will be a banquet and entertainment for the contesting teams in the evening. R. E. Howe, secretary of the Southern Appalachian Operators Association will have charge of the general arrangements. J. M. Webb of the U. S. Bureau of Mines, will help to train the teams. The contest will be judged by Knoxville physicians. Dr. Kyle Copenhaver, formerly chief surgeon for the American Zinc Co., will be chairman of the judges.

The Signal Mountain Portland Cement Co., of which John L. Senior, James Building, Chattanooga, Tenn., is president, is reported to be about to establish a coke and byproducts plant.

UTAH

The State Securities Commission has cancelled the stock application of the Two-Ton Smokeless Fuel Co., of Salt Lake City, on motion of the applicant. The proposal was to sell 7,715 shares of common stock at \$10 a share.

Coal production in Utah in May totaled 251,874 tons. In May last year 260,586 tons was produced in the state. In April of this year 288,536 tons of coal were produced.

The Consolidated Coal Co., of Salt Lake City, has received a permit from the State Securities Commission to offer for sale 50,000 shares of its stock at \$1 par value. The company's property is located in Salina Canyon, Utah. The property has a large shaft 265 ft. deep and about 280 ft. of tunnel extending to the seam to be mined.

On June 17 John Taylor, mine foreman for the United States Fuel Co. at Hiawatha, was appointed an assistant state coal mine inspector. He will work in conjunction with John Crawford, who has been Utah coal mining inspector for several years past. The additional inspector was made necessary by the recent withdrawal of part of the inspection assistance rendered the state by the U. S. Bureau of Mines.

WEST VIRGINIA

The recent death of Frank P. Harman, of Washington, president of the Turkey Gap Coal Co., necessitated a special meeting of the board of directors at Bluefield on June 17 at which the following officers were elected: James A. McQuail, president and general manager; Oscar M. Deyerle, vice-president; William H. McQuail, Jr., secretary and treasurer. Members of the board of directors are: James Booker Clark, of Baltimore; Clinton DeWitt, Jr., Lynchburg; E. McD. Harmon, Burch; William H. McQuail, Jr., Pottsville, Pa.; James D. Tate, Chilhowie, Va.; Oscar M. Deyerle, Bluefield; Charles K. Robertson, Shamokin, Pa.; James A. McQuail, Lott; Henry M. Sackett, Lynchburg, Va. The company is a West Virginia corporation with a capital of \$1,000,000 and a substantial acreage of unmined coal. The company operates six collieries, the Wenonah mines Nos. 1, 2 and 3 and the Modoc, Josephine and Joanna mines with an annual production of from 500,000 to 600,000 tons of Pocahontas No. 3 seam coal.

The Maidsville Coal Co., began operations during the third week of June at the old North American Coal Co., mine at Maidsville, recently purchased at public sale. The property at Maidsville was sold on May 23 to satisfy outstanding debts, the Fiedler Coal & Coke Co., of Morgantown, which held a trust lien against the property, purchasing it for \$13,000.

The annual examination for mine

foremen and firebosses is to be held by the Department of Mines beginning at 9 o'clock a. m. at the following places and on the dates mentioned: Morgantown, West Virginia University, Mechanical Hall, July 20; Central Junior High School at Charleston, July 27; High School Building, Beckley, July 30; School building at Welch, Aug. 3; High School building at Logan, Aug. 6, and High School Building at Wheeling, Aug. 10.

During the latter part of last week the work of rock-dusting mine No. 41 of the Bethlehem Mines Corporation, near Barrackville, where the explosion occurred March 17, was under way. Early this week the work of rock-dusting the twin plant, Dakota, will be started.

The Thurmond Consolidated Coal Co., was recently organized with a capital stock of \$1,500,000, the headquarters being at Logan. This company represents a consolidation of several coal companies in which Walter R. Thurmond and others are interested, all operating in the Logan field.

C. F. Huff, of Greensburg, Pa., has leased the Jerry Run Coal Co. mines, comprising about 63 acres of Pittsburgh coal in the southwestern part of Taylor County, the lease to run for a period of 10 years. According to the best information obtainable the lessee will start operations in a short time, giving employment to about 60 non-union miners.

The Coal Operators Sales Agency has obtained quarters in the recently completed building of the Union Bank & Trust Co. in Huntington. F. W. Schoew is president of the company.

Veazey No. 2 mine, at Robson, on the Virginian Ry., has resumed operations. At the Glen Jean mine, owned by the same company, electric pumps are being installed, and as soon as that work is completed operations will be resumed.

In the Marion County Circuit Court at Fairmont recently the Fairmont & Cleveland Coal Co., which has one of the largest coal mines in northern West Virginia in Parker Run, at Rivesville, was awarded 107 of the company houses, which it will receive possession of July 29. Two houses were awarded in the Dakota mining town to the Bethlehem Mines Corporation in eviction suits.

The total authorized capital stock of the Amelia Coal Co., has been increased from \$25,000 to \$50,000. These companies have reduced their capital stock: The Deep Hollow Coal Co., from \$10,000 to \$5,000; Glennova Coal Co., from \$50,000 to \$5,000; Chesapeake Coal Co., from \$1,000,000 to \$500,000.

The following West Virginia coal companies have surrendered their charters and discontinued business: The Western Coal Co., M. M. Tyree Coal Co., and the Norwood Coal Co.

There is a shortage of mine labor and miners in the Winding Gulf district, despite the fact that 17 out of 74 mines in that district have shut

down, according to an announcement by George Wolfe, secretary of the Winding Gulf Operators' Association.

WYOMING

The Kemmerer Coal Co. is to install more machinery in its Sublet mines, which will employ about thirty more men. The new machinery, which includes a conveyor, is expected to arrive early in July.

ALASKA

Anthracite deposits on Chickaloon Ridge, reported last year by the U. S. Geological Survey, will be investigated by the Bureau of Mines. Several permits already have been taken out in the district. It is planned to test the coal on an Alaska railroad locomotive, and if found satisfactory, the product will be mined and shipped in large quantities.

WASHINGTON, D. C.

Through discontinuance of work and reassignment of duties 23 positions in the Geological Survey have been abolished during the current fiscal year. The annual salaries of these positions amounted to \$41,500, and as the work has been discontinued or absorbed among the other employees this represents a yearly reduction in the overhead expenses of the bureau.

The U. S. Civil Service Commission announces an open competitive examination for associate cadastral engineer (qualified in mining engineering) to fill a vacancy in the General Land Office, Department of the Interior, with headquarters at Denver, Colo., and vacancies occurring throughout the United States in positions requiring similar qualifications. The entrance salary is \$3,000 a year. The duties of the position are the correlation of surface and subsurface operations under coal, oil and gas leases; the establishment, re-tracement and relocation of survey lines and corners; the plotting and mapping of the work performed; the making of surface and subsurface surveys of mineral claims and leasing units, and the workings in connection with the supervision of operations, output and royalties. Receipt of applications will close Aug. 4. Full information and application blanks may be obtained from the U. S. Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. Civil Service examiners at the post office or custom house in any city.

CANADA

Disaffected miners, working in the Drumheller and Wayne coal fields of Alberta, on June 20, decided by a vote of 684 to 132 on the formation of a new local union entirely separate from the United Mine Workers. The total number of miners at present working in the field is approximately 1,800, the majority of the men abstaining from voting at the request of the U. M. W. officials.

Because freight rates have now fallen within the province of the Board of

Railway Commissioners, the Canadian National Rys. has withdrawn from the verbal agreement made with the Alberta Government to move 25,000 tons of coal from Drumheller, Alta., to Ontario points at an experimental figure of \$7 per ton. The railroad's move is believed to have been dictated by the fear that, if the experiment proved that coal could be moved at between \$3 and \$4 less than the existing tariff of \$11.40, the entire position of the National Rys. in regard to Western freights might be in jeopardy.

Governmental assistance for domestic production of coke from coal mined in Canada is to be provided in a bill prepared by Minister of the Interior Stewart. Not exceeding 3 per cent of the cost of the plants would be advanced by the government.

Traffic

The New York Public Service Commission has approved new rates of the Delaware, Lackawanna & Western R.R. on coke, coke breeze, coke dust and coke screenings, carloads, minimum weight in open cars 50,000 lb. (except that when car is loaded to full visible or cubical capacity, actual weight will apply, but not less than 35,000 lb.) and in box or stock cars 40,000 lb. rates per net ton from Harriet, to New York, Chicago & St. Louis stations: Angola, Dunkirk, Farnham, Irving, Sheridan and Silver Creek, \$1.26 (reduction, 25c.); Ripley and State Line, \$1.51 (reduction, 25c.), effective July 24. Also of the New York Central East from North Tonawanda to Harriet, 70c. (reduction, 43c.) per net ton, effective June 22, 1925.

A reduction of 42c. a ton on coal freight rates between Springfield, Ill., and Bloomington, Ill., and a reduction of 27c. a ton on coal between Lincoln, Ill., and Bloomington, Ill., has been ordered by the Illinois Commerce Commission. Present rates between Springfield and Bloomington are \$1.42 a ton and between Lincoln and Bloomington \$1.18 a ton. The commission directs that the rate from Springfield shall be \$1 a ton and from Lincoln shall be 91c. a ton.

Association Activities

Incidental to the annual meeting of the National Coal Association held at Chicago last week, the West Virginia Coal Association held its annual meeting at the same time, at which all the old officers were re-elected, as follows: J. G. Bradley, of Dundon, president of the Elk River Coal & Lumber Co., president; G. H. Caperton, of Charleston, vice-president; Walter H. Cunningham, of Huntington, secretary; C. C. Dickinson, of Charleston, treasurer. Representative coal men from all sections of the state were present at the meeting. Several hours were devoted to a discussion of problems affecting West Virginia operators.

The thirteenth annual outing of the Cincinnati Coal Exchange drew a record crowd June 16. More than one hundred sat down to the dinner at the North Cincinnati Gym Club's grounds at Bass Island. As usual, the baseball game attracted most of the attention and for the first time in three years the team represented by men in the low volatile trade, captained by Ed Harper, walked off with the trophy. Harry

Jungens pitched for the victors and Ross caught. The High-Volatile battery was Davidson and Justice, pitchers, and Loeb, catcher. The presentation of the trophy was made by Harold W. Coates, Sunday editor of *The Commercial Tribune*. This year there was a long list of athletic events. The three-legged race went to Gerding and Gormlay, who also won the second event, a pick-a-back race. The 100-yard dash was won by Elmer Wierhake, manager of the General Coal Co., while the same event for aged racers went to Fred Heitzman, of the Caster, Curran & Bullitt forces. The team captained by Jack Humphrey won the tug-of-war and H. B. Justice won the shotput. Ernie Howe, a former president of the Coal Exchange, and Jim Reilly, former president of the Chamber of Commerce, were the judges. The Chairman of the Entertainment Committee was Julius B. Ratterman.

At the annual meeting of the Colorado and New Mexico Coal Operators' Association, held June 17 at Denver, Colo., the following officers were elected: F. R. Wood, president; H. F. Nash, vice-president; F. O. Sandstrom, secretary, treasurer and traffic manager. The following were appointed directors for the ensuing year: W. D. Brennan, Frank Bulkeley, L. A. Hayden, A. M. Johnson, A. M. McNeil, S. S. Murphey, H. F. Nash, J. J. Roche, J. van Houten, J. F. Welborn, and F. R. Wood.

New Companies

An Ontario charter has been granted to British Colonial Mines of Canada, Ltd., with headquarters at Toronto. The authorized capital is \$5,000,000 and Toronto lawyers are mentioned as the incorporators.

The Red Glow Coal Co. was incorporated in Denver, Colo., the early part of June, with a capital stock of \$40,000, by Ambrose F. Lunney, James B. McGowan and others.

Obituary

David Kelso, age 45 years, who served several years as an associate mine inspector and who was associated with mining operations in the Birmingham (Ala.) district a greater part of the time for the past 35 years, died suddenly from a heart attack on June 21, while on a pleasure ride in his automobile with a friend.

Coming Meetings

Atlantic States Shippers Advisory Board. Seventh regular meeting at Atlantic City, N. J. July 8-9. General secretary, P. W. Moore, 30 Vesey St., New York City.

Rocky Mountain Coal Mining Institute. Summer meeting, Aug. 26-29 at Price, Utah. Secretary, Benedict Shubart, Denver, Colo.

American Institute of Mining and Metallurgical Engineers. 132d meeting, at Salt Lake City, Utah, Aug. 31 to Sept. 3. Secretary, F. F. Sharpless, 29 West 39th St., New York City.

Oklahoma Coal Operators' Association. Annual meeting, Sept. 10 at McAlester, Okla. Secretary, A. C. Casey, McAlester, Okla.

New York State Coal Merchants' Association. Annual convention, Sept. 10-15, at Richfield Springs, N. Y. Executive Secretary, G. W. F. Woodside, Arkay Bldg., Albany, N. Y.

National Safety Council. Annual meeting Sept. 28 to Oct. 2, at Cleveland, Ohio. Managing Director, W. H. Cameron, 168 No. Michigan Ave., Chicago, Ill.

Tenth Exposition of Chemical Industries. Sept. 28 to Oct. 3, at Grand Central Palace, New York City.

Canadian Institute of Mining and Metallurgy. Annual western meeting Nov. 3-5, Winnipeg, Manitoba, Can. Secretary, George C. Mackenzie, Drummond Bldg., Montreal, Que., Can.

Fourth National Exposition of Power and Mechanical Engineering, Nov. 30 to Dec. 5, at Grand Central Palace, New York City.

Coal Mining Institute of America. Annual meeting, Dec. 9-11, Pittsburgh, Pa. Secretary, H. D. Mason, Jr., P. O. Box 604, Ebensburg, Pa.