COAL AGE

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And Now Another Diagnosis

MANY A MAN has died from the calling in of too many doctors and the administration of too many alleged cures. Finding the coal "industry admittedly sick and sick almost to death," Ethelbert Stewart in the *Labor Review* seeks for it another diagnosis, the purpose of which is to show how sick the industry really is. Doped with "cures" the industry is indeed sick, but we fear more medicine will only increase the malady. With Harry L. Gandy, the secretary of the National Coal Association, we believe the cure is to leave the industry alone to correct its condition by the strength of its own constitution.

All the researches of the Fact-Finding Commission Mr. Stewart finds inadequate and misleading. He wants someone to ascertain how many hours are worked at the face. Was this one of the facts the responsible "managers of the industry have not seen their way clear to furnish?" If so, it was because the miner objects to any such inquiry. He does not want to punch a clock. If the miner would do it, the operator might be able to tell how long and how often his men work.

The final arbitrator in the anthracite region has decided that the requirement that the mine worker punch a clock is a violation of the union agreement, except where a new mine is started and even in such cases the mine worker objects to surveillance of this kind. This information, therefore, cannot be made available till the union is satisfied to allow the practice to be introduced. The expense of having every man carry a check and having the time recorded at which every man is checked in and checked out and having the records tabulated and totaled would be considerable. Would this reduce the cost of coal? Would this change in the rules be in accord with the union contract? We deny the first and question the latter.

Be it noted that we confess that the number of days the tipple works is not a true test of working time. Many men work when the tipple is idle; many, when the men at the tipple work, lay off for sickness, pleasure and farming, many day men and miners work more hours than the tipple hands and still more for less hours, but on the whole the number of days the tipple operates measures, as well as any other figure, the opportunity for work, whether the miner embraces that opportunity or neglects it. As for the day workers they have a much better running time than the tipple record would show. The figures collected by the commission in this case are truer than those obtained from the tipple run. And those figures have been used.

As a matter of fact unless the time spent and the income obtained in other work than mining were computed no one would know how much the mine workers earn. In certain sections the mines actually are closed down in the farming season, the men finding work on their farms more profitable than mining. On many farms the actual working days of the farmer are short and extremely profitable. The farmer, of course, does not get rich at his occupation, but his income in the short time that he spends in sowing and reaping greatly exceeds that in most industries. If it did not he would not be able to continue in that industry, so exceptionally seasonal is it. It is far more irregular than mining, though no one has been found to deplore that fact.

Mr. Stewart is not a safe guide to statisticians or he would not talk of the extending of entries and "driveways" as a capital outlay and not a current production cost. Has he never learned that mining is a wasting industry, and does he not know that entries have to be extended merely to maintain production? When a mine reaches the end of its activities only the coal adjacent to the roadways and supporting them is left, and the roadways are of value only by reason of this small quantity of coal. By the time the mine reaches its boundaries many of the roadways have long ago had these pillars removed, destroying their entire value. Then when the mine is finished, even the pillars remaining have been drawn, and the capital value of every roadway has been entirely lost.

We are surprised, also, that Mr. Stewart objects to figures of accidents based on tons produced. Surely their value cannot be disputed. We want to know, and are entitled to know, with what cost in lives and in accidents our coal is produced, even though the mine worker is mainly interested in the fatality and accident rate per man.

We would be glad if the lives lost per million tons of output could be decreased. Surely Mr. Stewart would be also. Mr. Stewart, let us assume, puts twenty tons in his cellar yearly. Is he not interested in knowing that those twenty tons have caused a minimum of distress? He wants that tonnage, and he desires to get it by adding as little as possible to the sum of human misery.

But the mine worker looks at the problem from a different angle and for him quite a proper one. He wants the rate of accident and fatality per thousand men employed greatly lowered. He wants the chance of saving his life raised. So the Bureau of Mines figures both ways and is even figuring as far as it can on the basis of man days which is a good statistical figure but one which does not really represent the chance of living and escaping injury of the man who enters the industry.

These last figures, though quite incomplete, are already available, though they have not been issued as bulletins simply because they are incomplete. A wise statistician would see that all three methods of calculation have their value in answering the problems of the industry.

The little use made of the Coal Commissions report, the fact that it has not been published and will not be till it is ancient history, and that few who have it have cared to digest it suggest that any more statistics would be a waste of money. The public does not care to study these reports and cannot get their true significance

without an exhaustive study which it does not care to make, and the coal men who spent millions on them do not want to collect them again, especially as they have not as yet led to any really constructive result. Investigations and inquiries which lead to no useful end and the results of which the government shows no keen desire even to print are so fruitless that they are sheer waste of money. They have added much to that high cost of government which everyone, including the administration, is deploring.

Seeing and Knowing

ON THE SIDE LINES of the National Retail Coal Merchants' Association, a retailer remarked that he had received a shipment of pea coal on which he looked with considerable suspicion. It didn't seem good enough to justify him in putting it on the market. If it wasn't up to standard he would be liable to lose out to his competitors. But in the end he sold the coal, and every consumer was satisfied. Some expressed themselves as extremely well pleased. The trouble was that the retailer gave this coal only a visual inspection. Had he put it to a specific-gravity test he would have known just what sort of coal he had received.

Coal as the Basis of a New Chemical Industry

OF COAL the industry has learned that it is capable of being used in many ways and each time it heard about such new developments it visualized a new industry at the coal mines, but in nearly every instance the installations went elsewhere and were controlled by other interests. Gas was made from coal but the expense of piping it and using the gas only part of the year made it difficult to finance profitably the making of gas at mines, especially in view of leakage and the possible breakage of long lines of pipe traversing regions over hill and down dale, across streams and railroads.

Coke could be made in byproduct ovens, but what could be done with the gas? It was not needed at the mines, and it could not be piped at a profit. Besides, the coke companies desired to mix coals and so it paid best to take them to a common and suitable manufacturing point and to mix them there. As for electricity, the waste in extremely distant transmission and the lack of condensation water at the mines tended to make the generation of electrical energy at the mines for general consumption undesirable in some cases.

But now comes a new suggestion. Coal can be made into water gas which consists in the main of carbon monoxide and hydrogen; the gas can be scrubbed and the tar removed. Then the cleaned gases can be subjected to a high temperature and pressure in the presence of a catalyst. The product formed can be arranged to be largely methanol or methyl alcohol. This is a product corresponding in the main to wood alcohol and capable of doing the same work as that liquid. Wood alcohol is poisonous; it is not known whether synthetic methanol is or is not. In any event it is odorless, whereas wood alcohol has a pungent odor. The first can be made for from 15 to 16c. a gallon, whereas wood alcohol costs 68 to 73c. By the time methanol is brought from Germany, it costs 40c. a gallon, but even at that price it is making the manufacturers of wood alcohol more than apprehensive and the importations are increasing rapidly.

It seems clear that the coal industry is going to displace that of lumber as source of alcohol, and there is no reason why the methanol should not be made at the mines. The patents are held by the Chemical Foundation, Inc., a company which has been organized to take charge of the German patents seized during the war. It issues licenses and uses the money to cancel the charges against the Germans for damages inflicted during the war. This method of manufacturing methyl alcohol was invented and patented before we entered the conflict, but the patented process has only recently been actively operated in Germany. The opportunity is excellent for introducing the process into America and some one of our many operators should get in touch with a chemical corporation and endeavor to have a plant erected at some mine, for the products are all of a character that they can readily be transported. There are no such cumbersome materials as coke and no gases to be handled or used. Other hydrocarbons can be made by this process such as the aldehydes, ketones and acids. Motor spirit might well be one of the ultimate products of the synthetic methanol process.

That Perplexing German Problem

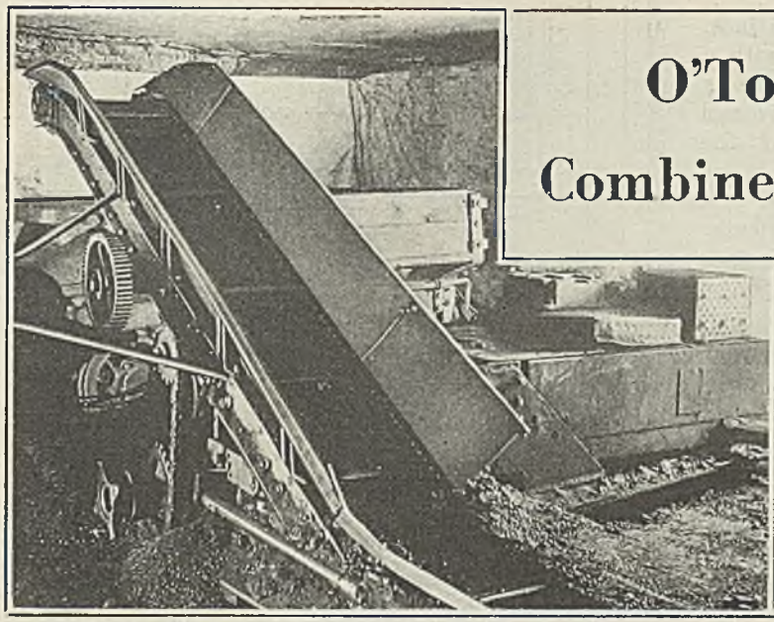
THOSE WHO DEMANDED that Germany should pay, forgot that the payment must be taken in services, and no one apparently wants to accept such ministrations leaving their own labor idle meanwhile. Germany is largely a manufacturing country, and its products compete with those of the Allies. Great Britain, in particular, is idle today because of the large service the lowly paid and well-equipped German is able to render.

Now comes a proposal which, perhaps, is not new, but for the first time well staged. It would provide that the Germans shall furnish the Allies with new ports and new railroads that will open up large areas in Africa, let us say, and put the products of the mine, the soil and the forest on the market.

This program has an appealing sound but if it is coal that is to be mined and the coal is good enough to ship, Great Britain will be adversely affected, and if it is copper or iron we shall be unfavorably disposed towards its addition to our present glut of production. More wheat lands under cultivation also will injure the farmers everywhere.

Fortunately, the nation which permits itself to accept such German assistance is its own judge of what kind of competition it fears and what assistance it desires. It can select such a port and such a railroad as will not build up an undesirable competition with its own nationals. So some arrangements may be made, always remembering that the contractors and manufacturers of that country will be wondering why they are excluded from bidding for contracts or why the Germans are given preference over nationals in the awarding of bids. Furthermore, employees out of work will make a similar clamor for a share in the construction of plant and equipment.

The suggestion that the Germans be afforded the opportunity of constructing ports and railroads, however, has its merits provided the project is deftly chosen in the general interest of the nationals of any particular country and provided their psychology will enable them to see it as an industrial undertaking that otherwise would not have been attempted and as furnishing an opportunity to increase the national wealth and add another safety valve for an excessive population.



O'Toole Machine Is a Combined Cutter and Loader

Removes 42-Ft. Swath of Coal in Long-Face Mining at Rate of 2 In. per Minute—Big Hydraulic Jacks Control Roof Along Faces; Cribs Protect Headings

By Frank H. Kneeland
Associate Editor of *Coal Age*, New York City

Delivery End of Machine

THE EVOLUTION of underground mechanical coal loaders has progressed far enough to convince many mining men that any machine, to be most efficient, should not duplicate the movements of a man with a shovel, as most of the early types did. Also, they feel that the method of mining should be adapted to the machine instead of conforming the machine to the method. One of the latest developments in this direction is an invention of Col. Edward O'Toole, general superintendent of the United States Coal & Coke Co. of Gary, W. Va. It is a combined cutter and loader for long-face mining. It undercuts the full length of a 42-ft. face while a parallel conveyor on the floor bears the falling coal to a haulageway loading point. The whole machine is advanced against the face by power-driven screws. Little explosive is used except in development work.

The first machine of this kind—or what might be called the experimental machine—has been in operation for over a year. During this time many of its weaknesses, both in design and construction have been discovered. Some of these have been corrected in the present machine, but others can be rectified only by a new and improved model.

This machine is composed of five basic elements or parts, namely: (1) An electric motor and gear box actuating all parts of the machine by means of gears, clutches and chains; (2) a sectional or segmented cutter bar that undermines the coal face; this is built into and forms a part of (3) a segmented conveyor that receives the coal from the face and transports it to the mine car; (4) a propelling mechanism that forces the entire machine to its work, and (5) hydraulic jacks of large capacity that control the roof pressure. At first blush it might be thought that movable jacks could hardly be considered as forming parts of a machine, but as will be shown later, however, the loading mechanism could hardly function without them.

The general dimensions of the present machine are as follows:

Over-all length	49 ft. 9 in.
Length of face cut	42 ft.
Over-all width of conveyor (from rear of skirt board to point of bits)	4 ft. 2 in.
Height of conveyor at delivery point	4 ft. 10¾ in.
Total height of top of conveyor	6 ft. 2¾ in.

All the various parts or elements enumerated work either in unison or separately as may be desired. All movements of the machine are power actuated. Under favorable conditions the coal is undercut, brought down, carried to and loaded upon the mine car with little labor, none of which is arduous.

The cutter chain employed on this machine is identical with that used on an ordinary short- or long-wall undercutter except that the blocks carry bits at about 5-ft. intervals instead of every block carrying its bit. The advance of the machine under the face is so slow that the bits thus spaced will do all the cutting necessary. The chain travels in the ordinary manner around a head sprocket at the forward or heading end of the machine and a tail sprocket at the rear or rib end. Because of the comparatively slow advance of the machine and the wide spacing of the bits the power required to drive the chain is little, if any, more than that consumed by an ordinary undercutter.

CONVEYOR BEHIND CUTTER BAR

Immediately in rear of the cutter bar is placed the conveyor. This is of the scraping type and consists of two strands of roller sprocket chain with low flights extending between them. The width of this conveyor on the present type of machine is 15 in. The rear side of the conveyor pan is a 15-in. channel iron, and the forward side is open or but little higher than the thickness of the cutter bar. Both conveyor and cutter bar are built as a unit but in sections each about 10 ft. long. Small dips or inequalities in the floor accordingly may be followed easily.

Propulsion is accomplished by means of power-operated jack screws or thread bars each about 8 ft. long. The square ends of these thread bars slip into square holes in worm wheels on the rear side of the conveyor pan. These wheels are driven by worms carried on a segmented shaft extending lengthwise of the conveyor and actuated from the motor or gear box by means of a clutch.

Each thread bar passes through a heavy split bronze nut which bears against the foot of a hydraulic jack, the thread bar passing on through a hole in the base. The arrangement is such that the thread bar need not

be in line with the hole through the base of the jack. To accomplish this end the split nut is made with a spherical head which fits into a similarly shaped cup on the base of the jack. This forms a kind of universal joint and greatly facilitates the operation of the machine.

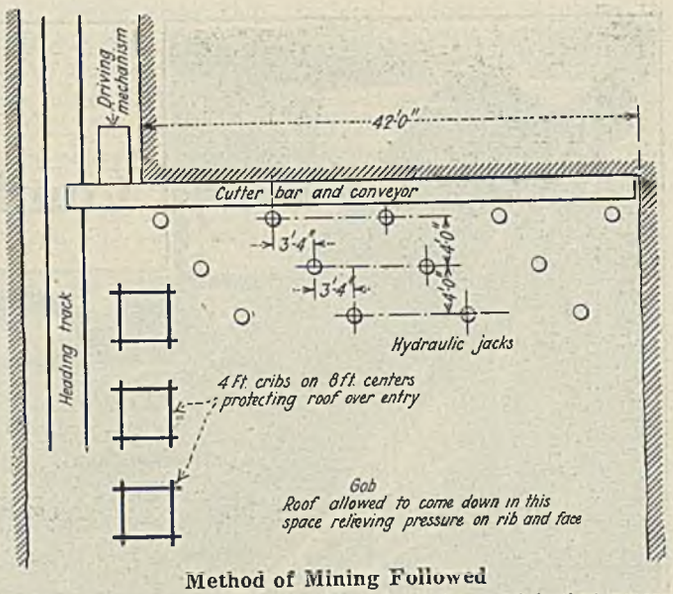
The hydraulic jacks employed with this cutter and loader are of special type, adapted to this particular purpose. Each consists of an ordinary hydraulic jack of 100-tons rated capacity. This is mounted upon a wooden base to which it is securely fastened. On top of the jack head is fitted a steel cap to which is welded a heavy steel pipe the length of which will depend upon the thickness of the coal to be mined. The cup welded to the lower end of the pipe is held to the plunger head of the jack by means of setscrews which extend into a groove in the plunger head. The upper end of the pipe is welded to a flange.

Each jack thus consists of two parts, ordinarily joined together but separable if necessary. These are: (1) The jack proper, with a plunger travel of about 6 in. mounted on its heavy wooden base, and (2) the extension pipe. In use, heavy wood blocking is placed on the upper end of the extension pipe transmitting the thrust of the piston to the roof. This blocking permits a slight bending of the roof behind the face, which under favorable conditions is sufficient to bring the coal down into the conveyor without resort to explosives and with only a little hand picking.

Setting Up for Operation

In operation the machine is set up with the driving mechanism in a heading, beside the mine track, that is between the track and the heading rib. The combined cutter bar and conveyor extends along a 42-ft. face at right angles to the heading. This opening must be previously driven and must be about 12 ft. in width or wide enough to accommodate the conveyor and the propelling thread bars. From this point on the machine moves under its own power, its advance into the face being at a maximum rate of about 2 in. per minute.

As the machine moves forward, jacks are set behind it. Three jacks are provided for each 10 ft. of face length and arranged in three rows. When the rearmost jacks become 12 ft. from the face or 8 ft. from the rear of the conveyor this row is moved forward until it is just behind and close to the conveyor. The operation of moving a jack is quite simple and can be performed in a short time. The pressure is relieved, the jack collapsed and the blocking removed.



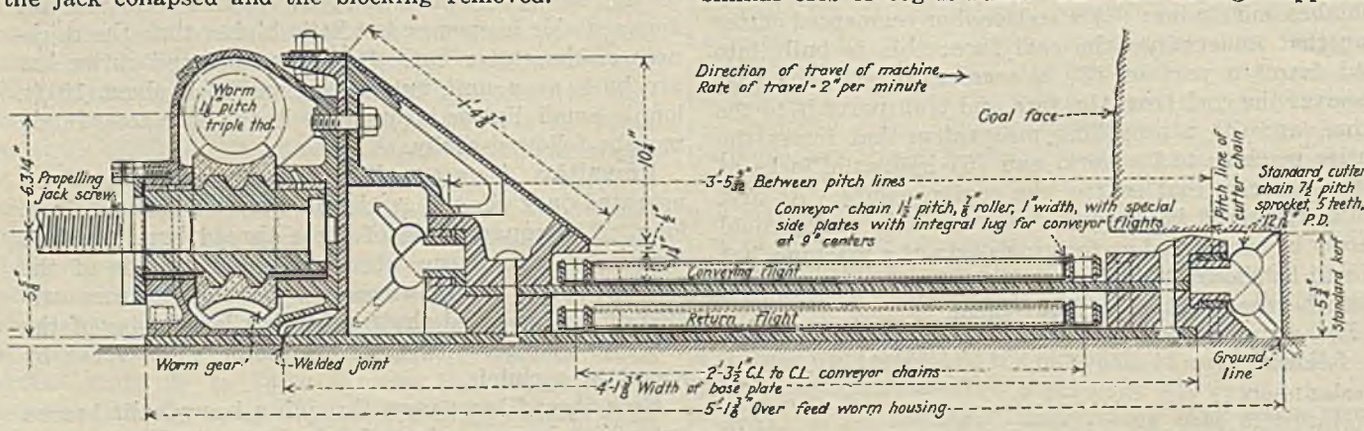
Method of Mining Followed

Advance is fairly steady and the only timber used is that necessary for building cribs. Behind the jacks the roof is allowed to come down freely into the gob. When the machine has advanced to the end of the heading it may be turned around so as to return either taking a cut from the opposite rib of the same heading or it can be brought back in the next parallel heading to the right.

Three men are all that are required to move a jack. One of these steadies the top of the jack and the other two move it forward. To facilitate the moving operation a heavy railroad spike is driven into the base block on each side about 8 in. from its bottom. The heads of these spikes face downward. Two men, one upon either side and in rear of the jack slip crowbars under these spikes and together they readily heave the jack to its new position, it being steadied meanwhile by the third man. The blocking is then placed between the jack and the roof and the pressure pumped up.

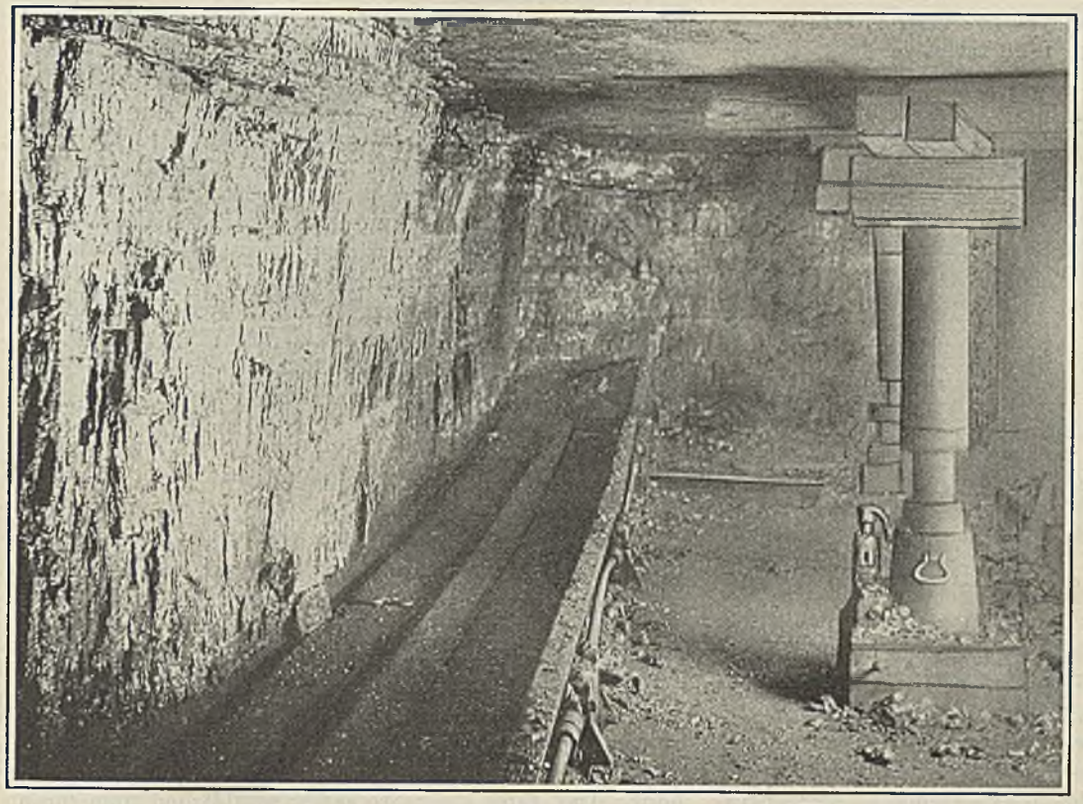
If the jack to be moved is one of those against which a thread-bar nut bears, the operation is the same except that the keys are first removed from the nut pins, the pins withdrawn, the nut taken apart and moved forward. After the jack has been placed in its new position the split nut is replaced upon the thread bar with its head fitting into the cup-shaped depression already referred to. The pins are now replaced, and the keys or cotters driven home. Naturally the moving of jacks and similar work is performed so far as possible while trips are being changed.

As soon as the machine has been moved forward 8 ft., a 4-ft. crib is built behind it in line with the rib of the entry. After each succeeding 8-ft. advance another similar crib or cog is built. This row of cogs supports



Cross-Section of Cutter Bar and Conveyor Showing Propelling Jack Screw

This is the improved conveyor now being built. The one on the present machine differs from it somewhat in detail. The chief difference, however, lies in the fact that the bar here shown is thin enough to enter the kerf cut by the chain bits.



Along the Conveyor

This shows the conveyor unloaded with the bits of the cutter chain just within the kerf. A good idea also may be had from this picture of the 100-ton hydraulic jacks used to control the roof and propel the machine and how they are arranged and used. Near the farther end of the picture one of the propelling thread bars may be seen extending from the rear of the conveyor through the base of one of the jacks. The segmented propulsion shaft may also be seen behind the conveyor.

one side of the entry roof, the other resting firmly on a rib of coal. Beyond or inside the cribs no posts are set, and the roof is allowed to come down freely into the gob, thus relieving the pressure on the face and inner rib.

Only seven men are required for the operation of the present machine. This gang comprises one foreman, one car spotter who also controls the operation of the machine, one bug-dust shoveler who transfers to the conveyor the bug dust scraped out of the kerf by the bits, and four face men. These latter pick down the coal from the face into the conveyor, assist the others in moving the jacks forward, build cribs and do other miscellaneous work. For a bigger or longer machine the labor force would be the same except that one additional man would be required for each extra 10 ft. of face length.

To receive the coal, empties in trips of about 10 cars each are pushed under and past the discharge end of the conveyor and the first car or that next the locomotive spotted in proper position. When the forward end of this car has been loaded the trip is moved slightly and the other end filled. The conveyor is then stopped momentarily while the next car is spotted under it. Each car of the trip is thus moved along in succession until all are loaded. While the trip is being changed, which takes about 5 min., jacks are moved forward, cribs built, the machine oiled, the track cleaned or other necessary work done.

The main motor on the present machine admittedly is underpowered to drive all the machinery. A second or auxiliary motor of 10 hp., accordingly, has been added to actuate the conveyor. In the new model now being constructed in the company shops at Gary, only one motor will be employed. The conveyor will be widened to 24 in. and the height of its front edge will be made the same as the height of the cutter bar. This will permit the conveyor to follow the cutter bar into the kerf and under the face. Another contemplated improvement is the addition of a rib-shearing device at the inner end of the conveyor which will not only make a straight even rib but will overcome all tendency of the coal to hang in this tight corner.

TEN TONS PER HOUR FOR OVER A YEAR

Although the present machine is experimental in character, the record of its performance is interesting. In 13 months of operation or from the time when it was first started on Dec. 1, 1923, up to and including Dec. 31, 1924, this machine mined and loaded 76,583 tons of coal in 7,968 hours of possible working time. As the machine has been operated on triple shift this is an average of almost 10 tons per hour, day and night, since it was started. During much of this time, however, the machine was being operated in old workings or those previously developed for hand mining. These contained many old crosscuts or other passages that were filled with gob, and were the cause of much delay. A far higher rate of production was often maintained for months at a time. A condensed summary of operation showing the various delays and their causes is set forth in Table I.

There appears to be no good reason why the cutter bar and conveyor of this machine cannot be lengthened to 100 or even 150 ft. if desired. This would simplify greatly development of the section or mine where the machine is to be used, as the distance between development headings would be increased by twice the added length of the conveyor. With the present machine cutting 42 ft. of face, the distance between heading centers is 100 ft. With a 100-ft. cutter bar and conveyor, that distance would be increased to 216 ft. In both cases this would allow of a 2-ft. barrier being left in the center of the panel or block to prevent gob from a worked-out cut running into the conveyor when taking the last cut in the panel. A pillar one or two feet thick is sufficient to accomplish this result. This will constitute the only coal lost in mining by this method. All the rest will be recovered. In consequence only about 1 per cent of the coal will be left in the mine.

Table I—Report of Delays—December 1, 1923 to December 31, 1924, Inclusive

Total cars loaded	21,881
Total shifts machine operated	783
Total possible hours of operation	7,968
Total hours actually operated	2,690
Total hours lost (See below)	5,278
Delayed on account of:	
Main motor and armature	410
Conveyor motor	67
Chain and frame	236
Clutch	80
Starting box	9
Shaft	24
Sprocket	3
Cutter bar and chain	55
Changing and setting bits	18
Feed clutch	89
Gears	172
Leads and cable	11
Feed shaft	21
Worm gear and shaft	32
Building cribs	224
Slate from gob sliding in on conveyor	200
Falls of roof	75
Leveling machine	189
Moving jacks	734
Timbering to recover and recovering jacks	152
Timbering	217
Roof working, and waiting on falls	219
Waiting for mine cars	257
Power off	82
Cleaning and working on track	51
Disassembling, moving and assembling machine	781
Overhauling machine generally	552
Shooting coal	40
Miscellaneous	278

Many advantages are afforded by the use of this machine. Some of these are as follows:

(1) The number of men necessary to obtain a given output will be reduced. From experience with the present machine it is considered entirely possible with a cutter bar and conveyor of suitable length to obtain an output of 1,000 tons per day per machine. Such a machine would require about 13 men per shift for its operation. This would mean that a mine having an output of 5,000 tons of machine-mined coal in 24 hr. would require the services of only 195 men to operate the cutting and loading machines.

(2) Because of the rapid and steady advance of the machine and the small number of men employed, also because the workings are concentrated and closely supervised, the liability to accident will be greatly reduced.

(3) The number of necessary working places will be greatly lessened. In a mine of the capacity above assumed that is one producing 5,000 tons of machine coal per day, aside from the main headings common to all mines, only five machine places and ten development headings would be necessary. Experience has shown that a machine heading 14 ft. wide can be driven by present methods at just about half the speed of the machine advance. This necessitates the simultaneous development of twice as many headings as there are machines employed.

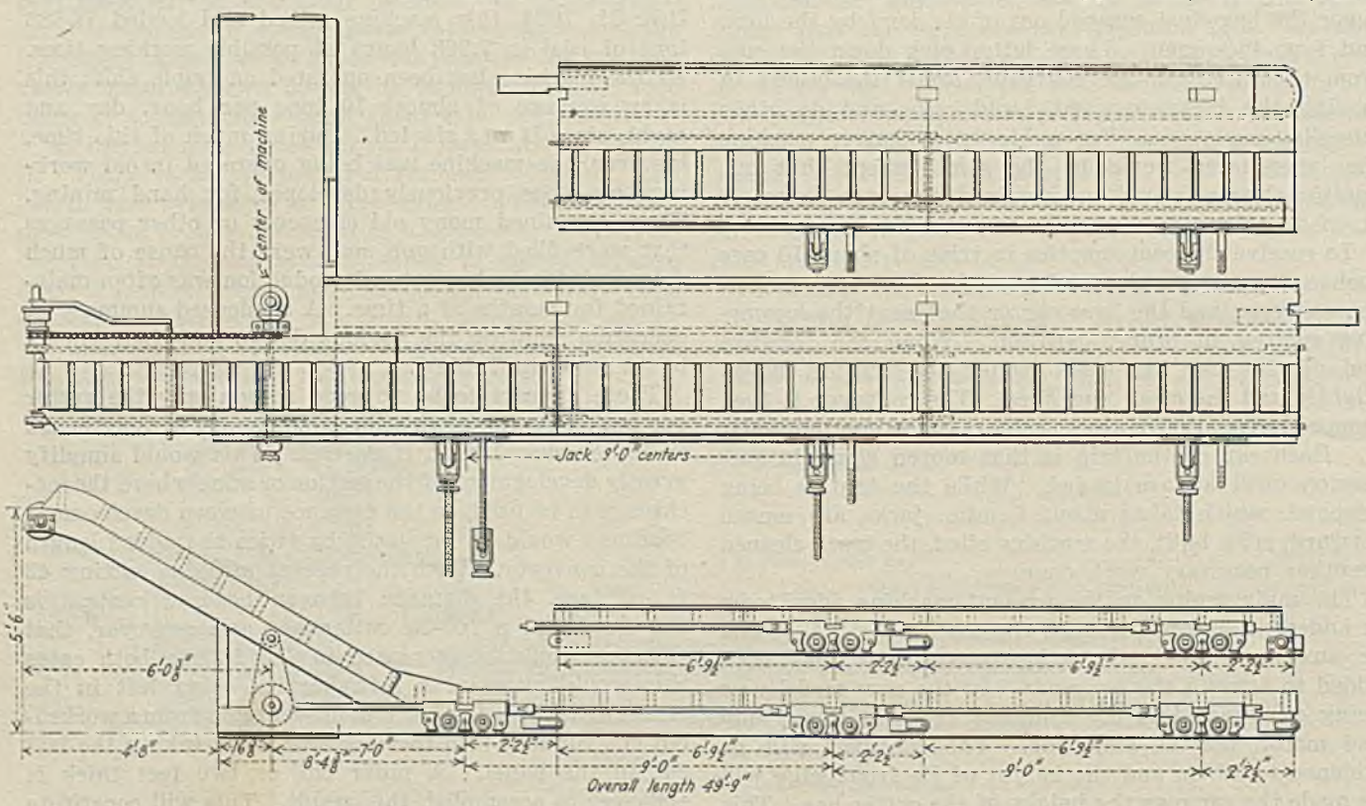
(4) The quantity of explosives used per ton of coal produced will be greatly decreased. The reason for this is evident and needs no comment.

(5) In regions where the roof is tender the coal can be overcut, thus protecting the fragile roof with top coal. The overcutter for this purpose may be mounted directly upon and be moved forward with the conveyor of the O'Toole cutting and loading machine.

(6) The use of this machine will decrease difficulties arising from labor troubles, because the number of men employed will be less and those necessary to the operation of the machine will be paid by the day or hour. Day rates are more easily established than piece rates and day men, as a rule, are more satisfied and contented than piece workers.

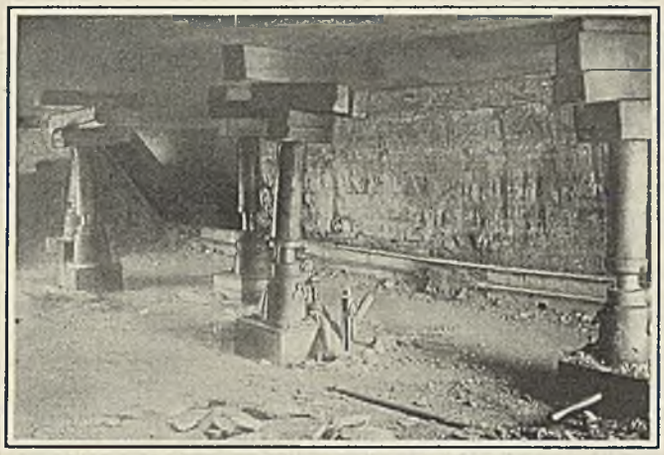
(7) This machine can be operated in beds too thin to be profitably worked by hand under present labor rates.

(8) Use of this machine reduces narrow workings and tight ends. A large portion of the coal is brought down by roof pressure instead of with explosives. The quality of the product is thus appreciably bettered, the



Plan and Side Elevation of the Machine

Every 9 ft. in this model there is a joint between sections that permits a certain amount of bending both vertically and horizontally between segments. Rolls or inequalities in the floor may thus be followed readily and exact horizontal alignment is unnecessary. Some such provision is necessary in order that the machine may operate successfully in most mines.



Looking Toward the Delivery End

The back of the conveyor is only about 15 in. high. The coal comes down from the face in slabs and lumps that frequently require breaking down with picks to such a size that the conveyor can move them away. The large percentage of lump coal made by this machine is at once apparent even to the casual observer.

proportion of prepared sizes or that which will pass over a plate with ¾-in. circular perforations being much increased, with a corresponding decrease in the small sizes and fines.

(9) The cost of haulage will be reduced; no gathering will be necessary as full main-line trips only will be handled.

(10) The trackwork necessary and its cost will be lessened. All haulage will be "main line" and no room tracks, switches or turnouts will be required.

(11) The timber consumed in roof support will be much decreased, the use of timber being practically confined to the cribs built along the headings as the machine advances.

(12) The cost of handling roof slate in rooms and headings will be nil because of the great reduction in the necessary length of headings and the entire elimination of rooms.

(13) The problems of drainage and ventilation will be much simplified, largely because of the limited area of active workings and the small number of men employed.

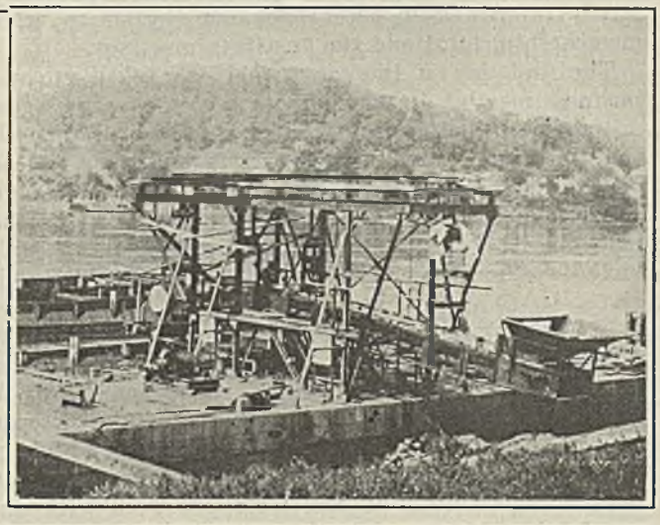
(14) Because of the concentration of the workings and the comparatively small size of the active area the expense entailed in mine inspection and general supervision will be much reduced.

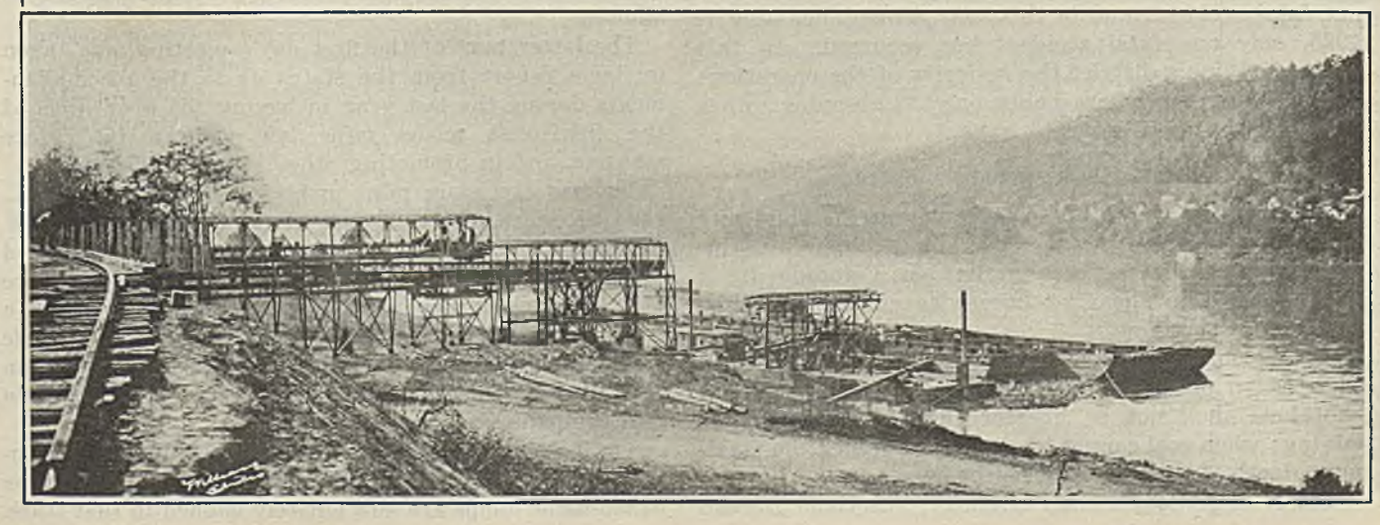
(15) Because of the small number of men employed, the number of dwellings necessary for the housing of the total mine force will be much decreased.

Coal is mined and loaded today in much the same manner and by much the same means as were employed in its production a hundred or more years ago. Coal mining is at present an industry which, because of some onus, real or imaginary, is unattractive to young native-born Americans. The adoption of machine mining and loading will doubtless lift coal production into the class of callings that will be gladly followed by young native-born whites. It thus will be unnecessary for the coal industry to depend for its labor supply, as it must under present conditions, upon the foreign immigrant and the Southern negro.

River May Rise and Fall 50 Ft. and Still They Load Coal

The Philadelphia & Cleveland Coal Co. built this unusual loading plant on the Ohio River at Huntington, W. Va., last fall. The capacity is 5,000 tons per day of 10 hr. from railroad cars on the track at the left of the long picture, through the tipple conveyors on shore and into barges by means of the section of river conveyor mounted on a float as shown in the smaller picture. The conveyor loading boom in the land part of the structure (the outer sheathing and roof had not been applied when the photographs were made) can be run in or out and raised or lowered by electric hoists so as to empty into the barge hopper at any stage of the river.





Mine Inspectors' Institute in Annual Meeting Discusses Safe Practices

Safety Men from Many States Argue for and Against Solid Shooting, Black Powder, Sprinkling and Shearing—Problems of Inspectors Are Cleared Up—Associate Members Admitted

By J. H. Edwards
Associate Editor, *Coal Age*

SOME SAFE PRACTICES in coal mining were discussed and recommended at the annual meeting of the Mine Inspectors' Institute of America in Peoria, Ill., May 19 and 20. Proposals against solid shooting and black powder and in favor of shearing and snubbing coal in every mine in the country roused some sharp, two-sided arguments however, so that the convention was no cut-and-dried affair in which anybody's fanatical safety program could be rushed through. Interest among the 100 men present was so keen that future activity by the Institute greater than that of any year since the war was predicted. Practically every state was represented. The next annual meeting will be at Pittsburgh, Pa., May 11, 1926.

In contrast to the previous policy of the Institute, a more liberal plan was adopted for the future. This was made evident by the passing of a constitutional amendment providing for an associate grade of membership. This makes it possible for many who are vitally interested in safety but not eligible to active membership, to attend the Institute meetings.

The first day of the convention was taken up by a business meeting in which reports of the various committees were read, and discussed and acted upon by the Institute. Conflicting interests and varying conditions in the different states were responsible for spirited discussions on recommendations such as that made by the committee on standardization of explosives to allow the use of none but permissible explosives.

T. P. Back, mine inspector, Canton, Ill., stated that no permissible explosive is being used in the coal mines in the northern counties of Illinois for the reason that competition forces the use of black powder in order to obtain the necessary percentage of lumps. Black powder is used exclusively and during last year over 3,000,000 tons of coal were produced with only one fatal accident, and in this year, which ends July 1, 1925, only one fatal accident has occurred. In this northern Illinois district the majority of the operations are wagon mines, there being only 32 shipping mines out of 400 in the district.

Favor Shooting from Solid

A proposal to prohibit shooting from the solid met strenuous objection. James Dalrymple, chief mine inspector of Colorado, stated that in Colorado it is impracticable to shear or otherwise cut or mine the coal before shooting.

The recommendations as adopted by the Institute in this regard provided, in substance: The depth of the shot hole shall not be greater than the shearing or mining; when coal cannot be sheared or mined the maximum depth of the hole shall not be over 4 ft.

Dr. J. J. Rutledge, chief engineer, Maryland Bureau of Mines, Baltimore, Md., chairman of the committee on standardization of mine ventilation, took the report of the sectional committee, standardization division of the American Mining Congress as a basis for recommendations to be adopted by the Institute. He highly complimented the original report of the American Mining Congress committee. The report of its Jan. 16 meeting was read and acted upon section by section. J. W. Paul, of the U. S. Bureau of Mines, running true to his reputation for exactness, suggested several changes in the wording. After they were made, the major part of the report was accepted.

Dr. Rutledge Discusses Report

In discussing the report, Dr. Rutledge stated that in his opinion the two most important recommendations in the revised report are:

"No. 23, Clean Airways. That all airways be kept clean and free from the accumulation of falls, mine cars and timbers.

"No. 31, Cross-Cuts. That where the law permits, the main entries which must be maintained through the life of the mine be driven 200 ft. or more before a cross-cut is made and that the temporary ventilation of those entries be accomplished by means of small auxiliary fans and the air current carried to the face through tubing or by brattice lines.

"This method will insure an ample air supply at the face at all times, reduce the cost of making numerous cuts and stoppings, prevent a vast amount of air leakage and short circuiting, greatly reduce the volume of air the permanent fan must handle with a corresponding decrease in power consumption and minimize the danger of short circuiting a portion of the mine by the destruction of the permanent brattice."

As to the provision regarding cross-cuts it was voted that no variation from the former recommendations be allowed.

The latter part of the first day's meeting was taken up by a report from the states as to the accomplishments during the last year in having the provisions of the Institute's model mine law written into state statutes, and in promoting other safety measures.

Thomas Stockdale, mine inspector, Bramwell, W. Va., read a comprehensive report of progress in that state. Effective July 1, 1925, four safety men will be added to the state force making a total of five, and three more district mine inspectors will be employed, making a total of twenty-five. Over 10,000 permissible electric safety lamps are now in use, 5,700 of these having been put into service during 1924. Twelve West Virginia coal companies are now rock dusting.

The notable progress in Utah of obtaining the adoption of model mining laws was reviewed. Open or naked-flame lamps are now entirely banned in that state.

In several states new safety provisions failed by only a small margin or by error to become laws. It was the opinion of those reporting that favorable action be taken in the next legislative sessions.

The second day of the convention was given over to the presentation of papers on ten subjects bearing directly or indirectly on mine safety. The first, by Dr. Rutledge, "Tamping with Rock Dust and Cushioning Shots," a paper which will appear in a later issue of *Coal Age*, proved to be one of more than ordinary interest to the Institute. Dr. Rutledge described in detail a number of tests made within the last year, all of these indicating large increases in the per cent of lump coal produced and almost proportionally large decreases in the quantity of explosive required. In every case where black powder was used in the cushioned or air-chamber shooting, smoke was either eliminated entirely or reduced about 50 per cent. Observations which were made at close range—at no small risk to the observers—failed to indicate any flame when either black powder or permissible was used with the air chamber.

In none of the test shots was the powdered limestone tamping material blown from the hole, but instead it was compressed about 20 per cent. In the discussion, Dr. Rutledge was asked, how, in the tests, the quantity of explosive which the miners would have used, without air cushioning, was determined. He replied that the figures were simply averages of those quantities which were ordinarily used, rather than figures derived from a trial by experts to determine the minimum amount of explosive usable with the regular method of shooting. Dr. Rutledge stated that a coal company reported a $20,000 saving in a year by supplying its miners with a definite percentage of dummy sticks so as to reduce the quantity of explosive, unknown to the miner.

Progress toward more general adoption of air-cushioned shooting was indicated by a report that a company in the Southwest has ordered 1,000 waterproofed paper spacing tubes such as were used in the tests described by Dr. Rutledge.

SPEED IN PROSECUTION

The paper by F. W. Cunningham, state mine inspector, of Pennsylvania, on experiences in prosecuting violators of state mining laws, indicated the importance of bringing action only in those cases where ample evidence was available to insure reasonable liklihood of conviction, in order to win the confidence and respect of the court. The desirability of bringing cases before a justice of the peace was emphasized. This produces speedy action which is of utmost importance.

Dr. T. T. Reed, safety service director, Bureau of Mines, talked on relations between state inspection departments and the safety service of the Bureau. He corrected the wrong impression that some inspectors had as to the field of activity of the Bureau. He made plain that the Bureau does not desire to provide what is equivalent to state inspection, pointing out that the Bureau has notified the State of Utah that it must provide its own inspectors after July 1, 1925. There is, however, an agreement that the state will accept the inspection reports of the Bureau covering mines on public lands, in order to save the expense of duplicate inspections.

"Ten years of Service With Closed Lights," a paper prepared and read by Geo. H. Deike, president of the Mine Safety Appliances Co., of Pittsburgh, Pa., clearly

Frank Hillman

Safety inspector for the Woodward Iron Co., Mulga, Ala. He is the new president of the Mine Inspectors' Institute of America.

described the development of the closed light to its present state of perfection, and compared the service given by a closed light to that of an open-flame type. He stated that there are now about 230,000 closed lights, of four different makes, in use.

A paper read by Thomas English, state mine inspector, Sringfield, Ill., clearly set forth the items demanding special attention during the examination of hoisting and ventilating apparatus. An interesting feature was his description of the method used in several southern Illinois mines of cleaning out the pit or sump in the bottom of the hoisting shaft. Instead of the dangerous and time-wasting method of sending men down into the sump, the pit is made sufficiently deep to permit, a mine car to run into it from a track. The car is spotted directly under the cage in order to catch spillage.

In a short paper E. J. Hoey, a state mine inspector of Illinois, argued that any mine which, in a long period of years, has shown no gas, may at any time develop it and therefore daily examinations of every mine by a certified fireboss are essential.

In the absence of James Sherwood, G. B. Butterfield, secretary of the Institute, read the paper on reducing accidents. A specific recommendation in the paper was that all mine cars should have a clearance of 18 in. between the top of the car and the roof.

The Institute looked forward with eagerness to the reading of the paper prepared by R. M. Lambie, chief inspector, West Virginia, describing the rescue work at Bethlehem Mine No. 41, mine of the Bethlehem Mines Corp., at Barrackville, W. Va. Mr. Lambie was unable to be present, so Robert Lilly, state mine inspector, Mt. Hope, W. Va., read it instead. Mr. Lilly worked with Mr. Lambie during the entire rescue. Mr. Lilly scouted the report that a bomb had been dropped down the mine shaft.

The difficulties and risk entailed in this rescue work were increased by the mine fire which followed the explosion. The fact that no expense was spared at this mine in applying water as a preventative of coal-dust explosion was cited to bear out the contention that

such treatment is not to be depended upon. Frank Hillman, safety inspector, Woodward Iron Co., Mulga, Ala., defended thorough sprinkling and washing-down as a preventative of dust explosions.

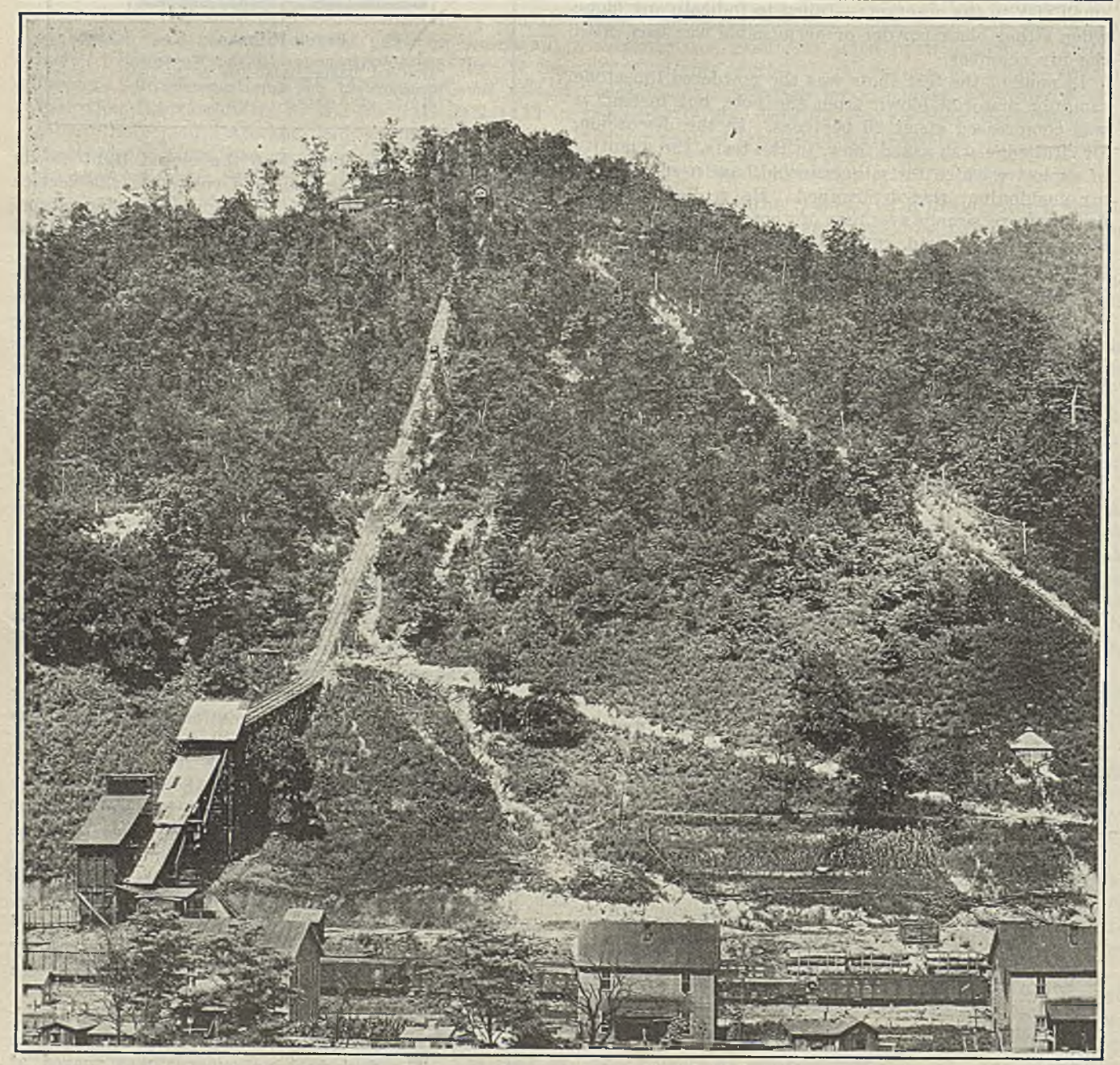
The paper on rock dusting by John E. Jones, safety engineer, Old Ben Coal Corp., West Frankfort, Ill., consisted chiefly of a review of the changes in state laws allowing or demanding rock dusting instead of sprinkling.

Mr. Hillman read a short, convincing paper urging the provision of separate traveling ways in mines. He described an accident which might have been prevented if separate traveling ways had been provided. In this case a part of a loaded trip broke loose and wrecked, causing the death of four men and injuries to seven.

The closing paper of the annual meeting was read by W. E. Kidd, district mine inspector of Illinois. He put forth arguments in favor of continuing to issue second-class certificates, his chief argument being that the second-class certificate is needed as a stepping stone to the higher positions.

At the close of the meeting the following officers were elected and installed to serve during the coming year:

Frank Hillman, safety engineer, Woodward Iron Co., Mulga, Ala., president; E. S. Hoey, district mine inspector, Christopher, Ill., first vice-president; William Boncer, mine inspector Bureau of Labor and Minerals, Richmond, Va., second vice-president; W. H. Jones, state mine inspector, Lexington, Ky., third vice-president; James T. Beard, New York, N. Y., retired associate editor of *Coal Age*, editor in chief; Dr. J. J. Rutledge, treasurer; G. Bruce Butterfield, general manager, The Associated Companies, Hartford, Conn., secretary, and J. H. Griftner, chief inspector, The Associated Companies, Champaign, Ill., secretary.



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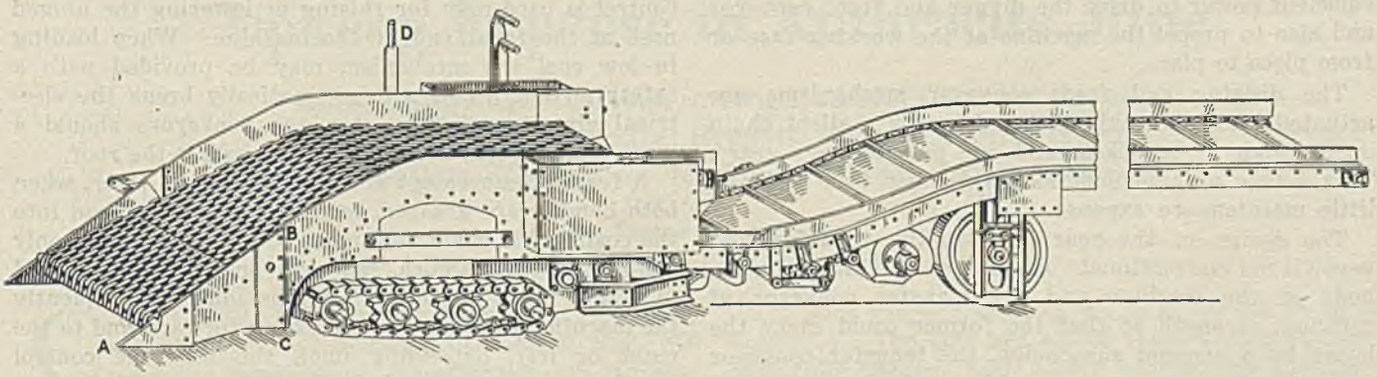
Beauties of West Virginia Hills Are Not Always Destroyed by Coal Mining

This is the Seng Creek Coal Co.'s mine at Whitesville, W. Va., where 125 men normally are employed. The capacity of this mine, whose slope mouth is at the top of the hill, is 800 tons a day. A set of shaker screens in the tipple at the bottom of the incline prepares the mine's output.

New Two-Ton Loader Built for Large Capacity



Stockly Machine Operates on Caterpillars Forcing Chain Conveyor with Digging Bits Under Coal—Overall Height Is 28-In.—It Is Adaptable to Car or Conveyor Loading

By A. F. Brosky
Assistant Editor of *Coal Age*, Pittsburgh, Pa.

A NEW, LIGHT, underground loading machine is being introduced into the coal industry. It is the Stockly loader, now in process of manufacture, which is to weigh approximately two tons, and have a theoretical loading capacity of three tons per minute under favorable conditions. It will operate on its caterpillars and can travel either on them or on mine tracks, using wheels that can be put on the caterpillar drive shafts. It is designed to be a low-cost machine that combines simplicity and flexibility without the sacrifice of ruggedness or large capacity.

Essentially, it is built in two units which, though pinned together, are operated independently as indicated in Fig. 1. The front unit is really the body of the machine and consists of a wedge-shaped (side section) frame over which travels a chain conveyor. At the front end of this conveyor is a digging mechanism. The machine is fed into the coal by caterpillar treads on which it is mounted. The front unit is 4 ft. wide and 8 ft. long. The height over all is but 28 in.

A vertically truncated section, ABC (headpiece), at the lower end of the front conveyor frame is hinged to form a swinging jib. This jib is connected by rods and pins to the fulcrum lever D which is used to raise the nose of the machine a short distance above the floor to clear obstructions.

Any loading machine must possess two essential elements—a digging rig, which may take any one of several forms, and a conveyor whose function is to elevate the coal to a height sufficient for ready transfer to the medium of transportation. It is possible to combine these two elements, as in the bucket elevator type of conveying mechanism, but obviously this particular combination is suitable only for loading loosely piled coal such as that in a storage yard. However, the scheme of dual service from a combination of two such elements can be made practicable in another way.

Instead of utilizing individual drives for moving the two most essential elements of a mechanical loader, the Stockly machine is designed so that the chains which drive the digging mechanism also function as a conveyor. The latter is constructed of eighteen parallel, endless drive-chains which are interlocked to form a traveling mat. The upper run of this conveyor and drive travels on a steel plate forming the sloped top of the wedge-shaped conveyor frame.

The digging mechanism on the front and lower end of the wedge frame consists of a horizontal shaft on which are mounted, side by side, 20 five-tooth, roller-chain sprockets of 2¼-in. pitch. These idle on a stationary shaft. Screwed into each sprocket tooth is a tempered tool-steel digging bit which projects through and about ½ in. above the conveyor mat. This is exhibited in the perspective view of the digger in Fig. 2.

These bits pull lumps of coal from the bottom of the pile upward and backward onto the conveyor mat, thereby serving to feed the wedge-shaped frame of the machine forward under the pile. This wedging or burrowing action is expected to cause over 75 per cent of the coal to slide and roll directly onto the conveyor without coming into contact with the digger. Although the travel of the digging bits is only 90 ft. per minute, they come in contact with the coal 130 times per second. As a result, degradation of the coal is reduced and lumps too large for end-dump mine cars and tipple screens and chutes can be handled.

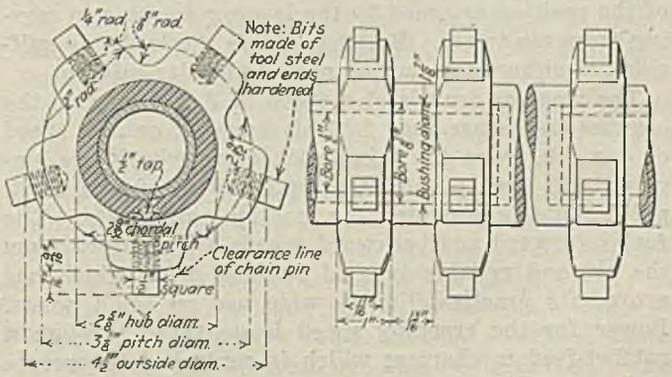


Fig. 1—Details of the Digging Sprocket

This is an ordinary sprocket except that a piece of hard tool steel is screwed into each tooth and projects nearly ½ in. from its end. These auxiliary teeth burrow under the coal and boost it onto the parallel chains that serve as an apron conveyor.

The headpiece illustration is a general view of the loader showing the two conveyors, tractor belts and swivel caster supporting the loading element. The control levers may be seen on the farther side.

NOTE—This machine is being manufactured by the American Mine Equipment Co., Pittsburgh, Pa.

By reason of the fact that only a small proportion of the coal is actually dug, the remainder rolling onto the conveyor, one 10-hp., reversible motor furnishes sufficient power to drive the digger and front conveyor and also to propel the machine at the working face or from place to place.

The digging and front conveyor mechanisms are actuated from the main motor drive by a silent chain on one pair of sprockets and one pair of spur gears. This simple arrangement makes for low first cost and little maintenance expense.

The design of the rear or swinging transfer conveyor is not conventional. In place of building the main body of the machine and the transfer conveyor of sufficient strength so that the former could carry the latter by a one-end suspension, the transfer conveyor

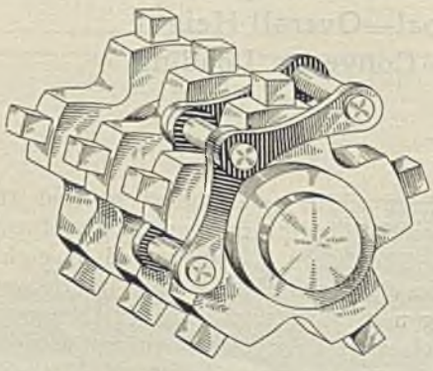


Fig. 2—Perspective of Sprockets

Twenty sprockets, each provided with digging tooth points, are placed side by side on the front shaft of the machine. Upon this shaft they idle, being driven by the chains that serve as the first conveyor. The nose of the machine may be raised and lowered to follow the mine floor.

is held to the body of the machine by a king pin and balanced lengthwise on a broad wheel equipped with a solid rubber truck tire. This wheel acts as a caster, enabling the car trimmer to swing the conveyor manually from his position at the discharge end. The conveyor projects far enough beyond the caster to discharge "end on" into mine cars. It is driven by an individual 2-hp. motor.

To facilitate the use of this machine in conjunction with sectional conveyors—which should be the practice wherever the two machines can be combined—the transfer conveyor is designed to maintain automatically a position directly over the sectional conveyor onto which the coal can be discharged without spillage, regardless of the position assumed by the loading machine in moving from rib to rib. Because of this the loader is suitable for either long-face or room-and-pillar mining.

The machine travels at a speed of 2 m.p.h. when the crawler treads are used for this purpose, or at a speed of 4 m.p.h. when the mine-track drive wheels are employed. A slow, powerful, creeping speed of 3 to 12 ft. per minute is provided for loading movements. The faster forward and backward speeds are obtained from the old and reliable type of friction drive which has proved its practicability in wide use on small hoists. Power for the creeping speed is delivered through a ratchet-feed mechanism which is controlled to operate each caterpillar tread independently or both together.

The control of this machine is as simple as its mechanical design. The primary movements are regulated by the manipulation of a two-handle control lever, as shown on the far side of the headpiece, and also a reversing switch. The lever to the left of the main control is used only for raising or lowering the hinged nose at the front end of the machine. When loading in low coal the mechanism may be provided with a safety switch which will automatically break the electrical circuit and thus stop the conveyors should a large lump of coal become wedged against the roof.

A forward movement of the main control lever, when both handles are grasped, feeds the machine ahead into the coal. This same movement forward, grasping only one of the two handles, sets only one caterpillar tread in action while the other remains idle. Consequently the machine, in this case, will swing forward and to the right or left, depending upon the way the control handles are manipulated.

The front position of the control lever engages the ratchet mechanism. In a rear position, this same lever puts the ratchet mechanism into neutral and engages the friction drive. Consequently, a backing motion away from the coal can be had at a speed equivalent to the travel speed of 175 ft. per minute, which is far in excess of that at which the machine is fed into the coal. To reverse the direction in this instance does not require reversal of the motor.

Depending on conditions, either one or two men are necessary to operate the Stockly loader. Where sectional conveyors are used in conjunction with the machine only one operative is needed, if the coal is properly prepared for loading. Where mine cars alone serve as the transportation medium, two men—a machine runner and a car trimmer—are required.

A New Consolidation Mine

This is Manway tipple at No. 261 mine near Caretta, W. Va. This plant is one of the most modern in the Consolidation Coal Co.'s long string of producing properties. The mine has not yet reached its full stride.

One Operation Completes Extraction and Reduces Upkeep Expense in Anthracite Mine

Main Gangway Is Driven in One Bed and Coal Produced in Another — Alternate Breasts Are Cut and Alternate Pillars Robbed — Nearly All Coal Is Recovered

By Dever C. Ashmead*
Wilkes-Barre, Pa.

COAL COMPANIES in the anthracite region are studying various methods of mining that will permit a considerably shorter life of gangway and, therefore, a decrease in the maintenance charges.

Maintenance charges in the upkeep of gangways where the measures are steeply pitching are high, due to the excessive cost of the replacement of timbers and the cleaning up of falls. Therefore, if the length of gangway in the coal beds can be decreased and the mining more concentrated, the life of the coal gangways will be decreased and consequently the maintenance charges will be lower per ton of coal produced.

Customary practice in the anthracite region is to drive long coal gangways and to work the breasts as the gangway from which they were driven is advanced. In many cases these gangways are from 4,000 to 6,000 ft. in length and some even longer. They have to be maintained not only until they have reached their limit, but in many places the breasts are allowed to stand for years before second mining begins. Therefore, if the gangway is kept open the maintenance charges are high, or if it is allowed to close, when the time comes to remove the pillars the cost of re-opening this gangway may be as great as the original driving cost.

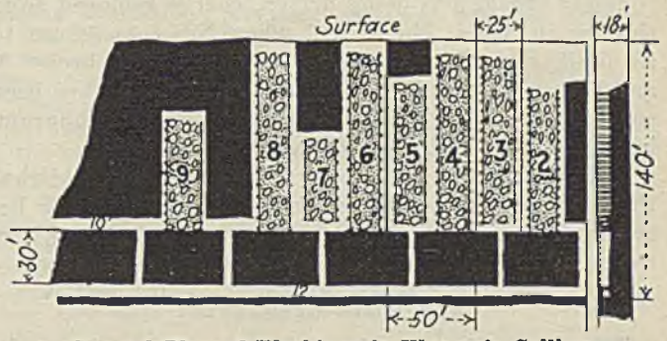
In order to do away with these bad features of ordinary practice and to concentrate the mining and to decrease the life of coal gangways the Lehigh and Wilkes-Barre Coal Co. at its Wanamie Colliery at Wanamie, Pa., has been conducting a system of mining that, as far as I know, is not in use in any other place in the anthracite coal fields. The work is now being conducted in what is known as the No. 28 Tunnel district and in that section of this district which lies in the Baltimore bed.

In this section of the colliery the Baltimore bed is 18 ft. thick and lies on a pitch from 60 to 80 deg. and at one point, at least, the pitch is 90 deg. Lifts are planned to be about 140 ft. apart vertically. The coal bed is to be divided into sections along the strike. Their number depending on the life that is found desirable for the gangways and also upon the tonnage that is required to be taken from this bed. The company is dividing the gangway so that the sections are 800 ft. long. This is shown in the general plan and elevation accompanying this article.

The main gangway is driven in either an underlying bed or else in the rock. This is used as the main haulage road and is in the Ross bed at this colliery. Tunnels are turned from this gangway to the Baltimore bed; and the main gangway in this bed, marked No. 12 on the accompanying diagram, is driven about 12 ft. wide and 6 ft. clear of the rails. It has to be well timbered. The sets are placed from 4 to 6 ft. apart, and fully lagged, particularly on the top and along the foot wall to prevent small pieces of coal and rock falling on the men. The larger pieces are supported by the main timbering.

Thirty feet above the main gangway is driven what is known as the Monkey Heading (No. 10 on the accompanying detailed diagrams). This provides for the air return. Chutes are driven between the monkey and the main gangway at 50-ft. intervals. The monkey heading is about 5 ft. wide and 5 ft. 6 in. high and has to be timbered in the same manner and for the same reasons as does the main gangway, but lighter timber is used.

Ventilation in the top lift of the colliery is natural. Holes are put through to the surface as may be needed.



General Plan of Workings in Wanamie Colliery

This shows how the workings are divided off into panels. Gangways in the Baltimore Bed are reached by tunnels from the Ross seam. Each Baltimore gangway thus serves one panel and is abandoned when that panel is worked out.

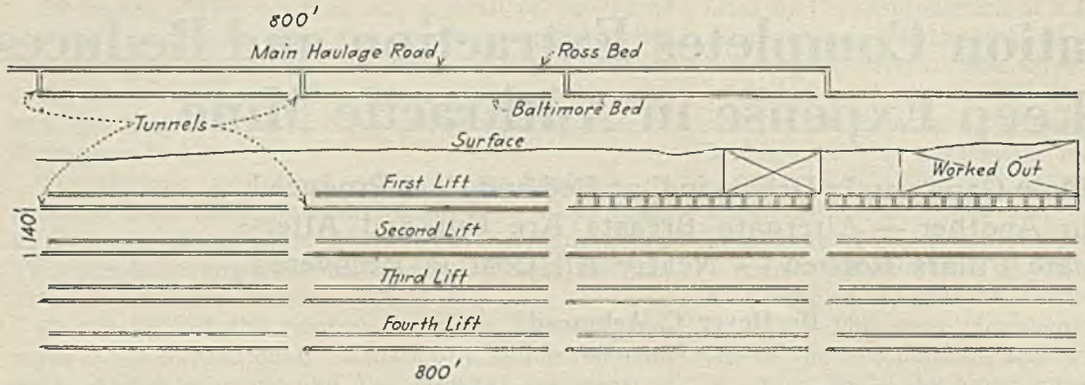
The lower lifts will have their returns provided by driving a break-through to the lift above.

A breast is driven up 25 ft. wide at the extreme limit of the panel of the property. This breast goes up until it reaches either the surface or the gangway immediately above. Spaces are allowed for a manway on each side of the box which is about 16 ft. wide in the clear. This box is numbered 2 in the accompanying diagram. Wherever possible the end of the box rests directly on the pillar between the monkey heading and the main gangway. This does away with the necessity of building batteries at the end of the breasts.

Coal that is slopped over—that is, the surplus coal which cannot be held in the box when mining—comes down the manway and is loaded through the adjoining chutes into the mine cars below and taken away. The rest of the coal is left standing in the box. While this breast is being driven in the manner described, breasts 4 and 6 on the diagram are also being driven. There are usually employed in this character of work, three miners and three laborers, therefore it is desirable to have sufficient places for them all to work.

NOTE—Paper presented before the American Institute of Mining and Metallurgical Engineers; published by permission of the director of the U. S. Bureau of Mines.

*Anthracite Mining Engineer, U. S. Bureau of Mines.



Cross-Section

Even - numbered breasts are driven first, beginning with No. 2. Odd - numbered breasts are driven in the pillar left between those of even numbers. Not more than three breasts are worked at one time, and the miners always have adequate support over the places where they are working.

A pillar of coal 25 ft. wide is left between each of the breasts, thus making the breasts on 50-ft. centers. When breasts 2, 4 and 6 have been driven to the limit, another breast (No. 3) is driven in the pillar between breasts 2 and 4, and breast No. 8 is started. When breast No. 3 reaches its limit the coal is left standing in it as it is in 2, 4 and 6 and another breast (No. 5) is started in the next pillar. Still another may be started in 9.

When a breast is started in a pillar it is necessary to build a battery at the lower end of the box as the pillar is directly over the chute. This battery is braced by timbers that extend across the monkey heading. The battery extends the full 16 ft. width of the box, as all of the pillar is taken out advancing.

While breast 5 is being driven, coal is removed from the box in breast No. 2, and when No. 5 is driven to its limit, coal will be drawn from the box at breast 3, and breast 7 started. When breasts 8 and 9 have been completed, another breast, not shown on the diagram, but to the left of breast 9, may be started.

Before drawing coal from the box it is intended that there shall be two full containers of coal standing between the box that is being drawn and the place where the men are mining, giving sufficient roof protection.

Men Work Efficiently

The three miners and the laborers work as a unit. That is, they plan the work so the coal can be drawn from a box as has been described, but they also have other places to work, in case there should be a car shortage or other troubles that might retard the drawing of coal from the boxes that have been filled.

The bed of coal is 18 ft. thick. The breasts are driven in the lowest bench and are about 7 ft. high. Therefore, 11 ft. of coal is left standing in the bed. This is shown in the cross-section at the right of the plan of workings in the detailed diagram.

When coal is finally drawn from the box, it is pulled back about 10 to 12 ft. at a time, then the miner drills holes in the roof or hanging wall and shoots the coal that has been left standing. This falls and is drawn down through the box. In this way all of the coal is recovered—about 40 per cent when the breasts are driven and the balance when the boxes are drawn.

When the box numbered 2 in the detailed diagram is drawn, slice is taken back with the box along the edge of the barrier pillar. This is done because there is insufficient room to drive up a breast between No. 2 and the barrier.

When the boxes are drawn, all support to the roof will, of course, be removed. At the present time one of these panels has been drawn back a distance of 800 ft., and indications are that there has been no roof break, the top being a hard sandstone, almost vertical.

It is expected that when the roof breaks it will do so in great slabs that will lean over and stay in position, therefore clogging the opening and tending to prevent loose rock dropping and mixing with the coal. This is what the engineers expect to happen, as the pitch of the coal is very steep.

By this method not more than three breasts are left standing at one time, and, as stated before, the work is so planned that coal is left standing in only two boxes between the box being drawn and the place where the men are working.

As fast as the coal is drawn from the boxes, the pillars between the monkey heading, which is No. 10 on the diagram, and the main gangway (No. 12) are drawn back. This does away with the necessity of maintaining this portion of the gangway. All of the coal is continuously pulled back, leaving no old breasts and no old gangways to be maintained. As can be seen, the panels are small; therefore, the gangway is short and its life is short. Consequently, the maintenance charges are considerably reduced, and the equipment is made available for use elsewhere.

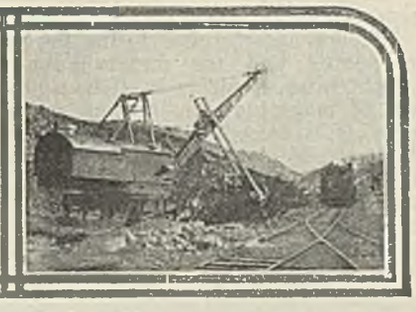
Ordinarily the posts for the boxes are placed on 6-ft. centers and heavily lagged. However, at times it is found necessary to place the posts closer together. These posts have to sustain considerable weight, particularly when the roof coal is being taken.

It has been found that in these workings it is possible to obtain about 45 tons a day from a set of breasts as has been described, therefore the number of panels (as they might called) required to produce a given output can be calculated readily.

The advantages of this method of mining are many and important. First, no coal is drawn from the boxes until work in the place is completed, consequently the coal packs tight in the box and takes the weight of the roof. Second, the coal is not left standing in the old chambers, for there are no old chambers, and roof falls are not apt to take place. Third, the weight of the roof being taken up by the box reduces the weight thrown on the coal at the face and lessens the tendency of the coal to run. Fourth, by not drawing coal from the boxes while driving the breast, roof falls in the breast are not liable to occur as continuous roof support is given and therefore roof rock is not mixed with the coal, which can be loaded into the mine cars clean when the box is drawn. Fifth, the life of a panel is short and therefore the maintenance charges are low.

There are, probably, some disadvantages, one of which is the degradation of the surplus coal the boxes cannot hold and which is sent down the manway. The indications, however, from the car yield are that the degradation is negligible.

News Of the Industry



To Rout Coal's Rivals, Says Dodson, The Industry Must Do Its Part

If It Sags Much More, the Government May Interfere, He Tells U. S. Chamber of Commerce—Resolutions Adopted Opposing Oddie Mines Department Bill

The keynote speech on coal at the annual meeting of the Chamber of Commerce of the United States, at Washington, D. C., May 20-22, fell this year to A. C. Dodson. For several years every effort has been made to stage important pronouncements in the various fields covered by the chamber's work. One of the sections of the chamber deals with natural resources production. In this section coal occupies a leading place. These section meetings have brought forth many noteworthy expressions of view from leaders in industry and the annual statements from the respective activities have taken on increasing importance.

The selection of Mr. Dodson is regarded as having been a particularly happy one. As the president of Weston, Dodson & Co., Inc., he directs both bituminous and anthracite operations. He knows what it is to deal with the United Mine Workers, yet the interests of his company are not so identified with union territory that he cannot also see the position of the non-union operator.

Cite Objections to Oddie Bill

The natural resources production group also adopted resolutions expressing oppostion to the Oddie bill, proposing the establishment of a federal department of mines, as inimical to the national coal industry. The following objections were urged against the bill:

"(1) The creation of an additional department of the federal government with the proposed bureau will place the mining industry, and particularly the coal industry, under bureaucratic control, involving the government in tremendous expense, without accomplishing any useful purpose.

"(2) To single out the coal industry for federal regulation and control is unjust to the coal industry, discriminatory and unwarranted.

"(3) While the proposed legislation provides for the gathering of coal statistics under the promise that such information shall not be revealed to the public, excepting such statistics as are general in their nature, nevertheless, we hold that business should not be required to divulge its private affairs to government agents, even under the promise that such information will be held secret, because, from our experience with the publicity feature of the income tax law, we can have no permanent confidence in either the ability or the willingness of government bureaus to keep such information secret."

Mr. Dodson's speech, comes at a moment when the depression which has gripped the coal industry for many months is in a very acute stage. Production is very low. *Coal Age's* barometer of the industry for the week preceding the speech dropped five points.

In this general setting had come further evidence of increasing stagnation in the union fields. The Pittsburgh Coal Co. had closed the last of its union mines. Out of its scores of properties only five are running. These include its Kentucky properties and its mine at Pomeroy, Ohio, where the union workers voluntarily sought a reduction, and also its non-union mine on the fringes of the Pittsburgh district.

Spokesmen for other businesses had encouraging reports to make, but Mr. Dodson could do little more than admit that King Coal is a very sick man.

Mr. Dodson in his address said:

"Old King Coal is a very sick monarch. He will survive, strong and dependable, years after his rival Fuel Oil is exhausted and forgotten. In the meantime, however, his suffering is extreme, and its duration and severity rest in the hands of those who depend upon him for a livelihood. Land owner, operator, miner, labor leader, retailer, railroader, banker, investor and consumer, all gain a living from Old King Coal. It behooves each one to do his part to bring him back to health.

Ask Governmental Aid?

"Shall we bring the patient down to Washington, put him in a government hospital under Dr. Politics or Dr. Economic Theory?—the former to have him examined and reported on by commissions for whom the Tower of Babel were a fitting temple; the latter to propose to cure him by statistical bulletins issued weekly, monthly or yearly, authorized by a congressional act, harmless in itself, but a stepping stone to drastic legislation which will permit the followers of Dr. Economic to try their theories on *other* basic industries eventually. Or shall we, his friends and retainers, keep him away from this seductive atmosphere of Washington?

"Shall the state and county authorities continue to tax to exhaustion one of their greatest assets? Shall legislators continually threaten adverse legislation and so frighten away investors? Shall the land owner feel that so long as his high royalty and high minimum tonnage can be squeezed out of the operator, he is safe?

"Shall the labor leader, thinking only of his own ambition, teach his followers to believe that their employers are forever trying to squeeze and to cheat them? Shall he do nothing but foment trouble, antagonism and suspicion? Shall the railroads refuse to consider any reduction in freight rates because they do not feel that the operator has done quite everything that he might have done for himself? Shall the consumer with an ignorance of conditions in the coal business forever continue to condemn us? A continuance of such a program can have but one ending—disaster!

Denounces Selfish Aims

"Many men in these groups are not looking further than the ends of their respective noses, it is high time that they get together in the common quest for self preservation. If we each pursue our selfish aims, regardless of each other, our industry will not be back upon its feet for many years.

"What is the correct diagnosis of this situation?

"Is the trouble high wages, limitations of output per man, high freight rates, over production or competition of substitutes? Each has had its part in making this complex situation, and the combined weight of all of them is over-powering.

"It takes courage to go beyond this point. It is so much easier to sit back and wait, murmur something about the survival of the fittest and let it go at that. But, even the few coal companies that are fortunate today can't afford to let it go. The industry is so vital to the welfare of this country that if it sags much more, artificial stimulants will be applied by legislative action, and then *no one* will escape.

"This very aloofness of certain large bituminous companies, unwilling in a crisis to adjust their ideas to meet those of their contemporaries in order that some progressive action could be taken, confident that they can paddle their own canoes, has helped to make this situation grave. We are like a routed army, and worse, for we've taken to quarreling among ourselves.

"The National Coal Association is not receiving the united support of the operators; the regional coal associations, through lack of funds and despair among their individual members, are

generally in a condition of paralysis.

"Federal interference during the war by zoning and the disarranging of freight rates, would in itself be a problem of magnitude for present adjustment, if it were not completely overshadowed by the differentials between union and non-union mining rates. The extremely high hourly and piece work rates, which before the war amounted to a difference of 10 or 15c. per ton, have increased to five times that amount.

"The union operator sees his business going to the non-union field; the latter having a mining cost low enough to absorb the difference in freight rates to almost any market. He sees himself in the grip of an arrogant union, unyielding and powerful enough to bring to its aid the influence of the federal government a dozen times in the past eight years.

"No better instance of this is seen than that of the Jacksonville wage agreement. Well meaning no doubt were the government officials who advised the union operators to sign on the dotted line a year ago, but think what that advice has done to this great industry! In all charity, the only intent that can be ascribed to the agreement's non-combatant advocates was that in the union fields the strong would survive and the weak would pass on, and in their going stabilization would be born. No such result has been obtained—*the substantial properties have suffered just as much as the unsubstantial, and there is no health in any of them. Confusion, the usual result of meddling, reigns.*

"Can a remedy be found? I must confess that I have no panacea. Help comes to those who help themselves. The operators the country over must help each other, factional differences must be put aside, what are now bitter regional feuds must become friendly rivalries. Freight rates must be adjusted on an equitable basis; mining regions geographically distant from markets cannot hope to retain those markets by freight rates out of proportion to the mileage and to the cost of service.

Union Will Destroy Itself

"The union operator cannot expect the non-union operator to fight his battles, and bitter experience has taught him not to sign an inflexible wage contract again. If the union is too blind to see the wisdom of adjusting wage levels to fit economic conditions it will destroy itself. Even now its members —seeing the shortsightedness of their leaders—are in revolt against them. No organization can stand in the way of a great economic force and not be flattened out. Wage agreements should balance with other industrial wages, and should not be made at flat rates to run for a term of years.

"The coal operators have no quarrel with collective bargaining. They realize that in these days of large groups of employees working for impersonal corporations instead of individuals and firms, as in years gone by, there must be some method for group expression and individual protection. But when that collectivism chooses the form of combining to restrain trade and to destroy capital, and of taking the bread from the mouths of the very men for whose protection it was created, then a halt must be called, and an opportunity must be given to the employer to break down the Chinese wall that the labor leader had built up between him and his employees, the two must be allowed to confer upon their private affairs, which the *paid* representative of one has forgotten in his personal ambition and zest for battle!

Feeling of Distrust Exists

"How much better it would be if the labor leader would appreciate the real function which he is supposed to exercise of teaching his constituents to protect themselves by giving an honest day's work for an honest day's pay! Perhaps the reason that this isn't more the fashion in labor circles is because there are still enough instances of operators trying to take undue advantage of their employees to permit a feeling of distrust to exist. How much happier for all concerned if things were the other way.

"The difficulties under which bituminous is suffering have been so well advertised as to make new ventures financially difficult except where conditions are ideal. With these facts in mind it may not be too optimistic to predict that in the near future demand will closely approach potential supply.

"There is room for all in this great industry, union and non-union operator, worker, labor leader, retailer, banker and railroader. The union fields will solve their present difficulty; hardened and chastened by their ordeal, they will be stronger than ever.

"A union, or an association between the operator and his employees, or a group of operators and their employees, based on the economic conditions as they pertain to the district in which they are functioning will no doubt arrive, and will advance along progressive lines, and be better equipped to fulfill the function of conservative leadership for its members.

"Around what standard shall we rally? I suggest that here is an exceptional opportunity for the National Chamber, a representative of all factors, whose purpose it is to foster legitimate business, to take upon itself the problem of trying to find, through wise council, some way of putting back on its feet an industry, of such tremendous importance to this country."

Beat Minister for Sermon In Non-Union Town

Robert Hardgrave, a striking coal miner of Bancroft, W. Va., and his wife were held under bond May 20, for the Grand Jury in Putnam County, following their arrest by state police, charged with beating the Rev. W. H. Beal, a Methodist minister, because they objected to his preaching in a non-union town.

It was alleged that the minister was beaten about the head and face with a rock when he returned to Bancroft May 18 from preaching at Plymouth, where mines are being operated on a non-union basis.

Stresses Pressing Need for Intelligent Coal Statistics

"In an industry admittedly sick, and sick almost unto death, with accurate statistics as the only means by which the disease can be diagnosed or any intelligent remedy applied, it is exceedingly unfortunate that the responsible managers of the industry have not seen their way clear to furnish intelligent statistical data for the industry," is the opinion expressed by Ethelbert Stewart, U. S. Commissioner of Labor Statistics, in the course of an article, in the May issue of the monthly *Labor Review*. It is entitled "Coal Situation in Illinois." Further extracts from the article follow:

"If the records could be kept to show the number of man-hours of work performed at the face of the working—that is to say, in getting the coal, which is the real point to the industry, instead of the number of days upon which the tipple works, which has nothing to do with the industry except to perform one minor point of loading the coal into railroad cars; if we had an accurate record of the number of men required to operate the mine, eliminating the number put upon the payroll to increase the car rating, which is purely a railroad scheme and has nothing to do with coal mining; if the actual coal production could be separated from the work of extending the entries and driveways farther into the coal seams, which is a capital outlay and not a current production cost; if, in addition to this, accurate records of labor turnover could show the real extent of the floating and drifting of the men—then a picture might be drawn by competent statisticians that would be of untold value to the industry and to the public.

"Drifters" Wreck Statistics

"It is not to be wondered at that coal operators grow weary of furnishing figures which get nobody anywhere and only result in such absurd statements as those sometimes made showing an impossible percentage of the workers who work but a few days in the year, utterly ignoring the element of labor turnover and drifting from mine to mine, and which simply mean that there was an enormous number of persons whose names were on the payroll of any given company for a very short time, with nothing to indicate on how many other payrolls they figured during the year.

"Another form of coal figures that have no relation to essential facts has been those showing fatal accidents in terms of tons of coal produced. Here again the Illinois report is far better than most of our sources of information, as it does give the fatalities per thousand employees, though without regard to the length of time the thousand persons were employed. The U. S. Bureau of Mines, realizing that it is the man who gets hurt and not the coal, has recently arranged with certain coal companies to report their accidents in relation to the actual one-man hours employed in the mine. The bureau has not as yet published these returns."

Zeigler Sets New Record For Output; Valier Has High Mark for Four Days

Though suspension of operations is the order of the day in the southern Illinois mining field, the No. 1 mine of the Bell and Zoller Coal Co., at Zeigler, again broke the world's record for a single day's hoist on May 12, by producing 8,464 tons of coal in 7 hours and 40 minutes actual working time. This tonnage was produced by 1,180 men at work on top and underground. The previous record was 8,218 tons, established by Orient No. 1 mine of the Chicago, Wilmington & Franklin Coal Co., in March, 1922.

The Zeigler mine is the first mine to be developed in Franklin County. The shaft was sunk by Joseph Leiter in 1902-3, and is now owned by Mr. Leiter, being operated on a royalty basis by the Bell & Zoller company. This mine has been a steady and consistent producer for many years, except for several months last year when machinery and other additions and betterments were made.

Struggled Against Union

The mine has had a stormy history in connection with the efforts of Mr. Leiter to run non-union in opposition to the attempts of the United Mine Workers to unionize it. He had virtually won his struggle to operate on an open-shop basis when an explosion occured at the bottom of the mine, killing about sixty-five miners. Following this explosion a fire broke out and the mine had to be sealed for more than a year. In the meantime negotiations had been closed with Bell & Zoller to operate the mine, and when it was reopened this company signed an agreement with the United Mine Workers, and it has since been operated as a union mine.

The Leiter coal holdings in Franklin County are conceded to be among the best in the state. The vein runs to a thickness of more than 14 ft. in some places and is of high quality. At the time it was purchased the surface and mineral were both obtained for $25 an acre.

Details of Record Production

The record output of May 12, produced in 7 hours and 40 minutes, filled 177 railroad cars, making a train one and one-third miles in length. The coal was hoisted a distance of 530 ft. and it required 836 hoists to bring the coal to the top. An average of 18.44 tons of coal was hoisted per minute. The coal was not only brought to the surface but it was cleaned, graded, weighed before being dumped into the railroad cars and again after the car was loaded.

After being idle for two weeks Valier Mine at Valier, Franklin County, Illinois, resumed operations May 11 and for four days production was on "high," as shown in the following table:

	Tons Hoisted		
	Main Shaft	Auxiliary Shaft	Total
May 11	7,432	118	7,550
May 12	7,742	166	7,908
May 13	8,214	0	8,214
May 14	8,202	48	8,250
Best 2-day average	8,208	24	8,232
Best 3-day average	8,053	71	8,124
Best 4-day average	7,898	83	7,981

The auxilairy shaft is used for hoisting coal for docking, bad order cars and additional coal, if needed, for use at the wash-house heater.

It is worthy of note that these tonnages were hoisted on consecutive days and that the first day's tonnage followed an idle period.

Valier Mine last fall hoisted 8,664 tons in eight hours, but this record, like those made by several other mines, did not follow a full working day.

The Indiana & Illinois Coal Co.'s No. 10 mine, at Nokomis, Ill., hoisted 84,800 tons of coal in a 14 days' run during April, or in excess of 6,000 tons daily. Over 800 miners are employed at the shaft, which is one of the few now operating in this section of Illinois.

Pinchot Frowns on Raise In Salary for Walsh

Although he, while State Forestry Commissioner in 1919, resigned and was reappointed in order to take advantage of an increase in salary from $3,000 to $5,000, Governor Pinchot, of Pennsylvania, has vetoed a bill that would have given Secretary of Mines Joseph J. Walsh the same increase had he followed the same course as did Forester Pinchot.

The Legislature of 1925 increased the salary of the Secretary of Mines from $6,000 to $8,000. The bill was sponsored by Senator Joyce, Luzerne, and it had no difficulty in passing, as it was generally recognized that the head of the Department of Mines was entitled to the increase. The Governor, however, frowns on "the long-established practice" which permitted resignations and reappointments in order to obtain a salary increase.

Coronado Coal Co. May Now Sue District 21, Supreme Court Decides

The famous Coronado case comes to the front again. On May 25 the Supreme Court at Washington, in a decision written by Chief Justice Taft, held that while the United Mine Workers of America, as an international organization, was not responsible for conspiracy to restrain the Coronado Coal Co.'s interstate trade there was conclusive evidence to show that District 21 of the union had certainly carried on two attacks against the company's mines. The company may now proceed against the district instead of the international to determine whether "the outrages, destruction and crimes committed were intentionally directed toward a restraint of interstate commerce."

The company's mines in Arkansas were wrecked by attacking mobs during a strike years ago. The company was awarded $200,000 damages from the United Mine Workers of America in the district court of western Arkansas. On appeals, however, the union won reversals of this decision, the case finally arriving in the Supreme Court on a writ of error.

Chief Justice Taft, in his May 25 opinion, said, in part:

"The tendency of the evidence to show that District 21 through its authorized leaders and agents and certain of its subordinate local unions organized and carried through two attacks of April 6 and July 17 is so clear that it does not need further discussion.

"We think there was substantial evidence at the second trial tending to show that the purpose of the destruction of the mines was to stop the production of non-union coal and prevent its shipment to markets of other states than Arkansas, where it would by competition tend to reduce the price of the commodity and affect injuriously the maintenance of wages for union labor in competing mines."

Total coal consumed in industry in April is estimated by the National Association of Purchasing Agents at 32,706,000 tons, not including coal used in heating buildings. Coal stocks on hand in industry May 1 are estimated at 42,598,000 net tons, sufficient to take care of industrial requirements for a period of 37 days at the rate coal was used in April. Forty-two per cent of firms reporting showed an increased consumption, 36 per cent used less than in March and 22 per cent used about the same amount of coal.

Zeigler No. 1 (Left) and Valier Mine Set New Production Records

Injunction Dissolved in Co-operative Mine Case; Two Operations Resume

Judge Robert C. Baltzell, in federal court in Indianapolis, Ind., on May 19, dismissed an injunction action that had been brought in an effort to prevent officials of the United Mine Workers from revoking charters of local unions whose members work in co-operative coal mines, and he dissolved a temporary injunction order he had issued a week previous pending final hearing of the case. However, the Court said he believed the question involved to be a vital one and one which would have to be decided eventually and he advised the miners to bring an action in a proper court if they wished a final decision on the question.

One of the grounds for the dismissal of the action was that the federal court did not have jurisdiction. He based this on the fact that both William H. Howe, plaintiff, of Chicago, and John L. Lewis, president of the miners' union, were residents of the same state, and there was no difference of residence to permit the case to be tried in a federal court.

The decision means the stopping of a dozen or more co-operative mines in Knox County and other sections of western Indiana.

At the opening of the final hearing, May 19, Judge Baker indicated he would sustain the defense contention that the court did not have jurisdiction as to Lewis, whereupon the plaintiff's attorneys offered to dismiss the action as to Lewis. They sought to have the injunction made permanent as to the other defendants, asserting that the officers of District No. 11 would be the agency that actually would revoke the local union charters in carrying out the orders of Lewis.

The Court indicated, however, that he thought Lewis an indispensable party in the action, and he said, too, that the Panhandle Coal Co., the operating company before the mine was leased to the co-operative operators, should have been a party plaintiff to the action. He inquired of defense attorneys what would prevent the Panhandle company from going into another court for a ruling on the same questions if the case brought by Howe should not be decided to the company's satisfaction.

Shut Down All Mines

Following the decision, Lewis said that the order he had issued for revoking charters would be restored automatically. The order had been held in abeyance pending action by the court. All mines were shut down as soon as the hearing's result was made public.

Arrangements to reopen the Dugger-Martin mine, at Paxton, under the terms of the Terre Haute agreement have been begun by officials of the company. The mine operated on a co-operative basis prior to the recent edict of John L. Lewis, international president of the United Mine Workers, outlawing such operation. Reorganization of the company also is being effected.

The Dugger-Martin will be the second southern Indiana mine to resume operation under the Terre Haute agreement following outlawing of the co-operative system. The first, the Knox mine, at Bicknell, began work May 18 with a force of 225 men.

Approximately 200 miners at the Enos mine, at Oakland City, the largest stripping operation in the state, who have been on an outlaw strike since May 8, have refused to go to work on the orders of Tyler G. Lawton, president of District No. 11, United Mine Workers. John L. Lewis, international president of the mine workers' organization, has sent down two of the international board members to investigate matters and take some action.

Union Will Stand Pat on Jacksonville Pact

Following a meeting of the executive board of the United Mine Workers in Indianapolis, Ind., May 12, officials of the miners' union said they intend to "stand pat" on the terms of the three-year wage contract signed in Jacksonville in 1923, and under no condition will they consent to a reduction in the wage scale during the life of the agreement, according to John L. Lewis, president.

Since the recent depression set in in the bituminous field reports have been in circulation in some parts of the country that a downward revision of the Jacksonville agreement on wages was at least likely. Reports were current that some action would be taken at the meeting of the board.

"The meeting of the executive board was called to consider a mass of accumulated routine matters," Lewis said, "and has nothing to do with the Jacksonville agreement or with any other general wage issue. Reports to the contrary are idle gossip and without any ground."

He stated that a reduction of wages, in his opinion, would offer no relief in the bituminous field. "If we lower the day wage rate, say, from $7.50 to $5 a day, the unorganized fields would merely lower their wage rates and undersell the operators now most injured by economic conditions," Lewis said.

Griggs Resigns as Manager Of Ore & Coal Exchange

H. M. Griggs, manager of the Ore & Coal Exchange, at Cleveland, Ohio, since 1918, has resigned to join Pollock, Becker & Co., operators of ore docks on the New York Central R.R. at Ashtabula, Ohio. Mr. Griggs was general coal and ore agent of the New York Central from 1910 to 1918, and in the differential coal rate case in 1917 he was chief witness for the railroads before the Interstate Commerce Commission. In 1920 he was agent for the commission under its order requiring shipment of 4,000 cars of coal daily to the upper lakes.

Illinois and Pennsylvania Mines in Merger

Organization of the Cosgrove-Meehan Coal Corporation to merge large soft-coal properties located in Pennsylvania and Illinois was announced May 19. The new corporation, it was said will own and operate twelve bituminous mines in Cambria, Indiana and Somerset counties in Pennsylvania and in Williamson and Montgomery counties in Illinois. The companies making up the consolidated organization have been in business for about twenty years.

In conjunction with the merger the banking firms of Frazier & Co. Inc., Scholle Brothers and George H. Burr & Co. are offering a new issue of $2,500,000 first closed mortgage 6½ per cent sinking fund gold bonds of the Cosgrove-Meehan Coal Corporation. The bonds, which are due in 1945, are being offered at 97½ and interest to yield more than 6.70 per cent.

One of the subsidiary organizations of the parent company is Cosgrove & Co., Inc., a coal sales agency, which is 100 per cent owned by the new company. This sales organization handled all of the coal mined by the companies included in the merger in addition to that mined by other companies. The coal lands owned by the new company in fee approximate 15,700 acres, which together with some 2,600 acres under lease, are estimated, according to the bankers' statement, to contain more than two hundred million tons of recoverable coal. The shipments for the past five years from the consolidated companies averaged 1,600,000 tons net per annum.

Searles Assails Merritt as Foe of Miners' Union

Ellis Searles of Indianapolis, editor of the *United Mine Workers' Journal*, in an address May 21 at the luncheon of the Exchange Club at the Hotel McAlpin, New York City, attacked Walter Gordon Merritt, who has been mentioned as the successor to Samuel D. Warriner, of Philadelphia, as chairman of the anthracite operators' wage committee, which will begin negotiations with the mine workers on Aug. 16.

Mr. Searles assailed Mr. Merritt for a recent address at Atlantic City, N. J., in which the latter was quoted as saying, in part, that he had never been able to understand why the public had not condemned labor in the hard-coal fields.

Mr. Searles said Mr. Merritt "has been for years general counsel for the National Anti-Boycott Association, that aggregation of employers who are traditional, hereditary, historical, hysterical enemies of organized labor."

"No man in America hates labor unions more" said Mr. Searles, adding that he considered Mr. Merritt's selection by the mine owners as their leader to deal with the miners union as "difficult to believe" because of his "bitterly antagonistic views."

"Let us all hope," said Mr. Searles, "that the anthracite operators will not select a man of the Walter Gordon Merritt type to be their red flag when the time comes to meet miners in a wage conference."

No Wage Cut in Kansas; Competition from Colorado And Oklahoma Now Likely

A first attempt in Kansas to escape the provisions of the contract signed in Kansas City in May, 1924, extending for three years the high post-war wage scale, which Kansas operators declare virtually confiscatory, apparently has failed. The Eastern Coal Co., operating under lease Sheridan No. 7, in the southeastern Kansas field, reopened the mine May 18, under the 1924 scale after having been idle since March 1, when the company announced it would revert to the 1917 scale. A new contract with District 14, United Mine Workers, containing all provisions of the contract signed in Kansas City in 1924, and bearing the same date of termination, was signed by James Price, Joe Lafayette and Jack Devine for the company. The mine employs 200 men.

Sheridan No. 18, leased by the Capital Coal Co., which it closed under the same conditions at the time the Eastern company shut down its mine, still is idle.

Kansas now is the lone orphan of the Southwest. Oklahoma is producing coal under the 1917 scale both in the McAlester and the Henryetta fields. Under the same wage scale Oklahoma coal has not offered much competition to Kansas on the Kansas City and northern markets, because of higher freight rates. But with this difference of rates neutralized by cheaper production, Oklahoma is expected to become a stiff competitor.

It was with considerable trepidation that operators in the Kansas field read of the Interstate Commerce Commission's decision, May 9, reducing rates on Colorado coal to the Missouri River. To Missouri River cities, Kansas City, Mo.; Atchison, Kan.; St. Joseph, Mo.; Omaha, Neb., and Sioux City, Iowa, the reduction is only 27c. a ton. But to points in western Nebraska, Kansas and Oklahoma the reduction ranges from 50c. to $1.74 a ton.

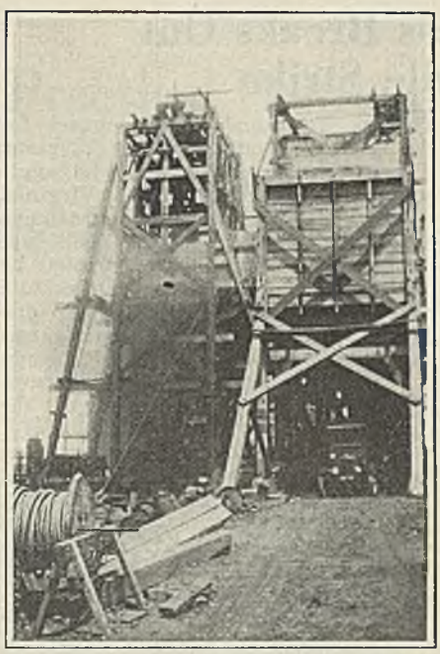
Under the new tariff Colorado will have the edge on Kansas in markets which once they fought over on an equal footing as concerned haulage cost. The Colorado influence will be felt even in the zone of 27c. reduction, as cheaper production in the western state, where most operators now are paying the 1917 scale, will make it possible for them to compete on more nearly equal price terms in markets to which Kansas has a preferential rate.

Hoover Urges Consumers To Buy Coal Early

Low prices, ease of transportation and adequacy of production, which he believes will facilitate action at this time, are reasons advanced by Secretary Hoover in advising consumers of both anthracite and bituminous coal to stock up during the next few weeks.

"Just at this moment all coal mines can take on a larger load of output" he explained. "The bituminous industry, especially, is selling at a loss practically throughout the United States, so the consumer can hardly expect better prices than those he can now get.

"Likewise, there is always a hazard of transportation congestion when business is good in the United States, if the great volume of coal movement is held off the railroads early in the year and then thrown on in the fall, when crops and general commodities are straining facilities. The public right now can do a good deal to stabilize industry and aid transportation by increasing the takings of coal, and do it with profit and with reduction of any risks as to supply which may arise later on."



Main Shaft of New Kings Mine of The Princeton Mining Co.

Located three miles south of Princeton, Ind., this mine is a new development planned on the most modern lines. The shaft, which is 439 ft. deep—said to be the deepest in Indiana—taps between 4,000 and 5,000 acres of coal. Cutters, drills and loaders of various types are being tried out as part of the plan to make the operation one of the biggest producers in the state. The plant is under the management of R. J. Smith, of the Deep Vein Coal Co., of Terre Haute, Ind. The smoke issuing from the shaft is due to a fire that broke out May 12 but that was brought under control two days later. Six entries were affected.

Miners May Postpone 1926 Convention to 1927

The United Mine Workers may postpone their regular biennial convention from February, 1926, to January, 1927. This new date will immediately precede the expiration of the Jacksonville agreement. The International Board at Indianapolis has asked all local unions for an immediate vote on the change of date. The news of the voting gave rise to a report that President Lewis was trying to get his organization to hold a convention at once for the purpose of authorizing a change in the Jacksonville scale. Indianapolis information now indicates Mr. Lewis' idea is directly opposite to that. He is trying to hold his men in line until the very end of the present contract.

Navy Receives 75 Coal Bids To Supply Fleet

Seventy-five bids, covering 345,730 gross tons of semi-bituminous and 178,500 tons of steaming coal, which the Navy will use at shore stations and for vessels during the fiscal year beginning July 1 next, were received by the Navy Department and opened May 20.

The proposals and the company or companies making the lowest bid and also the price range follow:

For 27,000 tons mine-run, for delivery f.o.b. cars, Boston, the Elkins Fuel Co., Morgantown, W. Va., bid $4.22; alternate bid, $5.82. W. B. W. Haff, New York City, bid $2.18 f.o.b. mines. The price ranged to $6.56.

Fifty thousand tons run of mine for delivery at New York City brought a low bid of $4.37, delivered New Jersey shore; $4.54, Brooklyn, from the Johnstown Coal & Coke Co., New York City. The highest proposal submitted was $5.80, New Jersey shore; $6 and $6.10 Brooklyn.

The low bid for delivery of 36,000 tons mine-run at Philadelphia was $4.17 f.o.b. barges, made by the Winslow Coal Co., Johnston Coal & Coke Co. and Shawnee Fuel Co., Inc. The Winslow company also bid $4.33 f.a.s. wharf. The highest price was $4.98 f.o.b. barges, $5.18 f.a.s. wharf.

The Equitable Fuel Co. made a low bid of $1.68, alternate $2.07, for delivery at Washington, D. C., for 50,000 tons run of mine. The quantity also included stoker, for which the lowest bid was $1.57, submitted by W. C. Atwater & Co. The price on mine-run ranged to $5.08 and that on stoker to $4.52.

Twenty-five thousand tons run of mine or stoker for delivery at Hampton Roads, Va., brought the following low bids: Elkhorn City Fuel Co., run of mine, $4.75; Fort Dearborn Fuel Co., stoker, $4.50. The highest bids were $5.20 for mine-run and $4.65 for stoker.

Bids on 150,000 tons steaming coal, also for delivery at Hampton Roads, resulted in a low proposal of $4.43 made by the Independent Coal Corporation. The highest bid was $5.10.

More Wage Cuts in Colorado

The State Industrial Commission of Colorado has granted permission to the Pike's Peak Consolidated Coal Co., Keystone Mining Co. and the Colorado Springs Coal Co. to make a general 20 per cent reduction in the wages of their miners. The above companies applied for the 1917 scale, which is 33⅓ per cent less, but the commission did not sustain that scale.

The Industrial Commission will hold a hearing at Durango to consider the application of the Calumet Fuel Co. to make a reduction of 20 per cent. This company originally asked for 33⅓ per cent, but the employees objected.

Two Weld County coal companies notified the State Industrial Commission on May 21 that they would reduce the wages of their employees to the 1917 scale. The companies are the William E. Russell Coal Co., operating a mine at Firestone, and the Consolidated Coal & Coke Co., with a mine at Dacona. They are the first notices of proposed reductions in the Weld County field.

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More Lawlessness Breaks Out In Panhandle Strike

Two volleys of shots fired at two non-union negro coal miners slightly wounded one, when the men were attacked from ambush as they were walking through a wood near Ida May, W. Va., on their way to mine No. 9 of the Jamison Coal & Coke Co., near Farmington, early May 25. Four alleged union miners are under arrest and firearms and a still have been confiscated.

Two non-union miners' houses were dynamited at Glendale, Marshall County, early the same morning, endangering the lives of sixteen people. Eleven arrests have been made, but union mine officials deny any responsibility for the lawless act.

In the Harrison County Circuit Court at Clarksburg on Saturday afternoon, May 23, Judge Haymond Maxwell granted an injunction to the Clark company which restrains the United Mine Workers of America from interfering in any manner with the operation of the Eagle mine. The injunction prevents the union miners from marching at or near the Eagle mine or the entrance of the coal company property.

Mr. Hughes Offers Services

Charles Evans Hughes, former Secretary of State and once presidential standard bearer on the Republican ticket, has proffered his services to the United Mine Workers in the Panhandle section strike in northern West Virginia, according to press reports from Wheeling.

Henry W. Warrum, Thomas Townsend and J. D. Gardner, attorneys for the miners' union, left Wheeling May 22 for Washington, D. C., to confer with Mr. Hughes.

The union, it is reported, has decided to take an immediate appeal to the federal Court of Appeals at Richmond, Va., against the new injunction writ issued early last week by Federal Judge W. E. Baker, who is considering until June 1, whether "peaceful persuasion" is unlawful.

The West Virginia & Pittsburgh Coal Co. filed a petition before Judge Baker in Wheeling May 19 by which it seeks to have "peaceful persuasion" declared unlawful and curbed within the bounds of an injunction. Judge Baker overruled the motion made by counsel of the United Mine Workers to dismiss entirely the new injunction sought by the coal company.

The court expressed the opinion that he could not dismiss the petition without further hearing from counsel for both sides, and said that the injunction would remain in force until June 1, when the hearing will be held. This forbids even "peaceful persuasion." The operators furnished bond in the sum of $10,000.

One hundred and thirty-eight pickets, arrested at Grant Town, where the New England Fuel & Transportation Co. is working Federal Mine No. 1 on a non-union basis, were haled into Marion County Circuit Court Friday morning, May 22, but Judge W. S. Meredith continued the cases until May 26 because of the absence of Thomas Townsend, chief counsel for the union in northern West Virginia.

A new angle in the labor struggle occurred in northern West Virginia, Friday, May 22, when six watchmen employed by the Chaplin Collieries Co., in Scotts Run, were arrested by Lieutenant H. N. Rexroad of the state police, when they refused to stop dispossessing union miners formerly employed by the company without formal writs of possession. A Morgantown justice of the peace discharged the watchmen.

Counsel for the coal company has declared that he will have Lieutenant Rexroad cited for contempt of court for violating an injunction granted to the coal company restraining union miners and all others from interfering with open-shop operation of its mine.

The miners' union continued picketing at the larger non-union mines last week.

Non-union coal production in northern West Virginia continues to increase. During the first four days of last week the non-union mines loaded 4,210 cars of coal, while union mines produced 649 cars. The peak of non-union production in the 12½ counties of the northern field was reached May 21, when 1,118 cars were loaded. On the preceding day 1,111 cars were loaded. In the week ended May 16 the non-union mines produced 5,896 cars of coal, or 203 cars more than the previous week. Union mines loaded 860 cars, or 54 cars less than the previous week.

From last reports the Bethlehem Coal Co., which is working on an individual agreement with its own miners, is steadily increasing its daily coal production at Scott mine No. 2, near Shinnston. It is reported that nearly the entire membership of local No. 4,009 has left the United Mine Workers and joined the independent organization.

Van A. Bittner, chief international representative, was cited in an injunction before Judge I. Grant Lazelle in Monongalia County at Morgantown for appearance May 22, but it is said that the officers failed to get service on him.

A deputy sheriff served a summons late Monday evening, May 25, on Bittner to appear in Morgantown to show cause for his violation of an injunction.

Fairmont Begins Rock-Dusting

The first rock-dusting in the Fairmont region of northern West Virginia will be done this week at the mine of the Byrne Gas Coal Co., at Byrne, between Fairmont and Morgantown, according to George Riggs, of the Mine Safety Appliances Co., who will direct the work. The rock is being procured from hills along the M. & K. branch of the B. & O. R.R. The next mines to be rock-dusted in the region will be mine No. 41 of the Bethlehem Mines Corporation, at Barrackville, where an explosion occurred in March, when 33 men were killed, and the twin plant, the Dakota operation of the same company.

Virginian Fights Extension Of Westbound Rates

The order of the Interstate Commerce Commission directing the establishment of the same basis of rates westbound from Winding Gulf mines as applies from New River district mines has been attacked in the U. S. District Court at Richmond, Va., by the Virginian Ry. The railroad, in an application for an injunction set for hearing May 28, announces its readiness to establish westbound rates in connection with the Norfolk & Western, but opposes such rates in connection with the Chesapeake & Ohio on the ground that such extension would dissipate its car supply. Stockholders of the Norfolk & Western recently indorsed a proposal to lease the Virginian.

In the original case before the commission, Wyoming Coal Co. et al vs. Virginia Ry. Co. et al (*Coal Age*, March 26, p. 490), the commission held that the refusal to make westbound rates was unreasonable.

I. C. C. Refuses Permit For 84-Mile Road

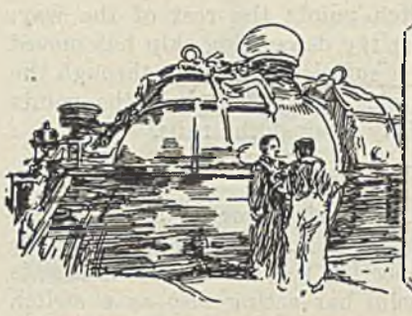
On May 16 Interstate Commerce Commission examiners again rendered a report denying application of the Owensboro, Rockport & Chicago R.R. for a permit to construct eighty-four miles of railroad and an Ohio River bridge connecting Owensboro with Elnora, Ind., there meeting the Chicago, Milwaukee & St. Paul and one other railroad as well as tapping the Louisville & Nashville R.R., and others at Owensboro. This would give a fresh gateway from the Kentucky coal fields and from the South to the North and Northwest. The road would also tap rich stripping fields. The Commission has held that there was no need of the road. The cost of the road would be between $6,500,000 and $8,500,000.

Blast Traps German Miners

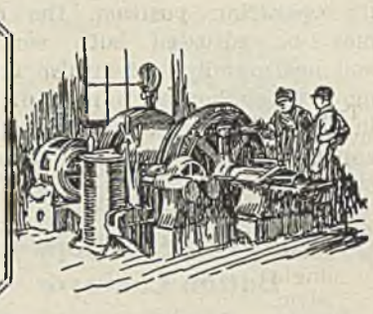
An explosion of a powder magazine in a shaft on the lower level of the Dortsfeld coal mine, near Dortmund, Germany, at 4.30 p.m., May 16, caused numerous cave-ins and sent poisonous fumes through the workings. Reports on the number of casualties vary all the way from 1 killed, 25 injured and 30 missing to 5 killed, 30 injured and 225 missing. More than 500 men are said to have been in the mine when the blast occurred. The cause of the explosion is unknown.

Second Pomeroy Mine Starts

The Forest Run mine of the New Pittsburgh Coal Co., at Pomeroy, Ohio, started up on Saturday, May 23, after the miners had entered a petition to the management similar to that of the Dark Hollow miners of a few weeks ago. This makes the second mine, formerly union, to be started in the Pomeroy district on the November 1917, scale.



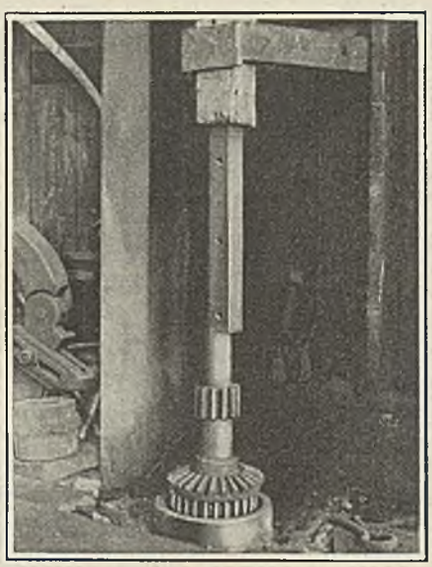
Practical Pointers For Electrical And Mechanical Men



Home-Made Piledriver Displaces Sledge For Removing Armature Shafts

The end of a shaft or steel bar will stand a surprisingly large amount of hammering without getting into an unduly battered condition, provided the blows are delivered squarely. Striking of a square blow practically is impossible with a sledge. There is always a tendency for the sledge to be tilted slightly, or for it to hit near the edge. This, unless a cushion of soft metal or wood is provided, results in damage to any finished surface struck.

Instead of using a sledge, Harry Kivett, chief electrician of the Blue Diamond Coal Co., of Blue Diamond, Ky., uses a home-made gravity-type piledriver, of small size, for removing and installing armature shafts, and for making gear and pinion changes on the shafts of mining machines. The bottom part of the device that Kivett is using in the central shop of his company is shown in the accompanying illustration. It consists of a square wooden tube, 2¾ x 2¾ in. inside, and 15 ft. long, through which slides a weight or hammer. The tube is mounted plumb, and within about 24 in. of the side of the building. The hammer consists of an old steel shaft, 2½ in. square and about 4 ft. long, weighing approximately 90 lb. A rope fastened to the upper end of this shaft is carried up through the tube and over a sheave at the top. The loose end of this rope can be seen hanging beside the wooden tube in the picture.



Strikes a Hard, Square Blow

The 90-lb. weight or hammer can be raised about 12 ft. in the wooden tube, by means of a rope and pulley, and then dropped on the part to be driven. A heavy vertical blow is thus delivered to the work.

SIMPLE IN OPERATION

Directly under the tube there is a pit of small diameter but several feet deep. The top of this pit ordinarily is covered by an old spur gear and car wheel, the two together forming a hollow-center anvil. When the photograph was taken a bevel gear was being driven onto the shaft upon which the hammer is resting. The operation of this driver is simple. The part to be driven is set up under the tube, the hammer is raised by hand with the rope to a height deemed sufficient for the desired blow, and then dropped. The maximum distance to which the hammer can be raised in this case is about 12 ft.

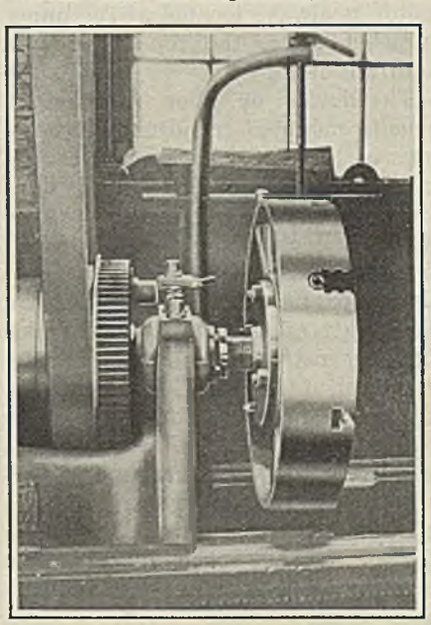
This device has been so useful and is so inexpensive to build, that in addition to the one in the central shop, others have been installed in the shops at the individual mines.

Crane Swings Heavy Chucks Into Place with Ease

In the central repair shop of the Maryland division of the Consolidation Coal Co., at Frostburg, Md., an arrangement has been devised that enables a machinist to put on or remove a heavy lathe chuck without lifting it. This device is shown in the accompanying illustration. Essentially, it is nothing more than a crane or davit which serves to suspend the chuck in a suitable position while it is being threaded onto the spindle nose. When not in use it may be swung back out of the way, either with or without the chuck.

This crane is made from 1-in. pipe, the bottom end of which rests in a suitable pocket or step bearing carried by a ½- x 2-in. bar lying below the ways of the lathe and bridging the bed. This bar is supported at its two ends by the lower inside flanges of the lathe bed. The upright is held in a vertical position by an iron plate with a hole through it which serves as an upper bearing. This plate is bolted to the headstock as shown. Near the end of the overhang of the boom is a ⅝-in. slotted hole through which passes a heavy-headed ⅝-in. cap screw. Between the pipe and the hexagonal screw head is placed a large washer which permits easy rotation of the screw by means of a regular lathebox wrench. The threads on the lower end of the cap screw engage a tapped hole in the chuck.

With this arrangement, when in



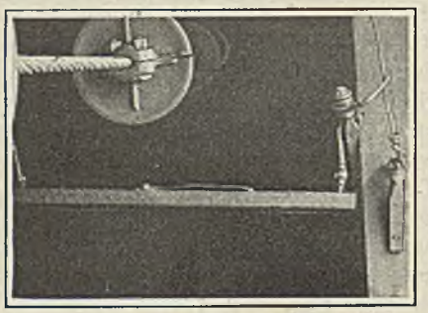
Screwing Chuck Onto Spindle

By means of the crane or davit this heavy chuck is suspended at proper height for screwing onto the nose of the lathe spindle. The slotted hole in the davit's extremity permits the necessary movement of the supporting cap screw as the chuck is screwed to place and seated.

its operating position, the chuck may be adjusted both vertically and horizontally. It is also free to move throughout a limited distance in line with the axis of the lathe spindle while it is being threaded either on or off.

Cutout Protects Rope and Button Conveyor

Because of low first cost and relatively small maintenance expense when properly installed, rope and button conveyors are used extensively for retarding coal on steep inclines at drift mines. In practically every case a motor is required either to start the conveyor or to drive it continuously, and in some instances, after starting the conveyor, the motor acts as a dynamic brake. The motor is always located at the upper sprocket where the rope tension is naturally high.



When Rope Drops Circuit to Motor Breaks

Considerable damage may be done if the steel cable of a rope and button conveyor comes off the lower or idler sprocket and the motor continues to rotate the upper or driving sprocket. This danger may be obviated by a simple electrical cutout placed below the upper cable and near the lower sprocket. The weight of the falling rope knocks down the two-by-four.

The lower or idler sprocket is usually mounted in adjustable bearings so that the rope stretch can be taken up. In most cases this is done automatically by weights or springs. But occasionally the rope comes off the lower sprocket, the motor continues to move the conveyor, and some part of the equipment breaks. In some instances the lower sprocket has been torn from its moorings. The motor fuses or overload breakers seldom open the circuit soon enough to prevent damage, because at certain times such conveyors require a high starting torque and, therefore, the fuses have been increased in capacity or the breaker "set up" to a high point.

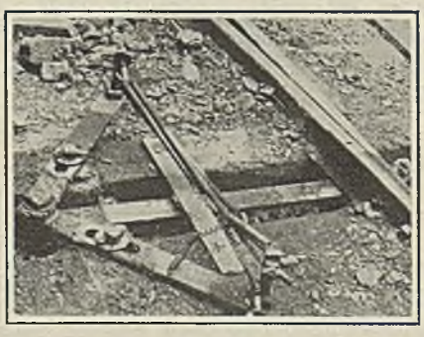
Chance of damage by the rope coming off the lower sprocket can positively be eliminated by the installation of a circuit breaking device such as that here pictured, which is in the tipple of the Hazard Blue Grass Coal Corp., at Hazard, Ky. It consists of a two-by-four across which is carried a conductor in series with the low-voltage release of the motor starter. This two-by-four is hung a few inches below the upper rope and close to the lower sprocket in such a position that if the rope comes off the sprocket and drops, the two-by-four will be knocked down and the electrical connection torn loose, cutting off power to the motor.

C. E. Bullard, manager of the company, explained that every rope and button conveyor in the Hazard field is now equipped with a power cut-off of this principle, and that he believes the practice was started in that field by A. F. Barbieux, manager and electrical engineer of the Columbus Mining Co.

Quick-Acting Spring Switch Does Its Work Well

There are a number of ways of making a double-acting, spring-holding device for a self-operated switch. One type which seems to be satisfactory is that shown in the illustration, which is a recent photograph of a device in use at the foot of the slate disposal incline of the Elkhorn Coal Corporation at Wayland, Ky.

Balanced skips operate on the incline, a 3-rail track being used most of the distance. At the bottom, the track merges from three rails into two rails. This is done so that both skips can be loaded from a single chute. As each skip comes down its respective side of the 3-rail track, its wheels automatically force the switch points over so that the skip can return over the same side from which it descended. The function of the spring switch device is to take the switch points the rest of the way, after the descending skip has moved them sufficiently to pass through the switch, and then to hold the points tightly against the rails.



A Good Spring Switch

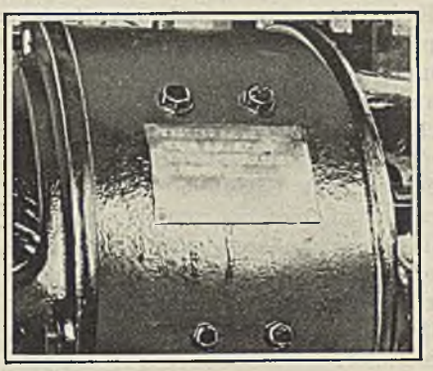
It is located close to the foot of the refuse-disposal incline. The wheels of the descending skips throw the switch points over beyond the half-way position, this movement stretches the coil springs. The completion of the throwing of the switch, in either direction, is done by the extended springs.

Toggle-Joint Principle

The device works on the principle of a toggle joint. When the connecting rod, which in this case is a solid bar acting also as a switch rod, is moved away from its position at one side, the coil springs are stretched. After the rod has been moved slightly past dead center, the springs complete the movement with a decisive snap. R. R. Schillenger, electrical engineer, states that this device has been in use many years with complete satisfaction.

Name Plates Serve Other than Advertising Purpose

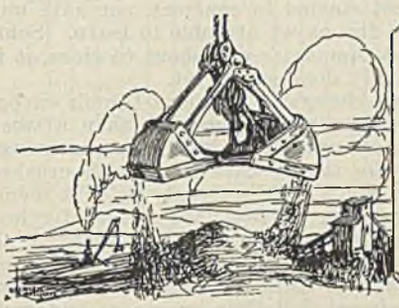
Considerable difficulty was experienced by C. E. Starbuck of Corning, Ohio, foreman of the central repair shop of the Sunday Creek Coal Co., in obtaining repair parts for an electric motor which was minus a name plate when it first came to his attention. As a result he fully appreciates the importance of replacing plates which have become lost.



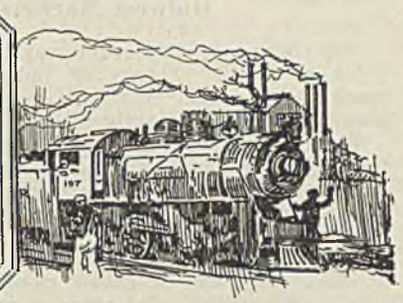
Here Is a Trouble Saver

When this motor came into the shop the nameplate was gone. The home-made plate is complete except for the serial number which is yet to be determined from the mine equipment records maintained by the company.

The home-made nameplate, on the motor illustrated, was cut from a sheet of copper about 1/16 in. thick. All of the original data except the serial number has been stamped on this plate. Mr. Starbuck explained that the number will be added before the motor leaves the shop, this number having been found on a record at the mine from which the motor came. He remarked that the replacing of this plate might not save him any further annoyance but that he was certain that it might save the next man a great deal of trouble.



Production And the Market



Bituminous Coal Market Still Sluggish; Hard-Coal Trade Easier

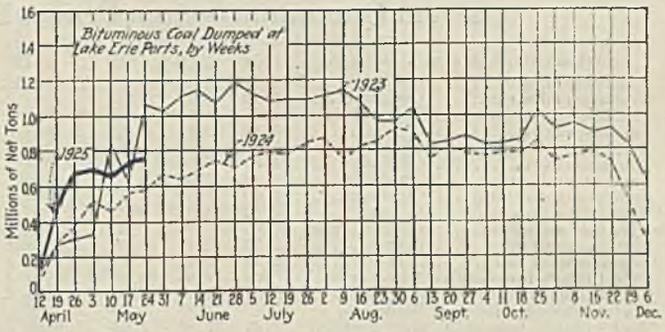
As far as general conditions are concerned any change for the better in the bituminous coal market seems to be as far off as ever. There has been little or no change in the situation at any point. Despite the general belief that prices are as low as they are likely to go—as low as they possibly can go, in the opinion of many—industrial consumers continue to resort to stockpiles or buy from hand to mouth, holding off on the chance that quotations will sag still further. Perhaps the brightest spot is in Cincinnati, where heavy lake cargo buying has brought about a brighter aspect, without, however, any immediate far-reaching benefit.

Midwestern markets are woefully flat. Illinois coals probably will face less keen competition from Indiana steam fuels since Lewis' victory over the co-operatives. Several mines in Kentucky have increased their operating time and some that had been closed since April 1 are working again. Receipts of coal at the head of the lakes were heavier last week, but orders were slow. A number of municipal contracts are in sight, however. Working time is very low in the West and Southwest, where the open market has practically disappeared, operations being almost entirely confined to filling contracts.

Southern Ohio Feels Better

A better feeling is developing in southern Ohio, particularly in the steam trade. Buying on the open market is the rule, though some inquiries on contracts are afloat. The dullness in eastern Ohio, however, is unrelieved. Little change is discernible in the slow gait of business at Pittsburgh. New England and other Eastern markets also fail to show any perceptible variations from recent conditions.

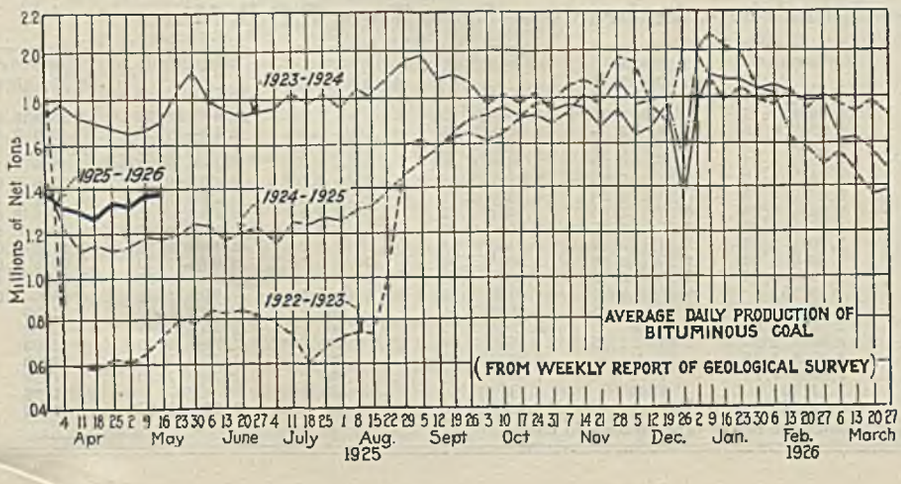
The anthracite market has lost some of its recent briskness. Output is heavy and there is no dearth of tonnage. Both domestic and steam sizes are easier, independents being unable to get more than company circular for their product. Stove is strong, egg and



pea in good demand and chestnut easy. Steam coals are quiet.

Output of bituminous coal again increased slightly in the week ended May 16, totaling 8,375,000 net tons, according to the Geological Survey. This compares with 8,277,000 tons in the preceding week. Anthracite production in the week ended May 16 was 1,998,000 net tons, compared with 2,036,000 tons in the previous week and 1,898,000 tons in the corresponding week of 1924.

Dumpings at Lake Erie ports during the week ended May 24, according to the Ore & Coal Exchange, were: Cargo, 687,973 net tons; steamship fuel, 46,128 tons—a total of 734,101 tons, compared with 715,352 tons in the previous week. Hampton Roads dumpings in the week ended May 21 totaled 451,537 net tons, compared with 404,320 tons in the preceding week.



Estimates of Production

(Net Tons)

	1924	1925
BITUMINOUS		
May 2 (a)	7,063,000	7,987,000
May 9 (a)	7,360,000	8,277,000
May 16 (b)	7,263,000	8,375,000
Daily average	1,211,000	1,396,000
Cal. yr. to date (c)	185,421,000	181,151,000
Daily av. to date	1,605,000	1,564,000
ANTHRACITE		
May 2	1,616,000	1,984,000
May 9	1,924,000	2,036,000
May 16	1,898,000	1,998,000
Cal. yr. to date	34,591,000	33,786,000
COKE		
May 9	178,000	143,000
May 16 (b)	189,000	136,000
Cal. yr. to date (c)	5,176,000	4,429,000

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

Midwest Markets Lifeless

The Chicago coal market was inactive last week to the point of death. Stocks of industrial fuel are reported much reduced and retailers are cleaning up their yards preparatory for the early trade.

The only activity in the Chicago market last week was felt when some of the Illinois producers thought the stockyards people were badly in need of fuel and attempted to advance prices. The packers were able to cover at their own price on Indiana coal. Indiana steam coal, by the way, has been playing an important part in the daily market, as fuel from the so-called co-operative mines has been coming into Chicago at prices low enough to shut out not only central and southern Illinois coals but western Kentucky fuels as well.

Nothing much is doing on domestic and prepared coals outside of anthracite, which is moving in fair to medium quantities. Anthracite is in a favorable position, as many people are buying now because the possibility of a strike in the hard-coal districts has had much publicity here. Prepared Illinois and Indiana coals for the retailer are in practically no demand. Smokeless coals are moving fairly well and there is a little business done on high-volatile coals from Kentucky and West Virginia. No eastern coal is on track in distress in Chicago; for that matter, there is practically no unbilled coal in the city.

The railroads have not started to contract, nor have any of the big industries, so far as we are able to learn. Some of the independent steel companies are about to close, it is said, but have not actually done so as yet.

There is practically no change in southern Illinois except that perhaps a little less tonnage is moving than a week ago. There isn't even an unusual demand for screenings because the strip pits are taking care of it with crushed coal. In the Williamson and Franklin County fields it seems as if the bottom has been hit. A few days a week for less than a dozen mines is the working time and there is all kinds of coal on track from mines that have been idle for weeks. Railroad tonnage is light but the strip pits apparently are working almost full time on steam and railroad coal.

In the Duquoin field conditions are somewhat similar, two days a week being about the limit. There has been no change in prices of coal in this field. In the Mt. Olive field things are practically at a standstill. The mines are working a little, crushing mine-run to take care of their steam contracts, and the movement of domestic is nil. In the Standard district a little coal is moving, but so little that it is not a factor and it is going below cost. A few mines that have steam contracts are crushing and some of them are almost giving it away at the buyer's own price and some of them have coal on track for many weeks. Railroad tonnage in this field is light. No change in prices.

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

Low-Volatile, Eastern	Market Quoted	May 26 1924	May 11 1925	May 18 1925	May 25 1925†
Smokeless lump	Columbus	$3.50	$2.85	$2.85	$2.75@$3.00
Smokeless mine run	Columbus	2.30	1.85	1.85	1.75@ 2.00
Smokeless screenings	Columbus	1.85	1.45	1.45	1.40@ 1.50
Smokeless lump	Chicago	3.10	2.85	2.85	**2.75@ 3.25**
Smokeless mine run	Chicago	1.85	1.85	1.85	1.75@ 2.00
Smokeless lump	Cincinnati	3.60	3.00	2.85	2.75@ 3.00
Smokeless mine run	Cincinnati	1.85	2.00	2.00	2.00
Smokeless screenings	Cincinnati	1.60	1.50	1.35	*1.25@ 1.35*
*Smokeless mine run	Boston	4.40	4.25	4.25	4.15@ 4.35
Clearfield mine run	Boston	1.95	1.95	1.85	1.70@ 2.00
Cambria mine run	Boston	2.50	2.15	2.10	2.00@ 2.25
Somerset mine run	Boston	2.15	2.05	1.95	1.85@ 2.10
Pool 1 (Navy Standard)	New York	2.65	2.55	2.55	2.40@ 2.70
Pool 1 (Navy Standard)	Philadelphia	3.00	2.60	2.60	2.45@ 2.75
Pool 1 (Navy Standard)	Baltimore	....	1.95	1.95	*1.80@ 1.95*
Pool 9 (Super. Low Vol.)	New York	2.20	1.95	2.00	1.85@ 2.15
Pool 9 (Super. Low Vol.)	Philadelphia	2.20	2.00	2.00	1.85@ 2.20
Pool 9 (Super. Low Vol.)	Baltimore	1.85	1.85	1.85	*1.65@ 1.85*
Pool 10 (H.Gr.Low Vol.)	New York	1.85	1.85	1.85	1.75@ 2.00
Pool 10 (H.Gr.Low Vol.)	Philadelphia	1.85	1.70	1.70	1.60@ 1.85
Pool 10 (H.Gr.Low Vol.)	Baltimore	1.70	1.70	1.70	*1.55@ 1.65*
Pool 11 (Low Vol.)	New York	1.60	1.50	1.50	**1.45@ 1.65**
Pool 11 (Low Vol.)	Philadelphia	1.50	1.55	1.55	1.50@ 1.60
Pool 11 (Low Vol.)	Baltimore	1.55	1.45	1.45	*1.35@ 1.45*
High-Volatile, Eastern					
Pool 54-64 (Gas and St.)	New York	1.50	1.50	1.50	**1.45@ 1.65**
Pool 54-64 (Gas and St.)	Philadelphia	1.55	1.45	1.50	1.45@ 1.60
Pool 54-64 (Gas and St.)	Baltimore	1.45	1.50	1.50	*1.40@ 1.50*
Pittsburgh sc'd gas	Pittsburgh	2.40	2.40	2.40	2.30@ 2.50
Pittsburgh gas mine run	Pittsburgh	2.10	2.15	2.15	2.10@ 2.25
Pittsburgh mine run (St.)	Pittsburgh	1.85	1.95	1.95	1.90@ 2.00
Pittsburgh slack (Gas)	Pittsburgh	1.35	1.50	1.55	1.50@ 1.60
Kanawha lump	Columbus	....	2.10	2.10	2.00@ 2.25
Kanawha mine run	Columbus	....	1.40	1.40	1.35@ 1.50
Kanawha screenings	Columbus	....	1.20	1.10	**1.00@ 1.25**
W. Va. lump	Cincinnati	2.25	2.05	2.05	**2.00@ 2.35**
W. Va. gas mine run	Cincinnati	1.35	1.45	1.40	**1.40@ 1.60**
W. Va. steam mine run	Cincinnati	1.35	1.30	1.30	**1.25@ 1.50**
W. Va. screenings	Cincinnati	.85	1.15	1.10	**1.10@ 1.25**
Hocking lump	Columbus	2.40	2.25	2.25	2.15@ 2.35
Hocking mine run	Columbus	1.60	1.40	1.40	**1.40@ 1.60**
Hocking screenings	Columbus	1.35	1.30	1.10	**1.20@ 1.45**
Pitts. No. 8 lump	Cleveland	2.40	2.25	2.25	1.90@ 2.60
Pitts. No. 8 mine run	Cleveland	1.85	1.90	1.90	1.85@ 1.95
Pitts. No. 8 screening	Cleveland	1.25	1.45	1.40	**1.40@ 1.50**

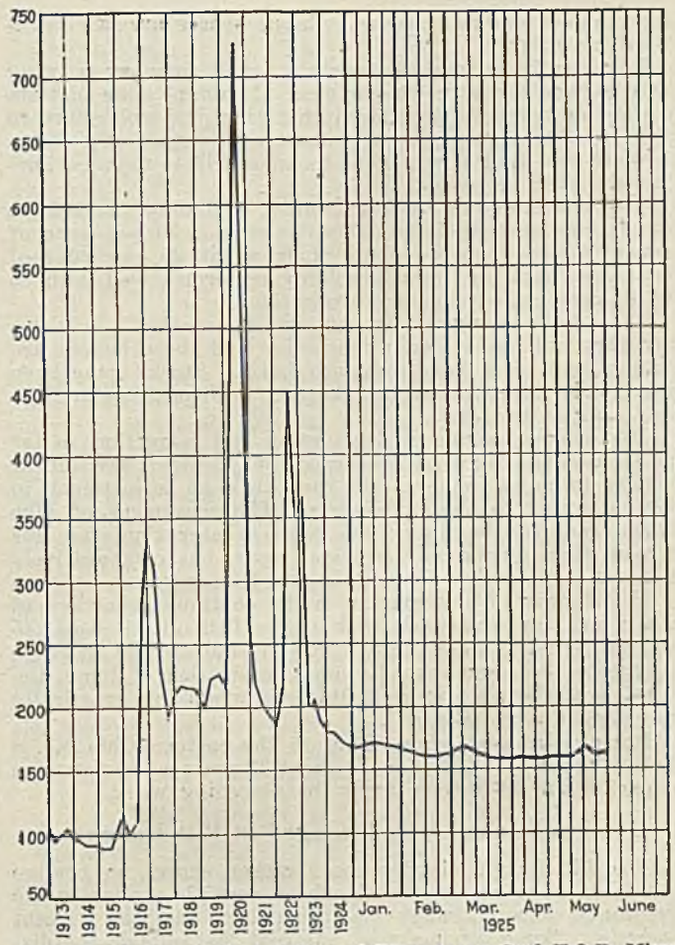
Midwest	Market Quoted	May 26 1924	May 11 1925	May 18 1925	May 25 1925†
Franklin, Ill. lump	Chicago	$2.75	$2.60	$2.60	$2.50@$2.75
Franklin, Ill. mine run	Chicago	2.35	2.35	2.35	2.25@ 2.50
Franklin, Ill. screenings	Chicago	1.85	2.10	2.10	2.00@ 2.25
Central, Ill. lump	Chicago	2.35	2.35	2.35	2.25@ 2.50
Central, Ill. mine run	Chicago	2.10	2.10	2.10	2.00@ 2.25
Central, Ill. screenings	Chicago	1.60	1.85	1.85	1.75@ 2.00
Ind. 4th Vein lump	Chicago	2.85	2.60	2.60	2.50@ 2.75
Ind. 4th Vein mine run	Chicago	2.35	2.35	2.35	2.25@ 2.50
Ind. 4th Vein screenings	Chicago	1.95	2.00	2.00	1.85@ 2.15
Ind. 5th Vein lump	Chicago	2.35	2.25	2.25	2.15@ 2.40
Ind. 5th Vein mine run	Chicago	2.10	1.95	1.95	1.85@ 2.10
Ind. 5th Vein screenings	Chicago	1.60	1.60	1.60	1.50@ 1.75
Mt. Olive lump	St. Louis	2.85	2.50	2.50	2.50
Mt. Olive mine run	St. Louis	2.50	2.25	2.25	2.25
Mt. Olive screenings	St. Louis	2.00	1.75	1.75	1.75
Standard lump	St. Louis	2.15	2.25	2.25	2.25
Standard mine run	St. Louis	1.85	1.80	1.80	1.75@ 1.90
Standard screenings	St. Louis	1.65	1.70	1.70	1.65@ 1.75
West Ky. block‡	Louisville	2.00	1.65	1.65	1.50@ 1.85
West Ky. mine run	Louisville	1.55	1.35	1.35	1.25@ 1.50
West Ky. screenings	Louisville	1.55	1.20	1.20	**1.15@ 1.30**
West Ky. block‡	Chicago	2.25	2.00	2.00	1.90@ 2.15
West Ky. mine run	Chicago	1.60	1.30	1.30	1.15@ 1.50
South and Southwest					
Big Seam lump	Birmingham	2.80	2.40	2.30	2.25@ 2.40
Big Seam mine run	Birmingham	2.00	1.75	1.75	1.50@ 2.00
Big Seam (washed)	Birmingham	2.20	1.85	1.85	1.75@ 2.00
S. E. Ky. block‡	Chicago	2.25	2.25	2.25	2.15@ 2.40
S. E. Ky. mine run	Chicago	1.60	1.65	1.70	1.60@ 1.85
S. E. Ky. block‡	Louisville	2.10	2.20	2.20	2.00@ 2.40
S. E. Ky. mine run	Louisville	1.50	1.30	1.30	1.15@ 1.50
S. E. Ky. screenings	Louisville	1.10	1.20	1.10	1.00@ 1.25
S. E. Ky. block‡	Cincinnati	2.75	2.20	2.20	**2.15@ 2.50**
S. E. Ky. mine run	Cincinnati	1.35	1.35	1.35	**1.25@ 1.65**
S. E. Ky. screenings	Cincinnati	.95	1.15	1.10	**1.10@ 1.25**
Kansas lump	Kansas City	4.50	4.25	4.10	**4.00@ 4.50**
Kansas mine run	Kansas City	3.50	2.85	2.85	2.75@ 3.00
Kansas screenings	Kansas City	2.50	2.60	2.60	2.50@ 2.75

* Gross tons, f.o.b. vessel, Hampton Roads.
† Advances over previous week shown in heavy type, declines in *italics*
‡ The term block is used instead of lump in order to conform to local practice, but the same coal is being quoted as heretofore.

Current Quotations—Spot Prices, Anthracite—Gross Tons, F.O.B. Mines

	Market Quoted	Freight Rates	May 26, 1924 Independent	May 26, 1924 Company	May 18, 1925 Independent	May 18, 1925 Company	May 25, 1925† Independent	May 25, 1925† Company
Broken	New York	$2.34	.....	$8.00@$8.75	.....	$8.05@$8.60	.....	$8.05@$8.60
Broken	Philadelphia	2.39	.....	8.60@ 8.75	.....	8.60	.....	8.60
Egg	New York	2.34	$9.00@$9.25	8.35@ 8.75	$8.65@$8.95	8.35@ 8.60	**$8.40@$9.25**	8.35@ 8.60
Egg	Philadelphia	2.39	8.35@ 9.50	8.70@ 8.75	8.60@ 9.30	8.40@ 8.60	8.60@ 9.30	8.40@ 8.60
Egg	Chicago*	5.06	7.68@ 7.77	7.73@ 7.81	7.86@ 8.50	7.44@ 8.18	7.86@ 8.50	7.44@ 8.18
Stove	New York	2.34	9.00@ 9.25	8.35@ 9.00	8.85@ 9.25	8.85@ 9.10	*8.75@ 9.25*	8.85@ 9.10
Stove	Philadelphia	2.39	8.70@ 9.60	8.75@ 8.95	9.20@ 9.75	8.85@ 9.00	9.20@ 9.75	8.85@ 9.00
Stove	Chicago*	5.06	8.03@ 8.17	7.94@ 8.14	8.22@ 8.70	7.92@ 8.10	8.22@ 8.70	7.92@ 8.10
Chestnut	New York	2.34	9.00@ 9.25	8.35@ 8.85	8.50@ 8.75	8.35@ 8.60	*8.25@ 8.50*	8.35@ 8.60
Chestnut	Philadelphia	2.39	8.75@ 8.85	8.70@ 8.85	8.60@ 9.45	8.50@ 8.60	8.60@ 9.45	8.50@ 8.60
Chestnut	Chicago*	5.06	7.90@ 8.03	7.81@ 7.99	8.14@ 8.35	7.69@ 8.00	8.14@ 8.35	7.69@ 8.00
Pea	New York	2.22	5.50@ 6.00	5.50@ 6.00	5.00@ 5.50	5.00@ 5.60	5.00@ 5.50	5.00@ 5.60
Pea	Philadelphia	2.14	5.75@ 6.25	5.75@ 6.00	5.40@ 5.75	5.00@ 5.40	5.40@ 5.75	5.00@ 5.40
Pea	Chicago*	4.79	5.36	5.36@ 5.91	4.91@ 5.36	4.69@ 5.00	4.91@ 5.36	4.69@ 5.00
Buckwheat No. 1	New York	2.22	2.25@ 2.75	3.00@ 3.15	2.00@ 2.60	2.50	*2.00@ 2.50*	2.50
Buckwheat No 1	Philadelphia	2.14	2.50@ 3.00	3.00	2.25@ 2.75	2.50	2.25@ 2.75	2.50
Rice	New York	2.22	1.90@ 2.25	2.00@ 2.25	1.75@ 2.10	2.00	*1.70@ 2.00*	2.00
Rice	Philadelphia	2.14	2.00@ 2.25	2.25	1.90@ 2.00	2.00	1.90@ 2.00	2.00
Barley	New York	2.22	1.50@ 1.75	1.50	1.40@ 1.60	1.50	*1.35@ 1.50*	1.50
Barley	Philadelphia	2.14	1.50	1.50	1.50	1.50	1.50	1.50
Birdseye	New York	2.22	1.50	1.60	1.40@ 1.60	1.60	**1.60@ 1.85**	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

	1915			1924
	May 25	May 18	May 11	May 26
Index	162	161	166	167
Weighted averaged price	$1.96	$1.95	$2.01	$2.02

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.

At St. Louis it is the quiet period in the domestic situation. Practically nothing is being delivered excepting a little current stuff for domestic use in small quantities, on account of rainy weather. It is generally expected that after June 1 business will pick up considerably for perhaps the better grades and also the lower grades for apartment-house storage. Country domestic is unusually quiet excepting in Illinois, where a good tonnage of non-union coal is coming in. Whole sections in central and northern Illinois have deserted Midwest coals entirely. Local carload steam is fairly good. Wagonload has eased off and country steam is hard to find. Prices are unchanged.

Operating Picks Up in Kentucky

Kentucky is getting a very fair production for this season of the year. Increased operating time is reported in several mines in eastern Kentucky and some that had been down since around April 1 are reported to be running again, principally on a part-time basis. The Consolidation mines in the Elkhorn fields are building more miners' homes and preparing for larger production. At Louisville consumption is about normal for the season, in spite of some complaints. While there is not much local demand for prepared sizes, there is a goodly call for steam coal, principally screenings, with a good movement to local plants of eastern Kentucky screenings, and a fair movement of western.

Prices have been very steady throughout the week. Some coal men argue that with steam coal in good demand the chances are that screenings will hold stronger this summer than for several summers, and that prepared coal may be advanced to higher levels. However, efforts to get over $2.25 a ton for best grades of gas or byproduct block coal haven't met with much success, as there is too much coal available at lower prices, and a lot of buyers are satisfied with 2-in. lump or egg, which can be had at $1.75@$2 and which has been in good demand for lake movement.

Reports indicate that movement up the lakes has been increasing, and that there is better movement from the mines. However, there has been no overproduction reported as yet on screenings, which are quoted at $1@$1.25 in eastern Kentucky and $1.10@$1.25 in western Kentucky.

Mine-run prices range from around $1.15@$1.50 for either eastern or western Kentucky, with nut coals at about $1.50 and up to $1.75 or $1.85. Western Kentucky egg, lump and block are $1.50@$1.75; eastern Kentucky block, $2@$2.40; lump and egg, $1.75@$2.

Hand-to-Mouth Buying in Northwest

A slight improvement in shipments to the Duluth-Superior docks was noticeable last week, when 36 cargoes arrived, of which 10 were hard coal. Fourteen are reported on the way from lower lake ports, of which one is hard. It is probable that shipments next week will fall off as trade is negligible. The Steel Corporation is bringing up a lot of coal, and it is reported that the large dock will be filled to capacity. It is thought that the corporation will bring up approximately 1,300,000 tons this year. This indicates that iron mining will be resumed and that the independents will start digging, which forecasts an increased sale of coal.

A coal contract for the Village of Buhl, amounting to 9,000 tons of Youghiogheny screenings, went to the Hanna Coal Co. at list, $4. Several other large contracts probably will be let within the next week. One for the Village of Hibbing calls for 20,000 tons of screenings and 4,000 tons of Youghiogheny steam lump. Practically the same amount will be taken by the City of Virginia. There will be no competition for this coal, as all the docks will bid the same, which will be list or only slightly below.

Buying is from hand to mouth, the chief reason being that most buyers believe that there will be some break in prices. Prices are firm with the exception of Pocahontas, which is at $7.50 for lump, $5.50 for run of mine and $4.50 for screenings. It is said that a much better grade of coal is coming up this year than ever before.

The usual inaction of a dull spring attends the coal trade in the Twin Cities. There are some inquiries from railroads—some of the smaller ones, indicating that the larger will soon be in line. Aside from this, little is doing in contracting. While prices are low now, buyers are not convinced that they will not remain low, and so are not anxious to come into the market.

The all-rail trade is doing very little in the Twin Cities. Prices are unchanged at $2.75 for southern Illinois lump, $2.25 for central Illinois, $1.75 for western Kentucky, and $5.25 for Hocking at the dock and $5.75 for Youghiogheny.

At Milwaukee the coal market is very quiet. The influx of coal by cargo from lower lake ports continues to be the chief subject of interest in these days of a spent season, with dealers looking ahead to busier times. Arrivals are not as numerous as during the first weeks of the season, but the tonnage is mounting. Thus far a total of 584,575 tons has been received—193,915 tons of anthracite and 390,660 tons of bituminous coal.

The City of Milwaukee's call for bids on next winter's coal for the schools, water pumping stations, fire departments houses, etc.—an aggregate of about 80,000 tons—revealed a slight firming of price for bituminous coal and a slight shading for anthracite, of which only 2,500 tons is wanted. The bituminous coal is offered at $4.93 per ton delivered, and the anthracite at $14.11 per ton. Last year the lowest offer was $4.63 for bituminous coal, and $14.95 for anthracite.

Western Trade Sluggish

There virtually is no such thing as an open market in the Southwest. Nearly all coal that is being mined is being produced on contract. Oklahoma mines, operating under the 1917 scale, are finding a weak market, but the only Kansas shafts operating are supplying contract users. Kansas shovel coal is being crushed and is finding a more or less restricted market at $2.50@$2.60, but "no bills" of this grade have begun to accumulate, as well as of shaft lump and nut. There have been no changes in prices since last week.

Utah mines that are operating are working around two

days a week; five are still idle. The warmer weather has not made the domestic business any quieter than it was, for a few winter-storage orders are now being received, dealers report. Outside of metal mining and smelting very little coal is being mined for industries. The sugar industry has not entered the market yet. The larger sizes are draggy, but slack is described as "about easy." Prices remain firm. There is less likelihood of their breaking than there was a few weeks ago.

There has been no improvement in the Colorado coal market in the last week. Mines are operating only about 33 per cent. An improvement is unlikely before Aug. 2, when the decision of the Interstate Commerce Commission in the Missouri River rate case becomes effective. That decision gave reductions in freight rates on coal from the Colorado and New Mexico fields to the western portion of Kansas and Nebraska ranging as high as $1.09 down to 27c.

Situation Brighter at Cincinnati

At Cincinnati heavier cargo buying and rounding out of boat loads and, in fact, better conditions in all forms of lake business than has been noted here for years back has helped to put a better face on affairs. But while some of the values have stiffened under the more even flow of business, it cannot be said that the general market has been greatly benefited. The one thing, however, that is most impressive is that the seasonal slump that comes about this time of the year is not in evidence. This is largely due to the fact that the western Pennsylvania and Fairmont decrease in output has been absorbed by producers in West Virginia along the Chesapeake & Ohio.

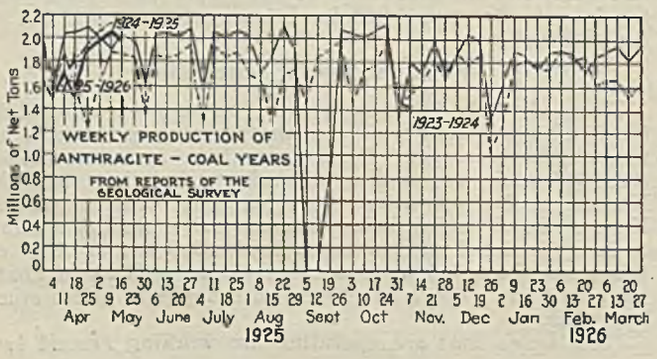
The buying has not benefited the Kentucky producers to the extent that it has those in the western and southern sections of West Virginia, but they have hopes.

Egg sizes still command most attention. Good stuff has no trouble in commanding $2 and the spot market is somewhere between that and $1.75. Stove coal and 2-in. also have been brisker and firmer. With some of the West Virginia mines heralding the fact that they are "sold up" for the next couple of months, mine-run has shown a firmer tendency. After wobbling a bit the slack market has steadied with a spot range of $1.10-$1.15, top grades getting $1.25 when a particular coal is wanted.

Smokeless business has not fared as well as bituminous. The air of uncertainty has not cleared as it should have—just why seems to be a problem. Some of the New River people find the lump market strong at $3, while the Pocahontas producers are naming a spread of $2.75 for lump and egg, the difference being that they try to get $3 and are willing to take $2.75 for it. Nut is fairly strong with quotations ranging $2.25@$2.50 and the mine-run market is unchanged. The slump in screenings is adjusting itself though the position is not as strong as it was and the market range narrower—$1.25@$1.35.

With the lake trade taking a considerable tonnage, the stress of the Columbus market has been relieved to a certain extent, and a better feeling is developing. This applies particularly to steam trade, which is the principal feature at this time. Buying on the open market is still the prevailing tendency, although some of the larger consumers are inquiring about contracts. There is not a great deal of distress tonnage available, as operators are following the policy of not shipping without a purchaser. Screenings are rather scarce and are consequently higher than formerly.

Domestic trade is reduced to a minimum as retailers are not coming into the market to any extent. Some are taking in smokeless and other fancy grades in preparation for the summer stocking season. Retail prices are still somewhat irregular.



Lake traffic is good, but only a small tonnage is being moved from southern Ohio mines. If mining scale matters can be adjusted it is believed that this field will share in this trade to a good degree at least. Movement of bottoms is brisk and indications point to an excellent tonnage during the present season.

Production in the Hocking Valley, including Cambridge, Crooksville and Jackson fields, is around 20 per cent of capacity. In Pomeroy Bend it is about 25 per cent of capacity. Eastern Ohio is holding up pretty well with 35 to 40 per cent of capacity production.

There is no change in the eastern Ohio market. Inquiries are very dull from steam consumers and these buyers are taking fuel on a hand-to-mouth basis. Stocks have been practically all consumed but there is no disposition to store any coal at this time.

Two major factors need attention and correction so far as Ohio coal mining is concerned, one being a revision of wages to union miners and the other an adjustment in freight rates to the lake ports. The movement of lake cargo coal to the docks has been greater thus far this season than during any previous year, but comparatively none of it is coming from Ohio and Pennsylvania.

The feature of this market is the continued shortage of slack and nut-and-slack with prices firm at $1.40@$1.45 for slack and $1.45@$1.50 for nut-and-slack. The shortage is due to the comparatively small production of lump, the retail trade being over and Ohio mines making practically no shipments of Lake coal.

During the week ended May 16 the eastern Ohio No. 8 field produced 211,000 tons, or about 30 per cent of potential capacity and 6,000 tons under the preceding week.

Conditions Little Changed at Pittsburgh

The Pittsburgh district coal market shows no change whatever in prices and no clearly discernible change in the volume of demand, but it is possible there has been a slight increase. Some producers of gas coal just outside the district have been having a heavier demand, which is attributed largely to the shutdown of mines by the Pittsburgh Coal Co., the operations closed being chiefly gas-coal mines. It is commonly said in the trade that the company stocked up some of its customers for a couple of months, but the company refuses to admit that it did anything along that line.

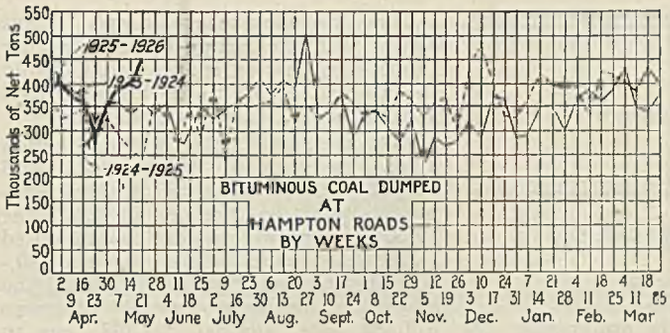
Some of the Buffalo bituminous trade profess to see the approach of the end of the long stagnation period. For a long time the trade has been satisfactory to no one except the consumer. The complaint of wholesalers now is mostly that there are so many mines owned or controlled by big manufactories or railroads that the need of a middleman is less than it used to be, but the producer is losing more money these days than the wholesaler is. West Virginia coal leads, but everything is quiet. Bottom prices are still in force—$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 and $1.40@$1.60 for slack, and $1.75@$2 for Allegheny Valley mine run.

There is very little activity in the soft coal market at Toronto. Warm weather has been responsible for a marked falling off in the demand for hard coal. Dealers are looking forward to a revival of business in a few weeks, when householders will begin to lay in their stocks for the season. The past few weeks have been fairly good, with a steady demand. Supplies are coming in abundantly, with the exception of stove coal. Prices are unchanged.

New England Trade Static

In the New England market for steam coal there is no perceptible change as compared with a week ago. Prices are fully as low as at any time during the current season. There is the same pressure to keep up production in the smokeless districts, at least at no lower level than the average since last fall, and prices are made accordingly. In some lines of manufacture there is a slightly better tone, but as to any influence on buying the effect is negligible. In shoes, machinery and textiles there is little optimism for the next few months.

At Hampton Roads piers the volume of coal on hand and en route continues to exceed current requirements. Aside from deliveries on contract the tonnage dumped is rela-



tively small; there are perhaps fewer cargoes coming forward to be forced on inland buyers, and there is little inquiry for spot coal. Several factors in Boston distribution apparently are becoming discouraged over poor net returns hitherto, and are now inclined to restrict shipments to tonnage actually sold. F.o.b. vessel at Norfolk and Newport News No. 1 coal is still being sold from $4.35 down to $4.20, while other grades are being worked off at considerably less. On cars Boston, Providence and Portland there is now a range of $5.20@$5.35, with even the best grades in very light request.

Except for more or less remote points where suitable transportation is not usually available from Hampton Roads there is next to no business along the coast for Pennsylvania coals. A restricted tonnage seeps in all-rail, but rates are against this movement except for a narrow strip of territory 100 miles or so east of the Hudson River. As to price on Pennsylvania output there is no change.

Mild Interest in New York Market

There is a fair amount of business to take care of the spot coals offered at New York. Contract coals are moving well but consumers are not taking more tonnage than they require. Industrial users along the railroads have fair stocks but are not increasing them.

Little is being done in the way of new contracts or renewals of those expiring next month. Users believe they will be as well off by buying in the spot market. The railroads and cement factories are picking up bargains.

Stocks at tidewater are held down because of the uncertainty of shippers regarding their ability to dispose of heavy shipments. Enough coal is coming forward to meet all demands, however.

Philadelphia consumers are backward about stocking, but a slight flurry in prices of high volatiles has brought railroads into the market a bit more actively.

Some of the big power production concerns are scouring the market for bargains in low-volatile coal, and frequently are met with some pretty low prices from shippers anxious to make a start on a non-union basis. Some of these prices have at times been a bit surprising in comparison to contract prices.

The tide market is extremely quiet, with only a fair sprinkling of the seasonal business coming to the shippers. Bunkering is fair—at least no worse—and there are signs that the business of the port is increasing rather than otherwise.

At Baltimore the soft-coal market continues exceptionally flat. Coals can now be secured under competitive bidding at prices about 10c. off those prevailing during the early part of April. The export situation is almost a void.

General trade conditions at Birmingham are in all essential respects the same as a week ago. Domestic inquiry and movement are exceptionally sluggish. Shipments against contracts are much lighter than normal at this time of year, indications pointing to a heavier movement than usual during the late summer and early fall. Mines are moving their lump with difficulty, egg and nut having somewhat better standing in the market at present. Low-grade domestics are still without much call and are being diverted generally to steam requirements.

The volume of steam business is about the same as for several weeks past. All classes of commercial coal users not in the habit of making contracts are buying in small lots in the open market and are merely keeping enough coal in transit to meet immediate needs. The bunker market is quiet at all the Southern ports.

There is little surplus or distress coal, as many operations are entirely closed down and others are only operating as trade requirements justify. Quotable prices on all grades are unchanged from a week ago.

Hard Coal Easier in New York

The anthracite market at New York has begun to waver. So much coal is coming forward that independent operators find they cannot get much more than company prices for their product. The easiness affects both domestic and the smaller coals. The companies are well taken care of with orders and have no difficulty in marketing their output.

Chestnut is the easiest of the domestic coals. There is a very good demand for egg coal but a better call for stove, which remains the favorite size. Pea also continues in good demand.

The steam coals are easier. Some contracting is going on, most producers refusing to sign up beyond Aug. 31, when the wage agreement expires. Current quotations for independent product on contract range from $2.25 to $2.35 for No. 1 buckwheat.

The Philadelphia anthracite market continues to lose tone. Retailers have continued to take in coal of all sizes, and the yards have close to full stocks of all sizes. At the present time company operators are getting most of the business, due to the lower prices.

As yet there is no sign of a cut in prices to move independent coal, and it is believed they will shut down rather than take this action. They all want to be in position to make the monthly increase up to Sept. 1, which would be difficult if prices were shaded now. There is some hope that dealers will order a bit more heavily as the end of the month draws near to avoid the increase as much as possible.

Steam coals are very draggy, and any consumer wanting a block of buckwheat or rice would find no difficulty in having the prices shaded. Barley is better than these two, but not much at that.

Talk of strike in the hard-coal regions has not stirred up householders in Baltimore to any unusual ordering of fuel. Deliveries for April and May, despite the cut in price at retail and the announcement that an advance in retail prices probably will take place on June 1 to take care of the advances already recorded in wholesale rates, have been only about the average for the period in the last two or three years. The old habit of a majority of householders laying in their entire winter supply during April and May seems to have faded.

At Buffalo the demand for anthracite is waning as the open season advances, and it will not be good again, except spurts close to the end of this month and one or two more, till the fall chill begins to remind consumers of another winter on the way. What the future of the domestic fuel problem is to be is hard to say exactly, but it is certain that anthracite has lost its old hold on the public. It is becoming more and more a luxury, on account of its cost. The lake trade is quiet, but improving. Shipments for the week were 73,200 tons, of which 33,000 tons cleared for Duluth and Superior, 22,200 tons for Milwaukee, 13,500 tons for Chicago and 4,500 tons for Marquette.

Coke Market Slips Further

The spot furnace coke market at Connellsville, very dull for weeks, lost a little additional ground last week. Demand continues absent from furnaces and the call from miscellaneous consumers for small lots has decreased. Such buyers, who were paying up to $3.25 three weeks ago for choice coke, and ten days ago up to $3.15, do not seem to need to pay more than $3 now for their pick of all the cokes available. There are suspicions that coke can be bought for under $3, but they rest upon theory.

Demand for spot foundry coke remains light, but prices are unchanged since sagging off early in May.

The monotony of the coke market, however, has been broken in the past week by a second-half contract being made, while several more inquiries are in the market for the same period. The idea of buying for the half year instead of for the single quarter is based largely upon the probability of an anthracite suspension Sept. 1.

Freight-Car Loadings

	Cars Loaded	
	All Cars	Coal Cars
Week ended May 9, 1925	981,370	154,214
Previous week	981,711	149,218
Week ended May 10, 1924	908,203	136,181

Foreign Market And Export News

British Coal Markets Unsettled; Buyers Await Lower Prices

The Welsh steam coal trade is extremely unsettled at the moment. For early shipment the better tendency lately in evidence has been maintained, and colliery owners, in view of the persistent threats of a national strike on the termination of the present wages agreement, are unwilling to commit themselves heavily for shipments after the end of May. The threat of the miners in the Rhondda district to strike at pits employing about 40,000 men over the non-unionist question did not materialize. While there has been a fair day-to-day demand for coal, new contract business has been very slow. The Palestine Railways order for 25,000 tons of Welsh steam coal is understood to have been placed with a London firm of exporters who have Welsh connections, but details have not been disclosed. Other inquiries open include one for 20,000 tons of small coals for the Portuguese State Railways for delivery over May and June.

The Newcastle market shows signs of falling flat again after a short spell of steadiness. Buyers apparently are holding off so as to obtain a possible concession in prices. Producers of best steam coal find some difficulty in maintaining their quotations, but as these are low enough they are not disposed to reduce them as yet, but second-hand sellers are not so particular, and a slight fall in prices is not impossible.

The opening of the Baltic season has had little effect so far in stimulating business, while the German, French and Italian markets are all very dull. Very little business is passing in the contract market; the only inquiry of consequence is that of the Palermo Gas Works for 10,000 tons of Holmside or Wear special gas coal, to be shipped in two cargoes, June and August. On reliable authority from Italy, it is reported that a cargo of 4,000 tons of Russian coal is discharging there and that another one is timed to follow shortly.

Output by British collieries in the week ended May 9, a cable to *Coal Age* states, totaled 5,075,000 tons, compared with 4,950,000 tons the week before.

Distribution and Consumption Unchanged in French Market

In the French coal market the situation in regard to consumption and movement of coal is unchanged. In the Sarre territory the scheme of allowing stocks to accumulate for outlet is not well favored; in fact, rather than do this the Administration des Mines Domaniales will resort to voluntary stoppage of work. The sale of household fuels to consumers has improved slightly.

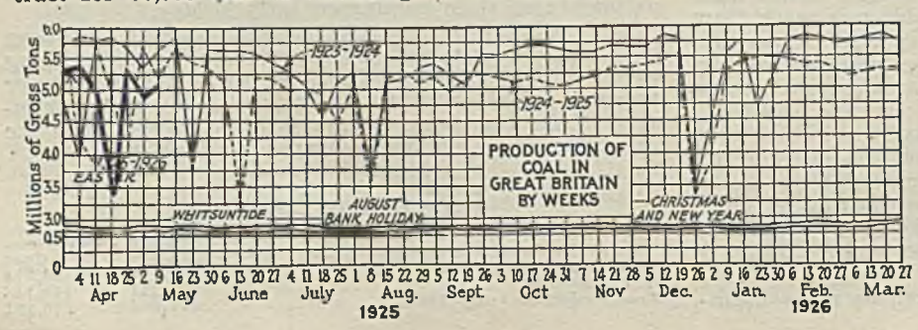
The freight rate, Paris-Béthune, has been advanced 1 fr. by reason of the nearness of the period of standstill on the waterways.

During April the O.R.C.A. received from the Ruhr 328,230 tons of coke, a daily average of nearly 11,000 tons. In the first six days of May the coke arrivals were 54,929 tons, or a daily average of a little more than 9,100 tons.

Some time ago the O.R.C.A. found a Ruhr cokery willing to accept a contract for 70,000 tons of metallurgical coke, first choice at 19.20 M., but it now appears that the Reich Government vetoed the execution of this deal for the reason that the price of indemnity coke would with difficulty be maintained at 24 gold marks if one cokery agreed to supply a heavy tonnage at 4.80 M. below the official price.

Activity at Hampton Roads Below Normal

Hampton Roads business barely held its own last week with high-volatile coal decidedly in the lead over everything else. Shipments to Canada continued one of the main features of the market, though general movement was dull and not sufficient to cause any stiffening of prices. General activity in the trade was reported as below normal with coastwise movement dull and bunker trade only fair. The Chesapeake & Ohio terminals at Newport News were above normal in dumpings, but the other piers were considerably below the average. Inquiries were slack and new business scarce.



The Norddeutscher Lloyd, joint owner with the Krupp Co. of Emscher Lippe Westphalian coal mines, has sold its interest therein to the Phoenix Steel Works for 23,000,000 reichsmarks.

Advance statistics on the production of coal in Spain for 1924 show a total output of 5,819,922 metric tons of bituminous coal, as against 5,672,377 for 1923. Anthracite production amounted to 282,460 tons in 1924, as against 229,669 in the year preceding, and the amount of lignite produced in 1924 was 371,488 tons, against 394,368 tons in the previous year.

Export Clearances, Week Ended May 23, 1925

FROM HAMPTON ROADS

	Tons
For New Brunswick:	
Br. Str. Lingan, for St. John	7,192
For Newfoundland:	
Nor. Str. Frithjol I, for Botwoodville.	3,590
For Far East:	
Br. Str. City of Bedford, for Far Eastern ports	1,206
For Argentina:	
Br. Str. Essex Envoy, for Puerto La Plata	6,629
Br. Str. W. I. Radcliffe, for Montevideo	7,796
For Canada:	
Br. Str. Rose Castle, for Montreal	10,313
Nor. Str. Thorngend, for Montreal	3,651
For Italy:	
Ital. Str. San Giuseppe, for Portevocchio de Piombino	7,179
Grk. Str. Ionopolis, for Genoa	7,643
For Virgin Islands:	
Amer. Str. Irene, for St. Thomas	4,565
For Mexico:	
Nor. Str. Stanja, for Puerte Mexico	2,403
For Jamaica:	
Br. Str. Wilston, for Kingston	5,161
For Brazil:	
Nor. Str. Gro, for Pernambuco	5,556
For Algeria:	
Noor. Str. Hektor, for Algiers	3,299

FROM PHILADELPHIA

For Porto Rico:	
Am. Str. Carib, for San Juan	——

Hampton Roads Pier Situation

N. & W. Piers, Lamberts Pt.:	May 14	May 21
Cars on hand	1,440	1,338
Tons on hand	91,539	82,497
Tons dumped for week	116,140	147,369
Tonnage waiting	7,000	12,000
Virginian Piers, Sewalls Pt.:		
Cars on hand	756	1,096
Tons on hand	55,400	78,300
Tons dumped for week	78,578	73,530
Tonnage waiting	.....	.....
C. & O. Piers, Newport News:		
Cars on hand	2,215	1,869
Tons on hand	115,055	93,450
Tons dumped for week	166,282	182,259
Tonnage waiting	18,600	3,785

Pier and Bunker Prices, Gross Tons

PIERS

	May 16	May 23†
Pool 9, New York	$4.70@$4.85	$4.70@$4.85
Pool 10, New York	4.50@ 4.65	4.50@ 4.65
Pool 11, New York	4.25@ 4.50	4.25@ 4.50
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	4.30	*4.25*
Pool 2, Hamp. Roads	4.20	*4.15*
Pools 5-6-7, Hamp. Rds.	4.10	*4.00*

BUNKERS

Pool 9, New York	$4.95@$5.10	$4.95@$5.10
Pool 10, New York	4.75@ 4.90	4.75@ 4.90
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	4.35
Pool 2, Hamp. Roads	4.25	4.25
Pools 5-6-7, Hamp. Rds.	4.10	*4.00*

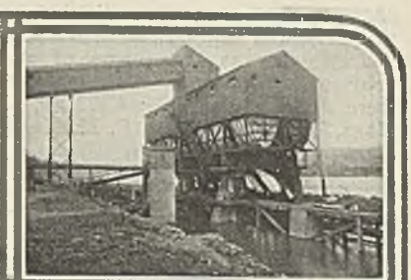
Current Quotations British Coal f.o.b. Port, Gross Tons

Quotations by Cable to *Coal Age*

Cardiff:	May 16	May 23†
Admiralty, large	26s.3d.@26s.9d.	26s.3d.@26s.9d.
Steam smalls	15s.6d.	15s.6d.
Newcastle:		
Best steams	17s.6d.	*17s.3d.@17s.6d.*
Best gas	19s.@19s.6d.	*18s.9d.@19s.*
Best bunkers	18s.	*17s.6d.@18s.*

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

News Items From Field and Trade



ALABAMA

The State of Alabama will take over the Aldrich coal mines and operate them with convict labor, when repairs in the mines have been made by the Montevallo Coal Mining Co.

Notice has been filed in the Probate Court at Birmingham of the change in name of the Helena-Straven Coal Co., with operations at Straven, Shelby County, to the Peerless Cahaba Coal Co.

COLORADO

The threatened strike of miners at the Crested Butte Coal Co. property was called off May 9 when the miners notified the State Industrial Commission in Denver that their difficulties with the employers had been satisfactorily adjusted. The men objected to pushing by hand the coal cars from the face of the mine to the shaft opening and the company agreed to employ mules in hauling coal cars the longer distances in the mine.

The Ojo coal mining property of the Canon-Reliance Fuel Co., in Huerfano County, was sold by the company early in May to P. G. Cameron, of Pueblo, who will take possession as owner and operator. The Ojo mine has been operated in conjunction with the Wolf Park property near Canon City by the Canon-Reliance company, of which H. H. Pinkney is manager.

The Canon Reliance Fuel Co. has filed suit against the Oakdale Coal Co. for damages amounting to $1,020,000. The companies have adjoining properties at Oakview, and the Canon Reliance company alleges that the Oakdale company has been guilty of trespassing.

The Keely Coal Co., Dugger, has filed a preliminary certificate of dissolution.

The Sterling Midland Coal Co., an Illinois corporation, has changed the name of its agent for service of process from W. K. Sproule to Harry Kitchell, J. F. Wild Building, Indianapolis.

ILLINOIS

The Young Coal Co. will reopen its mine at Duquoin about June 1. The mine until recently was operated by the Scott Coal Co., of St. Louis, of which E. J. Scott, who died recently, was president. The mine employes fifty men.

Federal Judge English, at East St. Louis, on May 15 deferred action on the petition for a confirmation of the sale of 30 acres of coal land owned by the Southern Gem Coal Corporation, which is in receivership. Objection was made that the price to be paid is too small. An order of sale was granted on April 18 by Judge English on petition of the receivers and the land was sold later at public sale in Marion. The Pyramid Coal Co., the only bidder, offered $5,500 and agreed to assume $3,200 in advanced royalties under a lease let in February, 1922, to the Hamilton-Lester Co. of Herrin.

The Franklin County Mining Co., at Benton, has installed new equipment for preparing a greater number of sizes of coal, and with its new selling connections probably will be able to operate a greater number of days during the summer and winter.

INDIANA

The annual convention of District 11, United Mine Workers, was held at Boonville, May 19. Thomas Kennedy, international secretary-treasurer of the organization, was the principal speaker. No important business was transacted, the convention being a get-together affair for the inspiration of union members. Over 1,200 miners and their families attended.

Green Mound mine, near Washington, the largest in Daviess County, resumed partial operation May 21, after seven weeks' idleness. A force of 60 men was put to work. These will be augmented as business warrants.

KANSAS

The Eastern Coal Co., which has leased No. 7 mine of the Sheridan Coal Co. in the north part of Crawford County, resumed operation May 18 after two months of idleness. The shutdown occurred when the lessees bulletined a return to the 1917 scale, which the men refused to accept. It had been persistently reported the mine was to reopen on a non-union basis but the day before work was to start the lessees signed a contract with the union. The mine employs 200 men.

Twenty mine-rescue teams, comprising 120 men, are training in southeastern Kansas for the state meet to be held in Pittsburg, June 13. So great has been the interest of southeastern Kansas miners in the event that the federal Bureau of Mines on May 15 sent another instructor, Alex Weir, to assist the Bureau's representative, John B. Hynal, in training the teams.

Mine No. 45 of the Central Coal & Coke Co., in the southeastern Kansas field, which has been shut down since April 1 to permit the extension and overhauling of its rope haulage, will reopen June 1. It has a capacity of 750 tons and employs 250 men. At the same time the company's mine No. 51, the only shaft it has been operating since March, will be closed. The last shot in No. 51, which has a capacity of 1,200 tons, was fired May 28.

James C. Brown, a mining engineer of Pittsburg, has been employed by the Kansas Public Service Commission to make a survey of the state penitentiary mine at Lansing. One of the principal purposes is to determine how much coal remains to be worked on the state property.

KENTUCKY

At Covington, on May 14, U. S. District Judge A. M. J. Cochran, W. W. Bell, of Maysville, receiver for the Harlan-Kellicka Coal Co., on suit filed by Charles F. Hunt, of Maysville, and George C. Monroe, of Evarts, Ky., who allege that the company property is subject to mortgages of $350,000, and ask that the court authorize foreclosure on the mortages and sale of entire holdings of the company, subject to a first mortgage claim held by the State Trust Co., of Maysville, for $125,000. A restraining order also is asked to prevent persons from taking possession of the property on court judgments or executions from interfering with the trustee for the receiver.

The Mary Helen Coal Co., one of the largest in the Harlan field, suffered a $50,000 fire loss May 9 when a headhouse and conveyor from one of its two mine openings was burned. The tipple was saved and the other head house was not injured, and will be able to continue running coal to the tipple. Coal along the conveyor site was burning some hours later. Engines from Harlan traveled eight miles, and saved the tipple.

After being idle since April 1 the mines of the Imperial Elkhorn Coal Co., at Sergent, are resuming work, but only part time. It is expected, however, that they will soon be on full time. They employ about 150 men.

The Imperial Elkhorn Coal Co., at Sergent, started operations about May 15 on a part-time basis after being down since April 1. The plant employs about 150 men.

The Consolidation Coal Co., with large operations at Jenkins, McRoberts and other points in the Elkhorn district of eastern Kentucky, has placed contracts with R. Mankin & Co., Huntington, W. Va., for 100 additional miners' homes at Jenkins and McRoberts.

The Mathel Coal Co., Callaway, which was sold recently at public auction at the door of the Court House, at Pineville, will be operated by the pur-

chasers, it was announced. The entire property and equipment sold for $30,100, which was two-thirds of its appraised valuation. The purchasers were John Phillips, G. C. May, R. B. Moss, C. C. Byrley and F. M. Meadows.

Early in May J. D. Barney, of Ashland, acquired two coal mines in Pike County, known as Kewanee Mine and Winston Elkhorn Mine.

Leaders from various sections have been in Frankfort in the last few days to complain against a heavy increase in assessment values for state taxation, running to as high as 25 per cent. White L. Moss, well-known coal man and politician, from Pineville and Thomas De Venny, superintendent of the Portsmouth By-Product Coke Co., Edgarton, W. Va., with properties in Kentucky, were among the complainants.

At Owensboro, in Muhlenburg County, Curry Gibson, manager of the Hayden Coal Co. mine, was arrested recently on two warrants filed by company employees, one charging that Gibson is violating the state law in refusing to employ a checkweighman at a mine employing over twenty coal loaders. The other warrant charges Gibson with carrying a concealed deadly weapon. He was released and cited to appear for trial on a set date. Gibson came to the mine just recently from Henderson, Ky., under a contract to operate the plant, which started running coal two weeks ago.

MINNESOTA

Bidding on municipal fuel contracts so far this spring has revealed a unanimity of prices that suggests the trade has become tired of cutting prices merely for the benefit of the buyer. Bids have been opened at a number of points through the Northwest, and in practically every instance the figures have proved to be the same for the corresponding grades of coal.

MONTANA

Thomas Goof, of Washoe, has been reappointed on the board of coal mine examiners representing the coal mine operators; Edward Cunningham was named as representing the mine workers. He lives at Red Lodge and succeeds Hirst Biever, of Roundup. George Griffin is the third member of the board. The board will hold examinations in Billings and Great Falls during June for coal mine inspector, mine superintendents, mine examiners and firebosses.

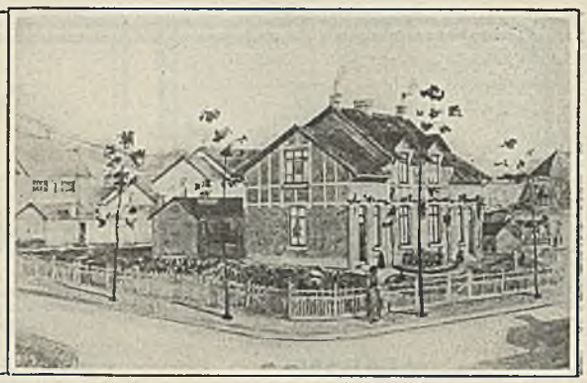
NEW YORK

Burns Bros. reports for the fiscal year ended March 31, 1925, net profit of $1,271,902 after charges, or after preferred dividends $10.22 per no par Class A share and $2.22 per no par Class B common, against $1,305,311, or $10.30 and $2.30 in the preceding fiscal year. After cumulative dividends have been paid on A common at $8 a share, B common shares with Class A common in any further distribution. Surplus at the end of the year was $36,339, against $49,454 on the corresponding day a year ago. Net profits for April were $223,962, the largest ever realized for that month.

United States Distributing Corporation reports for first 1925 quarter net income of $211,780, or $1,22 a share, after charges, compared with $152,173 in first 1924 quarter.

Workmen's Houses

An architect's design of the houses recently constructed at the coal mines near Lens, France, to replace the devastation of the war.



OHIO

There has been quite a stir in the local of the W. A. Gosline Co. mine at New Lexington because a number of the miners have petitioned the company to be permitted to return to work on the 1917 scale. Officials of the United Mine Workers at Columbus made a hurried trip to the scene and tried to keep the men in line, with the result that the opening of the mine has been delayed while organization matters are being fought out. The report was that a majority of the 75 men employed at the operation voted to accept the 1917 scale, but Lee Hall, president of the Ohio division of the United Mine Workers, denied this and said that only a small number voted for the 1917 scale. The developments in that section are being watched with interest by operators in all sections of the State.

William H. Gray, prominent mining engineer connected with the West Virginia Coal & Coke Co., has been in Cincinnati for several days and shrewd guessers have it that this large amalgamation of West Virginia interests, and in Logan County in particular, has been paving the way through him for the erection of coal docks in Cincinnati and elsewhere south on the Ohio river to get the benefit of what is known as the rail-river freight rates.

Cincinnati retailers and others who submitted bids on the tonnage to be supplied to the Board of Education for school purposes furnished a variety of surprises when these were tabulated. The bids ranged from $3.60 on slack to $5.75 for the small amount of lump that was sought. Two bids were made for the business in bulk, that is for all grades for all schools, one at $4.30 and the other at $4.36 a ton. It was this last that particularly ruffled the other bidders and talk was heard of requesting the Board to make analyses of the coal to be furnished to see what would be actually had in the way of heat units.

E. F. Bardin, former president of the Cincinnati Coal Exchange and president of the McBard Coal Co. has temporarily retired from business in Cincinnati. He has purchased property at Lakeland, Fla., and will try orange farming. The retail end of the business has been taken over by the McBard-Bayles Coal Co. and the wholesale end will cease to function for the time being. "I cannot see," said Mr. Bardin, "where there is any hope for the coal trade for the next two years from a wholesale dealer's standpoint, and I for one am not going to clutter things up by staying in it."

PENNSYLVANIA

Samuel D. Warriner has been elected a director of the Westmoreland Coal Co. to fill the unexpired term of the late Lewis A. Riley.

Opening of mines in the central Pennsylvania field under the 1917 scale is boosting output. Loadings in the week ended May 16 were 11,379 cars, as compared with 10,944 cars in the previous week. The month's output to the 16th was 24,952 cars as compared with 22,742 for the same period in April. Six hundred men have been called to the Dagus mines, at DuBois, by the Peabody Coal Co., the operating concern of the Northwestern Mining & Exchange Co. These mines were closed down on April 1. They supply the demands of the Erie R.R. The United Mine Workers are making strenuous efforts to prevent the working of the Heisley Coal Co.'s mines at Nant-y-Glo, Cambria County, and of the Lucerne mine at Homer City, operated by the Jefferson & Indiana Coal Co. Parades and demonstrations are being held almost daily at both places and mining officials admit that they are operating under great difficulty.

The tipple of the Carnegie Coal Co. mine at Bulger, Washington County, was destroyed by fire early May 21, with a loss estimated at $100,000. State police are investigating to determine the origin of the fire. It was reported that a man with a flashlight was seen prowling around the tipple just before the blaze was discovered.

Governor Pinchot has vetoed the joint resolution of Senator Horace W. Schantz, Lehigh County, providing for a commission to investigate and study the question of giant power. The measure was a substitute for that of the Governor's own Giant Power Board, which desired to be continued in office for another two years. The Governor's giant power board bill died in committee, just as did his long series of giant power bills, during the closing

days of the 1925 Legislature. The Schantz measure created a commission over which the Pinchot administration would have had no control.

Moshannon Mine No. 10, in Rush township, Centre County, has been the scene of considerable difficulty recently. Approximately 100 men are working under the 1917 agreement. Union men there, who have been idle for two years, started demonstrations against the workers. Nick Gerbinski, of Osceola Mills, a labor organizer, was arrested and held in bail in $1,000 for his appearance at Court in Bellefonte, charged with assault and battery.

M. D. Kirk, of Pittsburgh, has resigned his position as assistant to the President of the Pittsburgh Terminal Coal Co. and accepted the post of general manager of the Vesta Coal Co., a subsidiary of the Jones & Laughlin Steel Corporation, with headquarters in Pittsburgh.

UTAH

On May 14 definite co-operative agreement was made between the Industrial Commission and the U. S. Bureau of Mines which provides that the Bureau shall, through its engineer, be in charge of mine inspections in the coal properties in part or wholly on the public domain in the state, and the reports of inspections of such mines will be made in duplicate, one being sent to the Industrial Commission and the other to the Bureau of Mines. The Bureau will advise the commission in respect to the safety and condition of the mines under the provisions of the safety orders of the commission. The Industrial Commission is to furnish one full-time stenographer to the mining engineer and all necessary office space. It has been understood for the past three months that some new agreement would be made.

Opposition to permitting the construction of the National Coal R.R. into the Gordon Creek canyon, in Carbon County, was withdrawn on May 18. Hearing was held before the Public Utilities Commission, which sat for the I. C. C. The case had been previously passed on by the Utah body.

George W. Ivory and Jos. F. Livingston have been awarded a coal lease covering 276 acres of public land in Sevier County by the federal land office. An investment of $10,000 must be made during the first three years and a minimum of 8,000 tons of coal mined beginning with the fourth year. The government is to receive a royalty of 10 per cent. The granting of this lease ends a controversy of years. Mr. Ivory originally located the property under the coal-land laws, but the government protested the filing.

Coal production in Utah during April amounted to 288,536 tons compared with 325,195 tons for the same month last year. This compares favorably with the same month since 1920 with the exception of last year.

VIRGINIA

The Hampton Roads State Port Commission has called a meeting June 2 for the purpose of ascertaining all facts to determine its stand on the proposed lease of the Virginian Ry. to the Norfolk & Western for 999 years. The city of Norfolk has formally stated its opposition to the lease, as has the State of Virginia. Opinion on the matter is divided, one side holding that the Virginian under Norfolk & Western control would be converted into an exclusive coal carrier, to the detriment of general traffic. The Virginian has a far better grade to Tidewater than has the Norfolk & Western. It is probable that under the merger one of the Norfolk & Western piers would be shut down and the new Virginian pier put into operation.

The Eastern Coal & Export Corporation, one of about twenty coal companies that are parties to suits by railroads for demurrage charges accumulating in 1919 and 1920, won a decision in the Circuit Court at Norfolk May 20 from the Norfolk & Western involving claims of about $29,500 and interest in the demurrage cases.

WASHINGTON

C. T. Thurman and S. J. Skim, practical miners who have worked in Washington coal mines a number of years, arrived in Morton early in the second week in May to take charge of the operation of the mine of the Morton Coal & Coke Co. They have purchased the stock of Abe Flewelling in the Morton Coal Mining Co., lessee of the property, and plan to develop the mine as rapidly as possible. Pete Pergolious, who was manager of the property under the Pergolious and Flewelling lease, is understood to retain a portion of the mining company stock.

A. L. Patterson of Seattle, efficiency engineer, recently announced that he had just finished an inspection of the Temple coal property, about a mile east of Morton, and had closed a deal whereby the company interested had purchasel 460 acres from Hugh Temple and the old Edlund place. The inspection party was composed of E. R. McMillian, metallurgist and mining engineer of Seattle, who was sent in by the U. S. Bureau of Mines; W. R. Resse, state mine inspector, with offices in Seattle; Fred T. Kegler, an engineer who has worked with the Carbon Hill Coal Co. for 14 years, and Mr. Patterson.

WEST VIRGINIA

Effort was made to blow up a fan house of the Ben Franklin Coal Co., at Panama mine, near Moundsville, early Monday morning, May 18, with two sticks of dynamite, which struck in a hill and shook the town when they exploded. Ten miners in a bunkhouse were badly shaken, while arising to go to work, but escaped injury. The dynamite was thrown without direction which saved the fan house.

The summer meeting of the West Virginia Coal Mining Institute is to be held at Logan, W. Va., on June 2 and 3. The program for the first day calls for a discussion of "Super-Fuel" by B. H. Mulvehill, of the Wheeling Trent Corporation, of Wheeling; "Some Practical Effects of Mine Gases and Their Detection," by William Yant, of the U. S. Bureau of Mines, Pittsburgh, Pa.; "Mining Substations," by J. E. Borland of the Westinghouse Electric Co., Bluefield; the "Geology of Logan and Surroundings," by C. E. Krebs, of Clark & Krebs, Charleston; "Recent Development in Pneumatic Separations," by William J. O'Toole, general manager of the American Coal Cleaning Corporation, of Welch. On the second day visits will be made to several mines in the vicinity and an inspection made of various modern mechanical mining devices. A moving picture entitled "Coal —The Principal Source of Power," now being filmed by the West Virginia Department of Mines, will be shown.

It is said that by June 1 reports will be filed by groups Nos. 1 and 2 in the proposed $100,000,000 merger in northern West Virginia, which comprise the larger operations involved.

Another New Mine Aids West Virginia's Growth

Construction at the Bartley mine of the Pond Creek-Pocahontas Coal Co., near English, W. Va. The photograph shows the new headframe, hoist house and substation at the auxiliary shaft. The 250-hp. hoist was used for hoisting coal while the mine was under construction last year, but it is now hoisting men and materials. Garner Fletcher is general manager for the company and H. S. McKalip is superintendent of the mine.

The field engineers recently completed their financial surveys in Monongalia, Harrison and Marion counties.

In the Harrison County Circuit Court last week R. H. Knode, of Philadelphia, was appointed operating receiver for the Hudson Coal Co. of Clarksburg, which operates the Lewis mine, near Reynoldsville. The proceeding was not based on insolvency, but was a move made by the Fidelity Trust Co. of Philadelphia to protect the bondholders. J. Morgan Orr is retained as general manager. This was one of the first companies to work nonunion in northern West Virginia after the World War.

Work has been completed on the new 80-ft. steel tipple of mine No. 41 of the Bethlehem Mines Corporation, near Barrackville, scene of the mine explosion in March. The new tipple is 2 ft. higher than the one destroyed by the explosion. The work of retimbering the coal shafts is under way.

The sale of the North American Coal Co., in the Cass district of Monongalia County, set for May 9, has been continued by the trustee, Terence D. Stewart. Satisfactory bids for the property were not made. The sale was directed to be made by the court in favor of the Fiedler Coal & Coke Co., which holds a deed of trust dated Sept. 1, 1922, for $40,000.

The large band mill and power house of the Babcock Coal & Coke Co., at Landisburg, was destroyed by fire May 14. The loss is estimated at about $150,000 and is fully covered by insurance.

A deed was filed in the County Clerk's office of Fayette during the second week of May by the Rich Creek Coal Co., of Fairmont, conveying to the West Virginia Coal & Coke Co. the Glen Ferris mine, in the Kanawha district, and the Lyburn, Wilburn, Mona, Rossmore, Earling, Wanda and Manitoba mines in Logan County.

The Ajax mine at Fayette in Fayette County has been flooded by water which broke through a barrier on May 14, and half a dozen miners had a narrow escape. Only two entries escaped the flood and three mining machines were covered up. Approximately 60 miners are idle by reason of the flood.

It was reported from eastern Kentucky and West Virginia sources last week that a deal is pending whereby the Chesapeake & Ohio R. R. may purchase the Coal River & Eastern R. R., a short coal feeder operating in Boone County, the matter to come up in New York this week. It is stated that the price is $370,000.

The J. C. Sullivan Pocahontas Coal Co., operating seven mines in the Winding Gulf district, has laid off indefinitely the general superintendent of mines, his assistant, the mining engineer, the mechanical superintendent of the repair shop, and other officials, as part of a policy of retrenchment.

The Meadow Smokeless Coal Co. an operation on the Sewell Valley branch of the C. & O., in Fayette County, was sold recently to some Huntington investors for $60,000. The purchasers were unable to operate successfully and the company has gone into bankruptcy. The mine was valued, a few weeks ago, in connection with the bankruptcy proceedings, at only $3,000.

Major W. P. Tams, Jr., president of the Gulf Smokeless Coal Co., announces the completion of an air cleaning plant at his Covel mine, located on the main line of the Virginian Ry. in Wyoming County.

Work will be begun soon on the large tipple of Mine No. 1 of the Winding Gulf Colliery Co., in Raleigh County, according to the announcement of L. Epperly, general manager of the Justus Collins interests. A modern screening and air cleaning plant also will be installed.

Edward V. D'Invilliers, of the D'Invilliers Engineering Co., and John D. Dilworth, a mining engineer of Philadelphia, were in West Virginia last week in the interest of the $100,000,000 coal merger. They visited mines in the Clarksburg, Fairmont and Morgantown sections and had group meetings with operators in the three cities. Mr. D'Invilliers, according to reports, says the bituminous coal industry all over the country is favorably inclined toward large mergers, which seems to be the only means of stabilizing the industry.

CANADA

Some damage to pumping machinery suppplying water to mines Nos. 1, 5 and 10 of the British Empire Steel Corporation, located half way between the towns of Reserve and Dominion, N. S., was done presumably by strikers on the night of May 13. Maintenance men on reporting for work the following morning found the door of the pump house broken in and part of the machinery smashed. Two sledge hammers were found among the wreckage. Company officials said that the mines affected would not be in any immediate danger.

Testifying before the Alberta Coal Commission at Calgary on May 12, George P. Saunders, coal dealer, of Winnipeg, said that to obtain the Manitoba market for Alberta coal three things were necessary, namely: a dumping clause that meant something; adequate protection and a little concession in railway rates. At the hearing by the commission at Drumheller on the 14th, Jesse Gough, a leading coal operator, strongly denied the statement which had been current in several quarters that the Alberta coal mines were badly managed. The expansion of the industry since 1911 was proof to the contrary. He claimed that the wages paid were the highest in any industry, and expressed the opinion that there were not too many mines.

Miners in the Edson Coal Branch have sent a petition to Premier Mackenzie King of Canada urging the construction of coal-bunker facilities at Prince Rupert and also asking for an adjustment in the rate of coal shipped from western Alberta to the Pacific coast for coaling purposes. It is pointed out that the Edson coal is particularly suited for bunker needs and that Prince Rupert is the logical market for western Canada coal.

W. B. Sherman, president of district 18, United Mine Workers who visited the Edson Coal Branch recently declared that the mines in that district were unanimous in favor of remaining with the union. Many of the mines in the South of the province have recently broken away to form a Canadian union and to accept terms direct from the operators. Efforts will be made to reorganize the miners in the Crows Nest Pass district, declared Mr. Sherman, who affirmed that the union was determined to remain a power in Alberta.

Exploration work at the Granby Consolidated Mining, Smelting & Power Co.'s Cassidy colliery, on Vancouver Island, British Columbia, has definitely established the continuation of the coal seam to important depths. Where first picked up in the new area the seam is 12 ft. thick and the coal is of a markedly better quality than that heretofore mined. During last year the company produced 225,364 tons of coal, 59,011 tons of which was converted into coke at the company's smelter at Anyox; 16,639 was used for power purposes at the colliery, and the remainder was sold in Vancouver, Victoria, Seattle and other Puget Sound ports.

The Canadian Bureau of Statistics reports that during January 168,280 net tons of coke was consumed in the Dominion. Production of coke by Canadian plants totaled 101,132 tons, of which 4,038 tons was exported. Imports during January, nearly all from the United States, were 71,188 tons. Ontario was the principal consumer, using 103,028 tons; Quebec coming next with 20,450 tons. The coal used in the production of coke included 45,889 tons of Canadian and 110,478 tons of imported coal. The average recovery was 1,295 lb. of coke for every net ton of coal carbonized, or 64.78 per cent.

Traffic

Hearing Set in $650,000 Case Against C. & O.

A hearing in the case of the Nelson Fuel Co. against the Chesapeake & Ohio Ry. has been set for June 12. This case has attracted much attention because of the large amount of reparations involved, $650,000.

This suit was originally instituted before the commission early in 1924 by the Nelson company, operating mines in Greenbrier County, W. Va., on the Greenbrier & Eastern Ry. The fuel company contended that the C. & O. freight rates on coal accepted from the Greenbrier & Eastern were unreasonable and out of proportion to other rates within the same district and asked for a readjustment of rates and for a refund on the rates it had been compelled to pay.

Association Activities

The Pennsylvania Coal Mining Institute held a session in Johnstown, May 21, attended by about 400 members and guests. Mayor Louis Franke pictured the effects of depression in the coal trade. A. P. Pollock, past president of the Coal Mining Institute of America, now general manager of the Ford Colliery Co., said that under existing circumstances coal men prove themselves to be the greatest optimists in the world. Mr. Pollock had the subject, "The Coal Industry, Past, Present and Future," his address dealing largely with reminiscences of his own experiences. Mine Inspector Nicholas Evans spoke briefly words of encouragement for the young men in the industry and Dean Holbrook of the State College School of Mines invited everybody to attend summer school at the college, which opens June 22 and runs five weeks.

Industrial Notes

Gordon R. Kyle, for many years associated with the United States Rubber Co. has joined the sales organization of the **Boston Woven Hose & Rubber Co.** Mr. Kyle's headquarters will be the New York office of the company, 30 Church Street, from which point he will continue his long association with the mining and other industries in connection with the use of mechanical rubber goods, specializing in transmission, conveyor and elevator belting.

Coming Meetings

American Wholesale Coal Association. Ninth annual convention, French Lick Springs Hotel, French Lick, Ind., June 1 and 2. Secretary, G. H. Merryweather, 1121 Chicago Temple Bldg., Chicago, Ill.

The West Virginia Coal Mining Institute. Summer meeting June 2-3, Hotel Aracoma, Logan, West Va. Secretary, R. E. Sherwood, Charleston, West Va.

Illinois & Wisconsin Retail Coal Dealers' Association. Annual meeting, June 9-11, at Lake Delavan, Wis. Secretary, I. L. Runyan, Great Northern Bldg., Chicago, Ill.

Mid-West Retail Coal Association. Annual meeting at Kansas City, Mo., June 9-10, Baltimore Hotel.

Pennsylvania Retail Coal Merchants' Association. Annual convention, June 11 and 12, Hotel Bethlehem, Bethlehem, Pa. Secretary, W. M. Bertolet, Reading, Pa.

Retail Coal Dealers Association of Texas. Annual convention June 15 and 16 at Houston, Texas. Secretary, C. R. Goldman, Dallas, Texas.

The Colorado and New Mexico Coal Operators' Association. Annual meeting, June 17, Boston Building, Denver, Colo. Secretary, F. O. Sandstrom, Boston Building, Denver, Colo.

National Coal Association. Annual meeting, June 17-19, Edgewater Beach Hotel, Chicago, Ill. Executive Secretary, Harry L. Gandy, Washington, D. C.

West Virginia Coal Association. Annual meeting, June 17-19, at Edgewater Beach Hotel, Chicago, Ill. Assistant secretary, James E. Hart, Huntington, W. Va.

Illinois Mining Institute. Annual meeting, June 18-20, on board boat leaving St. Louis, Mo. Secretary, Martin Bolt, Springfield, Ill.

International Chamber of Commerce. Third general conference, Brussels, Belgium, June 21-27.

American Society for Testing Materials. Twenty-eighth annual meeting, week of June 22, Chalfonte-Haddon Hall, Atlantic City, N. J. Secretary-treasurer, C. L. Warwick, 1315 Spruce St., Philadelphia, Pa.

American Institute of Electrical Engineers. Annual convention, Saratoga springs, N. Y. June 22-26. Secretary, F. L. Hutchinson, 29 West 39th St., New York City.

Chemical Equipment Exposition. June 22-27, Providence, R. I. Association of Chemical Equipment Manufacturers, 1328 Broadway, New York City.

Twelfth National Foreign Trade Convention, Seattle Wash., June 24-26. Chairman, James A. Farrell, National Foreign Trade Council, Hanover Square, New York City.

New Equipment

Sturdy Crawling-Tractor Crane Is Versatile

Locomotive cranes are tools adapted to many industries, their versatility rendering them well fitted to a broad range of usefulness. Of late years this field, already wide, has been still further enhanced by the development of the crawling tractor mounting. One of the most recent machines of this type is that just placed on the market by the Industrial Works of Bay City, Mich., and shown in the accompanying illustration.

This machine, known as the type D.C., is similar in appearance to previous models built by the same company. It embodies, however, many improvements in design. Among these are split propelling gears, increased speed, a double clutch mechanism and long tractor belts.

From the operating standpoint probably the most important of these details is the arrangement of split gears and the clutches whereby each tractor belt may be controlled separately. Two concentric vertical shafts at the axis of revolution actuate two independent trains of spur and bevel gears, each operating a tractor belt. Each belt is controlled by two powerful friction clutches and band brakes located in the revolving upperworks. This gives definite and independent control over each belt. The drive is "all gear," no chains being used. This is said to be the only crawler crane that steers and propells by means of friction clutches, also the only one with a separate clutch and band brake controlling each tractor belt. Thus, maneuvering in close quarters is simplified.

This machine operates at a speed approximately 25 per cent faster than its predecessors. The length of the tractor belts is such as to afford ample stability when lifting over either end of the machine, on any kind of ground. All functions of this crane are controlled independently of each other, separate levers being placed on the operator's platform. Different combinations of these functions may, however, be utilized simultaneously to advantage.

This machine may be driven by a steam engine, electric motor or a gasoline or fuel oil engine to suit any local condition. It can be equipped with either clamshell or dragline bucket, electro-magnet, hook and block, or grapple. In short, any equipment that operates on a boom may be applied. It also can be converted into either a shovel or a piledriver. Care has been exercised in its construction to combine the necessary strength with the light weight essential in a tractor crane. It already has found a market in many fields of industry and its builders feel confident that it will continue to fill the demand for a small, sturdily built crane for general utility work.

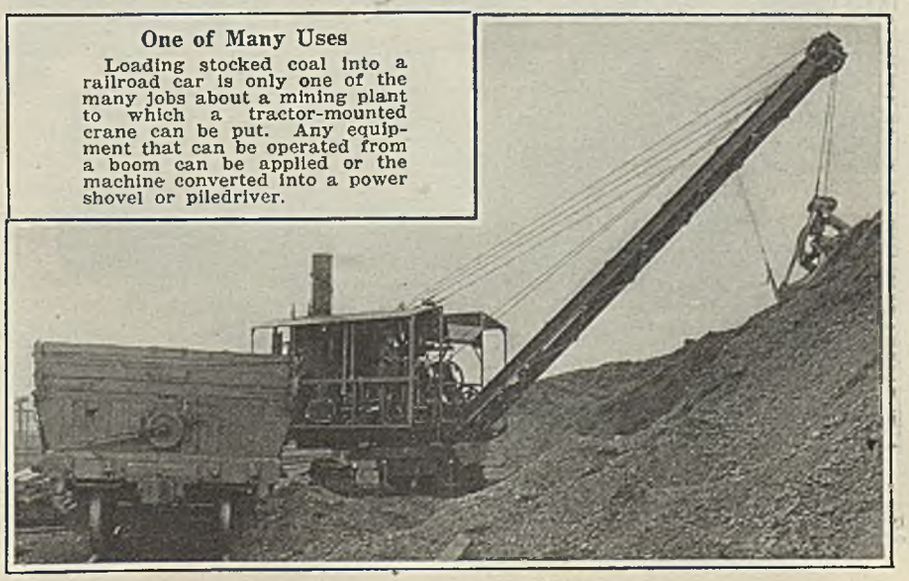
Container Makes Repairs to Lamp Battery Easy

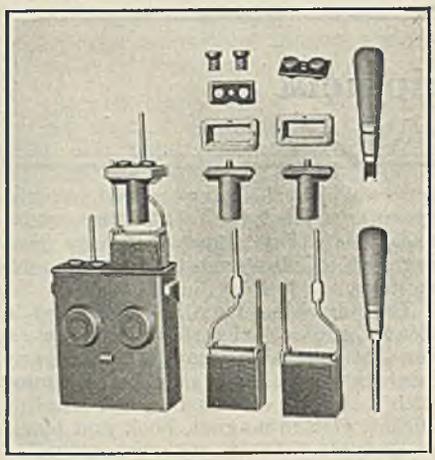
Repairs to electric mine lamp batteries, which for any reason may be found necessary, form the source of appreciable annoyance to many mine operators, some finding it necessary to return such batteries to the makers. In the Wheat lamp, however, built by the Koehler Manufacturing Co., of Marlboro, Mass., this objection is overcome by the construction of the battery container, the design of which is such that the lamp man, even though he has had little or no previous electric or storage battery experience, can make all necessary repairs at the lamp house and resort need not be had to the manufacturer except for the spare parts.

In this equipment, the accumulator elements used are of the lead variety and are held in a two-compartment container. This is made of a non-corrosive vulcanized insulating material, so that no other insulation, except the ordinary separators between the battery

One of Many Uses

Loading stocked coal into a railroad car is only one of the many jobs about a mining plant to which a tractor-mounted crane can be put. Any equipment that can be operated from a boom can be applied or the machine converted into a power shovel or piledriver.





Battery and Container Disassembled

This shows the simplicity of the battery construction and of the tools employed. Soft moulded rubber gaskets seal the battery container and although a vent is provided permitting the escape of gas during the charging operation, no electrolite can be spilled even though the container be turned in any position.

plates are needed. This sealing element which acts as a soft rubber cork, is inserted in the container to the level of its top and is then expanded against the walls until it completely closes the opening.

In detail, as may be seen in the accompanying illustration, this sealing device consists of an upper and lower wedge-shaped piece of vulcanized material, the two being drawn together by tightening screws. Around these pieces and between their edges is a soft rubber gasket molded to fit. By tightening down the screws, the beveled edges press against this soft rubber and expand it against the walls of the container. The non-spilling device, which prevents escape of the electrolite, forms a part of the lower piece. The two leads from the battery elements are brought up through the soft rubber gasket and the pressure created by the screws seals these leads as tightly as it does the container.

Because of the position of the holes for these leads through the soft rubber gasket, it is impossible for the lamp man to assemble the battery in a reverse manner. The two center leads which are connected in order to bring the two cells of the battery in series, are fastened with a drop of solder.

When it is desired to remove the battery element from the container, it is only necessary for the lamp man to disconnect these center leads, loosen the two sealing screws and draw out the sealing device and the other elements intact. These may be removed for inspection and then returned. Should it be found necessary to renew one or more of the plates, the old or defective ones are removed, the container rinsed out, new plates inserted, the sealing device returned to position and the screws tightened. The two leads between the cells may then be connected and the battery filled with a new solution of electrolite when it is ready to be charged and put back into service in as good condition as when it left the factory.

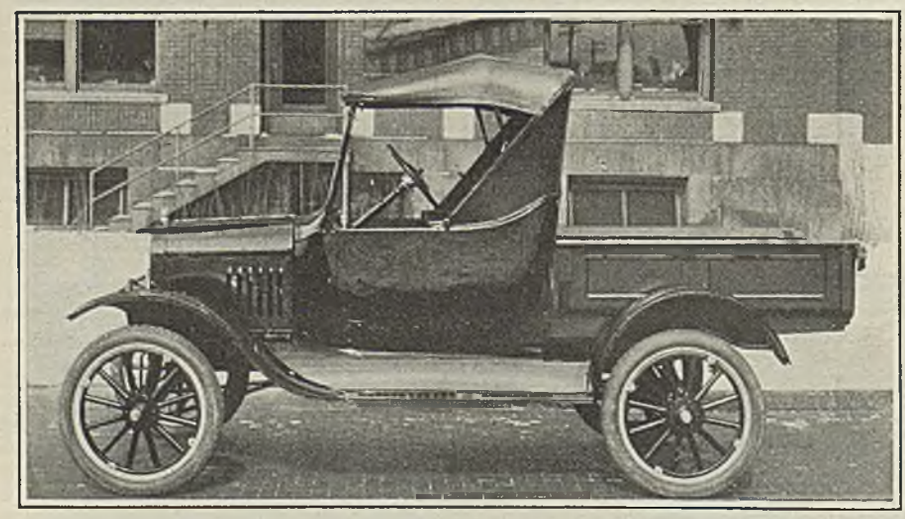
As the container and sealing device are not injured in any way by this operation, it is unnecessary to renew them unless they have been previously damaged. No machinery of any kind is required in the operations above described, only ordinary lamp house hand tools being used.

Light Truck Facilitates Quick Deliveries

The rapid movement of supplies, machinery repair parts, tools, etc., about the mines sometimes becomes a serious problem. As a rule it is far from advantageous to tie up a big truck with a light load; neither it is advisable to attempt the transportation of tools or supplies by means of a passenger vehicle. There is, however, a vast deal of trucking about a mine or group of mines that can be accomplished quickly and efficiently by means of a what commonly is termed a delivery car.

To meet such needs the Ford Motor Co., of Detroit, Mich., has recently placed on the market the delivery truck shown in the accompanying illustration. This machine differs in no wise from the standard model runabout except in the fact that the rear deck has been replaced with an all-steel "pick-up" body, the inside dimensions of which are 40¾x56 in. The height from the floor to the top of the flare is 13 in.

The uses to which this light truck can be put will be at once apparent to those in and about the mines upon whom devolves the duty of moving tools, materials and supplies from place to place. Thus, spare armatures or other machine parts can be rushed from shop or warehouse to some outlying mine in case of a burnout or breakdown. Supplies also can be delivered quickly to the point needed. Similarly, a complete autogenous welding outfit, together with its operator can be loaded onto such a machine and quickly carried to the point where they are needed.



Light and Inexpensive to Operate

Tools, rope, block-and-tackle, chain blocks, armatures, machine parts, welding outfits and the like can be placed quickly in this "carryall" and transported to any point about the mine where they may be needed.

Obituary

J. Farwell Gascoigne died at St. Joseph's Hospital, Chicago, May 20, from pneumonia, aged 38. "Jack" Gascoigne—as he was known to his friends—had been engaged in one capacity or another in the coal business in the Middle West during the last fifteen years. Until 1920 he was identified with the coal interests of the Edwards & Bradford Lumber Co. and when that company retired from the coal business he was manager of sales. Then he organized the Great-West Coal & Lumber Co., was its president, and brought the company to the position of one of the leaders in the Middle West trade. He also was president of the United Coal & Coke Co. and the Illinois Western Coal Co. The funeral was held May 22 at 3 p. m. at Rosehill Chapel. Burial was in Rosehill Cemetery.

Charles McFadden, Jr., who with his father, founded Twin Rocks, in the Blacklick Valley of Pennsylvania, and was the first to operate soft coal mines at that place, died in Washington, D. C., May 12, after a six weeks' illness of heart disease. He was born in Latrobe, Pa., in 1858, was graduated from Seton Hall College, A. B. 1888, a. m. 1889; took a post-graduate course at Georgetown University, studied law under Benjamin Harrison Brewster and was admitted to practice in the State of Pennsylvania. He formed the Black Lick Mining Co. for the purpose of mining and selling bituminous coal and was its president for many years. Burial took place in Washington, May 14. He is survived by his wife, his mother, five sons and two daughters.

William Brown, of Huntington, W. Va., died at his home there May 13, of angina pectoris. He was identified with the mining industry throughout the greater part of his life and at the time of his death he still retained an interest in the Red Campbell mine, at Ford Branch, Logan County. He was born in Glasgow, Scotland, 69 years ago. He leaves a son and a daughter.

New Companies

Canadian Coke Corporation, Ltd., has been granted a Dominion Charter, with headquarters at Montreal. The company is capitalized at ten thousand shares, nominal value, and will manufacture coke, coal and gas.

Papers have been filed with the Secretary of State of Ohio chartering the **Buka Coal Co.**, Cincinnati, with a capital of $50,000, to mine coal and sell coal and coke. Simeon Buka, Louise Buka, Theodore Stiebel, Ida Stiebel and Luis T. Murphy are the incorporators.

Commodore Jellico Coal Co., Knoxville, capitalized at $10,000, has been organized by J. T. Bradley, F. F. McCoy, L. B. Bradley, A. J. McCoy and C. O. Baird, incorporators.

The American Coal & Mining Co. of Pleasanton, Linn County, with a capitalization of $10,000, is one of the most recently chartered Kansas coal companies.

Mahoneys, Ltd., of Moose Jaw, Sask., has been incorporated to carry on business as wholesale and retail dealers in coal and fuel and to operate coal mines, with a capital of $50,000, by James K. Mahoney, Harold Schull, Julian Marquis and others.