

# COAL AGE

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

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## Signs Favorable to the Coal Industry

**D**ESPITE the welter of coal overproduction, despite the continued threat that economies will cause a further contraction in coal demands, despite the assurance that oil is going to make further inroads on the sea and, in places, for transportation by land, one can, nevertheless, see signs ahead that are reassuring for the coal industry. These signs include the activity of the public utilities, and the ousting of oil by coal in large steam-boiler and locomotive-boiler practice. Power companies, also, are organized for expansion, and are reaching out for new power uses, such as for better illumination.

The safety of highways, both for passengers and for vehicles, will be increased by better lighting, a development which is rapidly taking place. Furthermore, illumination is proving a great aid to merchandising. Stores which in earlier days were dimly lighted are now ablaze with high-candlepower lamps, and new electric signs add constantly to the demand for power. In factories, also, the value of illumination to safe operation and a better product is causing rapid increase of the demand for electric energy.

In modern dwelling houses, besides better lights, all kinds of equipment are being installed, to reduce the drudgery of housekeeping. Electric washers, sweepers, mangles and irons are being introduced; and even electrically cooled refrigerators and radiators. Farms are being equipped with electric feed cutters, separators, churns and milking devices. Electrically operated pumps are providing water under pressure, for domestic purposes; and perhaps we may look for the extensive use of electricity for the sprinkling of crops and for irrigation in times of drought; extending the practice already long in use in southern California and other semi-arid agricultural regions.

## "Eventually—Why Not Now?"

**U**NION OFFICIALS who insist day after day that arbitration shall not be the solution of the anthracite deadlock give an exposition more remarkable for its pertinacity than its wisdom. The public that pays the final bill is plainly out of patience with the position of the mine workers and as plainly in sympathy with the stand of the operators. When we remember the century-old epidemic of "anthracite-phobia" and the easy appeal to passions and prejudices which the advocates of labor have time and again so successfully invoked against capital, the swing in the public attitude has a significance which should impress even the irreconcilables among the executives of the United Mine Workers of America.

Mr. Lewis, leading a forlorn hope with all the vigor of a victorious commander, speaks feelingly of the unwillingness of the miners to permit a third person to fix "their wages and decide what kind of food they shall eat, the clothes they shall wear" and other living con-

ditions. It is an understandable unwillingness. But, if the mine workers are to escape this dictation, they must do one of two things. They must either surrender their conception of an inherent right to the jobs they have deserted, and make no protest against the employment of others in the places they have vacated, or offer an acceptable substitute for arbitration—a substitute which will protect the public's right to an uninterrupted supply of fuel. No one at this time seriously suggests the first surrender. The union, on the other hand, offers no peaceful substitute for arbitration.

Until Mr. Lewis and his associates prove wiser than the wisdom of ages and come forward with such a workable alternative, the public is going to believe that arbitration is the ideal solution. The public is going to be cold to demands for sympathetic consideration of claims which the union has declined to press before an impartial tribunal. The public is going to be suspicious of the merits of contentions which can be established only through inconvenience, discomfort, exhaustion and suffering. If union leaders persist in their determination to war on peace, the public may acquire a beligerency of its own.

Sooner or later—lacking that superwisdom—the union will have to reaccept the principle of arbitration. It has acknowledged as much in its adherence to the one-sided third party judgment incorporated in the discredited Pinchot plan. It has admitted it again in its Sunday attempt to foist the Governor's plan upon the country cloaked as a "revision" of the Markle plan. To prolong its opposition to bona fide, unrestricted arbitration in the desperate hope that something may happen to rescue the organization from its plight shows consideration neither for the public nor for its own loyal members who face want and privation.

## Bigger Recovery by Shearing

**D**ESPITE its demonstrated and potential merits, the shearing machine has not received the consideration which it deserves. It should be a material assistance in increasing the percentage of lump coal as it provides an additional free face for each shearing cut. Though this advantage obviously is partly or entirely lost by the increase in the quantity of bugdust yet two advantages remain that have no countervailing disadvantages.

One of these is that shearing prevents the undue shattering of the roof in shooting. Not only can the holes be more lightly loaded but the pressure created by the explosive acts horizontally as well as vertically and thereby damages both roof and coal less severely. Though by this means the roof is not protected as well as by the top cut of the turret machine the advantage is nevertheless appreciable, a fact which does not seem to be widely realized.

The last and probably the most important advantage of the shearing machine, is also not appreciated by many mine owners. It enables a more complete re-



covery of coal from mined-out areas by facilitating the lifting of that coal which lies below the kerf formed by an undercutting machine. This it does by channeling to the bottom of the seam, through the bench of coal which is left by the undercutter. Any man who has been a miner appreciates the difficulty with which many bottoms are lifted by pick and may even wink at the practice which is so prevalent, of abandoning the bottom coal when not forced by management to remove it.

The shearing machine is particularly beneficial in this respect in rolling seams. Under this condition the bar of the undercutting machine cannot be so nicely regulated as to stay on the bottom, with the result that some, and often much, coal is left under the cut. An almost imperceptible rise of the floor of the cut, or dip of the bottom, may cause a considerable thickness of unmined coal to be left on the floor of the mine. One of the largest producers in the country estimates a loss of coal in its mines of about one ton in thirty through the inability of the undercutting machine to cut on the bottom, and the failure of the efforts of the management to compel miners to lift coal which the machine over-rides. The shearing machine should stop this unprofitable waste of bottom coal, and at the same time improve roof conditions and perhaps increase the percentage of large sizes.

### The Bureau of Mines Director In Spitzbergen

AN INTERESTING story of a difficult coal enterprise is interwoven with a glimpse of the personality of the new director of the Bureau of Mines in a bulletin sent out by the Bureau on Dec. 9. It goes without saying that this bulletin was issued without the knowledge and consent of the new director, who is winding up his personal affairs in Ottawa; the acting director, Dr. D. A. Lyon, assumes responsibility in a note accompanying the publication, indicating that it is in the spirit of good-will on his part that the entertaining document is sent out. Indeed, the document is not, strictly speaking, addressed to the public, but is specifically sent to the far-flung employees of the Bureau. The bulletin describes the picturesque mining adventure of Scott Turner as general manager for the Spitzbergen mines of the Longyear interests.

If there is anything in the theory that Nature tries to provide for the wants of humanity, then there would seem to be sense in placing abundant coal at Spitzbergen,—not very far from the North Pole, between latitudes 76 deg. and 82 deg. And to judge from the obstacles she has interposed to mining and shipping the coal, she seems to be doing her best to keep it there till Arctic inhabitants may need it.

The enterprise of J. M. Longyear, of Marquette, Mich., and Frederick Ayer, of Boston, in coal mining in Spitzbergen began in 1905. Due to the inclement situation of this considerable group of Arctic Islands, no nation has established unqualified sovereignty, so that the keeping of order was entirely a function of the operating company. Installation of equipment, mining, and the development of markets continued to 1911, at which time Mr. Turner became general manager, replacing the general manager who was resigning. Why he resigned becomes increasingly easy to imagine as the narrative proceeds. At that time (in 1911) the production was 26,000 tons.

The problems with which Mr. Turner grappled courageously and, on the whole, successfully are interestingly detailed. These included Arctic climate, poor and unwilling labor, no government, inadequate shipping facilities, and the determination of markets. There is plenty of coal in Spitzbergen, it is clear: the problem is to get it out economically. A single seam investigated thoroughly showed bituminous coal amounting to 11,000,000 positive, 13,000,000 probable, and 43,000,000 possible tons. In 1913 the output of the mines had been brought up to near 38,000 tons.

The national sovereignty of the Islands is not yet determined, a conference of the powers in 1914 to decide this having broken up without coming to an agreement. The beginning of the war distracted attention from this question; and also changed all plans regarding the operation of the mines. In 1916 the rights of the American company (Ayer and Longyear) were sold to a Norwegian syndicate, and Mr. Turner ceased to have any part in the enterprise.

### No Facts Withheld

ONE BITUMINOUS coal producer, the Union Pacific Coal Co., realizes that the truth told does less harm than all the surmises that follow the truth withheld. It has issued orders that if, owing to some untoward circumstance, it has an explosion in its mines and reporters throng around the plant they are to be received with all the courtesy possible under the circumstances and to be given a statement every three hours or oftener if need be. Many a wild story, many an unfortunate misrepresentation would be avoided if this practice, quite common in the railroad service, were followed. Of course, the company has undertaken with the utmost diligence to make its mines safe. It has workings which are models of safety in every way and a system of inspection that makes the prospect of a large loss of life unlikely, but should the unforeseen happen there will be full disclosure of the facts.

### Improving Trite Advice

“TAKE an interest in your work,” “Love your work” or something to this effect usually is included among the “five,” “ten,” or “fourteen” points of advice given to the young man going into the coal industry or any other field of activity. But does not this point of admonition have a rather hollow sound? The very words “love” and “interest” have to do with the inner feelings of an individual and are not voluntarily controlled.

Would it not be much better to tell the beginner that if he is not interested in his work, he should attempt to find out why; and remember that with increased knowledge and proficiency comes greater interest. This may offer to him a solution instead of discouragement.

### Mine Ventilation

THE PRACTICE of ventilation suffers much from the popular notion that one aircourse should be as large, as smooth and unencumbered as another, whereas only where the volume of air to be transmitted is large need the aircourses be wide, high, with rounded lines and no interference. That is why particular solicitude should be felt for the passages that have to carry the full unsplit current.





## "Cooling with Coal" Widens Market

Theaters Lead in This New  
Low-Cost Use of Fuel for  
Refrigeration — Homes and  
Other Buildings to Follow

By R. Dawson Hall  
Engineering Editor of *Coal Age*

**E**CONOMY in the use of coal by railroads, public utilities, metallurgical plants, industries and domestic consumers has changed the steady progress in the production of that mineral so that now it is difficult to tell whether consumption is increasing or decreasing. What is more, the last word in economy has not been said. The railroads have made only a start in electrification. The public utilities have set standards which only a few are reaching. Metallurgical economies are still progressing and have not been universally adopted. More industries every year close down their inefficient power plants and turn to purchased power producing energy with economical equipment, and domestic consumers are trying out new composition roofing and sheathing boards that prevent leakage of air and loss of heat. The anxiety of the gas manufacturers to get into the heating business is causing them to advocate houses almost hermetically sealed because a leaky house takes so much heat that to warm it with gas would bankrupt the householder.

Operators must face the inevitable restriction in market due to economy. It cannot be stemmed. He would be exceedingly ill-advised and unpopular who would attempt it.

In the headpiece is shown the interior of the Chicago Theater. This great moving-picture house seating about 5,000 is cooled to 74 deg. in summer by a 300-ton plant, the daily operating charge of which is about 1c. per seat. This cost is approximately half a cent lower than that estimated for the average theater but even the average is low enough to have proved the "cool-with-coal" idea a profitable one. Increased theater patronage in hot weather repays not only the operating cost but also, within two or three years, the original investment charge.

However, there are always new uses for coal. One of these which has been almost unknown until today, but which has large possibilities for the future, is the cooling of the air in theaters, offices, factories, stores, restaurants, hotels, hospitals and homes by refrigeration plants the electric power for which is generated with coal. Sufficient advance has been made in the refrigeration of moving-picture houses to prove the case. There, summer patronage has been increased enough to more than offset the original plant investment and the daily operating cost which averages only 1.5c. per seat.

Among the other new uses for coal is the manufacture of what have been hitherto regarded as mere byproducts of its distillation, but at present it is questionable whether these can be sold at a price justifying such treatment. Where the coal is distilled, the gain is in the better fuel rather than in the byproducts. There are possibilities in coal distillation and gasification but even if pushed to present limits and even somewhat beyond them, they would add but little to the coal consumption. Hope from this course seems somewhat remote.

So the main solution is by the use of more coal for domestic heating and in developments in the use of power. There is quite a possibility that the average farmer and country laboring man might be induced by advertising to heat his house more completely and to use wood less in so doing. This advance would be in the direction of the use of coal of the larger sizes



and the market would be likely to be badly unbalanced by that additional demand, for some farmers like to buy their coal when they can haul it in sleds and so are disposed to leave the work of hauling and therefore their buying till the winter.

At best, it is not a large use, and the operator, if he is going to use his strength to develop his market, must lay his stress on those opportunities which are largest. The biggest are those where the producer helps the consumer to get more business, thereby aiding the former to increase his sales. These opportunities are in the increased sale of electrical power.

Hitherto the public utility has not been a generous purchaser of coal. It has largely bought the smaller sizes of the product at cost below that of production, but that was because the quantity of coal desired was usually such that, unless he was buying the unsized low-volatile, there was plenty of slack available as the outcome of preparing screened sizes.

The economies of the public utility have enabled it to make this advantageous bargain. Had its demands been larger it would have had to crush some run of mine all the time, and it does part of the time even today. The utility, if it needs more coal, will have to pay a bigger price for all of it or will have to produce enough coal for the supply of its own needs. It cannot continue to steal a ride behind the domestic consumer. In consequence it would be wise for the operator to see if it is not possible to find ways in which more power would be used.

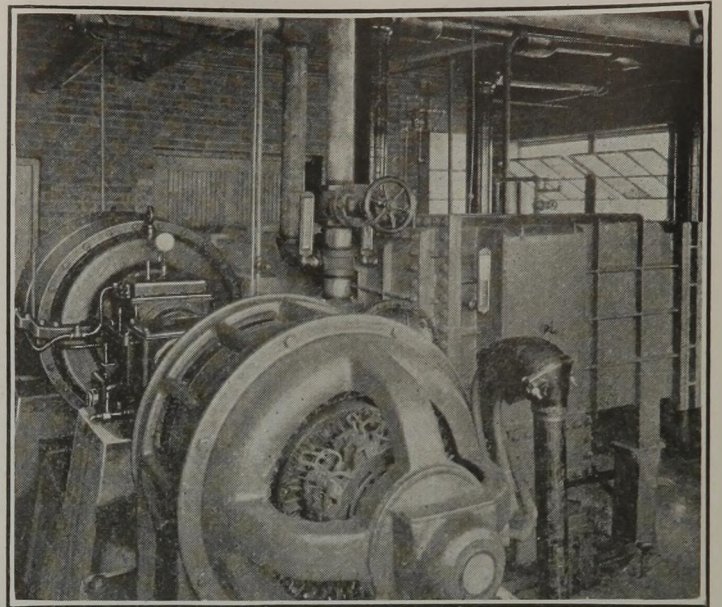
Here, some will say, "Surely the electric companies, having this as a direct interest, will have been lying awake nights figuring on means of selling more power and what can the operator who knows the game less well do to aid them?" That is an old manner of arguing and usually not a safe one. No one uses it as regards the coal industry which every one feels they could steer to better advantage than its present captains.

#### ORGANIZATIONS PROMOTE PROGRESS

The public utilities have formed a Society of Electrical Development with which operators should be acquainted and with which they might advantageously co-operate. This society has been quite active in developing small uses of power in the home. It is working on electrical refrigeration by which it understands the keeping of an "ice box" cool. This is an admirable project and in a way important to the backers of the Society as the current used for this refrigeration is sold at a high figure to small users. It helps to bear the heavy burden entailed in the domestic installations of electricity. As an aggregate it promises little to the coal operator, whatever it may mean to the public utilities. The Commercial Department of the National Electric Light Association is another interest that is seeking new outlets for the sale of electric power. Progress in the use of refrigeration can be advanced through that association also.

The cooling of air in public buildings and homes, however, promises to be a leading use of electric power. The public has desired to obtain the benefits of this development for centuries and would have had it years ago had it realized that it would not be too costly. Enough has been done to show that when applied to large numbers of people assembled together it is well within the compass of any pocket book.

In general the principle is as follows: A suitable



**Weather-Making Machine for Theater Cooling**

This plant uses "dieline" or, more scientifically, "dichloroethylene" as the refrigerating fluid. This liquid is heavier than water, boils at atmospheric pressure at a temperature about 120 deg. F. It is flammable but only with relative difficulty. This 75 to 90-ton plant is a model of compactness.

gas is compressed by a motor-driven compressor. In so doing its temperature is raised. By means of a condenser the gas is brought back to normal temperature. It is then allowed to expand and in doing so becomes chilled. The cold gas is passed through pipes under water, thus cooling the water, and this water is sprayed on the air which is being admitted to the building, the air of which is to be conditioned. Sometimes the air to be used is purified in an ordinary air washer and then passed among the refrigerating coils, sufficient water being sprayed on the coils from flushing pipes or spray troughs to increase the efficiency of the cooling surface and to prevent the formation of ice on the surfaces of the coils.

During the administration of President Taft efforts were made to keep the Presidential offices in the White House cool by the use of ice but the quantity needed, several tons daily, soon convinced the Department of Public Buildings that the work was excessively costly.

As far back as 1907, Kuhn, Loeb & Co. arranged with A. M. Feldman, an architect of New York City, for the cooling of its bank on William and Pine Streets, New York City, the cooling being provided by the use of ammonia refrigeration. Mr. Feldman is an advocate of conservatism in cooling. He believes that "dwellings should never be cooled more than eight or ten degrees below outdoor temperature in the hottest weather nor below 73 deg. F. It appears that the human body has the faculty to adjust itself to atmospheric conditions and obtains comforts with only slight differences of temperature, especially if some of the excess absolute humidity has been removed from the air."

Mr. Feldman declares that Kuhn, Loeb & Co. was well satisfied when the outdoor temperature was 91 deg. F. and the outdoor relative humidity 53 per cent if the temperature admitted to the banking office was 71 deg. F., the average temperature in the office being 81 deg. F. and the relative humidity 63 per cent.

Certain it is that Kuhn, Loeb & Co. must have been satisfied, for four years ago the same architect using the same system reconstructed the plant to take care of three floors in the same bank. It will be observed that the air after being freed by mechanical methods



of the water it carries at about 71 deg. F. is introduced into the banking room where it becomes heated to 81 deg. F. In this process it gains a capacity to take up more moisture, so that its saturation falls to 63 per cent. This is what makes the air refreshing. If it were saturated it would not be comfortable because it would not assist in the removal of moisture from the surface of the body.

The general disposition of refrigerating engineers is to cool the air still more. It is not quite clear that this is necessary. It may well be that the people who are adopting refrigeration for the popularizing of their places of resort desire to advertise the fact that their buildings are cooled and so prefer to refrigerate them excessively in order to prove their claims. They may later choose to cool their buildings as little as will produce comfort, thus saving money and avoiding the risk of their patrons getting pneumonia or colds. It has been stated that some patrons of cooled motion-picture houses have left their seats and returned to the outside air rather than subject themselves to the possibility of contracting colds. At present, however, the tendency is in favor of greater refrigeration despite the increased cost.

#### INSTALLATION IN 1907 STILL WORKING

An early installation was that made in 1907 for the Pompeian Room of the Congress Hotel in Chicago. This room is still cooled by this installation and since then the French and Gold Rooms have been similarly cooled. Another early installation was the Café of the Ritz-Carlton in New York City which has a machine capable of freezing 75 tons of ice daily.

In Chicago the following theaters have been refrigerated: the Chicago, State-Lake, McVickers, Pantheon, Tower, Senate, Harding, Madison Street, Diversey, United Masonic Temple, Uptown, Woods, Riviera, Palace Music, Annette, Central Park, Trianon, Laurence, Tivoli and Capitol. Chicago has led in the work of refrigerating buildings though there are many cities where the need for cooling is greater. The Woods Theater is the only one which houses the legitimate

drama. The play which ran in this theater last summer had left New York where it had played to crowded houses and had come to Chicago to take advantage of the cooled air of the Woods Theater. It played to full houses, the seats being taken six weeks in advance. Today it is back in New York, the temperature in the city no longer needing improvement by refrigerating processes.

#### OPPORTUNITY IN NEW YORK CITY

In New York the Capitol Theater and the Rivoli have refrigeration. So far little has been done in that city of many first-class theaters to keep such places cool. In Pittsburgh two theaters have recently been cooled by refrigerated air, the Davis and the Grand. In Philadelphia, the Fox is thus cooled and in Buffalo, Shea's Theater.

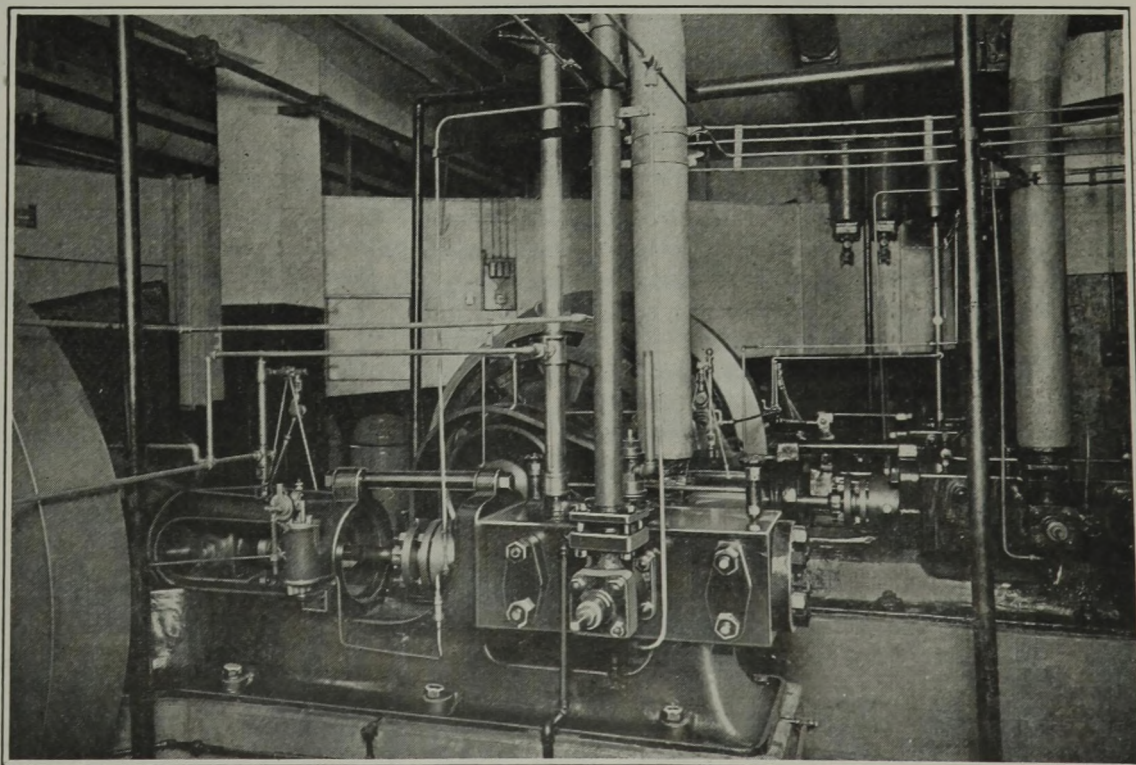
The South is plentifully supplied. Thus at St. Louis, Mo., is Loew's, the Grand Opera House, Delmonte and the Masonic; in New Orleans, La., is the Orpheum and Loew's State Theater, in Kansas City, Mo., is the Orpheum, Main Street and Newman theaters; in Dallas Tex., is the Palace, the Melba and the Majestic; in Houston, Tex., the Texan and the Majestic; in Fort Worth, Tex., the Majestic; in Tulsa and Oklahoma City, Okla., two Orpheum theaters. In San Antonio, Tex., also the Majestic Theater is refrigerated. The Palace Theater at Peoria, Ill., the Capitol theaters at Des Moines, Ia., and Cincinnati, Ohio, respectively, are other examples.

Other theaters where refrigeration is being installed are the Belmont, Ascher, Marks, Howard, Highland, Grove and Wasson in Chicago, the Hammond at Hammond, Ind., the New State at Detroit (209 tons), the Rialto at Joliet, Ill., the Lyric at Indianapolis, Ind., the Keith, at Atlanta, Ga., and the Miami at Miami, Fla. Keith's theater in Washington is to have an installation. These are only a few of the projected plants. The work of preparing for the coming summer is exceeding the capacity of the architects and manufacturers to fill the demand.

The cost of these installations is considerable and

#### Cools Seats at a Cent Apiece

Machinery of the 300-ton carbonic anhydride refrigeration plant which cools the big 5,000-seat Chicago Theater in the Mid-West metropolis. It has two duplicate units each of 150 tons refrigerating capacity. The variation in the theater from roof to orchestra pit has never exceeded 2 deg. in any place since the system was put in. Cooling is attained by direct expansion, the coils for this purpose being placed within the air washer. Examples like this suggest how much coal will be used when we temper our air to suit our bodily comfort.





is made more difficult by the fact that such plants require much room which is not always available. What space has been found is already pre-empted by the heating equipment. One authority said that a 400-ton plant which would supply a house with about 6,000 seats would cost, including air washers, \$100,000. With current at 1½c. a kilowatt-hour the refrigeration plant could be run for \$6 an hour. The ventilating fan by which the cooled air is circulated would cost another \$2 per hour for operating charges, but that unit must be kept running whether the air is cooled or drawn direct from the street.

#### COST FIGURED AT 1½C. PER PATRON

Ventilation is necessary in any event so the cost is only 0.1c. per seat per hour. Just how often the seats are filled is doubtful. Throughout the industry perhaps it may be only 1½ times per day. One authority, speaking of a New York theater of modest size, says that "it is a safe estimate to say that the seats have never been filled less than 1½ times a day and the average is more nearly twice that. On some occasions the seats have been filled 3.9 times during the day." This same authority said that the rate of 1½c. per kilowatt-hour was unusually low and that the cost of a 400-ton plant would be nearer \$150,000. Making the rate 3c. per kilowatt-hour the cost would be \$30 per day per 1,000 seats for twelve hours' operation. Assuming the seats were filled twice a day as an average, the cost per patron would be 1½c. This, he assumed, would be a fair average for the season.

It is easy to see that this would not be a figure that would deter theater managers from making the investment. Dr. E. Leonard Hill, a ventilating engineer, said that the McVickers Theater in Chicago had spent \$69,000 in cooling equipment and found that the increased profit in showing to large houses was such that in two years they hoped to have their expenditures back in those increased profits alone.

#### CHICAGO THEATER'S 300-TON PLANT

At the Chicago Theater, a 300-ton refrigerating plant cools the outside air from 95 deg. to 74 deg. The theater which houses from 4,000 to 5,000 people is kept cool by a plant that is said to be run for \$50 a day or a cent a seat and for less than that therefore per patron. The plant has two units so that one only can be used if full refrigeration is not needed. R. A. Kroeschell said that 15 deg. of a drop between outside and auditorium was all that should be attempted. Dr. Hill said that the air could be profitably cooled to 50 deg. and then heated by radiators to reduce moisture or it could be passed through ducts that would add to the temperature or again it could be mixed with bypassed air. He advocated that when the air was 90 deg. outside it should be cooled so as to keep the temperature of the auditorium 75 deg. with 60 per cent relative humidity. Mr. Wittenmeier said that if anything 72 deg. was too low and that 75 deg. was better. With the air passing along the floor the women would complain that their ankles were cold and would wrap them in newspapers to avoid that discomfort and to allay their fears of catching cold. Mr. Wittenmeier thought that if the temperature was 90 deg. outside, it should be about 15 deg. lower inside the building for comfort.

It has been estimated that there are about 1,000 Class A motion-picture theaters which could imme-

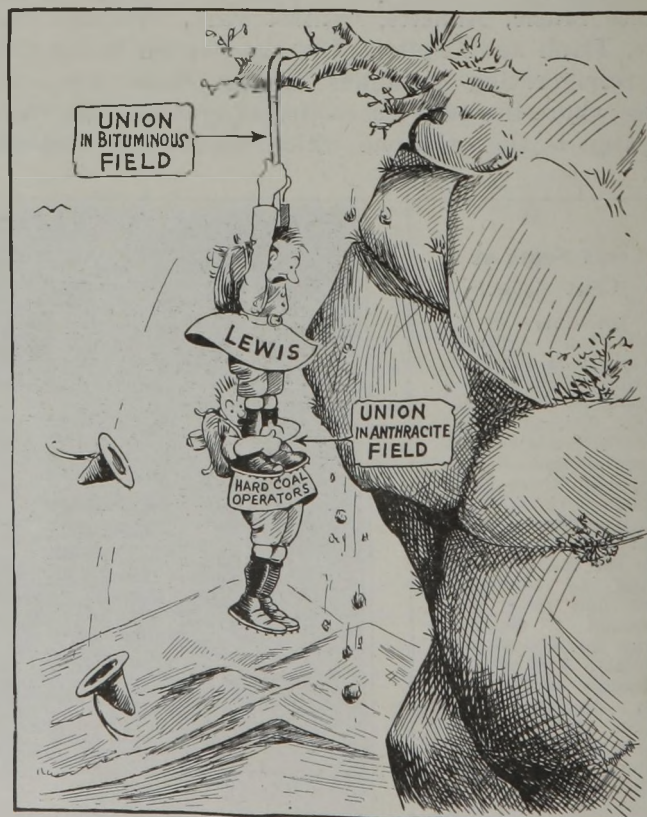
diately afford modern cooling plants. Each of them would require an average of 400 hp. including ventilation. Here is a total potential summer demand of 400,000 hp. to which should be added the demands of the legitimate drama which, though not nearly so great, is nevertheless considerable.

In other articles I desire to detail more developments in the art of cooling which show how rapidly it is spreading. Something also should be said of the various systems in use.

If all the motion-picture theaters, large and small, were cooled they would use almost a million tons of coal a year for cooling. Suppose they used on an average two-thirds of a million horsepower for twelve hours a day for six months and that each kilowatt-hour required 1½ lb. of coal, the "movie" industry would absorb the quantity of coal stated. The cooling of motion-picture houses is only a small part of the whole program which will not be reached till home cooling is introduced. Thus the importance of refrigeration as an outlet for more coal can readily be appreciated.

### A Correction

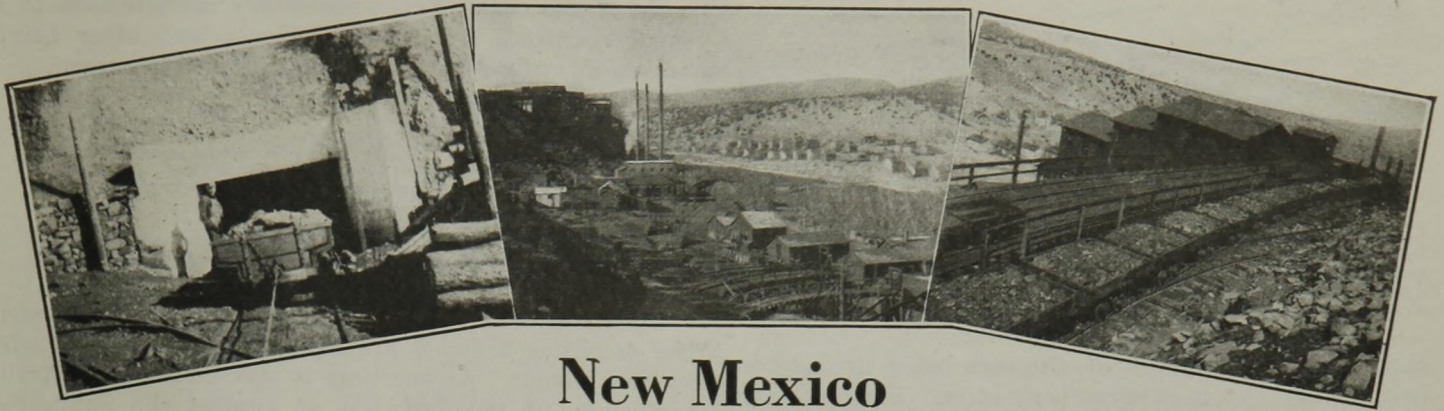
On page 771 of our issue of Dec. 10 it was stated concerning the Chance process of coal preparation that: "These two agencies (paddles and water jets) serve to counteract each other and result in a tendency, toward whirlpools, eddies and boiling." Whirlpools, eddies and boiling are actions that would be detrimental to the operation of this equipment and the apparatus was specifically designed to avoid them. The passage quoted should have read: "These two agencies serve to counteract each other and check any tendency toward whirlpools, eddies and boiling."



#### But If He Strikes—!

Lewis: "Let loose of my feet or I'll strike with this stick!"  
(With apologies to Sondagssnise-Strix, of Stockholm, whose cartoonist could not have guessed that C. P. Daniel, of Knoxville, Tenn., would reinterpret and retitile his work.)





## New Mexico Has Anthracite Mines but No Strike

By John A. Holmes  
Madrid, N. M.



PENNSYLVANIA, now strike-bound, does not mine quite all the anthracite that is normally produced in America. There are a few other small hard-coal regions. New Mexico has one of these, a little field containing scarcely six square miles, lying 50 miles east of Albuquerque on the Santa Fe railroad.

In this territory both anthracite and bituminous coal are mined from a single bed—the White Ash—and there are soft-coal mines also in another seam—the Cook and White.

The field has eight mines all of which belong to the Albuquerque & Cerillos Coal Co. Five are now producing coal. Three of the five—Nos. 4, 8 and 9—are anthracite operations all delivering their coal to a single breaker. Two of these produce less than 100 tons a day. No. 4 is the main anthracite mine of the field, yielding about 300 tons daily. In it the company has experimented with various systems of mining within the last several years but is now using only standard methods.

Geologically this small field is exceptionally interesting. Coal is found solely in the Mesa Verde formation of the Upper Cretaceous area. It occurs only on the Mesita de Juan Lopez and a part of the Ortiz mine grants. This coal tract is surrounded by a vast mineral-bearing region producing gold, silver, lead and copper. This peculiar condition is accounted for by the fact that on both north and south of the coal area lie volcanic upheavals which have thrown out two major igneous sheets, each about 800 to 1,000 ft. thick. These intrusions of andesite porphyry, cut by many dykes, have forced their way between the sedimentary formations.

The first bed of coal to be developed years ago was

The headpiece accompanying this article shows, at the left, the slope mouth at No. 4 mine, the principal anthracite producer of the Albuquerque & Cerillos Coal Co.'s several anthracite and bituminous operations in the Madrid (N. M.) region. In the center is a distant view of the mine town, the power plant and the company's breaker serving all of its anthracite mines, Nos. 4, 8 and 9. No less than nine sizes of coal are prepared. At the right are the approach tracks to the breaker. At present about 400 tons a day from three mines normally is handled through this breaker.

the White Ash, the product from which soon gained prominence in the Southwest as a low-ash, non-coking fuel. This bed dipped to the southeast on a 15 per cent slope and averaged 6 ft. in thickness. As this mine was developed southward, the coal gradually changed from a bituminous to an anthracite, the thickness simultaneously decreasing to 4 ft. and even less. Later this operation caught fire and had to be abandoned. Several years afterward, however, a breaker was built and work started on the development of the anthracite.

The largest mine so far developed is the No. 4, whose main slope has been driven in more than a mile. This passage was projected on the dip and entries turned off every 1,000 ft. on the strike. When these entries have advanced far enough, dips are turned parallel to the main slope, rooms are necked off on either side and driven on the strike. All cars are delivered to the room neck by a hoist, whence they are pushed to the face by the miners. As the coal is only 2 to 3 ft. thick, rooms are driven wide and double tracked, the brushings being gobbled in the middle of the room. As soon as these rooms have been driven in their full distance, the pillars are drawn on the retreat. So far, several acres of coal have been removed and there has been no break in the igneous sheet which lies approximately 25 ft. above. Experiments have been made with longwall and the V-system of mining, but because of the many dykes and faults encountered, these methods have not proved practical.

### EFFICIENT VENTILATION ESSENTIAL

This mine is ventilated by a high-speed reversible fan delivering 90,000 cu.ft. of air per minute, driven by a 50-hp., 2,300-volt synchronous motor. As the workings are gaseous, all blasting is done at night by a shotfirer. Canvas brattice is carried to the face of all entries, but in spite of this it frequently becomes necessary to employ a booster or blower fan to clear the face especially if the passage is being driven to the rise. The main return normally carries about  $\frac{1}{2}$  per cent methane; air samples are collected and analyzed periodically.

The accompanying table shows the proximate analysis of coal taken from various beds and at various places in this coal field.

The breaker which prepares all the anthracite produced is located about a mile from the nearest of the



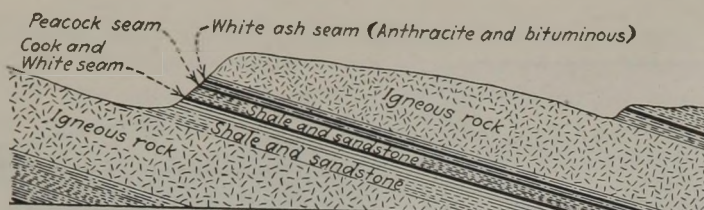


Fig. 1—Section Through Los Cerrillos Coal Field

The three coal measures here appearing lie between the igneous intrusions that have forced their way between the sedimentary formations. The coal beds thus have not only been subjected to heat from these igneous measures but are broken by numerous dykes. These latter have precluded the adoption of longwall and V-mining methods, though these systems have been tried.

three mines tributary to it, the cars being hauled over this distance by a gasoline locomotive. First the coal is dumped into a bin and thence fed to the large main crusher by a horizontal apron conveyor. From the crusher the product passes to a shaking screen which removes the No. 1 size, or that passing over 4-in. circular perforations. The coal that drops through this screen goes to another shaker where the duff is removed, this passing direct to the duff bin. Everything coming over this  $\frac{3}{8}$ -in. screen goes to the main sizing shaker where grades Nos. 2, 3, 4, 5, 6, 7 and 8 are separated; each of these respective sizes goes to its own bin from which it is elevated to the spirals. After the different sizes have been spiraled and respiraled, each grade is lowered to the railroad loading bins by means of spiral chutes. As the coal is loaded into the railroad cars, it traverses a screen intended to remove any small pieces or degradation that may have chipped or broken off the larger ones in handling. These undersizes are delivered by a screw conveyor to a bucket elevator that feeds the material back to the main sizing screen.

The No. 1 size is hand picked after it has left the screen but before it reaches the spiral, and any pieces

to which slate adheres are thus separated from the main body of the coal. These pieces are carried back to a small recrusher by a belt conveyor and after being broken down are discharged onto the main screen.

The following sizes are prepared:

- No. 1—over a 4-in. circular opening,
- No. 2—through a 4-in. and over a  $3\frac{1}{2}$ -in. circular opening,
- No. 3—through a  $3\frac{1}{2}$ -in. and over a  $2\frac{1}{2}$ -in. opening,
- No. 4—through a  $2\frac{1}{2}$ -in. and over a  $1\frac{1}{2}$ -in. opening,
- No. 5—through a  $1\frac{1}{2}$ -in. and over a 1-in. opening,
- No. 6—through a 1-in. and over a  $\frac{3}{4}$ -in. opening,
- No. 7—through a  $\frac{3}{4}$ -in. and over a  $\frac{1}{2}$ -in. opening,
- No. 8—through a  $\frac{1}{2}$ -in. and over a  $\frac{3}{8}$ -in. opening,
- Duff—through a  $\frac{3}{8}$ -in. circular opening.

Sizes Nos. 4 and 5 are combined and sold as brooder No. 4. Sizes 5 and 6 are likewise combined and sold as base burner. At one time it was extremely difficult to dispose of the duff, but at present the Santa Fe railroad is using it in its shops at Albuquerque.

#### GENERATES ITS OWN POWER

As no public utility plant is near this field, the company generates its own power. It now has a power house equipped with two 221-hp., and one 418-hp. Babcock & Wilcox boilers which are hand fired with duff and No. 8. A powdered fuel furnace under the 418-hp. boiler is contemplated for the near future. As this region is arid, tank cars are employed to haul all water for domestic use. Enough water, however, accumulates in the mine to assure the power house of an ample supply except in especially dry seasons when it becomes necessary to use city, that is, tank-car water. All boiler feed is treated before use.

This plant is also equipped with two 300-kw., and one 1,000-kw. condensing turbines, which are operated on a steam pressure of 150 lb. and exhaust to 21 in. of vacuum. The larger machine has been in operation only a short time, but a considerable reduction in water consumption has been obtained by it.

All power is transmitted to 2,300 volts, alternating current. In the mines, this is stepped down to 440 volts. Each circuit, of which there are eight, has its own individual feeder panel in the power house, on which watt-hour meters are mounted, giving the management of this operation an excellent check on the power distribution.

#### Proximate Analysis of Coals Produced

| Bed          | Grade of Coal | Moisture, per Cent | Volatile Matter, per Cent | Fixed Carbon, per Cent | Ash, per Cent | Heat Content, B.t.u. | Sulphur per Cent |
|--------------|---------------|--------------------|---------------------------|------------------------|---------------|----------------------|------------------|
| Cook & White | Bituminous    | 0.43               | 35.91                     | 52.45                  | 11.21         | 13,760               | 0.82             |
| White Ash    | Bituminous    | 1.36               | 37.39                     | 53.18                  | 8.07          | 13,700               | 0.82             |
| White Ash    | Anthracite    | 1.78               | 14.14                     | 78.58                  | 5.50          | 14,091               | 0.73             |
| White Ash    | Anthracite    | 2.84               | 7.73                      | 81.24                  | 8.19          | 13,390               | 0.55             |

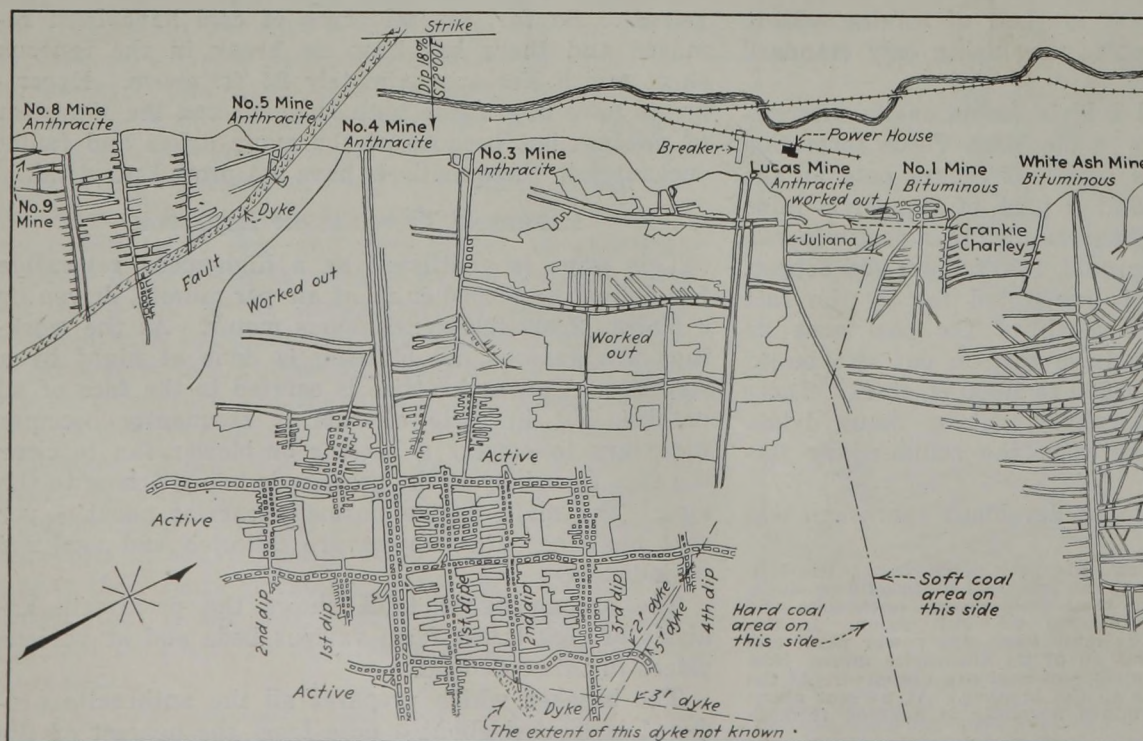


FIG. 2

#### Many Mines Work This Bed

The map shows the greater part of the coal region near Madrid, N. M., where the White Ash bed yields both bituminous coal and anthracite. Mines operating north of the dividing line shown on the drawing are in the bituminous territory and those south of it produce anthracite. At present the only anthracite operations working are Nos. 4, 8 and 9.



# Union Succumbs with Violence in West Virginia And Quietly in Central Pennsylvania

By Sydney A. Hale

Special Contributor, *Coal Age*,  
New York City

**M**ORE EPITHETS have been hurled and more epitaphs wasted over the fate of organized labor in West Virginia than in all the rest of the coal producing states combined. The history of the United Mine Workers' failure to hold central Pennsylvania, covered in this article, is colorless by comparison with the violent drama of the Panhandle state. There have been struggles equally intense, equally bitter, elsewhere, but the picturesqueness of the West Virginia background has been so well advertised in recent years that that state is treated as the keystone in the arch of anti-unionism. Few commentators can resist the temptation to discuss the situation there in detail and to tinge an already colorful picture with their own individual sympathies and prejudices.

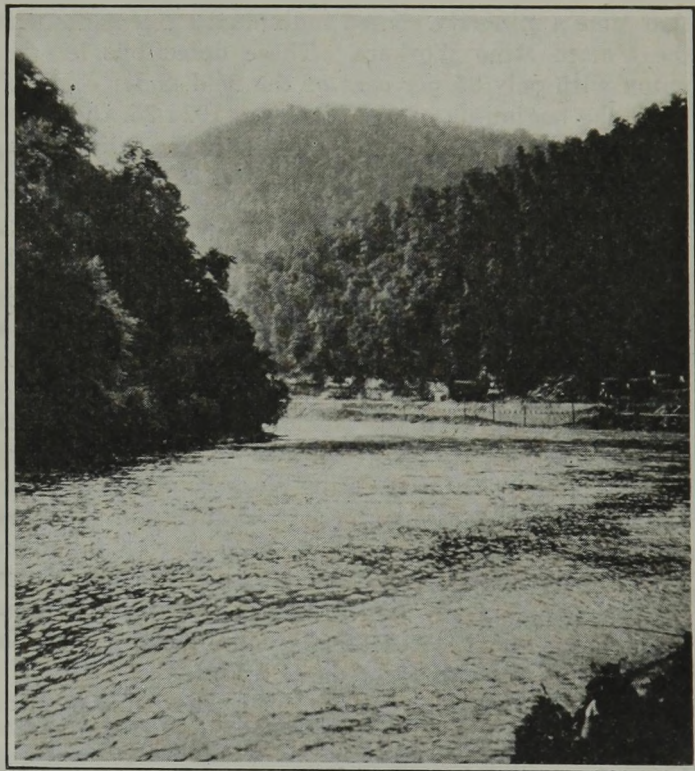
Undoubtedly the temptation is great. Armed marches with all the panoply of a miniature war, the lonely sniper in the wooded hills, riot and fatal gunplay in the village streets, an armored car dealing death as it careens through a beautiful valley, injunctions without end, charges and counter-charges of the abuse and the denial of civil liberties, distrust of the protection of the courts, men accused of treason against the state, plain and fancy slaughter carried to the threshold of the temples of justice, feudalistic conceptions clashing with "mobocracy," a whole commonwealth embittered by the jibes of the outside world—this is the stuff of which the story of the United Mine Workers in West Virginia is fashioned.

An elaboration of the incidents massed above would serve no good purpose in the present discussion. They are the byproducts of passions and prejudices to be weighed in an examination of the larger question of the public's responsibility in enforcing constitutional guarantees and in upholding American ideals in industrial warfare.

There is, however, another factor which gives West Virginia its commanding position in the labor situation. This cannot be ignored in any recital of the history of the labor movement in coal. One out of every four tons of soft coal mined in the United States is produced in West Virginia. Coal from that state shares with Pennsylvania anthracite the distinction of having the widest distribution. Moreover, little of the West Virginia product is consumed within the borders of that state. The lurid trimmings to the tale create a widespread popular interest in the situation, but the competitive power of West Virginia coal gives it a compelling influence in the coal set-up of every producing district east of the Mississippi River.

The idea of organizing the mine workers of the state is no recent development. There were union representatives from West Virginia at the historic Columbus conference of 1886 when the members of the National

Federation of Miners and Mine Workers and the Central Competitive Field operators signed the first joint interstate agreement in coal labor history. Because the operating interests of the state declined to attend, however, the miner delegates were denied a vote in the conference. The same bar was raised against them twelve years later when they sent delegates to the Chicago meeting which firmly established the Central Competitive Field as the controlling factor in wage negotiations between the United Mine Workers and the operators. As in 1886, the West Virginia miners



Some Coal Mining Country Is Idyllic

This coal "camp," of a variety that would bring gladness and song to the heart of a writer of advertising for summer resorts, is on the Guyandotte River close to the city of Logan, W. Va.

were excluded in 1898 because their employers scorned participation in the deliberations between the union and their fellow producers.

Despite this hostile attitude toward union recognition, organizers made considerable headway in establishing locals in West Virginia and the operators interposed no serious objection until 1902. In April of that year there was a union meeting at Huntington which voted a statewide strike. Operators felt that that action was taken, not because of any real grievance, but to help the striking anthracite miners. Against this southern West Virginia producers bitterly rebelled and, when the strike was broken, the union retained a strong foothold only in the Kanawha district. Two years later there was a split between the union and the Cabin Creek section of the Kanawha field over the open-shop. The Cabin Creek producers accused the

Seventh of a series of articles describing the changes in the labor status of the different bituminous coal producing districts of the United States in recent years. Preceding articles in this series appeared in *Coal Age* Sept. 25, Oct. 1, 8, 29, Nov. 19 and Dec. 31, 1925. The concluding article will be published next week.



union of calling a strike in violation of its contract and declared for non-union operation.

The status quo was maintained in the rest of the field until 1912 when the Paint Creek section refused to renew its contract with the union. A strike was called, and spread to Cabin Creek with the usual quota of rioting and disorder. In July, 1913, the entente was restored in Paint Creek by the negotiation of contracts granting the check-off, but naming a lower wage scale than that in other parts of the district. A separate agreement in the Cabin Creek section made no provision for the check-off. The following year the check-off was made the issue of a strike in the Kanawha region. This ended in a three-year contract nominally permitting open-shop operation, but pledging the employers to check off dues on request. In 1917 the union won the closed-shop and the compulsory check-off.

There was no further break until the nationwide strike of 1922. When that strike was called thirteen companies decided to continue operations. By the middle of August the number had increased to 126. At that time a minority signed individual agreements with the United Mine Workers. These defections left the union with only 35 per cent of the field under contract. With the beginning of the coal year 1924-25, there was a complete severance of union relations. The United Mine Workers has put forth strenuous efforts to recover its influence, but without success.

#### EARLY GAINS LOST IN 1902 STRIKE

The gains which the union was able to make in the other high-volatile fields of southern West Virginia in the early days were sacrificed in the 1902 strike. In the case of some of the newer developments, notably the Logan field, even the shadowy toleration of union activity has been absent. And that refusal to treat with or to recognize the United Mine Workers in any way was hardened by the campaigns of organization launched against the Williamson field in 1920 and 1921 and by the 1919 drive on Logan County. In both cases, union sympathizers started armed marches against the non-union fields and the campaigns culminated in guerilla warfare and the call for federal troops.

Except in the New River field, the United Mine

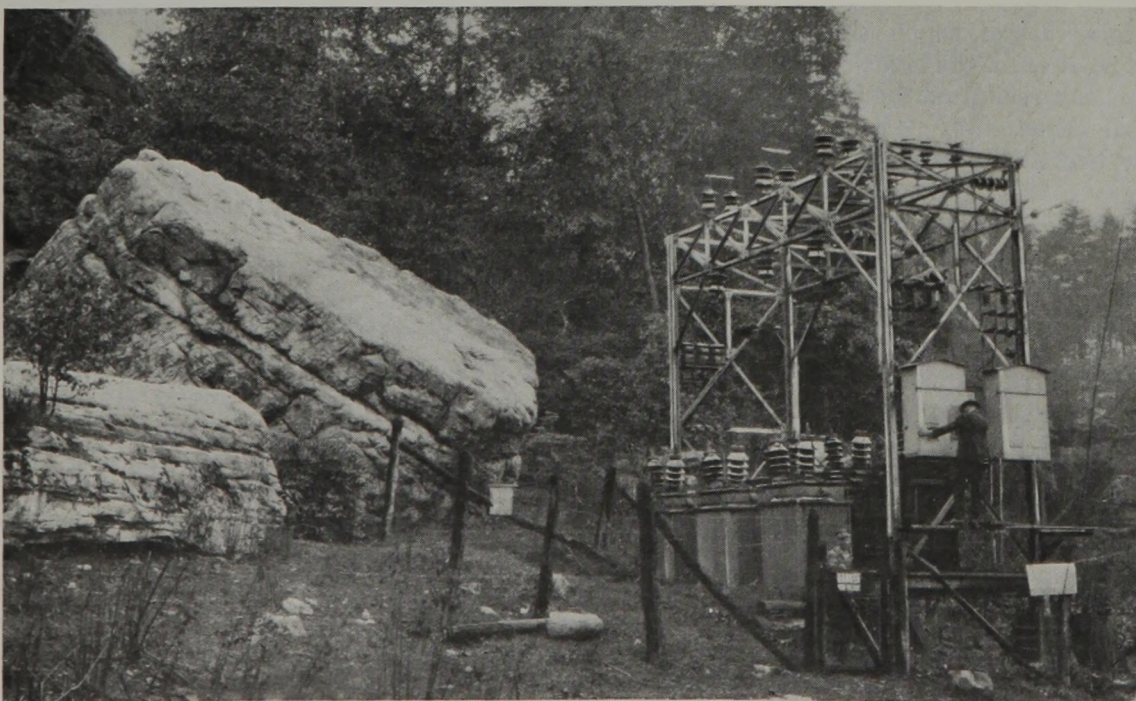
Workers has at no time been a real factor in the low-volatile districts of West Virginia. For a few years preceding the 1902 strike there was no special antagonism shown toward union activity in the Pocahontas field, but since that strike the counties in that section have been closed territory to organized labor. The Winding Gulf district, opened in 1909, also has been non-union.

#### UNION LOSES NEW RIVER FIELD

Following the surrender of the Cabin Creek and Paint Creek sections to the union, New River operators agreed to collective bargaining with a committee of union miners in 1913 and during the war recognized the union itself. This recognition carried with it neither the check-off nor the closed shop, but these two demands were granted by a majority of the operators in 1919. A small group, including the Willis Branch mine, held out and a strike was declared. Intermittent violence marked the struggle which closed in May, 1921, when the Willis Branch tippie was burned. A suit for damages against the United Mine Workers was later settled out of court. With the depression of 1921, one by one the larger mines closed down to reopen later at the 1917 scale, without union recognition.

The early success of the United Mine Workers in securing closed-shop contracts in the Panhandle field in northern West Virginia was later marred by the revolt of some of the operators in that section. These revolvers, seeking to escape union domination in a union territory, inaugurated another kind of closed-shop by compelling employees to agree not to become members of the United Mine Workers. Although these contracts have been denounced in opprobrious terms by the union, their validity was upheld by the Supreme Court of the United States in *Hitchman Coal & Coke Co. v. John Mitchell*, 245 U. S. 229. In that decision the court said:

"That the plaintiff was acting within the lawful rights in employing its men only upon terms of continuing non-membership in the United Mine Workers of America is not open to question. Plaintiff's repeated costly experiences of strikes and other interferences while attempting to 'run union' were a sufficient explanation of its resolve to 'run non-union', if any were needed. But neither explanation nor justification is needed. Whatever may be the advantages



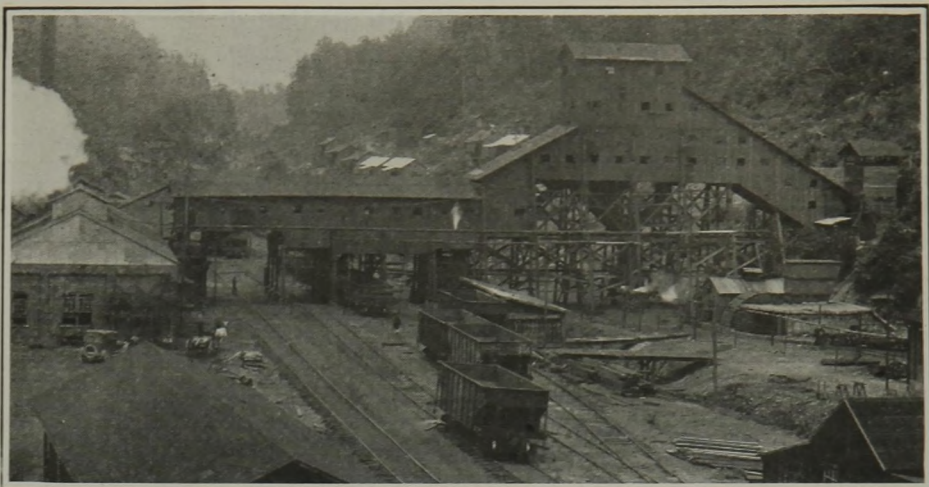
#### Rugged Beauty

This 600-kw. transformer substation of the Virginian Power Co. supplies power for the Nuttallburg mine of the Fordson Coal Co. and the Brown mine of the Stover Coal Co., which mines are opposite each other on New River in Fayette County, W. Va. The beauty of the scenery in this section is hard to equal. Reposing on flat spots on the mountain side, and in the river, are numerous rocks, as large as houses, which have broken away and rolled to a new resting place. Mountain laurel, rhododendron and evergreen trees preserve the beauty through the winter.



### Where Smokeless Coal Comes From

This is the tippie and power house of the Winding Gulf Colliery Co., of Winding Gulf, W. Va., in the heart of non-unionism. Seldom has the United Mine Workers been able to set foot in the smokeless region, so that today this section of southeastern West Virginia represents probably the most outstanding non-union field in the country.



of 'collective bargaining' it is not bargaining at all, in any just sense, unless it is voluntary on both sides. The same liberty which enables men to form unions, and through the union to enter into agreements with employers willing to agree, entitles other men to remain independent of the union and other employers to agree with them to employ no man who owes any allegiance or obligation to the union. In the latter case, as in the former, the parties are entitled to be protected by the law in the enjoyment of the benefits of any lawful agreement they may make."

The *Hitchman* decision, which was the outgrowth of a campaign against non-union operations in the Panhandle in 1907, proved no barrier to union activities. The United Mine Workers was unrelenting in its efforts to force all mines to enter into contractual relations with it and by 1920 only three companies were outside the fold. Resistance upon the part of those companies was stiffened by events in 1922 when an attack was made upon the Cliftonville mine, a former union operation leased and reopened as a non-union property by the Richland Mining Co. For this attack, in which a deputy sheriff was killed, 230 were indicted and a number of union members in Pennsylvania were convicted. The most recent development was a strike order issued in April, 1925, to end non-union operations. This strike, to date, has been a complete failure. Not only have the companies which were non-union retained that status, but their number has been augmented.

### FAIRMONT SICKENS OF UNION RULE

The Fairmont district had its first brush with the United Mine Workers in 1892. In that year local strikes, unsanctioned by the international officers of the union, were called. The operators won out, discharged the strike leaders and refused to recognize the union. In 1902, another attempt, this time engineered by the international headquarters, was made to extend the power of the union over northern West Virginia. This strike soon collapsed, but wages were increased after peace was restored. The union was unable to gain another foothold until 1917. In August, 1918, the majority of the operators agreed to the closed-shop and the check-off and the union was in control of the field until the beginning of the 1922 strike. At that time a number of companies broke away and in 1923 there were 156 out of 395 companies in northern West Virginia operating non-union.

A more serious blow was dealt union prestige, however, in the next two years. Under protest against the conditions imposed, many companies signed the Baltimore agreement of March, 1924, which was the northern

West Virginia counterpart of the Jacksonville agreement. At that time, according to George I. Brackett, former executive vice-president of the Northern West Virginia Coal Operators' Association, there were 79 union and 74 non-union companies running and 242 not operating. The union mines were producing 70 per cent of the tonnage. In a month the number of union companies working had dropped to 49 and the union percentage of production to 60. By January, 1925, the number of union companies in operation had been reduced to 24 and the number of non-union companies operating had increased to 129.

The United Mine Workers made a vain attempt to check this drift by issuing a strike appeal to workers in the non-union mines to come out April 1, 1925. This gesture was repeated in September, but the percentage of non-union tonnage has been steadily increasing and many of the largest producers have negotiated individual agreements with their men, paying scales of wages more in keeping with existing competitive conditions. Aside from a few operations, this great field has thrown off the union yoke.

The story of the unionized section of western Pennsylvania and the recent breaks from union control in that region was told in preceding articles in this series describing the situation in the Central Competitive Field. Despite the temporary successes achieved by the United Mine Workers in 1922, the other major districts in the western part of the state have remained strongly non-union. Recent attempts to stir up trouble in the Connellsville district have failed and Westmoreland is quiet. There has been nothing in recent developments to indicate that Connellsville workers will repeat their bitter fights of 1877 and 1891 or that Westmoreland miners will renew their heart-breaking battle of 1910-11.

Nowhere, perhaps, is the process of gradual disintegration of union influence better illustrated than in central Pennsylvania. Certain districts in that region, it is true, have been so persistently non-union for so many years that the situation has come to be accepted as a matter of course. That, however, is not true of the greater part of the region. Labor organizations existed in central Pennsylvania before the Civil War and most, if not all, of the predecessors in interest of the United Mine Workers had some influence in that field during their brief days of power.

Central Pennsylvania was among the first to extend recognition to the United Mine Workers. Operators in



that region signed their first agreement with the United Mine Workers, District No. 2, on May 1, 1899. In 1900 the union producers there conceded the check-off and union membership jumped from between 8,000 and 10,000 to approximately 30,000. By 1920 the membership had grown to 46,000 out of a total of 55,000 to 69,000 workers—dependent upon season and demand—in the field as a whole.

The United Mine Workers won an early recognition in Somerset County and also lost it early in the history of the organization. On Dec. 1, 1903, the majority of the operators declined to renew their contracts with the union and a strike started which lasted until April, 1904. The only large producer that did not join in this movement was the Brothers Valley Coal Co., which continued union recognition until April 1, 1921. Cambria and Indiana counties also developed non-union tendencies, but not to the extent shown in the Somerset area. Wage rates and working conditions in these non-union fields, however, have been controlled by the rates and conditions prevailing in the organized parts of the region.

Despite these losses and the inability of the union to make counterbalancing gains, central Pennsylvania remained predominately union until after the war and in the 1920 wage scale, which later was rewritten into the Jacksonville agreement. This is clear from the division between union and non-union workers shown in Table XI. The 1920 figures used were compiled by the Central Pennsylvania Coal Producers' Association. The 1900 figures inserted for comparative purposes are those of the United States Geological Survey.

Notwithstanding an increasing number of petty and local strikes, the general strikes of 1919 and 1922 and the persistent refusal of union officials to consider negotiations with central Pennsylvania before contracts were signed with the Central Competitive Field, the process of disintegration was not accelerated to a marked degree until after the signing of the Jacksonville agreement. Following that, the union operators in central Pennsylvania protested that the act would be suicidal, but consented to the three-year extension of the contract in their district, because it was impossible to induce the union officials to agree to any downward revision. Later attempts to persuade the union to take such action were rebuffed.

That these forecasters of woe were true prophets has been fully demonstrated by the subsequent march of

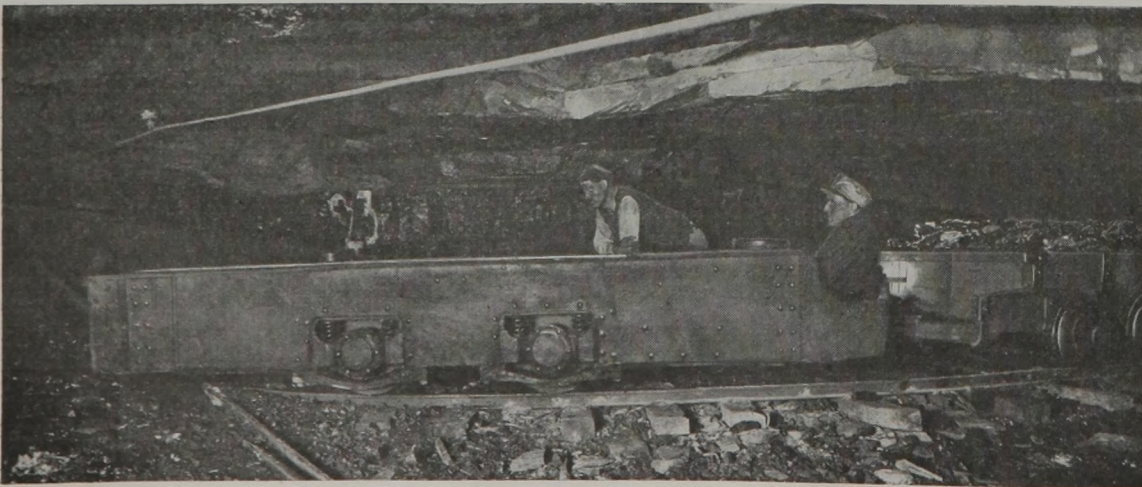
Table XI—Labor Status of Central Pennsylvania: 1900-1920

| County.....                         | 1900                    | Total Number<br>Workers | 1920          |                      |
|-------------------------------------|-------------------------|-------------------------|---------------|----------------------|
|                                     | Total Number<br>Workers |                         | Union Workers | Non-union<br>Workers |
| Armstrong.....                      | 2,000                   | 4,782                   | 4,430         | 352                  |
| Bedford.....                        | 1,002                   | 1,486                   | 1,385         | 101                  |
| Blair.....                          | 773                     | 454                     | 246           | 208                  |
| Cambria.....                        | 10,634                  | 21,022                  | 14,190        | 6,832                |
| Center.....                         | 1,314                   | 2,401                   | 2,401         | .....                |
| Clarion.....                        | 706                     | 2,634                   | 2,634         | .....                |
| Clearfield.....                     | 8,994                   | 11,882                  | 6,699         | 5,183                |
| Clinton.....                        | .....                   | 264                     | 264           | .....                |
| Elk.....                            | 1,375                   | 1,165                   | 1,131         | 34                   |
| Huntingdon.....                     | 599                     | 1,340                   | 1,249         | 91                   |
| Indiana.....                        | 1,354                   | 12,233                  | 7,184         | 5,049                |
| Jefferson.....                      | 5,913                   | 5,815                   | 3,486         | 2,329                |
| Lycoming.....                       | .....                   | 21                      | .....         | 21                   |
| Somerset.....                       | 5,369                   | 2,899                   | 288           | 2,611                |
| Tioga.....                          | 1,975                   | 1,187                   | 1,187         | .....                |
| Totals.....                         | 42,008                  | 69,585                  | 46,774        | 22,811               |
| Percentage of Union<br>Workers..... | 71*                     | 67                      | ...           | .....                |

\*Based on estimated membership of 39,000.

events. Union mine after mine was closed down. Some of these properties were later leased to friendly interests who reopened them at the 1917 wage scale. In a number of other cases, the operations were reopened by their owners on the condition that workers accept less than the Jacksonville basis. Reports of evasion of strict letter of the agreement have been too common to ignore. Although union officials have stoutly maintained that many of the smaller operations, some of which were forced into contracts in 1922 before the union would permit the resumption of work at other mines controlled by the same interests in closed-shop territory, pay the straight union scale, it is insisted by others who claim to be conversant with the facts that the union rate has been more honored in the breach than in the observance.

The net result of the union's "no backward step" policy in this field has been to reduce the percentage of union-mined coal to 30 per cent of the output of the field. Three of the largest producers in central Pennsylvania—one of which is railroad-controlled—have struggled along under union conditions, but in the case of the commercial companies the financial toll has been heavy. Many companies less favorably situated financially have found it impossible to meet competitive prices and pay the 1920-27 wage scales. These have either retired from the field or shifted to the non-union column. Even with the increased general demand for coal, hundreds of mines in central Pennsylvania have been idle for weeks and months. Broad Top alone remains solidly union—a fitting complement to union Blossburg in the north.



Feeding the  
Main Line

This storage-battery locomotive is used in gathering cars in the mine of the Black Star Coal Co., Inc., at Alva, Harlan County, Ky. Here the locomotive is shown about to swing onto the main line with a loaded trip.



## New French Nitrate Industry Centers Upon Coal

Plants Capable of Producing 100,000 Tons of Ammonia Annually Are Now Operating or Are Under Construction Near Mines

By Victor Truant  
Paris, France

**N**ITROGEN is basic in the life of any nation. It is vital to the prosperity of agriculture—as a main constituent of fertilizer—and also in the production of explosives, dyes and chemicals. In order not to be at the mercy of nations that have it in plenty, France is fast learning how to produce it herself. Today, at her collieries, she is manufacturing approximately 100,000 tons of sulphate of ammonia every year. This activity is an important adjunct to the French coal industry.

Formerly, France produced little nitrogen, though her consumption was large, and she had to import sulphate of ammonia and nitrates. In 1900 that country consumed only 48,000 tons of nitrogen. From 49,000 tons of sulphate of ammonia (9,800 tons of nitrogen) and from 260,000 tons of nitrate of sodium (39,000 tons of nitrogen) she produced only 37,000 tons of sulphate of ammonia, yielding 7,400 tons of nitrogen.

In 1913, French consumption of nitrogen had increased by 50 per cent compared with that of 1900 to 72,000 tons, of which the country produced only 17,000 tons.

### FRANCE FORCED TO INCREASE OUTPUT

It was absolutely necessary for France to increase her production as soon as the termination of the war would permit it. She made this effort and in 1924 produced 30,000 tons of nitrogen, from 98,000 tons of sulphate of ammonia and from 50,000 tons of cyanamide. But the French consumption rose at the same time to 91,000 tons and to make up the shortage the nation had to import in 1924, 63,000 tons of nitrogen, yielded by the following products:

|                          | Tons    | Yield in Nitrogen<br>Tons |
|--------------------------|---------|---------------------------|
| Nitrate of sodium.....   | 264,000 | 39,000                    |
| Sulphate of ammonia..... | 102,000 | 20,400                    |
| Cyanamide .....          | 10,000  | 1,800                     |
| Nitrate of calcium.....  | 11,000  | 1,400                     |
| Sundries .....           | 3,000   | 690                       |
| Total.....               | 390,000 | 63,890                    |

These figures clearly show what a future growth is necessary in the French nitrogen industry before it can satisfy the requirements of a consumption that is steadily increasing. It is striving along two lines to do so: (1) The development of the present production of sulphate of ammonia from the operation of byproduct ovens (92,000 tons, yielding 18,500 tons of nitrogen) and from the cyanamide process (increased from 12,000 tons, in 1913, to 50,000 tons, in 1924); (2) the creation of new works for the production of synthetic ammonia from atmospheric nitrogen.

While taking an important part in the rapid increase of the production of sulphate of ammonia at their coke-oven plants, the French collieries also have deliberately entered the business of producing synthetic ammonia. Both methods can be worked jointly as the various

processes of production of synthetic ammonia are based upon the recovery of hydrogen from the gases of coke-ovens, which contain about 50 per cent of that gas.

Six coal-mining companies among the most important of the Nord and Pas-de-Calais, three companies of the Center coal field and one company of the Lorraine coal field have synthetic plants either in course of erection or working already.

### FOUR PLANTS USE CLAUDÉ PROCESS

The Compagnie des Mines de Béthune is producing 870 tons of synthetic ammonia per month. The Société des Houillères de Saint-Etienne began at the end of 1923 the construction of a plant for the production of 5 tons of synthetic ammonia every 24 hr. This plant was started Dec. 13, 1924, and since then the output has increased until it reached 3.5 tons of anhydrous ammonia in July last. The plant is expected eventually to produce 10 tons per day. The Société Ammoniaque Synthétique, which is a creation of the Société des Mines d'Aniche (Nord), has constructed its plant, which is to be started soon, close to the coke ovens. The Decazeville plant, established by the Société de Com-mentry-Fourchainbault, is also close to coke ovens.

These four enterprises are utilizing the Georges Claudé process, in which the synthesis of ammonia is brought about by burning hydrogen in dosed air, the reaction taking place afterward by catalysis under the influence of a considerable pressure (900 kg.) and of a high temperature (600 deg. C.).

The other collieries employ the Casale process, the French license of which is in the possession of the Compagnie d'Alais, Forges et Camargue. This process is derived from the same principles as Claudé's process, but has some peculiarities of its own.

The Société Ammonia is now erecting one plant at Lens and one plant at Roche-la-Molière, in which the two coal-mining companies of the same name have a strong interest. The Lens plant is designed for a yearly production of 22,500 tons of ammonia and the Roche-la-Molière plant for 5,000 tons.

### NEW CONCERNS WILL START SOON

The Dourges plant and the Drocourt plant to have an annual capacity of 5,000 tons of ammonia will be ready to work within a few months. The Compagnie des Mines d'Anzin, in co-operation with the Kuhlmann group (chemicals), is having a plant built at Anzin to produce 7,500 tons per annum. As to the Société de Sarre et Moselle, its plants, which have certain peculiarities, will soon be completed and a part of the Merlebach Works is to be started immediately. Prospects for the utilization of one or the other of the two processes mentioned are now under the consideration of various other French collieries.

Considering only the collieries named in this article, it is estimated that, once their synthetic plants are in full working order, France will be able to make 60,000 tons of ammonia per annum, or about 100,000 tons of sulphate of ammonia. This is about the tonnage of sulphate of ammonia the country now is importing. But there is a wider scope for development, as France still imports from Chile 264,000 tons of nitrates each year. Nitrates can very well be replaced by sulphate of ammonia, as happened in Germany, where, by producing every year 325,000 to 350,000 tons of nitrogen, chiefly by the Haber process, the country has achieved "nitrate independence."



# Union Pacific Coal Co.'s Code of Standards—V\*

## Safety Standards (Continued)

32. No employee, unless in the course of duty, will be permitted to travel slopes or haulageways where manways are provided, and any violation of this rule will subject the person so offending to discharge.

33. Sec. 3,510, Wyoming Compiled Statutes.—“Control of Fire Damp—Penalty. It shall be unlawful for any miner, fire boss, employee in any mine, or other person, to brush fire damp from any place in a coal mine by means of a coat, sack, sail cloth, or any like article or material; or by any other means, or to use water for the removal of fire damp, and any person so offending shall be deemed guilty of a misdemeanor, and upon conviction shall be imprisoned for a term not exceeding six months, and fined in any sum not to exceed \$100. And any owner or superintendent, mine boss or fire boss, who shall knowingly permit the same to be done, shall be deemed guilty of a misdemeanor, and subject to the same penalties as heretofore described.”

(a) In case gas (methane,  $\text{CH}_4$ ) is discovered at any point within the mine, it shall be the duty of the person making the discovery to report the same to the fire boss or mine foreman who shall arrange for its removal.

(b) No body of gas shall be moved by anyone unless the mine foreman, his assistant or fire boss is present.

(c) No person or electrical apparatus, between the gas and return, is to be permitted to work or operate while the gas is being moved. (See ventilation section.)

34. No explosive except one designated as “permissible” by the U. S. Bureau of Mines shall be used.

35. Any explosives (permissible powder) in the possession of the miner must be stored in a suitable locked box which shall have the approval of the safety engineer. This box shall be kept at least 100 ft. from the working face, preferably in a crosscut, and not in direct line with the working face.

36. No man shall have in his possession at any one time, more powder than will be sufficient for one day's blasting.

37. Detonators must be kept at least 10 ft. distant from powder and placed in a recess in the solid coal. (It is suggested that several drill holes having a depth of from 8 to 10 in. be placed safely in solid coal for the storage of detonators).

38. The storing of powder and detonators together, or both or either of these with spikes, nails, tools, or other metallic substances is positively prohibited and subjects the person responsible for such storage to discharge.

39. Sec. 3,656, Wyoming Compiled Statutes.—“No person shall, whether working for himself or in the employ

of any person, company, or corporation, while loading or charging a hole with nitro-glycerine, powder or other explosive, use or employ any steel or iron tamping bar; nor shall any mine manager, superintendent, foreman or shift boss, or other person having the management or direction of mine labor, allow or permit the use of such steel, iron or other metal tamping bar by employees under his management or direction, unless such steel bar be tipped with at least 6 in. of copper or be tipped with wood, and when needles are used, they shall be made of copper only. All holes shall be tamped with clay or other incombustible material and when incombustible material cannot be obtained in the vicinity of the working place, then it shall be the duty of the employer to furnish such material for tamping at some accessible point near such employee's working places.”

## Electrical Safety Precautions

1. An insulated platform shall be provided at all stations where it may be necessary to handle live parts, or those that are suspected of being alive or capable of giving shock.

2. Supply lines extending to remote parts of the mine where current is not required after the working shift shall be disconnected by a person delegated to perform such work.

3. Working on live lines is prohibited.

4. Before working on 2,300-volt lines all wires of the circuit shall be short-circuited and grounded.

5. Cables and wires carrying 2,200 volts (nominal) shall be painted yellow at intervals of 50 ft., except at terminals where intervals of 25 ft. shall be maintained. This will distinguish the high- from the low-voltage lines.

6. Standard caution notices shall be posted at such points as will render them most effective in reducing the likelihood of accidental contact with live electrical equipment and conductors.

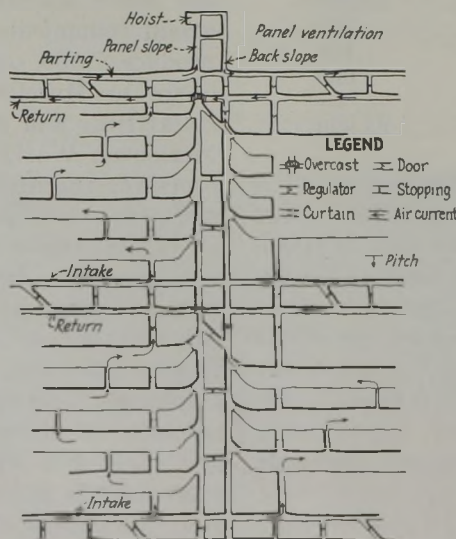


Fig. 27—Ventilation Plans Approved By an Engineer

Each panel is on its own split and no air is permitted to pass over two or more panels continuously.

7. At each pump, hoist, fan or motor-generator set, there shall be at least one Pyrene fire extinguisher or its equivalent. This shall be conspicuously marked that it can be used on live parts. Buckets of shale dust shall also be kept at these places, the aggregate volume of which shall not be less than 2 cu. ft.

8. No one but authorized persons shall be permitted to operate pumps, motor-generator sets, hoists or fans, and standard prohibitory notices to this effect shall be posted.

9. No person shall be allowed to work on or with electrical equipment of any kind unless authorized by the mine foreman or mine electrician.

10. Trolley wires that are less than 6½ ft. above the top of the rail shall be protected at all points where men are regularly required to work or pass under them and at all other points where men may come in contact with the wires.

11. Trolleys are to be carried on the opposite side of headings from the travelingways.

12. Light circuits shall not be installed in places known to generate gas.

13. Electric lamps shall not be installed where they can come in contact with combustible material.

## Some Safety Don'ts

Don't:

- leave tools where men and mules will have to walk over them.
- drive spikes, nails, files or other tools into props.
- leave nails sticking up in boards—bend them over.
- neglect to report what you consider unsafe conditions.
- work under loose coal or rock.
- be careless with powder and detonators.
- use too much powder.
- drill beyond the depth of cutting, where mining machines are used.
- tamper with electrical equipment.
- take unnecessary chances.
- violate any safety rules.
- leave doors or curtains open when they are supposed to be closed and vice versa.
- countenance unsafe practices by others.
- fail to mark and report broken bonds (it may save a life).
- fail to provide proper clearance between props and track—(viz. 2 ft. 6 in.).
- neglect to sprinkle.
- think that a shovel is your only necessary tool. Get a good saw, ax and bar, keep them in good condition and use them.
- take chances with gas ( $\text{CH}_4$ ).
- delay in reporting the discovery of gas to your foreman.
- try to move gas without authority from the foreman or fire boss.
- enter the mine without your life check.
- fail to warn the new employee of the dangers incident to his work and working place.
- ride on loaded or empty trips without permission.

\*This is the fifth of a series of articles giving the Code of Standards put into effect by the Union Pacific Coal Co., at its operations in Wyoming. The first four articles appeared in the issues of Dec. 17, 24, 31 and Jan. 7, and the remainder of the code will be published in future issues in this form that permits of easy filing.



- enter old workings. (Stay in your own working place.)
- take strangers into the mine without permission.
- travel slopes or planes.
- fail to report faulty equipment or apparatus not properly safeguarded.
- litter the floor of your working place with mining refuse. (Keep your gob in neat and orderly shape.)
- congregate on partings or haulageways.
- carry tools with you on a man trip.
- stand in the bight of a rope or chain in tension.
- sit on the same side as the trolley when riding a trip.

### Mine Ventilation

Sec. 3,508, Wyoming Coal Mining Law—"The owners, lessee or agent of any coal mine, whether shaft, slope or drift, shall provide and maintain for every such mine, ample means of ventilation affording not less than 150 cu.ft. of pure air per minute for each and every person employed in said mine, and as much more as the circumstances may require, which shall be circulated around main headings and cross headings and working places, to an extent that will dilute, carry off and render harmless the noxious or dangerous gases generated therein; the main current of air shall be so split, or subdivided as to give a separate current of reasonably pure air to every 50 men at work, and the inspector shall have authority to order separate currents for smaller groups of men, if, in his judgment, special conditions make it necessary; and the air current for ventilating the stable shall not pass into the intake air current for ventilating the working parts of the mine.

"In mines generating fire damp, worked out or abandoned parts thereof shall be kept free of standing gas, or be properly walled off and the entrance thereto properly closed, and cautionary notice posted on the stopping to warn persons from danger, and every working place where gas is known or supposed to exist shall be carefully examined by the fire boss within two hours immediately before each shift, and all accessible abandoned places shall be examined twice each week with a safety lamp (flame), and in making said examination the inspector shall leave at the face of every place examined, evidence of his presence, with the exception that when special conditions warrant the state mine inspector may designate a place or places in the mine, where the fire boss can meet the men and pass them to their respective working places. The fire boss shall make a daily written report on a form approved by the state mine inspector. The report shall be made before the fire boss goes off duty for the day and this report shall be kept as a permanent record. And it shall not be lawful for any miner to enter any mine or any part of a mine generating fire damp until it has been examined by the fire boss aforesaid, and by him reported to be safe. No room shall be driven more than 50 ft. in advance of a break-through or airway:

"Provided, however, that entries may be driven 100 ft. ahead of the last cross-cut, but in this event proper brattice

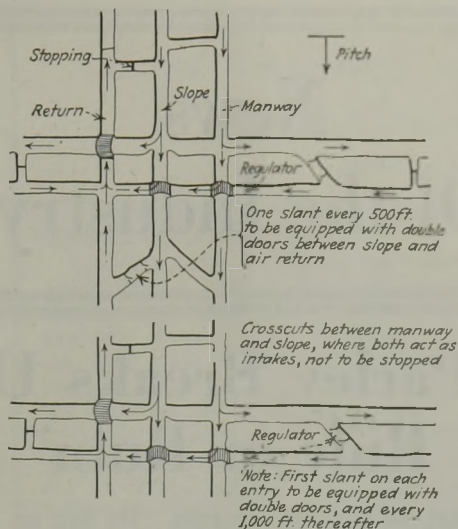


Fig. 28—No Doors Are Located In Overcasts

Overcasts do not include doors. Instead, inbye of the entry the first slant is equipped with double doors forming an air lock which can be used as an entrance to the air course.

or other means must be used to carry the air to the working face, the same to be approved by the state mine inspector. All crosscuts in rooms and entries, except the one nearest to the working face, shall be sealed in such manner that the air current shall be directed across the working face."

Penalties for violation of the above act are provided in Sec. 3,509.

### Regulations Are Complete

1. In no case shall the amount of air passing through the last break-through on any split be less than that set forth in the law.
2. The short circuiting or loss of air through leaks must not in any case exceed 35 per cent of the total air entering any split and, as stated, the quantity set forth by law shall pass through the last break-through.
3. Panels shall be ventilated as shown in Fig. 27 wherever it is possible. In any event each panel shall be on its own split. Do not pass air continuously over two or more panels.
4. The quantity of air passed through any split shall be subject to the approval of the ventilation engineer.
5. In panels or entries not working, that is, standing, the quantity of air passed shall be in accordance with the recommendation of the ventilation engineer.
6. The fan housing and airdrift shall be of fireproof construction.
7. All fans shall be equipped with automatic starters, open-phase relay, and pressure recording gage. Motor to be equipped with sliding base take up and endless belt. In no case is the distance between pulley centers to be less than three times the sum of the diameters of the two pulley wheels.
8. Motor house to be of ample size to give clearance around machinery to permit oiling without stoppage of the fan.
9. Belts shall be properly guarded by pipe-rails or other suitable means to prevent persons from coming in contact with them.
10. Abandoned rooms (rooms stand-

ing, in which the pillars have not been drawn) shall be walled off, confining the circulation of air to the entries and working places.

11. Regulators shall be of substantial fire-proof construction with the door one-half the width of the entry and made of steel plate.

12. Permanent stoppings between main intake and main return shall be of concrete construction and set into the rib 12 in. Thickness of wall shall be 6 in.

13. The cross-sectional area of an overcast shall in no case be less than the area of the air course upon which the overcast is located.

14. Side walls and top of overcast shall be made of concrete, the top reinforced with steel.

15. No doors shall be placed in overcasts. Instead, inbye of the entry upon which the overcast is placed at the first slant shall be placed double doors forming an air lock that may be used as an entrance to the air course. (See Fig. 28.)

In entry stoppings a small door shall be placed every 500 ft. to allow rock dusting in back entries.

16. The roof above each overcast shall be sloped, eliminating sharp breaks and corners and the end walls of the overcast are to be banked or graded forming an approach or easement for the air. Drainage under overcasts to be by pipes and not by ditches, the pipe to extend far enough back from the end wall so that the end banking will not cover it. Ends of pipe to be left open and accessible for rodding in case the pipe becomes plugged.

17. Sec. 4,436, Wyoming State Law— "... And in all mines the doors used in assisting or directing the ventilation of a mine shall be so hung and adjusted that they will close themselves, or be supplied with springs or pulleys, so that they cannot be left standing open." In addition to this, every door is to have a clearance of 8 in. from the floor so that loose coal or other material that might be on the floor will not hold a door open. Doors to have sills to fill up this 8-in. space and on haulageways the bottom of door is to carry heavy canvas. The use of doors for the directing or diverting of air is absolutely prohibited within the mine where this can be accomplished by overcasts or other means.

### No Sharp Turns in Air Courses

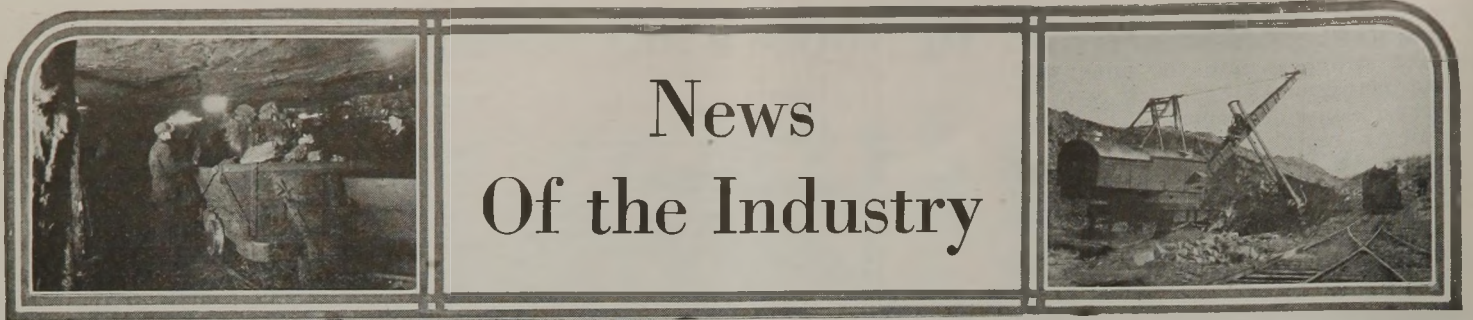
18. Air courses must be properly driven, of uniform cross sectional area, avoiding sharp breaks and turns. They must be thoroughly cleared before pulling the track, and where the roof has a tendency to cave or slough all back entries and main returns are to be center propped.

19. When a mine is ventilated by having a main return on either side of the slope these main returns are to be connected by means of overcasts at every third cross entry. New mines must be opened with separate returns on each side of the slope.

20. In all mines having two parallel main intakes the crosscuts between these intakes must not be blocked. (See Fig. 28.)

21. For the handling of gas (CH<sub>4</sub>) see Safety Standards.





## Hard-Coal Wage Parley Breaks Up; Inglis Decries Lewis' "Rule or Ruin" Policy

The anthracite wage conference, resumed at the Union League Club, New York City, on Dec. 29, was adjourned *sine die* at noon on Tuesday of this week. This is the second time such action has been taken in the history of the present negotiations. The first break came on Aug. 4 at Atlantic City. In both cases arbitration was the rock upon which the conference split.

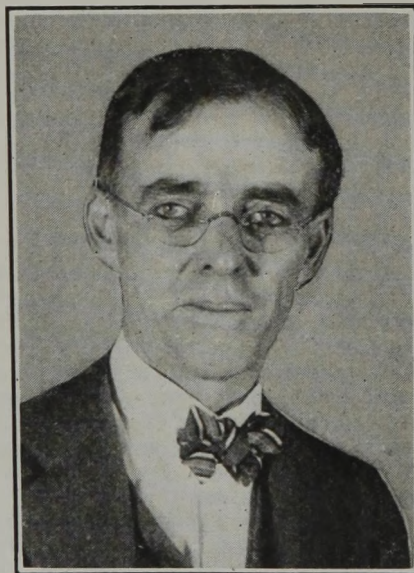
Each side blames the other for the rupture of negotiations. "As predicted in my statement yesterday," said John L. Lewis, president of the United Mine Workers, after the break, "the operators were determined to break up this conference without an agreement. After a period of fruitless discussion this morning (Jan. 12), the operators moved an adjournment without delay and demanded that the mine workers second the motion. Conscious of our responsibilities and still imbued with the hope that an agreement might be reached through the operators abandoning arbitration, the mine workers refused to do so. The operators later seconded their own motion and the chairman put the question. Under such circumstances, the mine workers recognized that they could not then through their own efforts keep the conference in session with the operators present, and reluctantly voted for the motion."

"The mine workers profoundly regret the operators maintaining throughout the sessions the same unyielding attitude which they evidenced when negotiations began six months ago at Atlantic City and which they have maintained ever since. The responsibility for the failure to agree and a continuance of the strike rests entirely with the anthracite operating interests, who thus arrogantly refuse to make any contribution toward industrial peace. The mine workers are prepared to continue this struggle for any period necessary to induce the operators to make a lasting peace which will preserve for our people the rights of free men."

Mr. Lewis, not the operators, retorted the latter, must bear the onus of prolonging the strike. "After many days of conference," declared a statement issued by Major W. W. Inglis, chairman of the operator members of the negotiating committee, and his associates, "we find there is no change whatever in Mr. Lewis' attitude. He absolutely refuses to consider any constructive policy. In a few words, his position is

that he will rule or ruin. He has informed us in no uncertain terms that he cares nothing for the opinion of the public or public officials, chambers of commerce, religious organizations or the press. He will have his own way or nothing.

"The operators' proposals, the Luzerne legislators' plan, the Markle plan, the engineers' and economists' plan—



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James A. Gorman

Secretary of the joint conference of hard-coal miners and operators recently in session at the Union League Club, New York City, in an effort to arrange a settlement of the hard-coal strike. Mr. Gorman also is a member of the anthracite conciliation board.

all were discussed at length, only to be summarily rejected by the miners' spokesman because they 'smelled of arbitration.'

"While the operators were pressing for practical measures to end the strike and put the industry on a permanent basis. Mr. Lewis dragged in unconstitutional proposals for federal price-fixing and wage-fixing. Such proposals are neither workable nor practicable, and while consuming time did not form a basis for any serious discussion. Their insincerity was further shown by Mr. Lewis' statement to us that we might raise the price of anthracite \$5 a ton so long as he got what he wanted."

"The operators have had but one object in view—maintaining production at a fair wage and a fair price. This requires some means of avoiding deadlocks and suspensions. They have of-

fered to open the mines, pay the old wages and, while production is going on, submit every issue in dispute to arbitration. The utmost effort has been made to meet Mr. Lewis' views, but he will consent to no settlement on a basis on which the industry could reasonably expect to exist.

"On the record of the past four years, with three general strikes and constant threats of strike, and the menace of disturbance in the industry by reason of Mr. Lewis' policy, the operators have been forced to the conclusion that arbitration is the only safeguard. Without this means of assuring production, the industry cannot perform the only function for which it exists, namely, to supply coal.

### Inglis Objects to Force

"The breaking up of the conference is due to just one cause—the refusal of Mr. Lewis to accept any form of settlement that would bring some assurance of peace to the industry. The operators have been trying to reach a sound settlement based on reason and justice. Mr. Lewis insists that force alone shall rule. Until his attitude changes, further discussion is useless."

The details of the negotiations leading up the break are summarized in the paragraphs following.

The operators again pressed the proposal for arbitration at a prolonged session on Jan. 6. The miners again rejected the idea and countered with a demand that the operators throw open their books to the union negotiating committee. The producers retorted that they would submit their records to an arbitration board, but not to the miners' committee. The union conferees then asked that the operators support them in promoting a bill to establish federal regulation and control of the industry. The operators retorted that they had been advised by counsel that a law fixing prices and wages would be clearly unconstitutional. The Pinchot plan was again dragged forth. Major Inglis and his associates would have nothing to do with it. When they offered the Markle plan as a substitute, the miners turned it down.

Asked what their next move would be, the operators replied that inasmuch as the miners had rejected arbitration there was nothing left but "to compose our differences by a continuation of negotiations." Mr. Lewis answered that that was satisfactory to the miners and that he would regard a break-up of the



meetings without an agreement as a public calamity. Mr. Markle then moved an adjournment of the conference, which had lasted nearly twelve hours.

The next day observers were given no information as to the progress of the negotiations. "After an all-day discussion which did not result in any definite conclusion," read the brief official communiqué, "the anthracite coal conference adjourned at the suggestion of Chairman Markle to meet tomorrow at 11 o'clock." In response to sharp protest by the assembled newspaper correspondents, the statement issued on Jan. 8 was expanded to the point of admitting that various modifications of the various plans before the conference had been talked over without either side changing its position. A four-hour meeting Saturday afternoon was followed by the announcement that the conference would hold a Sunday session for the first time in the history of wage negotiations.

### Miners Revise Markle Plan

Chairman Markle opened the Sunday meeting with the suggestion that the principal plans before the conference be submitted to Charles Evans Hughes, former Justice of the Supreme Court and counsel for the union in the check-off case before Judge A. B. Anderson at Indianapolis in 1919-20, for the purpose of formulating a plan that would be the basis of a contract. The miners voted this down. After the operators had refused to join in a night session, the miners then presented what they designated as "a revised Markle plan." The principal features of this plan are:

- (1) A five-year contract, subject to a modification by a board consisting of two miners, two operators and three members to be suggested by Mr. Hughes.
- (2) This board would have the power to investigate and determine whether the operators could pay an increase, and if so found, such increase would be retroactive. Records of both the miners and the operators would be thrown open to this board.
- (3) The board would also investigate, determine and recommend means for avoiding future suspensions and methods for increasing efficiency and reducing the cost of operation.
- (4) The establishment of a joint commission in each district consisting of one miner, one operator and a conciliator to strive for greater co-operation, harmony and efficiency in the industry.
- (5) The establishment of the check-off, limited to \$14 per year.
- (6) Equalization of wages, as provided for in the 1923 contract, by the Board of Conciliation. The Board also would handle questions of working conditions.

Major Inglis opened the meeting Monday morning with the declaration that this "revised Markle plan" was really the Pinchot program and could not be considered. "In order to make our position entirely clear," he continued, "we now desire to place on the record a plan that is constructive and should meet all your objections to plans previously proposed. It establishes a way out in case of disagreements and represents the utmost concessions that can be made and still preserve the essentials of a workable contract."

The provisions of this plan were as follows:

- (1) A five-year contract ending Aug. 31, 1930.
- (2) The wages in effect under the last contract to be paid until Aug. 31, 1926, as a consideration for an immediate resumption of work; and to continue thereafter, subject to revision, when and as economic

## Real Earnings of Contract Miners In Anthracite Fields—V

(GLEN ALDEN COAL CO.)

Are contract miners in the anthracite fields underpaid?

John L. Lewis, international president of the United Mine Workers, insists that they are. He has repeatedly drawn upon the reports of the Coal Commission, with their misleading figures basing earnings upon the number of starts made, to support his assertion. In a statement published in the *United Mine Workers' Journal*, on Sept. 15, 1925, Mr. Lewis declared that the average was \$1,700 per year, from which "there must be deducted over \$200" for supplies.

Check of actual payrolls, however, tells a far different story.

In 1924 the breakers of the Glen Alden Coal Co. averaged 291.6 days and employed an average of 4,390 contract miners. Of this number, however, only 2,829 worked regularly enough to appear on each of the 24 semi-monthly payrolls of the

year. Eighty-two men, or 2.9 per cent of this group, averaged \$3,764 net for the year. The lowest paid section, 68 men, averaged \$1,543.

The average earnings by \$100 groups for the 2,829 contract miners were as follows:

| Miners | Average Annual Earnings | Miners | Average Annual Earnings |
|--------|-------------------------|--------|-------------------------|
| 82     | \$3,764                 | 239    | \$2,549                 |
| 41     | 3,433                   | 236    | 2,450                   |
| 39     | 3,346                   | 228    | 2,351                   |
| 72     | 3,251                   | 261    | 2,252                   |
| 72     | 3,145                   | 193    | 2,152                   |
| 118    | 3,049                   | 177    | 2,050                   |
| 133    | 2,952                   | 141    | 1,956                   |
| 154    | 2,852                   | 90     | 1,861                   |
| 202    | 2,730                   | 58     | 1,749                   |
| 225    | 2,649                   | 68     | 1,543                   |

The average earnings for the entire group was \$2,516.09. The daily average ranged from \$13.56 to \$6.35. Nearly half (48.67 per cent) of the entire group averaged in excess of \$2,500 for their year's labors and 87.36 per cent received over \$2,000.

conditions may require, in the manner outlined herein.

(3) Either party may on June 1 in any year make request of the Board of Conciliation for a reconsideration of the wages paid.

(4) The Board shall meet forthwith, consider the facts presented and render a decision within thirty days.

(5) If the Board deadlocks, the questions at issue shall be referred to three persons to be appointed by Charles Evans Hughes, or, in the event of his inability to act, by some person of similar standing to be mutually agreed upon.

(6) The personnel of the appointees to consist of one man representative of labor but not affiliated with the United Mine Workers, one man representative of industry but not affiliated with the anthracite industry, and on man of eminent reputation and attainments.

(7) The three men thus appointed shall sit with the Board of Conciliation, hear the arguments, ask for and obtain any additional data they may consider essential and render a decision on the points in dispute before Sept. 1.

(8) The decision thus rendered shall be final and binding on both parties for the remaining term of the contract unless reopened as provided in paragraph three.

This plan was voted down by the miners after President Lewis had made his accusation that the operators were trying to break up the conference.

The operators, declared the miners' chief, "have made similar propositions a countless number of times since their first statement at Atlantic City on July 9. They have stubbornly resisted every suggestion of the mine workers that they arbitrate their profits upon the inflated capitalization of the industry and that they arbitrate the price which they charge the anthracite consuming public for coal. They have refused to reveal to this wage conference any of the records of the industry as proof of their unsupported allegations.

"The mine workers choose to refuse to accept the operators' brand of arbitration because it is obvious that it is not to the advantage of the mine workers to do so. The operators frankly desire arbitration as an instrument to

effect wage reductions and to decrease the annual earning power of the anthracite mine workers. The mine workers believe they are within their rights in refusing to permit the operators the use of a weapon which would enable them to degrade the living standards of the mine workers and the people of the anthracite region.

### Union Seeks Federal Action

"The mine workers have offered in this conference to make a contract for any period suitable to the anthracite operators, from a minimum of two to a maximum of five years. We have offered to set up the Anthracite Board of Conciliation, exclusive of the umpire, as a harmonizing, constructive and co-operating tribunal in the industry, designed to promote and establish a greater degree of confidence between employers and employees.

"In order to prove the insincerity of the anthracite operators, the mine workers suggested that they join in a petition to the federal Congress to establish complete regulation within the industry, both as to profits and prices of their commodity. This suggestion, without question, would offer to the public greater security and more fair treatment from the industry than any other of the numberless plans and theories which have been presented. The operators, of course, opposed the suggestion of governmental regulation of the industry for the same reason that they resent and oppose any suggestion that the mine workers be accorded fair treatment as to wages, conditions of employment and greater safety for human life in the industry. The operators occupy the hypocritical position of desiring the arbitration of human rights while resisting any suggestion that there be arbitration of property rights."



## Pittsburgh Coal Producers' Association Dissolved

**Deplores Conditions in Industry Due to High Wages and Unfavorable Freight Rates**

The Pittsburgh Coal Producers' Association, known nationally for its participation in labor negotiations as part of the Central Competitive Field, has been dissolved.

The following statement, issued by B. H. Canon, chairman of the executive committee, is self-explanatory.

"The Pittsburgh Coal Producers' Association, whose members were the principal commercial coal producers in the Pittsburgh district, was dissolved effective Dec. 31, 1925. The dissolution of the association was directly caused by the prostration of the coal business in the Pittsburgh district which has existed during the last two years and which may be traced to two principal causes, wages and freight rates.

"The wage scale being paid to coal-mine labor in the Pittsburgh district is the highest rate that ever was paid for such labor. Miners of the district have for many years been affiliated with the United Mine Workers of America. Their leaders, entirely unmindful of the changed conditions in the coal industry, have refused to consider modifications of the wage scale to meet in any degree the competition from other districts where the 1917 scale has prevailed for some time past.

"Efforts are being made by the Pittsburgh Coal Co. and some other producers to operate their mines independent of the United Mine Workers of America, on the 1917 scale, which, based upon the experience of those who are working under it, provides a very fair measure of miners' wages.

### Rates from Pittsburgh Are High

"The freight rates on coal in the eastern part of the country have for many years been made almost entirely with the idea of permitting other coal-producing districts to compete successfully with Pittsburgh. The rates from the Pittsburgh district to practically all consuming markets are on a basis higher than from almost any district that produces and ships bituminous coal.

"An outstanding instance of this situation is in the rates on lake cargo coal to the ports on the south shore of Lake Erie, where the Pittsburgh district pays \$1.66 per ton for a haul of 166 miles, while competing districts in southern West Virginia and eastern Kentucky pay only 25c. additional rate for additional hauls amounting to as high as 290 miles. This situation is now before the Interstate Commerce Commission on a complaint from the local operators and will be fought through to a final conclusion.

"While these efforts are being made to improve the situation of the Pittsburgh coal industry from the standpoint of wages and freight rates, the industry in the meantime is in a deplorable condition. The Pittsburgh Coal Co. found it necessary to withdraw from the association early in December.

## Miner Is Willed \$500,000; Wants New Overalls!

E. A. Duke, a coal miner of McDowell County, W. Va., has been informed by the executors of the estate of the late James Duke, of North Carolina, that he is heir to something over half a million dollars. Mr. Duke is employed by the Monarch Coal Co. His comment when he received news of the legacy was: "Well, if I do get the money I may be able to buy a good dinner pail and some new overalls to work in."

The other companies who were members were forced to the conclusion that they could no longer sustain the expense of the organization and at a meeting held late in December resolved to dissolve the association."

The Pittsburgh Coal Producers' Association was an outgrowth of the Pittsburgh Coal Operators' Association. The original association was formed in 1914 and the name changed in 1917.

## Vote to Move Union Offices In Kansas Indecisive

The United Mine Workers of District 14 (Kansas) will have to hold a run-off election on the proposal to remove headquarters from Pittsburg, where they have been located more than 30 years, to either Arma or Frontenac. Practically complete returns from the referendum of Dec. 29 show 2,000 votes for Frontenac, 1,174 for remaining in Pittsburg and 1,084 for moving to Arma. A majority of votes cast is required to settle the question. Frontenac, which is so close to Pittsburg as to be practically a suburb, offers a building valued at \$50,000, and Arma offers \$10,000 in cash toward erecting a building.

Since the vote was taken there is increased talk by conservative miners that moving the headquarters would be a serious step. The Kansas office of the Southwestern Interstate Coal Operators' Association and the offices of the principal coal companies are within a block of the union district offices in Pittsburg. Should the union move its headquarters transaction of business would be slowed up, it is being argued by those opposing the move. Proponents of the move urge that the union should own its own building and that it should be located more centrally for what is now the most active part of the mining field. The date for holding the run-off election will not be selected until official canvass of the returns from the first election has been made.

## Bull Movement Falls Flat

Some effort has been made to discredit the Bureau of Mines coal stock report on the ground that stocks were much larger than shown by the report. This criticism was not taken seriously, defenders of the report contend, as no break in prices followed its publication.

## Idle Nova Scotia Miners Loot Provision Stores

Owing to lack of steady employment in collieries Nos. 2 and 4 of the British Empire Steel Corporation there has been a great deal of hardship and want affecting practically the entire communities of Glace Bay and New Aberdeen. The prevailing distress culminated on the night of Jan. 3 in raids on provision stores, the stocks of which were looted, one store at New Aberdeen being burned. A mass meeting had previously been held by the United Mine Workers to consider any reply that might have been made by the Nova Scotia government to appeals for relief, a resolution having been passed at a previous meeting to the effect that if no relief was afforded they would be forced to take whatever they needed.

Rioting and looting were renewed on the following night, when six stores at Stirling and Dominion were raided. In all sixteen stores were robbed. It is believed that much of the later disorders was the work of irresponsible characters taking advantage of the situation. Vigorous measures have been taken by the government and the civic authorities to afford immediate relief to those in want and to check further disturbances. Sixty-three special constables were sworn in and \$8,000 provided for present necessities.

J. C. Douglas, Attorney General, provided that the government would guarantee any bonds of the municipality issued to provide funds for the relief of destitution and stated that rioters would be arrested and prosecuted. The curfew law has been put into force and at last accounts order had been restored and no further trouble was anticipated.

## John Cleveland Osgood Dies; Founded C. F. & I.

John Cleveland Osgood, 74, president of the Victor American Fuel Co. and founder and former president of the Colorado Fuel & Iron Company, died at his home at Red Stone, Colo., Jan. 4.

Osgood started his business career as an office boy in a cotton manufacturer's office, later becoming a clerk for a commission firm. He was cashier of the First National Bank of Burlington, Iowa, from 1874 to 1877, and then entered coal mining. He made a thorough investigation of the coal resources of Colorado in 1882 and in 1887 organized the Colorado Fuel Co., later consolidated with the Colorado Coal & Iron Co., the merger being called the Colorado Fuel & Iron Co., which he organized in 1892, and of which he was president or chairman of the board until his resignation in 1903.

He was forced to relinquish control of Colorado Fuel & Iron in 1903, after being buffeted between the Rockefeller and John W. Gates interests, both of which sought control. He was invited to remain as chairman of the board after the Rockefeller interests gained control, but stepped out and organized the Victor company.

Colorado Fuel & Iron at the time Osgood was forced out had properties estimated at between \$40,000,000 and \$50,000,000 in value.



## Shots and Dynamite Usher in New Year In W. Va. Strike Zone

Trouble broke out anew in the northern West Virginia coal fields last week, when a non-union miner was shot and is likely to die. The trouble zone has now shifted to Galloway, in the Flemington section, near Grafton, where the Simpson Creek Collieries Co., composed of Youghiogheny & Ohio officials, is attempting to work non-union on the 1917 wage scale. The Galloway mine was operated union until several months ago, when, it was reported, the existing contract expired and the large plant then shut down.

The trouble at Galloway is reported to have had its beginning Jan. 4, when union pickets are alleged to have stopped non-union miners on the way to work. The next morning two state troopers went to the home of Pasquale Floria, in Galloway, to serve a warrant, and upon receiving no response to their knocks proceeded to break down the door. The troopers charge that Floria brandished a revolver and fired a shot, whereupon one of the troopers returned the fire and Floria was shot through the back. Floria was removed to the Grafton Hospital and from last reports was in a serious condition.

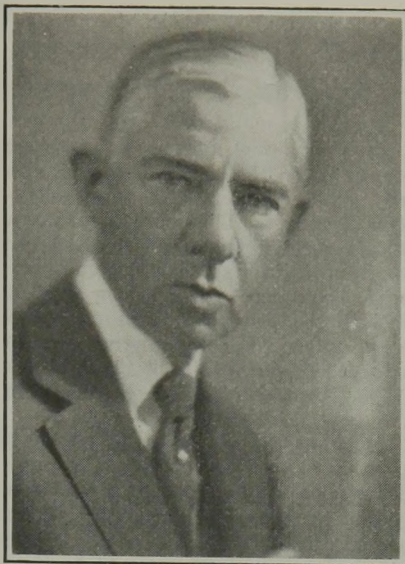
Officials of the United Mine Workers allege that when Floria saw the state police coming he dropped his revolver, which was unloaded. C. Fremont Davis, international representative, accuses the state police of kicking and beating Floria, according to the statement made by the dying man.

### Keen Interest in Politics

Interest was keen in the town elections at Monongah and Rivesville on Jan. 7, and from last reports the tickets supported in both towns by the coal companies won out. The results in Monongah are close, only 16 or 17 votes separating certain candidates, with a tie in another instance. The contest in Rivesville is overwhelmingly in favor of the coal interests. For some time there have been clashes between the town authorities and other officers of the law, and operators think that the election result will go a long way toward clarifying the general situation.

Bonds in the sum of \$16,500 have been furnished by the United Mine Workers in a series of cases marked by violence. A number of men with high-powered rifles are alleged to have attacked the home of Frank H. Brooks, superintendent of the Ida May mine of the Consolidation Coal Co. Samuel Boykens and William Austin are charged with shooting Mr. Brooks and each has been released under bond of \$4,000. E. W. Wilson and Henry Rosser, charged with conspiracy in the same offense, were released under bond of \$2,000 each. Cosmo Amoroso and Walter Bruzzy, charged with dynamiting a vacant house in Monongah, were released on bond in the sum of \$2,000 each.

Officials of the Western Maryland Railway Co. last week posted notices offering \$1,000 reward for the arrest and conviction of the parties who



Lemuel Burrows

dynamited the Binghamon bridge on Dec. 23.

Samuel L. Poole, superintendent of the Binghamon mine of the Binghamon Gas Coal Co., and Marion Shobe, a mine guard, have been held to await the action of the Marion County grand jury for shooting Robert Bostic, a union miner, after an altercation over moving automobiles from company property. Poole furnished bond in the sum of \$2,000, but Shobe was committed for trial.

Coal production in the 12½ counties of northern West Virginia has shown signs of increase after the holidays. A return of cold weather may help the situation, operators think. In the first four days of last week the mines produced 8,806 cars of coal. Non-union mines loaded 7,801 cars compared to 6,505 cars in the corresponding period of the previous week. Union mines loaded 1,005 cars of coal in the first four days of last week compared to 978 cars in the first four days of the preceding week.

### Mill Creek and Elkhorn Cos. In Smokeless Merger

Another consolidation of coal properties in the smokeless area was consummated on Jan. 2, when the Mill Creek Coal & Coke Co. took over the mines of the Elkhorn Coal & Coke Co. at Maybeury, W. Va. About four years ago the Elkhorn company acquired the properties and mines of the Coaldale Coal & Coke Co. These properties, which lie directly beneath the Flat Top Mountain, are among the best in the Pocahontas field. The seam of coal averages 8 to 8½ ft. thick. The Mill Creek mine has been in constant operation for more than 40 years. C. B. Smith will continue as general manager of the consolidated property, with his main office at Coopers. It is stated that a short tunnel will be driven on the line of the No. 2 seam connecting the Mill Creek mine with the Elkhorn tippie. When this has been done, the Elkhorn tippie will be rebuilt so as to accommodate the entire output and the Mill Creek tippie will then be abandoned.

## Lemuel Burrows Dead at 54; Had Recently Retired

Lemuel Burrows, president of Castner, Curran & Bullitt, Inc., died Jan. 6, at his residence in Forest Hills, L. I., after a brief illness. Born in Brooklyn, N. Y., June 1, 1871, he attended the public schools in that city. In 1888 he entered the employ of Castner, Curran & Bullitt, Inc., at 1 Broadway, in the capacity of office boy and worked his way up through various positions until he was appointed manager of the New York office in 1902. At that time the New York office handled all of the export business and quite a lot of the bunkering of the large steamship lines, this business being under this care.

In 1910 Mr. Burrows was appointed general manager and filled this position until 1916, when he was elected president of the company, at which time the New York office became headquarters of the corporation. Mr. Burrows retired Jan. 2 when the company passed into the control of the Massachusetts Gas Companies, as announced in *Coal Age* last week.

At the time war was declared on Germany Mr. Burrows went to Washington and offered his services to the Council of National Defense, and was very active in matters that came before the Coal Committee of this council under Mr. Peabody.

During the severe winter of 1917-18, when a serious coal shortage threatened New England, Mr. Burrows offered all of the facilities of his company to the Fuel Administration, with the result that a large amount of coal was supplied to the Northeast over the wharves of the company, and a number of loading and discharging records were broken in the handling of the government colliers "Ulysses" and "Achilles," each of which carried 13,000 tons of coal per trip to the New England consumers. It was generally believed that the handling of this coal through the splendid facilities of the company at Boston prevented a grave situation.

Mr. Burrows also was requested by the Fuel Administration to use his best efforts in obtaining and supplying coal to the Italian Government during the war in order that that ally might not suffer for lack of navy fuel. This work was discharged with such satisfaction that he was decorated by the King of Italy with the order "Corona d'Italia."

It was said among shipping men of long standing in Norfolk that Mr. Burrows had done more than any other person or agency to make Hampton Roads one of the principal coal ports of the world.

Mr. Burrows is survived by his wife and three sisters.

### To Extend Alaska R. R. Rights

The rights granted the Alaska Anthracite Railroad Co. in 1898, which have been extended from time to time, will be extended for three years from May 11, 1925, if Congress approves a bill introduced by Delegate Sutherland. The maps showing the definite location of the Stillwater Creek and Canyon Creek branch lines are to be filed within two years.



## "Hands Off" Policy In Coal Situation Spreads to Congress

By Paul Wooton

Washington Correspondent of *Coal Age*

Objection lodged by Senator Reed, of Pennsylvania, having been withdrawn, the Senate on Jan. 5 passed without debate the resolution by Senator La Follette, of Wisconsin, calling upon the Secretary of the Treasury "to furnish to the Senate a statement based on corporation income-tax returns covering the year 1924 showing for each corporation engaged in the mining of anthracite coal the amount of capital stock, the amount of invested capital, the amount of net income, the amount charged to depletion and depreciation accounts, and the amount of federal tax paid by each such corporation."

The Senate is in the habit of allowing most resolutions of this character to go through. Some Senators known to be out of sympathy with the revelation of legitimate business secrets are thought to have been influenced by the realization that in this instance the makers of the returns are likely to be benefited more than they are likely to be harmed.

If the Secretary of the Treasury decides that compliance will not be contrary to the public interest and divulges the tax returns made by the anthracite companies, it will emphasize the fact that earnings have decreased markedly since the report made by the Hammond Coal Commission. Senator LaFollette's real purpose probably would be served better by the Coal Commission data.

### Congress with Administration

Congress apparently thinks well of the administration's coal policy. It is becoming increasingly clear that the majority is not disposed to interfere in the present strike. It will take some radical change in the situation and some unforeseen pressure from consumers to change this attitude. Thus the great effort of the United Mine Workers to make the situation a national issue is failing with Congress just as it failed with the administration. Congress is much more concerned with farm relief, a readjustment of taxes and other domestic issues, to say nothing of the world court, than it is with coal. No hearings are in prospect on the several bills introduced. The Interstate and Foreign Commerce Committee of the House, which is being importuned to investigate coal, is engrossed in the rubber situation and as this is written has no plan to inquire into the need for coal legislation.

Although wage negotiations have been broken off it is probable that Congress will await the action of the Pennsylvania Legislature.

The attitude of the administration seems not only to have been communicated to Congress but has influenced public sentiment as well. The policy of holding industries responsible for the settlement of their own affairs seems to have been accepted by the

## Small Firms Safeguarded By Trade Associations

Trade associations rapidly are throwing a new defense around the small units of business, those who are watching their increasing activities declare. The statistical data which they gather greatly aid the small unit in its effort to compete with the large unit. It is one of the checks on consolidation in too large units. The big operation can afford to amass all of the figures it needs to conduct its business to the best advantage.

Membership in a trade association has become a factor in the determination of credit, it was revealed at a recent gathering of an association of credit men. The general conclusion seems to be that a business which is contributing to the stability of an industry is entitled to a higher rating.

The point also is made that business papers are in a position to render particularly valuable service by making available those statistics in which the time element is an important factor.

public. There is abundant evidence that the conscience of the country supports the principle of arbitration. It is believed by observers in Washington that the great majority of the people want no settlement that does not provide for the peaceful adjustment of all matters of controversy in the future.

## Governor Smith Recommends Permanent Coal Agency

Gov. Alfred E. Smith in his annual message delivered to the New York State Legislature Jan. 6, recommended among other things the establishment of a permanent coal agency as a part of the state government. Concerning this the Governor said:

"Closely related to marketing and transportation is coal supply. In order that the state might not find itself without any agency to protect its people in this period of coal shortage caused by the strike in the anthracite fields, I appointed a Fair Price Coal Commission which has served with considerable success as a volunteer agency of the state government. Entirely aside from the question of the merits of the contention of the conflicting parties, a strike that halts production of a necessity of life finds the greatest number of sufferers among the people who have no part in the quarrel.

"I recommend that the Public Service Commission be directed by law to be in continuous touch with this problem and be ready to represent the state and its needs when the occasion arises. In the last analysis this is a federal problem which must be solved by the authorities at Washington and in which the state is more or less helpless acting by itself. There should, however, be a continuing and well-informed state agency always ready in these emergencies."

## Fires at Non-Union Mines Near Evansville, Ind.

Two fires of undetermined origin occurred last week at mines near Evansville, Ind., which were closed by union miners when they attempted to operate non-union. Flames destroyed the wash house of the Swanee Coal Co. at Yankeetown and the home of Grover Hogan, top foreman of the Korff mine, near Booneville.

John A. Riddle, general counsel for District No. 11, United Mine Workers, speaking at a meeting of union miners at Princeton, urged the miners to continue their persuasive methods in bringing non-union workers back into the union fold.

Non-union mines were forced to close Jan. 6 when a veritable army of union miners took peaceful possession and brought into the union the workers who had manned the non-union mines.

The operators of non-union mines in the district declare they will reopen their mines and trust to the state to give them protection. William Kershner, Adjutant General of Indiana, stated on Jan. 7 that every unit of the National Guard, many of them veteran outfits from the late war, could be mobilized in an hour and started for the district if necessary.

In the meantime, the organized forces hailed as a triumph the commencement of negotiations with James Moore, owner of the Crescent and Sunnyside mines, in Vanderburg County. Mr. Moore conferred with union leaders before a big mass meeting and agreed to return his properties to a union basis.

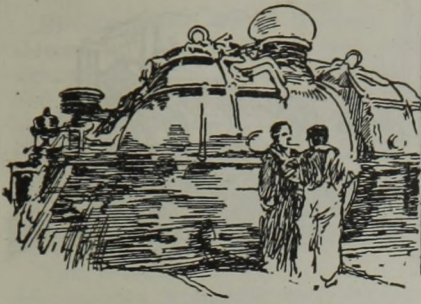
Walter Korff, general manager of the Bosse Coal Co., with holdings in Gibson and Warrick counties, ignored an invitation to attend the mass meeting and met with a group of operators in his office in Evansville. After the meeting he announced that his mines would open and expressed the belief that he would have sufficient workers to man the holdings. Plans also were made for reopening the Schimmell-Hampton mines.

## Mr. Turner Takes the Reins

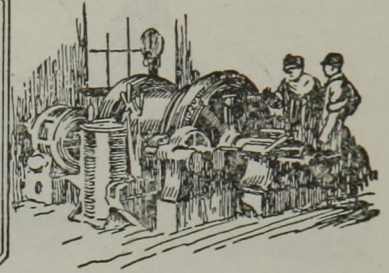
Scott Turner, the new director of the Bureau of Mines, has completed the task of winding up his personal work and has assumed active charge of the Bureau. The chief interest of the new director for the present will be centered on the organization of the economics branch of the Bureau. While some obstacles have arisen in connection with the transfer of appropriations, Mr. Turner expects to be able to get the new work under way in the near future on a basis whereby the economics branch will be a real handmaiden to the industry.

Another meeting of the advisory committee probably will be called for Jan. 26 and 27 in Washington. The board of directors and the government relations committee of the National Coal Association will meet on those dates and it is thought desirable to have some discussion at that time on the matter of co-operation with the coal producers.





## Practical Pointers For Electrical And Mechanical Men



### Potentiometers Save Money and Labor In Hoist Signaling

Radio's leap to popularity has acquainted millions with the meaning of electrical terms such as condenser, rheostat, and potentiometer. Before the advent of radio the latter term was not commonly used or understood by many who are classed as electricians. A potentiometer has been aptly called a "direct-current transformer." It is by this name that such a device is spoken of at the mine of the Montevallo Coal Mining Co., located near Aldrich, Ala.

Here, potentiometers connected to the 250-volt power circuits have replaced primary batteries as energy sources for the low-voltage signal lines. The new method is saving the \$100 per month formerly spent for repair and renewal parts of the

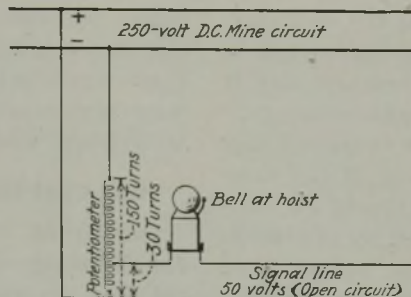


Diagram of Connections

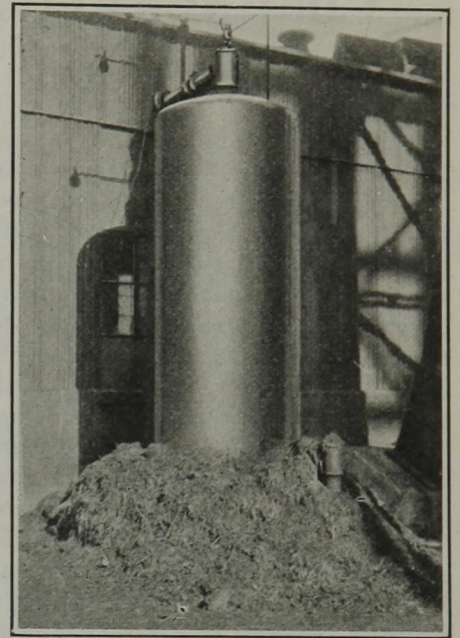
Each potentiometer takes approximately 1.7 amp. from the 250-volt line. Assuming that they are used twenty-four hours per day, the cost at 2c. per kw.-hr. to operate the twelve at the Aldrich mine, is \$74 per month.

primary signal batteries, and in addition is saving considerable labor and preventing a loss of time due to the failure of signals. Against these advantages there is, of course, a charge for the energy taken from the direct-current lines.

Assuming that all of the twelve potentiometers are energized for twenty-four hours per day, the maximum energy cost at 2c. per kw.-hr. is approximately \$74 per month.

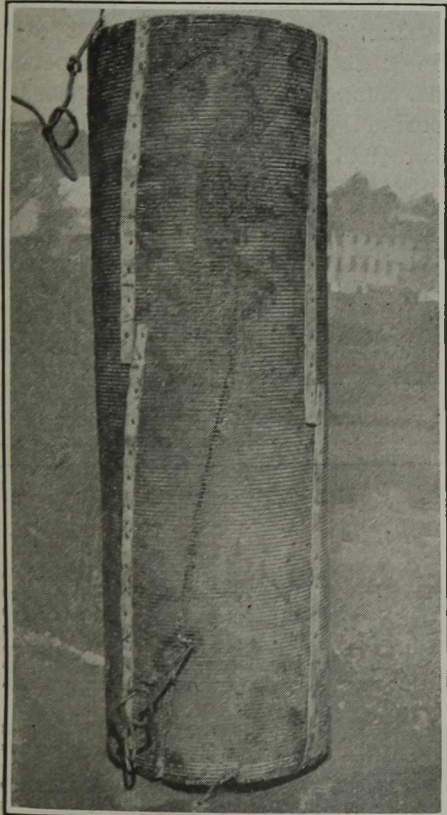
The potentiometers used at Aldrich are home-made because the company was unable to find a factory-made resistance of the proper characteristics and one having a tap at the desired point. The resistance wire ("Climax," No. 18 B. & S. gage 450 ft. long) is wound on a maple or cedar spool 29 in. long x 9½ in. in diameter. On this is cut a thread, six turns to the inch, to maintain proper spacing. After the wire is wound on the spool, strips of fibre are nailed on longitudinally at four points to hold the turns in case the spool shrinks or a break occurs.

The wire used has sufficient resistance and carrying capacity to limit the current—and therefore the heating—to a temperature far below the charring point of wood. But in spite of this fact it must be admitted that the use of wood presents a hazard.



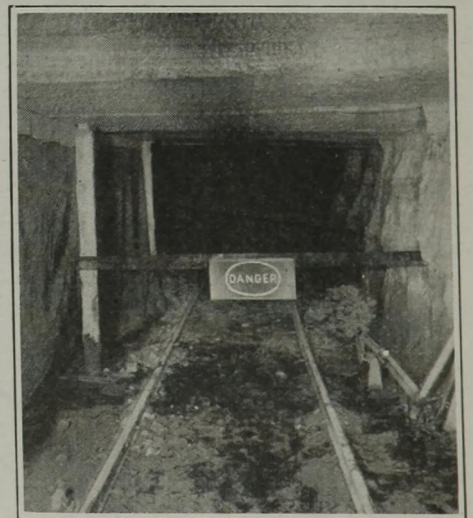
No Freezing in This Air Receiver

At the Harmar mine of the Consumers Mining Co., Harmarville, Pa., the dumping equipment at the bottom of the skip-hoisting shaft is air-operated and so are many of the gate controls in the tippie. The air compressors are located inside the hoist house while the air receiver is outside. To prevent water which collects in the receiver from freezing, manure is piled around the base of the receiver as shown. This scheme works satisfactorily.



Resistance Removed from Box

The company could not locate a factory-made resistance of the desired type, so built up this one, using a wood spool. The two outside terminals are connected to the 250-volt line. The signal line is connected to the tap, and to the bottom terminal.



This Danger Board Is Well Placed

Where gas is discovered at the face the particular place should be boarded off as here shown until the gas is removed. The board in this case rests in a rib niche at one end and is nailed to a prop at the other. It is not laid across the track, for in that position it would not be easily discernible. The danger sign conforms to the specifications of the Pennsylvania Compensation and Inspection Bureau. All supplies and tools are kept outside the inclosure of the fence. The canvas has been hung to remove the gas.





## Production And the Market



### Coal Market Remains Firm as Demand Eases; Hard-Coal Substitutes Slightly Stronger

Though the cold snap which stimulated the coal market pretty generally two weeks ago was short-lived in some localities a considerable degree of firmness still is in evidence right down the line. A noticeable slowing-up took place in the Middle West, where unseasonably warm weather followed close on the heels of the mercury's fall, but prices hold fairly well. Plenty of business in lump at circular prices is reported by producers in the more favored districts of Illinois, Indiana and western Kentucky, though the demand for egg and nut sizes is extremely unsteady. Business in high-volatile coals from West Virginia and eastern Kentucky has been very irregular with a wide range in prices.

West Virginia smokeless, which had been floundering somewhat since the close of lake navigation, has been steadied to a considerable extent by demand in the East, which is reflected by a stronger price line-up. Another important influence as a market stabilizer is the policy of Kentucky operators in holding a large amount of coal on track at mines rather than let it get into the distress classification. The foolish virgins are not all dead yet, though, for coal is still going into Chicago on consignment, and shippers are paying dearly for the practice.

Dullness persists in the New England market, practically all grades being in only fair demand. Except for a brief flurry early last week, the trade in the Middle Atlantic district has been fairly steady with no change in prices. Business has been in good volume since the holidays in the Northwest, and the dock operators are optimistic regarding prospects for the next few months. Demand in Alabama is steady and bookings are fully equal to moving output without difficulty.

That portion of the trade catering to the usual consumers of anthracite have been somewhat "edgy" as

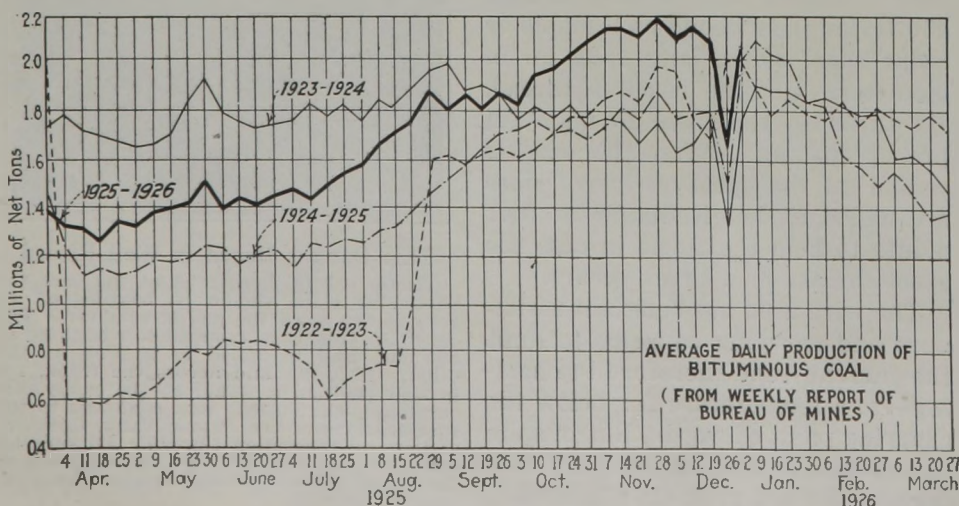
peace negotiations dragged along. Buyers have displayed a disposition to be cautious, but cold weather and snow have quickened the demand for substitutes at least temporarily. The call for coke has been moderately heavy and prices have hardened.

#### Soft-Coal Output in 1925 Is 523,072,000 Tons

Output of bituminous coal during the week ended Jan. 2 is estimated by the Bureau of Mines at 10,796,000 net tons, an increase of 2,365,000 tons over the revised figure for the previous week but 10,000 tons less than in the corresponding week a year ago. Total production of soft coal during the calendar year 1925 is estimated at 523,072,000 net tons, compared with 483,687,000 tons in 1924 and 564,565,000 tons in 1923. Anthracite output during the week ended Jan. 2 was about 28,000 net tons, as against 32,000 tons in the preceding week. Total hard-coal production for the calendar year just closed is estimated at 62,120,000 net tons, a decline of 25,807,000 tons from the previous year and of 31,219,000 tons from 1923—the falling off being due, of course, to the strike. Output in the first eight months of last year—or until operation was suspended—was 61,621,000 tons, compared with 59,247,000 tons in the corresponding period of 1924 and 66,849,000 tons in the same months of 1923.

Coal Age Index of spot prices of bituminous coal stood on Jan. 11 at 180, the corresponding price being \$2.18, compared with 181 and \$2.19, respectively, on Jan. 4.

Dumpings of coal at Hampton Roads underwent a further decline during the week ended Jan. 7, the total being 339,761 net tons, compared with 355,126 tons in the preceding week.



#### Estimates of Production

(Net Tons)

##### BITUMINOUS

|                     | 1924-1925   | 1925-1926       |
|---------------------|-------------|-----------------|
| Dec. 19 .....       | 10,814,000  | 12,689,000      |
| Dec. 26 (a) .....   | 7,540,000   | 8,431,000       |
| Jan. 2 (b) .....    | 10,806,000  | 10,796,000      |
| Daily average ..... | 2,039,000   | 2,037,000       |
| Cal. yr. ....       | 483,687,000 | (b) 523,072,000 |
| Daily av. ....      | 1,573,000   | 1,702,000       |

##### ANTHRACITE

|               |            |                |
|---------------|------------|----------------|
| Dec. 19 ..... | 1,867,000  | 55,000         |
| Dec. 26 ..... | 1,029,000  | 32,000         |
| Jan. 2 .....  | 1,255,000  | 28,000         |
| Cal. yr. .... | 87,926,000 | (b) 62,120,000 |

##### BEEHIVE COKE

|                   |               |            |
|-------------------|---------------|------------|
| Dec. 19 (a) ..... | 218,000       | 313,000    |
| Dec. 26 (b) ..... | 189,000       | 261,000    |
| Cal. yr. ....     | (c) 9,464,000 | 10,518,000 |

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



### Warm Wave Causes Midwest Market to Buckle

Unseasonably warm weather during the last week has slowed up the Midwest coal market to a great extent. Operators in the more favored districts of Illinois, Indiana and western Kentucky report that they have plenty of business on lump coal at circular prices, but that the demand for 6x3-in. egg, 3x2-in. small egg and cook-stove nut is extremely precarious. Prices are being held fairly well, although it was rumored, but not verified, that one of the large Franklin County operators had reduced his price on Frankiin County 6-in. lump from \$3.50 to \$3.25.

The market on high-volatile coals from West Virginia and eastern Kentucky was very erratic, with a wide range of prices. Furthermore, it was noticed that some of the good coals were among the weakest when it came to prices. This was brought about by the fact that the operators did not expect a slump and did not book up as heavily as they could have during the last cold snap. Pocahontas prices are holding up fairly well, with lump moving at \$3.50@ \$4.50; egg \$3.75 @ \$4.50, and stove, \$3.50@ \$4.25. Smokeless mine-run was offered freely at \$2.25, with some coal on demurrage going as low as \$1.75. Coal still comes into Chicago on consignment, and operators continue to pay heavily for shipping coal in this manner.

Steam coals have kept up well during the past week for two reasons: First, the warm weather has put a stop somewhat

to production owing to the difficulty in moving the prepared sizes; and second, some labor difficulties in the southern districts of Indiana closed most of the mines in that district, with considerable doubt as to when they will reopen. This forced a number of buyers who have been in the habit of drawing on southern Indiana coal to place orders elsewhere, and this diversion of business has led to a general tightening up of the steam market all the way through.

The general tone of the Midwest market, on the whole, is fairly optimistic, as it is believed that cold weather will come along soon to offset the warm days of the past week.

A little seasonable weather in southern Illinois brought some activity in domestic sizes, principally lump. Egg and No. 1 nut are heavy and there is no unusual demand for steam, with the result that nearly all mines have "no bills" of various sizes on hand. In spite of this, good working time prevails at most mines—usually four and five days a week, with the usual exception. Railroad tonnage is fairly good from the shaft mines. Car supply likewise is good but the train movement is slow. Strip mines are working steady on account of good weather. Railroad tonnage here also is reported good and coal is moving on special prices. In the Duquoin field conditions are somewhat similar with no change in price except on railroad tonnage.

The Mt. Olive field shows an increased demand for domestic sizes and steam is slow with a lot of "no bills." Working time is five days a week. Prices are unchanged.

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

| Low-Volatile, Eastern          |                | Market Quoted | Jan. 12, 1925 | Dec. 28, 1925 | Jan. 4, 1926 | Jan. 11, 1926†        |
|--------------------------------|----------------|---------------|---------------|---------------|--------------|-----------------------|
| Smokeless lump.....            | Columbus....   |               | \$3.85        | \$3.50        | \$3.55       | <b>\$3.75@ \$4.00</b> |
| Smokeless mine run.....        | Columbus....   |               | 1.90          | 2.75          | 2.85         | <b>2.85@ 3.10</b>     |
| Smokeless screenings.....      | Columbus....   |               | 1.20          | 2.60          | 2.60         | 2.50@ 2.75            |
| Smokeless lump.....            | Chicago....    |               | 4.00          | 3.35          | 4.00         | 3.50@ 4.25            |
| Smokeless mine run.....        | Chicago....    |               | 2.00          | 2.10          | 2.10         | 2.00@ 2.25            |
| Smokeless lump.....            | Cincinnati.... |               | 4.10          | 4.00          | 4.10         | 3.75@ 4.50            |
| Smokeless mine run.....        | Cincinnati.... |               | 2.10          | 2.55          | 2.50         | 2.25@ 2.50            |
| Smokeless screenings.....      | Cincinnati.... |               | 1.10          | 1.85          | 1.80         | <b>1.75@ 2.25</b>     |
| *Smokeless mine run.....       | Boston....     |               | 4.20          | 5.00          | 4.60         | <b>4.75@ 5.00</b>     |
| Clearfield mine run.....       | Boston....     |               | 2.00          | 1.90          | 2.00         | 1.75@ 2.10            |
| Cambria mine run.....          | Boston....     |               | 2.30          | 2.30          | 2.30         | 2.00@ 2.50            |
| Somerset mine run.....         | Boston....     |               | 2.10          | 2.05          | 2.10         | 1.90@ 2.25            |
| Pool 1 (Navy Standard).....    | New York....   |               | 2.75          | 2.95          | 2.95         | 2.75@ 3.15            |
| Pool 1 (Navy Standard).....    | Philadelphia.. |               | 2.80          | 2.95          | 2.95         | 2.80@ 3.10            |
| Pool 1 (Navy Standard).....    | Baltimore....  |               | 2.25          | 2.20          | 2.30         | 2.25@ 2.35            |
| Pool 9 (Super. Low Vol.).....  | New York....   |               | 2.10          | 2.30          | 2.30         | 2.15@ 2.45            |
| Pool 9 (Super. Low Vol.).....  | Philadelphia.. |               | 2.20          | 2.30          | 2.30         | 2.20@ 2.45            |
| Pool 9 (Super. Low Vol.).....  | Baltimore....  |               | 1.85          | 2.00          | 2.15         | 2.10@ 2.20            |
| Pool 10 (H.Gr.Low Vol.).....   | New York....   |               | 1.85          | 2.05          | 2.05         | 1.90@ 2.25            |
| Pool 10 (H.Gr.Low Vol.).....   | Philadelphia.. |               | 1.85          | 2.05          | 2.05         | 2.00@ 2.15            |
| Pool 10 (H.Gr.Low Vol.).....   | Baltimore....  |               | 1.70          | 1.90          | 1.95         | 1.90@ 2.00            |
| Pool 11 (Low Vol.).....        | New York....   |               | 1.60          | 1.75          | 1.75         | <b>1.70@ 1.95</b>     |
| Pool 11 (Low Vol.).....        | Philadelphia.. |               | 1.65          | 1.90          | 1.90         | 1.85@ 2.00            |
| Pool 11 (Low Vol.).....        | Baltimore....  |               | 1.50          | 1.65          | 1.70         | 1.70@ 1.75            |
| High-Volatile, Eastern         |                |               |               |               |              |                       |
| Pool 54-64 (Gas and St.).....  | New York....   |               | 1.50          | 1.60          | 1.60         | 1.50@ 1.70            |
| Pool 54-64 (Gas and St.).....  | Philadelphia.. |               | 1.50          | 1.60          | 1.60         | 1.55@ 1.70            |
| Pool 54-64 (Gas and St.).....  | Baltimore....  |               | 1.65          | 1.65          | 1.65         | 1.65@ 1.70            |
| Pittsburgh ac'd gas.....       | Pittsburgh.... |               | 2.40          | 2.65          | 2.65         | 2.60@ 2.75            |
| Pittsburgh gas mine run.....   | Pittsburgh.... |               | 2.10          | 2.10          | 2.10         | 2.00@ 2.25            |
| Pittsburgh mine run (St.)..... | Pittsburgh.... |               | 1.85          | 2.05          | 2.05         | 2.00@ 2.10            |
| Pittsburgh slack (Gas).....    | Pittsburgh.... |               | 1.60          | 1.55          | 1.55         | 1.50@ 1.60            |
| Kanawha lump.....              | Columbus....   |               | 2.50          | 2.25          | 2.25         | 2.00@ 2.50            |
| Kanawha mine run.....          | Columbus....   |               | 1.60          | 1.70          | 1.70         | 1.55@ 1.85            |
| Kanawha screenings.....        | Columbus....   |               | 1.00          | 1.20          | 1.15         | 1.00@ 1.10            |
| W. Va. lump.....               | Cincinnati.... |               | 2.30          | 2.35          | 2.75         | <b>2.75@ 3.25</b>     |
| W. Va. gas mine run.....       | Cincinnati.... |               | 1.30          | 1.60          | 1.60         | 1.50@ 1.75            |
| W. Va. steam mine run.....     | Cincinnati.... |               | 1.30          | 1.55          | 1.60         | 1.40@ 1.60            |
| W. Va. screenings.....         | Cincinnati.... |               | .80           | 1.10          | 1.10         | 1.00@ 1.25            |
| Hooking lump.....              | Columbus....   |               | 2.50          | 2.35          | 2.35         | 2.25@ 2.50            |
| Hooking mine run.....          | Columbus....   |               | 1.60          | 1.85          | 1.85         | 1.75@ 2.00            |
| Hooking screenings.....        | Columbus....   |               | 1.15          | 1.25          | 1.25         | 1.15@ 1.25            |
| Pitta. No. 8 lump.....         | Cleveland....  |               | 2.40          | 2.35          | 2.30         | 1.85@ 2.75            |
| Pitta. No. 8 mine run.....     | Cleveland....  |               | 1.85          | 1.85          | 1.80         | 1.80@ 1.85            |
| Pitta. No. 8 screenings.....   | Cleveland....  |               | 1.45          | 1.55          | 1.50         | 1.40@ 1.50            |
| Midwest                        |                | Market Quoted | Jan. 12, 1925 | Dec. 28, 1925 | Jan. 4, 1926 | Jan. 11, 1926†        |
| Franklin, Ill. lump.....       | Chicago....    |               | \$3.60        | \$3.35        | \$3.50       | \$3.50                |
| Franklin, Ill. mine run.....   | Chicago....    |               | 2.35          | 2.50          | 2.50         | 2.35@ 2.65            |
| Franklin, Ill. screenings..... | Chicago....    |               | 1.95          | 1.85          | 1.85         | 1.75@ 2.00            |
| Central, Ill. lump.....        | Chicago....    |               | 3.10          | 2.85          | 3.10         | 3.00@ 3.25            |
| Central, Ill. mine run.....    | Chicago....    |               | 2.20          | 2.30          | 2.30         | 2.25@ 2.35            |
| Central, Ill. screenings.....  | Chicago....    |               | 1.95          | 1.40          | 1.40         | 1.35@ 1.50            |
| Ind. 4th Vein lump.....        | Chicago....    |               | 3.50          | 3.00          | 3.00         | 2.75@ 3.25            |
| Ind. 4th Vein mine run.....    | Chicago....    |               | 2.35          | 2.30          | 2.30         | 2.25@ 2.35            |
| Ind. 4th Vein screenings.....  | Chicago....    |               | 1.85          | 1.85          | 1.85         | 1.75@ 2.00            |
| Ind. 5th Vein lump.....        | Chicago....    |               | 3.00          | 2.50          | 2.50         | 2.35@ 2.65            |
| Ind. 5th Vein mine run.....    | Chicago....    |               | 2.10          | 1.95          | 1.95         | 1.85@ 2.10            |
| Ind. 5th Vein screenings.....  | Chicago....    |               | 1.70          | 1.40          | 1.40         | <b>1.35@ 1.65</b>     |
| Mt. Olive lump.....            | St. Louis....  |               | 3.00          | 2.85          | 2.85         | 2.75@ 3.00            |
| Mt. Olive mine run.....        | St. Louis....  |               | 2.35          | 2.00          | 2.00         | 2.00                  |
| Mt. Olive screenings.....      | St. Louis....  |               | 1.80          | 1.75          | 1.75         | 1.75                  |
| Standard lump.....             | St. Louis....  |               | 2.55          | 2.40          | 2.40         | 2.35@ 2.50            |
| Standard mine run.....         | St. Louis....  |               | 1.95          | 1.80          | 1.80         | 1.75@ 1.90            |
| Standard screenings.....       | St. Louis....  |               | 1.30          | .85           | .85          | .75@ 1.00             |
| West Ky. block.....            | Louisville.... |               | 2.60          | 2.00          | 2.00         | 1.85@ 2.15            |
| West Ky. mine run.....         | Louisville.... |               | 1.55          | 1.35          | 1.35         | 1.25@ 1.50            |
| West Ky. screenings.....       | Louisville.... |               | 1.25          | 1.00          | .95          | <b>.90@ 1.10</b>      |
| West Ky. block.....            | Chicago....    |               | 2.60          | 2.00          | 2.25         | 2.00@ 2.50            |
| West Ky. mine run.....         | Chicago....    |               | 1.50          | 1.25          | 1.50         | 1.25@ 1.75            |
| South and Southwest            |                |               |               |               |              |                       |
| Big Seam lump.....             | Birmingham..   |               | 2.85          | 2.75          | 2.75         | 2.50@ 3.00            |
| Big Seam mine run.....         | Birmingham..   |               | 1.70          | 2.10          | 2.10         | 2.00@ 2.25            |
| Big Seam (washed).....         | Birmingham..   |               | 1.85          | 2.30          | 2.30         | 2.10@ 2.50            |
| S. E. Ky. block.....           | Chicago....    |               | 2.50          | 3.00          | 3.10         | 3.00@ 3.25            |
| S. E. Ky. mine run.....        | Chicago....    |               | 1.50          | 1.85          | 1.85         | 1.75@ 2.00            |
| S. E. Ky. block.....           | Louisville.... |               | 3.00          | 2.85          | 3.00         | 2.75@ 3.25            |
| S. E. Ky. mine run.....        | Louisville.... |               | 1.50          | 1.60          | 1.55         | 1.40@ 1.75            |
| S. E. Ky. screenings.....      | Louisville.... |               | 1.00          | 1.15          | 1.20         | .90@ 1.10             |
| S. E. Ky. block.....           | Cincinnati.... |               | 2.50          | 2.85          | 3.10         | 2.75@ 3.50            |
| S. E. Ky. mine run.....        | Cincinnati.... |               | 1.30          | 1.60          | 1.60         | 1.40@ 1.85            |
| S. E. Ky. screenings.....      | Cincinnati.... |               | .85           | 1.10          | 1.10         | .90@ 1.25             |
| Kansas lump.....               | Kansas City..  |               | 4.85          | 5.00          | 5.00         | 5.00                  |
| Kansas mine run.....           | Kansas City..  |               | 3.35          | 3.10          | 3.10         | 3.00@ 3.25            |
| Kansas screenings.....         | Kansas City..  |               | 2.50          | 2.30          | 2.30         | <b>2.25@ 2.50</b>     |

\* Gross tons, f.o.b. vessel, Hampton Roads.

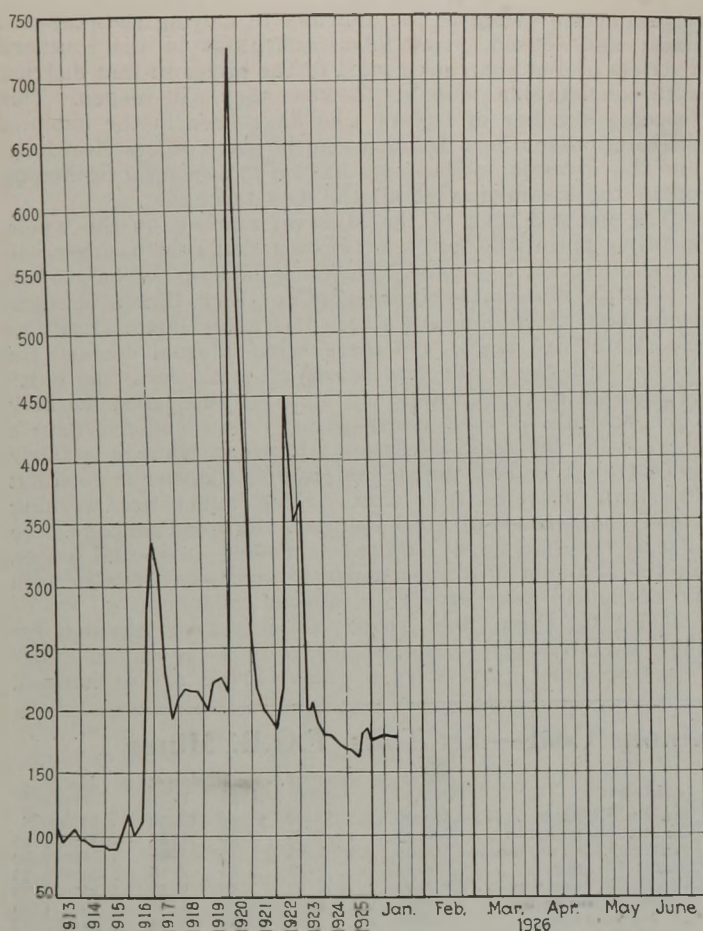
† Advances over previous week shown in heavy type; declines in italics.

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

|                      |                | Market Quoted | Freight Rates | Jan. 12, 1925  |                | Jan. 4, 1926  |                | Jan. 11, 1926† |                |
|----------------------|----------------|---------------|---------------|----------------|----------------|---------------|----------------|----------------|----------------|
|                      |                |               |               | Independent    | Company        | Independent   | Company        | Independent    | Company        |
| Broken.....          | New York.....  |               | \$2.34        |                | \$8.00@ \$9.25 |               |                |                |                |
| Broken.....          | Philadelphia.. |               | 2.39          |                | 9.15           |               |                |                |                |
| Egg.....             | New York.....  |               | 2.34          | \$8.50@ \$8.75 | 8.75@ 9.25     |               |                |                |                |
| Egg.....             | Philadelphia.. |               | 2.39          | 9.45@ 9.75     | 8.80@ 9.25     |               |                |                |                |
| Egg.....             | Chicago*.....  |               | 5.06          | 8.17@ 8.40     | 8.08           |               |                |                |                |
| Stove.....           | New York.....  |               | 2.34          | 9.75@ 10.25    | 9.00@ 9.50     | \$9.50@ 10.00 | \$8.03@ \$8.25 | \$9.50@ 10.00  | \$8.03@ \$8.25 |
| Stove.....           | Philadelphia.. |               | 2.39          | 10.10@ 10.75   | 9.15@ 9.50     |               |                |                |                |
| Stove.....           | Chicago*.....  |               | 5.06          | 8.80@ 9.00     | 8.53@ 8.65     | 10.00@ 11.00  | 8.48@ 8.80     | 10.00@ 11.00   | 8.40@ 8.80     |
| Chestnut.....        | New York.....  |               | 2.34          | 9.75@ 10.25    | 8.75@ 9.40     |               |                |                |                |
| Chestnut.....        | Philadelphia.. |               | 2.39          | 10.00@ 10.75   | 9.25@ 9.40     |               |                |                |                |
| Chestnut.....        | Chicago*.....  |               | 5.06          | 8.61@ 9.00     | 8.40@ 8.41     | 10.00@ 11.00  | 8.50@ 8.75     | 10.00@ 11.00   | 8.50@ 8.75     |
| Pea.....             | New York.....  |               | 2.22          | 4.75@ 5.50     | 5.50@ 6.00     |               |                |                |                |
| Pea.....             | Philadelphia.. |               | 2.14          | 5.75@ 6.00     | 6.00           |               |                |                |                |
| Pea.....             | Chicago*.....  |               | 4.79          | 5.36@ 5.75     | 5.36@ 5.95     | 5.50@ 6.00    | 5.50@ 6.00     | 5.50@ 6.00     | 5.50@ 6.00     |
| Buckwheat No. 1..... | New York.....  |               | 2.22          | 2.25@ 2.75     | 3.00@ 3.15     |               |                |                |                |
| Buckwheat No. 1..... | Philadelphia.. |               | 2.14          | 2.50@ 3.00     | 3.00           |               | 2.50@ 3.00     |                | 2.50@ 3.00     |
| Rice.....            | New York.....  |               | 2.22          | 1.90@ 2.25     | 2.00@ 2.25     |               |                |                |                |
| Rice.....            | Philadelphia.. |               | 2.14          | 2.00@ 2.25     | 2.25           |               |                |                |                |
| Barley.....          | New York.....  |               | 2.22          | 1.40@ 1.65     | 1.50           |               |                |                |                |
| Barley.....          | Philadelphia.. |               | 2.14          | 1.50           | 1.50           |               |                |                |                |
| Birdseye.....        | New York.....  |               | 2.22          | 1.40@ 1.65     | 1.60           |               |                |                |                |

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





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

| Index                  | 1926    |        | 1925    |         |
|------------------------|---------|--------|---------|---------|
|                        | Jan. 11 | Jan. 4 | Dec. 28 | Jan. 12 |
| Weighted average price | 180     | 181    | 178     | 175     |
|                        | \$2.18  | \$2.19 | \$2.16  | \$2.12  |

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.

In the Standard field there is no change. Prices are about cost of production and, with a few exceptions, all mines have various sizes of "no bills" constantly. Railroad tonnage was reported good last week. Car supply is plentiful and working time ranges from three to five days a week.

Domestic trade in St. Louis reports movement of middle and Illinois high grade egg and a little spurt for smokeless. Anthracite is pretty well cleaned up on the smaller sizes and there is no demand. Coke showed an increased demand last week. There is some call for Standard from apartments and cheaper business houses, but not in the volume usual at this period of the year. Country domestic demand is fairly good for cheaper coals and unusually good for west Kentucky domestic sizes. Country steam is quiet. There has been no change in prices.

### Demand Slumps in Kentucky

The slump over inventory period, along with mild weather last week flattened demand for both steam and domestic coal in Kentucky. Prices are holding firm, however, as operators are holding much coal on tracks at mines, instead of letting it get into the distress fuel classification. There hasn't been much trouble about car supply for some time, and the operators don't mind holding coal on track, as they did when cars were scarce and held cars were counted against their loading.

Steam coal demand is expected to pick up as industry gets back into the running. Cold weather would bring back the retailers, as many of them haven't much coal on hand.

The eastern Kentucky market on 4-in. block coal is \$2.75@\$.3.25, in spite of absurd rumors of \$2 block. There may be some off-grade and off-size stuff at \$2.50, but 2-in. lump and egg are the only items offered as low as \$2. The operator would rather keep his coal, especially in view of the fact that screenings are off. With a dollar and a half

slack market the operator might sell some cheap prepared, but not on a 90c.@\$.1.10 slack market.

The slump in industrial demand hit eastern Kentucky screenings, which dropped below \$1 for the first time in weeks, being quoted at 90c.@\$.1.10 for all grades. Western Kentucky screenings are firmer due to lower production of prepared, at 90c.@\$.1. Other western and eastern Kentucky prices are unchanged.

### Year Starts with Promise in Northwest

Trade has been running in good volume in the Duluth-Superior market since the turn of the year, and dock operators are hopeful regarding the outlook for the first half of the year at least. What is regarded as especially satisfactory is the placing of orders by industrial companies over northern Wisconsin and Minnesota, with foundries and other iron and steel enterprises bulking up well in that connection. A revival of interest also is reported from over the northern Minnesota iron-range territory.

While retailers are still ordering coal on an immediate requirement basis it has been bulking up into good proportions. Utilities companies and municipalities over Minnesota and eastern North Dakota have been ordering good tonnages on contracts made last fall. Shortage of water supplies in storage dams is forcing some of those consumers to resort to operating steam power plants in the emergency.

Pocahontas and other smokeless coals are in heavy demand as substitutes for anthracite. Only two docks are carrying any anthracite stocks and they are taking only small orders from regular customers of their retail yards.

Shipments of coal from the docks during December totaled 25,735 cars, compared with 27,411 cars during November and 29,615 cars during December, 1924. The aggregate cars loaded during the year was 239,548, compared with 242,604 during 1924 and 199,503 cars in 1923.

Prices are steady and unchanged for both anthracite and bituminous coals. Domestic coke is selling freely at \$8.50 and briquets at \$9.

Milwaukee dock managers have nothing new to report as to the coal situation, which continues as it has been for weeks. There is an ample supply of bituminous coal, for which there is a fairly good demand, which fluctuates sharply with the weather. The only change in prices reported by retailers is an advance of \$1 for nut coke, which now sells for \$15 a ton.

### Boreas Comes to Rescue of the West

Winter weather again has come to the relief of Kansas operators. While tracks are not cleared of "no bills," the surplus in the field has been much reduced, and the market, which had begun to soften, has stiffened. Shading was particularly evident in Kansas lump, on which the list price has been \$5. At present there is a slight surplus of lump, but there is a shortage of nut, and screenings are even. Arkansas is still looking for business, with the expectation that the normal midwinter recovery from the November slump cannot be far off. Semi-anthracite lump is quoted at \$6@\$.6.50, with many accepting less. Screenings are scarce at \$2.

There has been no material change in the domestic trade for Colorado and New Mexico coals in the past week, but operators look for a substantial increase in the next month to six weeks, as the stocks in bins are about depleted and inquiries and orders are beginning to come in in large numbers. Colorado mines are working about 90 per cent.

Utah mines are working about three days a week, and some operators describe business at "rotten!" Retail trade is good, due to a light fall of snow. Lump coal is somewhat of a drug on the market, but slack is a little scarce, if anything. The metal industry is taking a large proportion of the coal used for industrial purposes.

Utah operators have more orders than usual from the Pacific Coast and Northwest, demand being largely for stove size. Business is only fair in Idaho and Nevada.

A few dealers have been trying to persuade the trade to increase the price of slack from \$3.50 to \$4, but the effort is not likely to succeed. The schedule price at the mine is \$1.25, but for the past two or three months it has been 75c. Gossip has it that some of the smaller operators cut the price to unload surplus stocks of slack but would now like to raise them. The big operators are not inclined to make a change, however, feeling that it may prove a good lesson to those who reduced them.

Prices for coal other than slack remain firm.



### Wintry Spell Stimulates Cincinnati Market

At Cincinnati the feeling-out process, so common at this time of year and accentuated by the deliberations of the anthracite negotiators, went along merrily last week until Friday, when heavy snow falls and colder weather put fresh life in the market. While orders flowed in good volume few noticeable changes were made in values.

High volatile has been on a "brokers' market" since Christmas, as shown by the spreads in some of the makes. Mine-run has been variously priced from \$1.40 to \$1.85. Both steam and gas were obtainable at the low, these coals coming from mines that have had to look to the middleman for a sales outlet. On the other hand, byproduct and gas takers with an assured source of supply paid up to \$1.85 for choice coals. Domestic has moved up to \$2.75@3.50, the top being for specialized and advertised product. Egg prices ranged \$1.60@2.25 and slack from 90c. for off-grade Kentucky to \$1.25 for the choice.

Better demand in the East has helped the smokeless market, which had been floundering since the close of navigation. Egg and stove sizings going to tide were around \$4.50 with the inland from \$4@4.25; lump also picked up a little, with more selling around \$4 than at the low of \$3.75. Mine-run showed weakness in the fact that the spread between \$2.25@2.50 was softer than the mere figures indicate, and slack too was off 10c. with a spread between \$1.75@2, and it had to be standard stuff to bring this price.

Retail business is in practically the same position as it was last week. Buying has been a bit better, but this is a weather result. After a few days of open weather in which the river people were able to break through the ice the snow came along and has held them up again.

The report of the Cincinnati district of the American Railway Association places total coal loads interchanged last week at 9,161. This is a decrease of 2,883 compared to the previous week, and an increase of 320 compared to same week last year. It is expected that there will be an increase this week, as the demand for empties at the mines shows signs of improvement. All coal-loading roads have heavy surpluses on their lines.

Warmer weather following the blizzard caused a slight recession in domestic demand in Columbus and vicinity. This was not as marked as might be expected, as dealers' stocks were not heavy and occasional buying to replenish stocks is reported. Smaller orders are expected from householders during the remainder of the winter and dealers will be in the market not only for smokeless and splints but also for Ohio mined varieties. Retail prices are well maintained at previous levels. There is little distress coal on the Columbus market and bargain prices are few.

Steam business has shown little change outside of weakness in screenings, the declines having amounted to 15 to 25c. per ton in the past two weeks. One of the causes given is the closing of the lake trade. Steam plants are buying for current needs only as their fuel stocks are heavy. Utilities are taking their usual quota and iron and steel plants are good buyers. Some improvement in general industrial conditions is noted, and this, it is believed, will be reflected in the steam fuel business.

In eastern Ohio the market is in a somewhat chaotic state as demand has been at a low ebb for this time of the year. About a week or so ago retailers had quite a rush of orders, and were fairly busy, only to experience a warm spell and a dropping off in trade. During the holidays, however, many of the schools were putting in coal.

In the steam trade, orders are for current needs only,

which are not heavy. The railroads are said to be taking full quotas on contracts.

During week ended Jan. 2 the eastern Ohio No. 8 field produced 217,000 tons, or about 37 per cent of potential capacity. This is 30,000 tons over the preceding week, but 38,000 tons under the corresponding week a year ago. Revised figures for the calendar year 1925 show a production of 13,237,000 tons, or around 37 per cent of capacity.

### Pittsburgh Trade Stationary

The Pittsburgh district coal market presents no new features this week. Buying of domestic coal continues fairly good, but this does not represent a large part of the district's business.

Consumption by the industries has been running heavy and bids fair to continue so. There is practically no demand of any consequence from the East for Pittsburgh district coal. There is such a demand for nut and egg that the district is able to sell some in the East at \$2 to \$3, but its production of such sizes is small.

Competition continues very keen, both between producers in the district and between the district and non-union fields, and while prices are low they show no disposition to harden.

At Buffalo the demand in the regular soft-coal trade is more a matter of accepting what is urged on the consumer than anything more active on his part. There is often complaint that coal is bought that is not really wanted, but just to accommodate a friend who must make a showing of business or lose standing at headquarters. Slack, and especially gas slack, has not been as plentiful as sizes, but prices are about as usual.

### New England Market Drags

So far, in New England there has been no reaction from the dullness usual during the holidays. The trade drags much as it did a week ago, with screened sizes about the only relieving feature. For run-of-mine in practically all directions there is only fair demand; there is no new buying of any moment, and the range of prices continues as low as during December. Contract shipments are coming through in usual volume, the seasonable weather having influenced rehandling factors and others to keep reserves on a prudent basis. With the anthracite strike not yet settled, all the retailers are sharing in the demand from a proportion of the consumers for run-of-mine for household heating. To the spot market generally, however, there is no snap, and the agencies are easing along in the hope that somehow more remunerative prices can be obtained.

No. 1 Navy standard Pocahontas and New River can be had in cargo lots at \$4.75 f.o.b. vessel at Hampton Roads, and in special circumstances at an even lower figure. A few shippers more fortunately placed with respect to the volume of coal at and en route to the piers are able to get \$4.90@5. The quotations given are in gross tons.

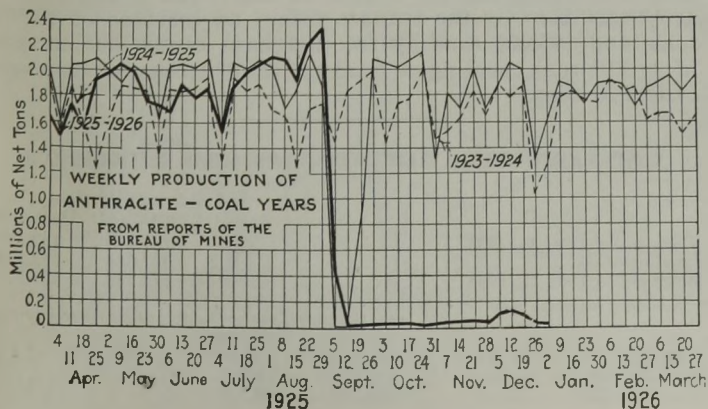
For inland delivery there is a spasmodic demand from small users and from retailers. Varying with the individual situation of the rehandler the range on cars at Boston and Providence seesaws between \$6 and \$6.50. At retail the price runs from \$8.50 to \$10 per net ton delivered.

For Pennsylvania coals all-rail there is an improved request for egg and nut sizes, the quality grades commanding up to \$5.25 per net ton at the mines. Pocahontas and New River are to be had on about the same delivered cost, although owing to difference in the through tariff \$4 is about the top figure for smokeless prepared. A number of splint coals are being offered at from \$3 up when shaker-screened. The bulk of the consumers who are in the market, however, are buying coke and such imports as Welsh anthracite and briquets when they can be had.

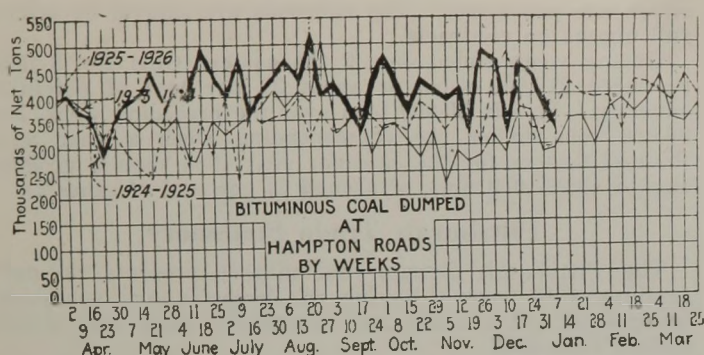
### Passing Flurry in New York

Indications that the anthracite wage conference would fail to reach an agreement last week caused a flurry in the bituminous coal market at New York, and resulted in a few heavy sales of coal for delivery during the present month. There was no change in prices, however. With that exception the market was quiet. With the coal in reserve consumers are not inclined to increase their supplies, not wishing to end the coal year with large stocks on hand.

Movement of mine-run is the feature of the market, screened bituminous not showing much strength. Low-







volatile egg from Pennsylvania is quoted at \$4.50@\$5, with lump bringing \$3.50@\$4. Prepared sizes of Broad Top coals are quoted by some houses at \$5@\$6. Screened sizes of smokeless coals were quoted at \$4.25@\$4.50, and high-volatile egg and nut coals \$2.50@\$3.

The Philadelphia market remains quiet. Consumers are still shy on contracting, relying on the spot market. There is a little better demand for screened coals, particularly sizes; as coke is almost sold up in the domestic market, there is a better chance for low-volatile screened coals. As a result there is a better supply of slack, although the market is a bit quiet on slack.

Beginning Jan. 1 coal from the New River and Pocahontas region is able to be delivered to buyers on the lines of the Reading Co. on the \$3.94 rate. Heretofore this rate applied only to Pennsylvania R.R. delivery. The so-called emergency freight rates, effective from Jan. 1 to April 1, from distant regions also are in effect now, and business has been solicited on Kentucky coal on a freight rate a bit under \$5.

The Baltimore soft-coal trade looks to 1926 with some rather mixed feelings, in which doubt is not absent. Industrial demand is not such as to give assurance that prices will be maintained at a fair level over the coming year. The business that has grown up in prepared sizes as a substitute for anthracite is somewhat dependent upon the resumption of mining in the anthracite fields—just what proportion of the business gained is to be held in prepared sizes of soft coal for the future is a real unanswered problem. At present there is no export business and bunker business also is below level. Warmer weather followed the recent cold snap, but the somewhat accelerated demand for soft coal, especially for prepared sizes, seems to hold. Prices remain about the same.

Demand for steam coal is considered exceptionally good in the Birmingham market so soon after the holidays. While business is not as brisk as it was just before the Christmas rush, inquiries are coming in in good numbers and ample business is being booked to move the output without delay. There are some little stocks in the hands of consumers yet, which is serving to hold back buying to some extent, but normal activity is expected soon. Contract coal is moving well to the railroads and large industrial users. The bunker tonnage being booked is larger than usual at this season.

Domestic demand in the spot market is good, and practically all the high-grade coals have been sold up through this month and the low and medium qualities are moving in a satisfactory way.

Quotations are unchanged from a week ago.

Coke demand also is good and local and foreign requirements are absorbing production; additional sales could be made were the product available. Foundry coke is quoted \$6@\$6.50 per ton; gas coke, \$6@\$6.50; egg, \$5.25, and nut, \$4.75@\$5 per ton ovens.

Coal output for the week ended Jan. 2 is reported at 339,000 tons. Figures compiled by the Alabama Mining Institute show a total production for 1925 of 19,857,000 tons, which is approximately 240,000 tons more than in 1924.

### Wage Parley Rules Hard-Coal Substitutes

The wage conferences are ruling the so-called anthracite market at New York. When the prospects for a settlement look bright wholesale dealers and retailers expect and do receive many cancellations of orders but when these reports prove groundless the effort made to reinstate the orders is just as strong. Because of such rumors the market changed rapidly last week. Meantime dealers and consumers are buying from hand to mouth, low temperatures causing many orders for small lots.

The demand for coke is increasing rapidly now that anthracite is practically out of the situation. Retail prices range all the way from \$13.50 to \$18 according to quality and manufacture. Crushed beehive coke was quoted on a range of \$7@\$8 at the ovens and byproduct coke at \$9@\$9.50. Mine-run bituminous coal also is being used where hard coal formerly was used, it being mixed with buckwheat for heating purposes with success.

Dealers felt convinced that even if an agreement on wages should be reached shortly not enough anthracite would arrive in this market this month to make a dent in the situation. A few retailers have small tonnages of domestic coals in their bins, but the demand is for either coke or mine-run bituminous coal.

The Philadelphia anthracite trade is pretty much on edge due to the various meetings of the miners and operators. With warmer weather there was a tendency to relax buying, but when the committee failed to reach an understanding last week, the ordering of substitutes became a bit stronger. Consumers are still calling for coke.

Some buckwheat was shipped last week by the P. & R. C. & I. to hospitals and the city water works. It is said this company has held back about 30,000 tons of steam sizes for emergencies such as these.

With the anthracite strike in its fifth month, Baltimore hard-coal dealers report that there is no situation, as far as they are concerned, as there is no hard coal in local yards. Dealers everywhere are pushing prepared sizes of bituminous and the public seems to take to these without any great effort. Prepared sizes of coke went up rather sharply in this market during the past week, the advance being about \$2 per ton and the quotations to the trade at the ovens around \$9. A mild winter, so far, except for a short sharp spell, has helped the situation very much.

Interest in the chances of an early settlement of the strike overshadows everything else in the entire Buffalo coal trade. While it will give the hard-coal people a prospect of full return to business as soon as the men go to work it is not so favorable to soft coal, for it will not help the regular trade and will force a readjustment of both the smokeless and the coke movement.

### Connellsville Coke Market Hardens

Coke prices in the Connellsville market showed a decided softening tendency late last week, which was considered quite natural in view of the sharp advance before Christmas and the presumption that with the holidays out of the way production would be restored. Later on prices began to harden again. While production had increased, apparently it had not increased as much as expected, while demand from the East continued moderately heavy.

Run-of-oven coke, which was at \$4.50@\$4.75 on the last day of the old year, reached a level of \$4.75@\$5 by Tuesday of last week, while prepared coke, rather poorly defined at \$5.50@\$6.50, got up to a range of \$7@\$8, with the latter figure obtainable on any coke fairly well prepared.

There was practically no blast-furnace buying last week, though there was a little—rather unexpected—the week before. The furnaces in operation are covered by contracts for the quarter, on which deliveries probably will be adequate, while few if any idle furnaces are likely to come in at this time. Accordingly the Connellsville coke market bids fair to be purely a matter of Eastern buying.

Foundry coke has been very dull and hardly makes a market of its own. It may be quoted nominally at the usual dollar differential over furnace coke, or at \$5.75@\$6.

The *Courier* reports coke production in the Connellsville and lower Connellsville region in the week ended Jan. 2 at 114,600 tons by the furnace ovens, an increase of 18,800 tons, and 105,400 tons by the merchant ovens, an increase of 11,110 tons, making a total of 221,000 tons, an increase of 29,910 tons.

### Car Loadings, Surplusages and Shortages

|                          | Cars Loaded |           |
|--------------------------|-------------|-----------|
|                          | All Cars    | Coal Cars |
| Week ended Dec. 26, 1925 | 701,079     | 122,350   |
| Previous week            | 967,886     | 187,398   |
| Week ended Dec. 27, 1924 | 647,324     | 129,725   |

|               | Surplus Cars |           | Car Shortage |
|---------------|--------------|-----------|--------------|
|               | All Cars     | Coal Cars |              |
| Dec. 22, 1925 | 186,285      | 63,509    |              |
| Dec. 14, 1925 | 172,577      | 60,245    |              |
| Dec. 22, 1924 | 230,798      | 100,330   |              |



## Foreign Market And Export News

### British Coal Market Improves Notably; Welsh Mines Reopen

Improvement has been marked in the British market, but, of course, the volume of trade is not up to the levels of former years. Some Welsh collieries have reopened in order to meet the recovery, and as colliery owners usually are well booked up for the beginning of the new year, it is expected that about another half a dozen pits will be restarted in the course of the next few weeks. This will still leave a large number idle, and in some cases no resumption of work will take place until questions regarding cutting prices and financial adjustments can be settled. Prices, however, are stationary.

At Newcastle-on-Tyne all classes of coal are very scarce and firm for prompt shipment, and the tendency of prices is upward in view of orders that have already been booked and the good inquiries now circulating. The outlook for the month is regarded very hopefully. In the forward market there are important railway, gas-works, and bunker coal contracts in negotiation for this year, though the business matures slowly owing to difficulty in quoting for delivery after next April. The Swedish State Railway authorities have contracted for about 32,000 tons of Northumberland steam coals (Broomhill classes) for shipment from January to April next.

Output by British collieries during the week ended Dec. 26, according to a special cable to *Coal Age*, totaled 3,965,000 gross tons, compared with a total production of 5,555,000 tons in the preceding week.

### Prices Firm in Fair Market At Hampton Roads

Hampton Roads business was fair last week, foreign trade having slumped, but bunkers appeared to hold up well. Mines quite generally were back in operation after the holidays, and while demand was somewhat below normal, prices strengthened slightly.

The apparent deadlock in the anthracite situation was having only a moderate effect on the local market. In the domestic trade one or two dealers had good supplies of hard coal which they

were holding for \$20 a ton, and getting no inquiries. Many hard-coal users have turned to soft coal and find it meets the situation.

### Belgian Domestic Coals Strong, Industrial Grades Dull

Industrial coals in the Belgian market continue inactive, as they have been for a long time. Domestic grades, on the contrary, are much sought and demand is expected to increase soon, as consumers' stocks are depleted.

Owing to the continued depreciation of the French franc, competing French coals are gaining headway in Belgium.

Free German coals (outside of indemnity coals) cannot for the present enter Belgium, except bunkering sorts at Antwerp. As in France, the admittance of such coals would be solved if Germany agreed that they be considered as "payments in kind" and paid for by the Agent of Payments of the Commission of Reparations.

The wage question has not been settled. The collieries maintain that wages should be conditioned not only by the index figure on living costs but also by the selling prices of fuels.

### French Market More Active, British Imports Higher

The French coal market is becoming increasingly active; December production of both industrial and domestic coals was committed early and the collieries have been limiting themselves to the carrying out of contracts. Imports of British coals have shown some improvement, but arrivals at Rouen are still much restricted.

Negotiations with the Kohlensyndikat are still suspended. The Germans lay the responsibility on France, though they have put in question various points that had already been settled, such as agreeing not to compete with French coals and restricting sales to certain well defined areas.

The canal freight rate from Bethune to Paris has been raised 2 fr. to 30 fr.

Deliveries of indemnity fuels from the Ruhr from Dec. 1 to Dec. 5 included 68,700 tons of coal, 46,700 tons of coke and 5,500 tons of lignite briquets. During the first twenty days of December the O.R.C.A. received from the Ruhr 160,564 tons of coke.

As the price of the French coke will certainly be increased owing to the advance in transportation rates and taxes, it is almost certain that the decrease of 2.50 fr. applied last month to the price of indemnity coke will not be maintained.

French fuel exports in November included 419,051 metric tons of coal and lignite, 60,915 tons of coke and 20,605 tons of patent fuels, compared with October figures of 425,505 tons of coal and lignite, 49,322 tons of coke and 17,039 tons of patent fuels. Fuel imports to France in November consisted of 1,595,785 metric tons of coal and lignite, 416,117 tons of coke and 126,850 tons of patent fuels, against October totals of 2,040,952 metric tons of coal and lignite, 390,233 tons of coke and 110,113 tons of patent fuels.

### U. S. Fuel Imports in November

|                      | (In Gross Tons) | 1924   | 1925   |
|----------------------|-----------------|--------|--------|
| Anthracite.....      |                 | 12,153 | 72,869 |
| Bituminous.....      |                 | 24,500 | 46,703 |
| From:                |                 |        |        |
| United Kingdom.....  |                 |        | 3,422  |
| Canada.....          |                 | 24,400 | 50,477 |
| Japan.....           |                 | 2,400  | 6,318  |
| Australia.....       |                 | 4,482  |        |
| Other countries..... |                 | 100    | 6      |
| Coke.....            |                 | 6,807  | 23,474 |

### Export Clearances, Week Ended Jan. 9, 1926

| FROM HAMPTON ROADS                          |       |      |
|---|-------|------|
| For Jamaica:                                |       | Tons |
| Br. Str. Willowpark, for Kingston..         | 2,235 |      |
| For Virgin Islands:                         |       |      |
| Dutch Str. Kellehaven, for St. Thomas.....  | 4,307 |      |
| For Brazil:                                 |       |      |
| Br. Str. Cogandale, for Rio de Janeiro..... | 7,417 |      |

### Hampton Roads Coal Dumpings\*

| (In Gross Tons)               |         |         |
|-------------------------------|---------|---------|
| N. & W. Piers, Lamberts Pt.:  | Dec. 31 | Jan. 7  |
| Tons dumped for week.....     | 110,471 | 138,780 |
| Virginian Piers, Sewalls Pt.: |         |         |
| Tons dumped for week.....     | 72,295  | 49,212  |
| C. & O. Piers, Newport News:  |         |         |
| Tons dumped for week.....     | 134,311 | 115,366 |

\*Data on cars on hand, tonnage on hand and tonnage waiting withheld due to shippers' protest.

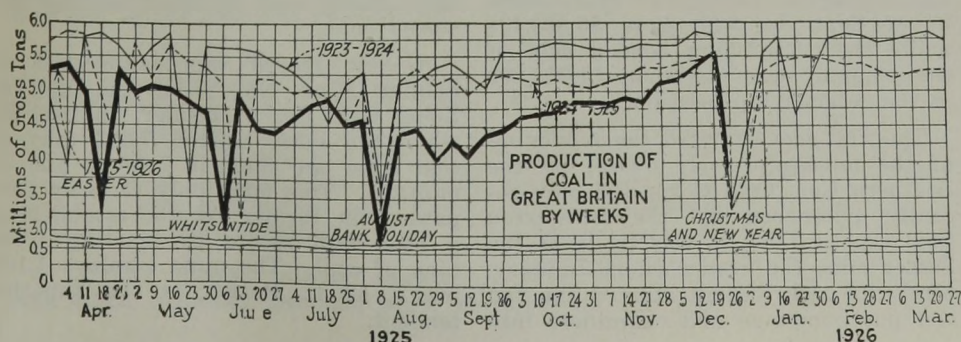
### Pier and Bunker Prices, Gross Tons

| PIERS                      |                |                |  |
|----------------------------|----------------|----------------|--|
|                            | Jan. 2         | Jan. 9†        |  |
| Pool 1, New York.....      | \$5.75@ \$6.00 | \$5.75@ \$6.00 |  |
| Pool 9, New York.....      | 5.10@ 5.30     | 5.20@ 5.35     |  |
| Pool 10, New York.....     | 4.80@ 5.15     | 4.90@ 5.20     |  |
| Pool 11, New York.....     | 4.55@ 4.70     | 4.65@ 4.80     |  |
| Pool 9, Philadelphia.....  | 5.05@ 5.30     | 5.05@ 5.30     |  |
| Pool 10, Philadelphia..... | 4.80@ 5.10     | 4.80@ 5.10     |  |
| Pool 11, Philadelphia..... | 4.50@ 4.75     | 4.50@ 4.75     |  |
| Pool 1, Hamp. Roads.....   | 4.60@ 4.75     | 4.60@ 4.75     |  |
| Pool 2, Hamp. Roads.....   | 4.20@ 4.30     | 4.20@ 4.30     |  |
| Pools 5-6-7, Hamp. Rds.    | 4.00@ 4.15     | 4.00@ 4.10     |  |
| BUNKERS                    |                |                |  |
| Pool 1, New York.....      | \$6.00@ \$6.25 | \$6.00@ \$6.25 |  |
| Pool 9, New York.....      | 5.35@ 5.55     | 5.45@ 5.60     |  |
| Pool 10, New York.....     | 5.05@ 5.40     | 5.15@ 5.45     |  |
| Pool 11, New York.....     | 4.80@ 4.95     | 4.90@ 5.05     |  |
| Pool 9, Philadelphia.....  | 5.30@ 5.55     | 5.30@ 5.55     |  |
| Pool 10, Philadelphia..... | 5.10@ 5.35     | 5.10@ 5.35     |  |
| Pool 11, Philadelphia..... | 4.75@ 5.00     | 4.75@ 5.00     |  |
| Pool 1, Hamp. Roads.....   | 4.75           | 4.75           |  |
| Pool 2, Hamp. Roads.....   | 4.30           | 4.30           |  |
| Pools 5-6-7, Hamp. Rds.    | 4.15           | 4.10           |  |

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

| Quotations by Cable to Coal Age |                     |                     |
|---------------------------------|---------------------|---------------------|
| Cardiff:                        | Jan. 2              | Jan. 9†             |
| Admiralty, large.....           | 23s. @ 23s. 6d.     | 23s.                |
| Steam smalls.....               | 13s. 6d.            | 14s.                |
| Newcastle:                      |                     |                     |
| Best steams.....                | 18s.                | 18s.                |
| Best gas.....                   | 16s. 6d. @ 17s. 6d. | 16s. 6d. @ 17s. 6d. |
| Best bunkers.....               | 11s. @ 17s. 11      | 11s. @ 17s. 11      |

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





## News Items From Field and Trade



### ALABAMA

The Alabama ByProduct Corporation, Pratt Division, is constructing a new coal washery at its No 10 Mine, at Dora, in Walker County. This operation, which has been idle for some time, will resume production when improvements have been completed.

The Connellsville Mine of the New Connellsville Coal & Coke Co. has resumed production of coal after a long period of idleness. The work of rehabilitating this operation has been in progress for about six months. New tipples and other necessary mine structures have been built, a new washery constructed and other modern preparation equipment has been installed and the entire plant has been reconstructed along the most modern lines. Modern equipment also has been installed inside the mine for the mining and handling of the coal. This mine is located on the Jagger seam, the coal being considered a high-grade blacksmith and coking product. The operation is under the direction of the Yolande Coal & Coke Co., of which J. B. McClary, of Birmingham, is president. Production will be increased as rapidly as possible to a maximum of around 2,000 tons daily.

E. L. Elliott, who had been superintendent of the operations of the Davis Creek Coal & Coke Co., at Rock Castle, Tuscaloosa County, for a number of years, has been transferred to Connellsville, where he will be superintendent. Mr. Elliott is succeeded as superintendent of the Davis Creek Coal & Coke Co. by W. A. Upton, formerly with the Nelson Coal Corporation as superintendent at Red Star, Walker County, which mine is now being operated by the Pratt Fuel Corporation.

### ARKANSAS

A new tippie for mine No. 2 of the Western Coal & Mining Co. at Denning, is almost completed and the mine will be ready for operation in about a month. The old tippie was destroyed several months ago when the shaft caved in. The shaft is nearly 100 ft. deep.

The store and office building of the Bernice Anthracite Coal Co.'s mine, at Russellville, where a strike has been in progress for several months, was dynamited about midnight, Jan. 1. The explosives, which caused considerable damage to the property but injured no one, were placed several feet from the building. The mines have been oper-

ated several months with non-union labor on the 1917 wage scale, union men having gone on a strike when the company refused to operate on a later scale. The miners are said to have been producing 200 tons of coal daily just before the holidays.

Many miners who walked out on strike at Alix, Aug. 19, have returned to work under the reduced wage scale, it is said. It is thought the men returned to the mines because no assistance was forthcoming from District No. 21, United Mine Workers. Only about half of the 175 men who walked out are remaining loyal to the union. Open shop mines are operating every day.

A large steam shovel has been installed in the coal field near Scranton by C. E. Packard and E. P. Linsey.

### COLORADO

John B. Marks, formerly assistant to the president of the Colorado Fuel & Iron Co., has been elevated to the vice-presidency of the corporation as a result of a special meeting held Dec. 30.

B. W. Snodgrass, vice-president of the Victor American Fuel Co., has been appointed president of the same company with headquarters at Denver.

### ILLINOIS

U. S. District Judge English at East St. Louis has appointed Wilbur E. Crane, of Chicago, receiver for the Standard Coal & Coke Co., of which Mr. Crane is president. Application for the receivership was made by a stockholder who charged that the company defaulted on obligations totaling \$128,000, including \$50,000 in bonds, due Dec. 31 last. The board of directors consented to the appointment of a receiver, stating that the company had been operating at a loss for several months. The Standard company is a Delaware corporation and owns properties in Williamson and Sangamon counties, Ill., and in Clarion County, Pa. Total assets as of Sept. 1, 1925, were \$3,868,498 while the outstanding bonded debt of the company was placed at \$1,756,200 in the receivership petition.

The first move toward the reopening of the mines formerly owned by the Southern Gem Coal Corp. and only recently purchased by the Brewerton Coal Co., of Lincoln, was made at the Sesser mine the first week in January, when the new owners started the fan and put pumpmen and examiners into

the shaft to find out the condition of the inside workings. All maintenance men formerly employed at the mine have been paid their back pay by the Brewerton company and indications are that if conditions prove at all favorable, work will be resumed some time during January or early in February.

The St. Ellen coal mine at O'Fallon has resumed operation following a shutdown of 17 months.

The Majestic mine, at DuQuoin, owned by the Crerar-Clinch interests in Chicago, has made a record for steady production, having worked continuously since Oct. 1.

Operators in Saline County are said to be studying the possibility of getting into the Missouri markets as a result of the Interstate Commerce Commission ruling that established rates into that territory on the Burlington, Big Four and Illinois Central railroads beginning Nov. 30. Williamson and Franklin counties have done considerable business in the territory covered by the new rates, but Saline County, up to Nov. 30, was barred. Saline County operators believe that they have a chance to compete for business now and it is expected that selling campaigns will be inaugurated out of St. Louis.

For the first time in several months the Cherry mine at Cherry, operated by the St. Paul Coal Co., employed more than 500 miners every day in the week during the last two weeks in December. Heretofore the miners worked five days per week and this is the only large mine in Bureau County and one of the few large mines in northern Illinois which gives steady employment to miners.

It is reported that the Rowling coal mine at Litchfield, which has been idle for two years, has been sold to R. Williams, of Harrisburg, and will be reopened immediately.

A fire which has been raging for several days on the Hussey dock at Waukegan has threatened hundreds of tons of soft coal. The dock owners have thirty men at work moving the stored coal.

A new record was established at Zeigler Mine No. 2, of the Bell & Zoller Coal Co., at Zeibler, on Dec. 23, when the mine hoisted 7,642 tons of coal from one shaft in 7 hours and 42 minutes. This mine only recently surpassed its former record, establishing a new high record by hoisting 7,640 tons of coal. The mine employs 1,100 men. E. L. Berger is the superintendent.



## INDIANA

Fire on Jan. 2 burned the tippie and loading sheds of the Indian Creek coal mine at Bicknell, owned by the Knox Consolidated Coal Co. The loss was estimated at \$75,000. The origin of the fire, which put 450 men out of employment, was undetermined.

The Crescent Coal Co., at Evansville, has awarded the contract for the construction of an office building on South Third St. The building will be of brick construction and will house all the company's offices.

The Patoka Coal Co., of Petersburg, has opened a new strip mine a few miles from that city and will begin work soon. The company, which is the first to engage in stripping coal in Pike County, has another mine in operation on Sugar Ridge, five miles south of Petersburg.

The Indiana Coal Co. at Sullivan, has filed a preliminary certificate of dissolution.

A federal injunction to prevent repetition of the disturbance at the Bosse Coal Co.'s non-union mine at Buckskin will be sought at once, Walter Korff, general manager of the company, declared. Five miners, who were brought to the mine to prepare it for reopening after 18 months' idleness, were taken from the premises by a group of 300 union miners. Later the five men were found at a railroad station where they had been ordered by their abductors to wait for a train.

## KANSAS

A verdict of \$50,000 damages was awarded by a jury in the Circuit Court at Kansas City to Matt Spann, of Franklin, against the Jackson Walker Coal & Mining Co., of Kansas City. The verdict was the largest returned in a damage suit in that city in several years. While employed by the company at Franklin, Spann suffered an injury to his spine and paralysis resulted. He sued for \$100,000.

Complete returns from the referendum held by the United Mine Workers of District 14 on Dec. 29 show almost unanimous approval of the proposal to postpone the biennial convention from next March until a year later.

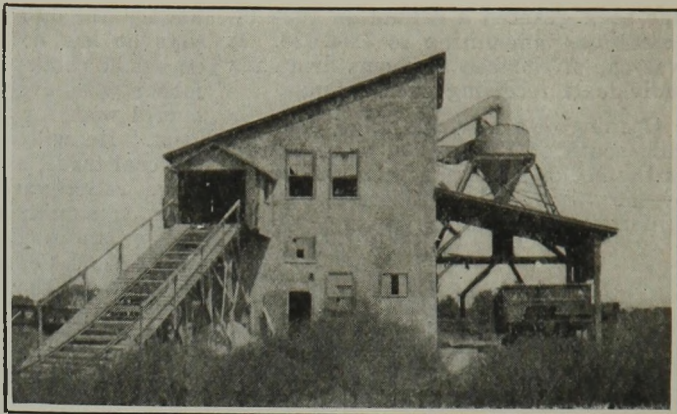
Incendiaries are believed to have set fire to the tippie of mine No. 7 of the Girard Coal Co. at Radley, Dec. 27. The tippie and machinery were destroyed, entailing a loss of about \$10,000. The estate of the late J. R. Crowe, of Kansas City, is the heaviest stockholder.

As a result of the fire which destroyed the washhouse at the Western Coal & Mining Co.'s mine No. 13, near Yale, the night of Jan. 5, each of the 175 men employed there lost about \$15 worth of tools and equipment. A day's operation was lost before new lamps and tools could be obtained.

D. Frank Moore, mining engineer, was killed instantly Dec. 23, when he

## First Rock-Dust Plant

This 20 x 32-ft. pulverizing plant was erected by the Old Ben Coal Corporation at No. 9 mine, West Frankfort, Ill., in 1918, when rock dusting was novel. There was no precedent to follow, but the design was so successful that no important changes have ever been made.



fell 100 ft. down a mine shaft at the Star Mine of the Roseland Coal Co., near Roseland, south of Pittsburg. Mr. Moore had been engaged in the mining activities in the district for 40 years.

Several general officials of the Western Coal & Mining Co. visited the Pittsburg field Jan. 6 to make a special inspection of two new properties, No. 22 being sunk near Arma, and No. 23 at Minden, Mo., which was opened last fall. The Arma shaft is down 250 ft. to the coal and the Minden mine 54 ft. to the coal. Both shafts will be operated with electricity throughout. Tippie and machinery installation are about complete and both mines will soon be put in operation.

Peter Keegan, for several years statistical clerk in the Kansas mine inspection department in Pittsburg, but for the past two years with the U. S. Bureau of Mines, again has his old home town for headquarters, being assigned as foreman miner of the bureau's car No. 6, which is now in Kansas. Mr. Keegan is the son of Francis Keegan, of St. Louis, general superintendent of the Western Coal & Mining Co., who was for many years superintendent of its Kansas mines, with headquarters in Pittsburg.

## KENTUCKY

Gov. W. J. Fields, of Kentucky, in his message to the 1926 Legislature, on Jan. 6, refrained from mentioning the movement for a tonnage tax on coal, which is one of the most discussed matters to come before the 1926 session. The Governor, however, recommended an appropriation of \$75,000 for base mapping of minerals by the Kentucky Geological Survey.

Judge William F. Hall, president of the Three Point Coal Co. and other mining companies in the Harlan field, recently traded the Everett Coal Co., a going and producing concern, for 1,700 acres of farming land near Montgomery, Ala. The Judge said that he intended to rest up a bit and see if there were as many thrills to farming as there are in coal production.

The Main Jellico Coal Co., Williamsburg, has filed amended articles reducing its capital stock from \$500,000 to \$50,000.

The Whitco mines of the Whitesburg Coal Co., in Letcher and Perry coun-

ties, in the Elkhorn seam were leased on Jan. 1 to G. C. Clark, who formerly was superintendent of the mines. Mr. Clark will continue the development of the mines and plans to increase output.

The Trio Coal Co., Madisonville, with a capital of \$30,000 has acquired the Finley Coal Co. and will increase the daily output from 6 to 25 carloads.

Sale of the holdings of the Sullivan Pond Creek Coal Co., on Pond Creek, Dec. 18 has been confirmed. Will M. Smith, well known Pike County farmer, who already owned the land, bought the plant. This mine, which has been closed for several months, is the last of the idle mines on Pond Creek, and with the resumption of production, practically all large mines on the creek will be running on almost a full-time basis. Cincinnati people are taking a controlling interest and will operate the plant. The company will be incorporated in the name of the "Octavia J."

## MINNESOTA

The Civic and Commerce Association of Minneapolis, in its annual business review for 1925, places fuel at \$6,000,000 for the year, the same as for the preceding year. Most other commodities show a gain over 1924. Petroleum products are placed at \$160,000,000 against \$145,000,000 for the previous year. There is much speculation on what portion of the increase represented the displacement of coal by fuel oil.

## MISSOURI

W. B. McGregor, of Brookfield, a member of the Board of Penal Institutions, says that a coal mine has been opened in Callaway County, near Holt Summit, with convict labor, which will provide more than enough coal to supply the Penitentiary and leave a considerable surplus for state institutions. There is a large supply of coal in sight, he said. He estimated the saving by the state mining its own coal for the Penitentiary at \$2,000 a month. The board employs forty convicts in the mines.

## MONTANA

The West Virginia Coal Co. of Missouri, Boatmen's Bank Bldg., St. Louis,



has been granted a refund on 1925 income taxes amounting to \$152,635. It was one of thirteen St. Louis firms and individuals receiving such refunds.

Opening of a new coal mine, one-half mile south of Burlington, to be known as the Miller mine, has been announced by the owners, W. E. Gross and A. L. Miller, of Burlington.

## OHIO

The Pan-Handle Collieries Co., of Columbus, has filed suit in the Franklin County common pleas court to recover \$12,100 from the estate of the late David C. Thomas, who was associated with the present owners of the company during his life. It is alleged that Mr. Thomas contracted to purchase \$20,000 worth of stock in the company on which he had paid \$7,900 at the time of his death.

The Ohio Collieries Co. has put into operation Mine No. 210, located north of Athens, after an idleness of more than seven months. About 300 miners are producing 1,800 tons daily.

The Columbus Board of Purchase has rejected all bids received Dec. 23 for approximately 27,000 tons of nut, pea and slack for various city departments and will readvertise for bids Jan. 27 for five-sixths of the original tonnage including 12,500 tons of Ohio nut, pea and slack for the municipal light plant; 7,000 tons for the Scioto River pumping station; 2,500 tons for the garbage disposal plant, and 500 tons of West Virginia nut, pea and slack for the coal pulverizer at the garbage disposal plant.

The Kentenia Coal Co., Cincinnati, is in the process of liquidation. Its business and good will, which consists of the production from several mines in the Hazard and Harlan sections of Kentucky, has been taken over by the Midland Coal Sales Co. which thus adds about 300,000 tons a year to its disposal. According to P. H. Henry, president of the Kentenia company, all claims will be met and a surplus divided

among the stockholders. Mr. Henry says he has not decided what he will do but he cannot see any chance for the jobber with overproduction to be contended with for the next five years at least. He will not be entirely out of the coal trade, as he is part owner of a large retail yard in Detroit. W. G. Polk, treasurer of the company, is a heavy stockholder in the Tennessee Jellico Coal Co. and will devote all of his time to the operating end of the business.

## PENNSYLVANIA

The Reading Co. transported 2,126,428 gross tons of bituminous coal during November, 1925, as compared with 1,516,016 gross tons in November, 1924, according to a report of Albert B. Bierck, comptroller.

The following changes have been made in the personnel of the organization of the Snowdon Coke Co. effective Jan. 1: William T. McKnight retired as secretary of the company and was succeeded by William D. Rankin, auditor of Pittsburgh, who will retain the same office in the Farmers Bank Bldg. Mr. McKnight retires from active business and will spend his time looking after his personal interests, also keeping an office in the same building. Edward H. Cox, of Uniontown, Pa., resigned as general manager of the company.

## TENNESSEE

W. B. Dimmick, general superintendent of the Ridgway Sprinkle Co., owner and operator of the Buffalo Creek Coal Co. at Helenwood, Tenn., while in Cincinnati recently said that thousands of dollars in improvements had already been put in these mines and other mechanical betterments would soon be started.

## UTAH

The Gordon Creek Coal Co. has received a permit from the Securities Commission renewing its right to sell 10,000 shares of 6 per cent guaranteed

cumulative preferred stock at 20 per cent commission. A share of common stock goes with two shares of preferred, the total price being \$10.

## VIRGINIA

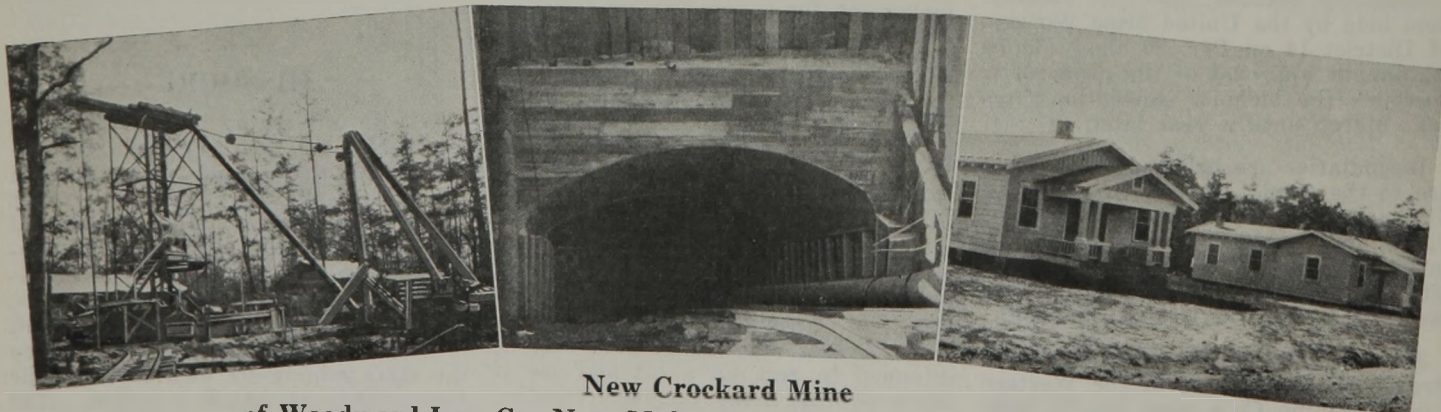
All the large mines in the state are going full blast, and many of them are working day and night according to A. G. Lucas, chief mine inspector of the Virginia state bureau of labor and industry. A number of the smaller mines which have been idle have been reopened. All the miners have plenty of work, and the operators are taking on everybody that comes along looking for a job.

## WEST VIRGINIA

One of the largest coal land deals consummated recently was announced last week by Howard W. Showalter, president of the Continental Coal Co., of Fairmont, which purchased 1,000 acres of undeveloped Sewickley coal land in two 500-acre tracts for \$300,000 in the Scotts Run section of Monongalia County. One block was purchased from Mr. and Mrs. D. E. Lemley and Dr. and Mrs. Chesney M. Ramage and the other from the David Henderson heirs and the Tennant heirs, both being located in Cass district. This gives Brock mine a total of 1,800 acres of choice Sewickley coal land and makes this plant the largest producing mine in the 12½ counties of northern West Virginia. Its present capacity of 3,000 tons in eight hours will be increased to 4,000 tons by April 1, Mr. Showalter predicts. The plant works non-union and on the 1917 wage scale.

The Baltimore & Ohio R.R. attained a new performance record over the Allegheny Mountains, east of Grafton, in December, when a daily average of 1,089 loaded cars were moved. In the 31-day period there were 33,759 cars moved over the mountains. It is estimated that from 65 to 70 per cent of this freight was coal.

The Imperial Coal Corporation of Johnstown, Pa., which purchased the



**New Crockard Mine  
of Woodward Iron Co., Near Mulga, Ala., Is Almost Ready to Produce**

The photograph on the left snapped on Nov. 14, the day the coal was hit, shows the contractors' top equipment for sinking and concreting the skip shaft of the new mine. This shaft, 17 ft. 8½ in. x 7 ft. 1 in. with elliptical ends and 517 ft. deep to the top of the coal is lined all the way down with reinforced concrete. The Crockard mine taps, at a record depth for that coal, a virgin area in the Pratt seam. Two 6-ton skips operated by an electric hoist will pro-

vide a hoisting capacity of 6,000 tons in 9 hr.

The center illustration shows the concrete portal of the partially-completed 8 x 16-ft. man-and-material slope. This slope, which will hit the coal at 937 ft. has already been driven 635 ft. A short distance from the portal a 90-ft. shaft connects into one side of the slope. This shaft will be equipped with a temporary fan and used as an outlet airway for the slope until

the mine has been developed to a point where another opening in a nearby hollow will connect with the surface. Finally, the 90-ft. shaft will be a permanent air intake in parallel with the manway portal.

A few houses, representing the standard set for the entire camp, already have been built at the Crockard mine. These houses are a five-room type, spaced 60 ft. apart, and equipped with strictly modern plumbing throughout.



Yukon mine of the Whyel Coal & Coke Co. recently, assumed charge of the property Jan. 4.

According to a statement made to Congressman J. Alfred Taylor of West Virginia by the Bureau of Mines, the Governor anticipates that the state will handle about 185,000 tons of New River coal from Raleigh and Fayette counties during the current fiscal year.

## CANADA

The Nova Scotia Coal Commission has completed its investigation and its report will be submitted to the government in a few days. Sir Andrew Rae Duncan, chairman of the commission, will return to England soon.

## Traffic

### Would Uphold Decision on Rates To Chicago District

Examiner R. L. Shanafelt of the Interstate Commerce Commission has made a report in Docket 11224, Chicago Coal Merchants' Assn., vs. Director General, as agent for the Santa Fe R.R. et al., recommending that the Commission find in accordance with its previous decisions, which is that interstate rates on coal from various producing regions to the Chicago switching district, higher to some delivery points than to Chicago itself, are not unreasonable, but that they are unduly prejudicial, the same as previously found. This is the third or fourth hearing in this case.

The substance of the previous decision was that the Commission found not unreasonable the rates assailed on coal from mines in Pennsylvania, Maryland, West Virginia, Ohio, Kentucky, Indiana and Illinois to points within the Chicago district and certain points in Illinois just beyond that district on the north and west. In other findings of undue preference and prejudice the Commission required reductions in the spread between the rates to Chicago and the points beyond the district on bituminous and anthracite coal from mines other than those in Illinois and Indiana, and the maintenance of rates on both kinds of coal from all mines to Greenwood Street in Evanston, Ill., on the Evanston basis.

In the Commission's decision just preceding this one it found that the rates on coal from origins involved to the Chicago district were not unreasonable, but that such rates were unduly prejudicial to the points within the district taking the higher rates.

### Halts Increase in Breeze Rates

Increases in rates on coke breeze from the Birmingham (Ala.) district to St. Louis, Mo., and related points, which were to have become effective Jan. 4, have been suspended until May 4 by the Interstate Commerce Commission. The tariffs affected are Louisville & Nashville R.R. supplement 5 to tariff I. C. C. No. A-15643; Mobile & Ohio I. C. C. No. B-708 and St. Louis-San Francisco supplements 9 and 10 to

I. C. C. 8524. The Commission has instituted an inquiry into the reasonableness of the proposed advances under I. & S. Docket No. 2576.

### Car-Distribution on D. & S. L. Unfair, Says Examiner

Examiner John T. Money of the Interstate Commerce Commission has made a proposed report in Docket 14968, Victor American Fuel Co. et al. vs. Denver & Salt Lake R.R., et al., involving the distribution of cars to coal mines between Aug. 1 and April 6, 1923. The examiner finds for the complainants on practically all points raised. It is in substance an assigned-car case, but involves certain other phases of the car-distribution rules incident to the placing of equipment.

It seems that the Denver & Salt Lake placed cars at some coal mines without charging them against the mines, as provided by par. 12, Sec. 1 of the Transportation Act. The examiner says the Commission should find defendant railroad's rules, regulations and practices are unreasonable, unlawful and unduly prejudicial; that its special practice of not counting cars against the mine's distributive share for railway fuel loading is unlawful and unduly prejudicial; that certain defendant coal companies have received an undue preference with their knowledge and consent by reason of their agreement with the carrier and the practice of the carrier under that agreement.

After a 30-page mimeographed report, in which the rules operating on the railroad are gone into in great detail, the examiner recommends that the coal operators on the Denver & Salt Lake R.R. and the officers of that line get together and promulgate rules that will avoid any preference to any shippers and set up a basis of rules that will be satisfactory to all concerned.

### New York Canal Traffic Light

Transportation of coal through the New York State canals during 1925 decreased considerably compared with the tonnage carried in the previous year. Shipments of anthracite up to the end of September, when the effects of the strike began to be noticeable, were only 1,598 tons less than the tonnage for the corresponding period of 1924, but the total for the year shows that 35,560 tons was transported northbound via the Champlain Division, a decrease of 12,712 tons in comparison with the previous year. During the year 1,642 tons of bituminous coal was transported as compared with 3,471 tons carried in 1924.

### Hearing to Equalize Coke Rates On Boston & Albany R. R.

Joseph Weed, chairman of the Coal & Coke Committee, Trunk Line Territory, announces that a hearing will be held at 11 a.m. Jan. 28, at 143 Liberty Street, New York, to consider adjustment of rates on coke, coke breeze, coke dust and coke screenings from Geneva, Solvay and Syracuse, N. Y., to various stations on the Boston & Albany R.R. The reason given for the investigation is a desire to establish rates in line

with rates for similar distances from other shipping points in Trunk Line Territory to New England.

As an illustration, the present rate to Brookview, N. Y., from Geneva is \$3.28; it is proposed to make it \$3.02; the present rate from Geneva to Pittsfield, Mass., is \$3.28; it is proposed to make it \$3.15; the present rate from Solvay and Syracuse to Mellenville, N. Y., is \$2.77; it is proposed to make it \$2.90; the present rate from Solvay and Syracuse to Pittsfield is \$2.77; it is proposed to make it \$3.02; the present rate from Solvay and Syracuse to Springfield, Mass., is \$2.77; it is proposed to make it \$3.28.

There are about as many increases as reductions except that increases seem to be greater to distant points; for instance, the present rate from Geneva to Framingham, Mass., is \$3.28, and it is proposed to make it \$3.91; the present rate from Solvay and Syracuse is \$2.77, and it is proposed to make it \$3.65.

### N. Y. Central Joint Rates On Coke Approved

The New York Public Service Commission has approved new rates of the New York Central (East) on coke, coke breeze and coke dust from Troy to New York, Ontario & Western stations: Eaton to Bernards, inclusive, \$2.65; Constantia to Fulton, inclusive, \$2.77; Minetto and Oswego, \$2.90; New Hartford and Clinton, \$2.39; Franklin Springs to Bouckville, inclusive, \$2.52; Pecksport and Hamilton, \$2.65; Randallville to Galena, inclusive, \$2.65; Galena to New Berlin Junction, inclusive, \$2.77; Sidney to Walton, inclusive, \$2.90; Beerston to Fish's Eddy, inclusive, \$3.02; East Branch to Livingston Manor, inclusive, \$3.28; Summitville, \$3.40; Port Jervis, \$3.53; Phillipsport to Kerhonkson, inclusive, \$3.40; Accord to Hurley, inclusive, \$3.53; Mamakating to Middletown, inclusive, \$3.40; Crystal Run to Firthcliffe, inclusive, \$3.53; effective Jan. 30, 1926. No joint rates heretofore have been in effect.

## Obituary

**Frank L. Fisher**, vice-president of the Harvey Coal Corporation, Harvorton, Ky., interested in other coal-mining properties and a large holder of coal lands, died Dec. 31 at his home in Knoxville, Tenn., at the age of 76. Mr. Fisher also was president of the East Tennessee National Bank.

## Association Activities

The Chicago Wholesale Coal Shippers' Association held its annual meeting at the Great Northern Hotel Jan. 6 and elected these officers for the coming year: John N. McCabe, of the Gruschow-McCabe Coal Co., president, succeeding R. B. Starek; James Andersen, of C. M. Moderwell & Co., vice-president, succeeding John N. McCabe; Geo. H. Merryweather, of the Waubun Coal Co. and the National Wholesale Coal Association, re-elected secretary; Fred A. Brahm, of the Platt & Brahm Coal Co., re-elected treasurer. Directors, J. B. Beardsley, of the Mitchell & Dillon Coal Co.; George H. Bridges, of D. E. McMillan & Brother; P. H. Holland, of the Holland Coal Co.; T. C. Irwin, of the Abbott-Irwin Coal Co.; Roscoe B. Starek, of the D. C. Shoemaker Coal Co.; William C. Hill, of the E. F. Daniels Coal Co., and George S. Wood, of the George S. Wood Coal Co.



## Coming Meetings

**The Engineers Society of Northeastern Pennsylvania.** Annual banquet at Hotel Sterling, Wilkes-Barre, Pa., 6:30 p.m. Thursday, Jan. 21. Secretary, T. F. McKenna, Scranton, Pa.

**Hazard Coal Operators' Exchange.** Annual meeting Jan. 22, at Lexington, Ky. Secretary, J. E. Johnson, Lexington, Ky.

**American Wood Preservers' Association.** Annual meeting, Jan. 26-28, 1926, at Cleveland, Ohio. Secretary, E. J. Stocking, Chicago, Ill.

**Coal Club of Philadelphia.** Annual meeting, Jan. 28, 1926, at the Bellevue-Stratford Hotel, Philadelphia, Pa. Secretary, C. K. Scull, Philadelphia, Pa.

**Northeast Kentucky Coal Association.** Annual meeting, Jan. 28, 1926, at Ventura Hotel, Ashland, Ky. Secretary, C. J. Neekamp, Ashland, Ky.

**American Institute of Electrical Engineers.** Annual convention, Feb. 8-12, 1926, at Engineering Societies Bldg., New York City. Secretary, F. L. Hutchinson, 29 West 39th St., New York City.

**American Institute of Mining and Metallurgical Engineers.** Annual meeting, Feb. 15-17, 1926, at Engineering Societies Building, New York City. Secretary, Dr. H. Foster Bain, 29 West 39th St., New York.

**The Rocky Mountain Mining Institute.** Winter meeting, Feb. 23-25, 1926, at Albany Hotel, Denver, Colo. Secretary, Benedict Shubart, Boston Building, Denver, Colo.

## New Companies

**The Baby Grand Coal Co.** has been incorporated at Paris, Ark., by C. W. Stone and L. B. Bench.

**The Lilly Meade Coal Corporation,** Owensboro, Ky., capital \$14,000 has been chartered by R. L. O'Bryan, William O'Bryan and William J. Mulligan.

**The Day Coal Mining Co.** of Whitesburg, with a capital of \$5,000 has been incorporated at Frankfort, Ky., by S. B. Pearce, C. H. Latimore and D. R. Tomb.

## Industrial Notes

**The Pennsylvania Crusher Co.** moved its general offices on Jan. 1, 1926, from the Stephen Girard Building to the new Liberty Trust Building, at Broad and Arch Sts., Philadelphia, Pa.

**The Climax Engineering Co.,** Clinton, Iowa, announces the appointment of F. M. O'Laughlin as sales representative for its Eastern sales territory. Mr. O'Laughlin will make his headquarters at the company's offices, 30 East 42d Street, New York City. Previous to his connection with the Climax company, Mr. O'Laughlin was assistant manager of the New York office of the Buffalo Gasoline Motor Co. George A. Colley, who previously represented the Climax Engineering Co., has associated himself with the A. G. Griesse Co., New York City.

**The Drake Non-Clinkering Furnace Block Co.,** of New York, announces that Alfred Campbell, formerly district sales representative in the Pittsburgh and Cincinnati territories, has been appointed general manager of the company, and D. B. Wilson has been appointed district sales representative in Philadelphia and also is in charge of Baltimore and Philadelphia territories. Harry Baumgartner has been retained as refractory engineer.

**The Maxim Silencer Co.,** of Hartford, Conn., manufacturer of silencers for industrial machinery, has appointed W. O. Whitney sales manager, effective Jan. 1, 1926. Mr. Whitney formerly was with the Brunswick-Kroeschell Co., New Brunswick, N. J., manufacturer of refrigerating machinery.

All designs, patterns, patents and good will covering Earle centrifugal pumps have been sold to the **Aldrich Pump Co.,** Allentown, Pa. This transfer will in no way

## New Equipment

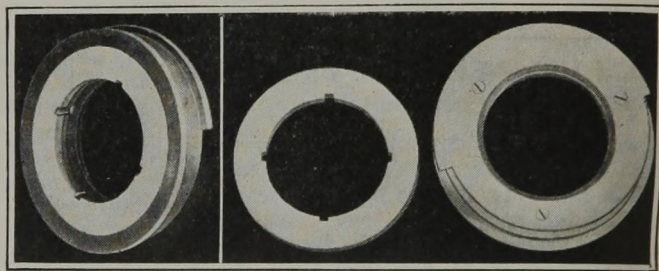
### Adjustable Ring Maintains Pump Efficiency

In the accompanying illustrations may be seen the adjustable ring recently developed by the Frederick Iron & Steel Co. for use on Frederick pumps. The photographs give a good idea of the appearance of this ring and the cross-section shows its application. This ring, which is known as the "Adjusto" and which is used in pairs, makes it possible to maintain the original efficiency of the pump over long periods.

FIG. 1

#### Two Views of New Ring

There are only five parts: a case ring, a collar and three adjusting screws. All are of bronze, but of differing compositions to avoid corrosion.



When the pump is sent out from the factory the rings are adjusted to give maximum efficiency.

The new ring is made up of only five parts including the binding screws. It consists primarily of two main parts or collars, one threaded into the other, thus affording a means for varying the thickness of the assembled ring and compensating for wear. The outer bronze ring as shown in the section is held stationary within the pump casing by means of its interrupted flanges. It forms the inlet to the impeller. The inner ring, or collar, is threaded into it, being provided with spanner slots on its interior surface and is held in place by three adjusting screws. Both rings, as well as the adjusting screws, are made of bronze but of dif-

ferent compositions to avoid corrosion.

Only running clearance is necessary between this ring and the end of the impeller intake as these two parts will always be separated by a thin film of water. When, after several months of operation, appreciable wear develops at this point and causes the efficiency of the pump to decrease, it is an easy matter to readjust the ring and restore the original efficiency. The screws are first backed off releasing the adjustable ring. This ring is then screwed forward a distance that will give a clearance of

about 0.003 in. between its face and the end of the impeller.

By this means the original efficiency of the pump is restored without the replacement of any parts; and this efficiency can be maintained at all times by merely keeping the rings in proper adjustment relative to the impeller. An outboard thrust bearing keeps the impeller in proper central position within the casing. In order that no seizure may take place between the impeller and the adjustable ring these parts are not only made of unlike metals but the threads on the rings are in such a direction (right or left hand) that any rubbing between the two surfaces tends to back the ring away from the impeller. As now built this ring is applicable to pumps 8 in. in size or larger.

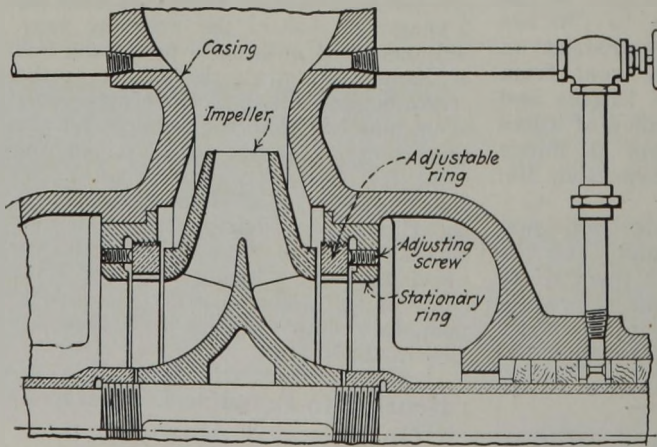


FIG. 2  
Section of Pump

Efficiency of a pump depends upon the tightness of the joint between casing and impeller. These rings render it possible to adjust quickly the clearance of this joint, thus maintaining the original efficiency of the pump indefinitely.

conflict with the Earle Gear & Machine Co.'s regular business of manufacturing Earle cut gears, Earle movable bridge operating machinery, Lea-Simplex cold metal saws and Earle special machinery.

R. B. Sinnock has joined the **Climax Engineering Co.,** Clinton, Iowa, as a sales representative. He will make his headquarters at Clinton and will handle sales of Climax gasoline engines in the territory adjacent to that point. Mr. Sinnock was previously a member of the sales force of

the Dayton-Dowd Co., Quincy, Ill. C. H. Adams also has been appointed a sales representative for the Climax company, and will travel throughout the southeastern portion of the United States. Mr. Adams has had a wide experience in the sale of mechanical equipment throughout that territory. Climax engines are used not only in industrial equipment such as cranes, shovels, locomotives, excavators, etc., but also as power units for operating pumps, generators, hoists, etc.