

COAL AGE

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What Can the National Coal Association Do?

MANY WONDER whether anything is gained by an association among coal men, yet men in nearly every industry bind themselves together and find the practice helpful. Some of our forefathers questioned whether they desired any United States. They said let the various commonwealths come together to meet an emergency, just as the coal men met in the war when dangers assailed the industry. They proposed to be separate in the interim. The question was settled. The states of America have become the United States. One cannot conceive conditions otherwise. Secession would now be regarded as criminal and suicidal. Some day coal men will wonder how anyone could seriously question the necessity for unity in their counsels if not unanimity in opinion and union in action.

The statistical work of the National Coal Association if conducted in a careful manner should do much to prevent undue development in the industry. When the coal men and the public learn the facts regarding production costs and market prices they will be able to see what the profit in the industry really is, and we shall not find so many anxious to enter the overcrowded ranks of producers. The public has only a small conception of the many items entering into the production of coal and believes that all the men in the mines are "miners" and that what is paid them is and should be the whole cost of producing coal.

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During the past week the National Coal Association met in its ninth annual convention and the present issue is largely devoted to its proceedings. Never has the Association produced more striking contributions to the progress of the industry. Early meetings were marked by severe repression. The papers presented were feeble indeed compared with those of the recent meeting, many of which appear almost in full in the pages that follow. Any one reading them, even if possessed by a complex against the industry, will realize that the operators met with the intention of solving the problems that confront them and the nation, with a constructive program, not perhaps definitely formulated but in process of formulation.

Few organizations have a complete program covering all phases of development. This nation itself, as a whole, has no definite plans. A few general principles govern us in the direction of our domestic and foreign relations; but about many matters we are still greatly at variance. Yet we, as a nation, have had not nine anniversaries but over a hundred. No one has up to the present written in plain unmistakable language a statement of the principles to which nationally we

adhere, and if they should be written they would lack much of meeting the many complex situations which we as a nation face. As the American people are divided and irresolute about certain matters, so we cannot anticipate perfect unanimity among coal operators.

* * *

But the National Coal Association apart from the formulation of policies has a definite reason for being. When operators learn just how much coal is going into a certain market and what the price in that market actually is, at any moment, we will have fewer no-bill cars and less distress coal. When mine workers who malingers, who will not work, who do not pay their bills or who do not protect their lives and limbs have their records writ plain we shall soon eradicate them from industry. A like exodus of wholesalers and retailers who will not pay their bills will occur when their records also are known and tabulated.

Though what follows may not represent the purpose of the Association, the coal operators, when they meet together, will absorb a sense of mutuality. It may pay better at times to produce coal at a loss rather than to leave houses empty and mines deteriorating, but a sense of solidarity will induce operators to regard this practice as one harmful to the coal industry as a whole and to themselves also in particular. They will also learn that large immediate gains bring misfortune on the industry, adverse criticism and legislation, excessive development and demoralization, and a disposition eventually will be established to correct these evils. This attitude of mind will not establish itself immediately nor uniformly, but the sense of solidarity will come in time, and the men of the industry will at length come to have courtesy rules that condemn alike excessive profit and unbridled competition as being entirely contrary to the spirit of the times.

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The National Coal Association is determined, while living strictly within the law, to develop, and will eventually create, the right spirit. All operators who wish for the industry a day when it will serve itself and the nation better than in the past should be found in its ranks.

Think a minute. Our interest in the success of the United States exceeds our personal interests in our own industry. If we did not have good government, order and a proper public sentiment in this country we would not have the basis for even endurable existence. So with the coal business—it is profitable, progressive, healthful only if we have taken time, not only for the proper handling of our affairs, but the proper direction of the corporate business of the whole industry.

National Coal Association Spends Three Days Formulating Plans for Coming Year

Staff Correspondence

EXPANDING SERVICE to meet the growing needs of the bituminous industry was demanded by the operators at the ninth annual convention of the National Coal Association, held at the Drake Hotel, Chicago, June 9-11. More statistical information, more marketing data, more scientific research, greater co-operation within the industry, intensive study of accident prevention work were set forth as services in which the organized bituminous trade should take the lead in furnishing its members.

While attendance was exceeded by that at some of the earlier meetings when war-time control made membership almost obligatory, the convention last week set a new record in genuine interest and enthusiasm and in the broad sweep of the program presented for the consideration of the delegates present. The innovation of group meetings to discuss pooled purchases and sales methods proved specially successful, and the attention given to the safety movement made it certain that the National Coal Association as an organization will play a larger part in accident prevention work in the future.

The convention, in a resolution adopted on the closing day, again went on record as unalterably opposed "to any federal legislation which singles out the coal industry for regulation." At the same time, it was made clear in committee reports and floor discussion that the industry proposed to so enlarge its statistical activities that there would be no excuse for compulsory fact-finding. Continuation of the statistical program undertaken by the association was specifically authorized in another resolution.

Walter Barnum, president of the Pacific Coast Co., with headquarters in New York City, was elected president of the association for the ensuing year. Ira Clemens, president, Clemens Coal Co., Pittsburg, Kan.; Michael Gallagher, general manager, M. A. Hanna Co., Cleveland, Ohio, and George B. Harrington, president, Chicago, Wilmington & Franklin Coal Co., were re-elected vice-presidents. E. C. Mahan, president, Southern Coal & Coke Co., Knoxville, Tenn., was elected vice-president to succeed Mr. Barnum. C. E. Bockus, president, Clinchfield Coal Corporation, New York, was again the choice for treasurer. Harry L. Gandy again was named as executive secretary.

At the opening of the convention on June 9, the following committees were appointed:

Nominations and Elections: Otis Mouser, Virginia, chairman; R. N. Sherwood, Indiana; George Bausewine, Jr., West Virginia; George J. L. Wulff, Missouri, and T. W. Guthrie, Pennsylvania.

Credentials: D. H. Morton, West Virginia, chair-

man; J. C. Nelms, Ohio; Irvin Johnson, Kentucky, and W. L. A. Johnson, Missouri.

Resolutions: Louis C. Madeira, III, Pennsylvania, chairman; John J. Lincoln, West Virginia; Warren Blauvelt, Indiana; C. F. Richardson, Kentucky; P. J. Quealy, Wyoming; George C. Eastwood, Michigan; E. C. Mahan, Tennessee; Lee Long, Virginia, and D. F. Hurd, Ohio.

President M. L. Gould, who had yielded the chair to Mr. Madeira, made his address to the convention a strong plea for increased membership. Those now in the association, he said, constitute "a splendid, loyal nucleus of forward-looking operators, who are contributing their support ungrudgingly to hold the lines firm against the know evils of disintegration and to make steady advances of practical value.

"In our Washington offices we have a most competent staff. It is needless for me to deliver any eulogy of Mr. Gandy. You know him, as I know him, for a most efficient executive, who, in the face of obstacles with which we are all too familiar, has not only held this organization together during the past three years, but has considerably strengthened it."

The association, asserted Mr. Gould, had a construction program which was bound to further the interests of the industry. But more operators must share the financial burdens of carrying out that program. As a private in the ranks, Mr. Gould pledged his support in a membership campaign. "When competitors in this business decide to get together and to direct their efforts toward increased efficiency, such as will come through learning from each other and through widespread co-operative effort, this industry will begin to realize its vast possibilities."

At the conclusion of his address, Mr. Gould was given a unanimous vote of thanks by the delegates for his labors in their behalf during his term of office.

The report of Harry L. Gandy, executive secretary, was a brief review of some of the major activities of the past year. Discussing the threats of regulation, he expressed the belief that time would make it clear that the economic problems of the industry could not be solved by legislation such as now proposed at Washington. Fact-finding, he pointed out, had not averted coal crises in Great Britain. Government intervention in wage disputes had not brought industrial peace. "The record here and in England justifies the statement that the advance recognition of an industrial emergency will bring the emergency. The setting up of a body political to which either side may appeal will make practically certain that employers and employees cannot agree."

Mr. Gandy acquitted the national administration of



Walter Barnum

*M. A. Gallagher**G. B. Harrington**E. C. Mahan*

any desire to injure the industry. "The statement of the Secretary of Commerce before the House committee and his reply to questions indicated a friendly attitude. We may disagree on just what should or should not be done, but at the same time I grant a sincerity of purpose to those with whom we disagree."

The coal trade is making slow, but certain, progress toward better merchandising, reported Mr. Gandy. Statistical activities of local associations are expanding. "That voluntary effort on the part of the industry, and the progress thus far gives promise that it will be successful, will eliminate the reason given by those who advocate statistical activity on a compulsory basis by the federal government."

C. E. Bockus, treasurer, reported that receipts for the year ended March 31, 1926, had totaled \$158,516 and expenses, \$160,309, leaving a deficit of \$1,793, as compared with a deficit exceeding \$23,000 a year ago. Outstanding accounts receivable far exceeded the liabilities. "If we can realize 10c. on the dollar, our association is solvent. I think we can realize at least 50c."

Although 138 association and individual members had been added to the rolls the past year, the losses numerically had outrun these gains, according to the report of S. Pemberton Hutchinson, chairman of the membership committee. The increase in tonnage represented, however, was over 16,000,000 tons.

LOCAL AND GROUP ADVERTISING

Local and group advertising was urged by George B. Harrington, chairman of the committee on publicity, who also reported a more favorable attitude toward the industry on the part of the daily press. There has been little gain in overseas business, said the report of H. N. Taylor, chairman of the committee on foreign trade. American shipping is handicapped by arbitrary laws which inflate costs and work against the export trade. Ira Clemens, chairman of the transportation committee, stated that no major problems had come before his group the past year.

"The price of progress is research," declared Walter Barnum, chairman of the research committee. Those who will not pay the price will fall by the wayside. Until membership in the National Coal Association has been increased, however, the research activities of that

organization must be limited largely to missionary work and co-operation with engineering societies and others engaged in research investigations.

The committee is co-operating with the American Institute of Mining and Metallurgical Engineers and the American Society of Mechanical Engineers in a consolidation of research activities in the mechanization of mines. Contact has been established with the Massachusetts Institute of Technology through membership of the committee of the Institute which gives counsel regarding the graduate course in fuel and gas engineering. The association also is financing a graduate research fellowship in the Carnegie Institute of Technology.

"We are proceeding in a purposeful way as far as our funds will permit. The old saying, 'knowledge is power,' is true. We must equip the rank and file of producing and selling organizations so that they won't be hopelessly handicapped by a lack of knowledge of their own goods and service. How can we meet oil competition, for example, without the rank and file of our industry, not just the occasional expert, being thor-

*Louis C. Madeira III and Harry L. Gandy*



S. P. Hutchinson



M. L. Gould



Ezra Van Horn

oughly at home and familiar with combustion differences and steam costs?"

The oil industry considers a \$500,000 fund for research only a drop in the bucket. "To an industry in greater need of research than is the oil industry," concluded Mr. Barnum, "even half such a drop would be extremely helpful. It would be a humble, but a real, beginning."

SEEK FOR MOTOR FUEL

Coal as the future source of motor fuel was the picture held up in a paper on "Hunting for the Elements Produced by Low-Temperature Distillation." This paper, the work of R. L. Brown and R. B. Cooper, was presented by Mr. Cooper, who is the National Coal Association graduate research fellow at Carnegie. The basis of all motor fuels, said the authors, is carbon. With petroleum reserves diminishing, the commercial conversion of coal into motor fuel cannot be long delayed.

The first general session ended with a review of mine water pollution of streams by Richard D. Leitch, associate chemical engineer, U. S. Bureau of Mines, Pittsburgh, and the report of the credentials committee.

The greater part of the Thursday morning session, presided over by Ezra Van Horn, general manager, Clarkson Coal Mining Co., was given over to a discussion of accident-prevention work. This new departure in the activities of the convention, covered in detail elsewhere in this issue of *Coal Age*, aroused such interest that prosecution of further work along the same lines was authorized in a resolution adopted the next day.

The report of the committee on nominations and elections, approved by the convention, named the following district directors: Walter Barnum, Pacific Coast Co., Washington; C. E. Bockus, Clinchfield Coal Corporation, Virginia; Ira Clemens, Clemens Coal Co., Kansas; T. F. Farrell, Pocahontas Fuel Co., West Virginia; David Ingle, Ayrshire Coal Co., Indiana; T. W. Guthrie, Hillman Coal & Coke Co., and L. C. Madeira, III, Madeira, Hill & Co., Pennsylvania; George B. Harrington, Chicago, Wilmington & Franklin Coal Co., Illinois; H. Denman, Paris Purity Coal Co., Oklahoma, Arkansas and Texas; C. W. Taylor, W. G. Duncan Coal Co., Kentucky; S. L. Yerkes, Grider Coal Sales Agency, Ala-

bama; H. N. Taylor, U. S. Distributing Corporation, Wyoming and Montana; George C. Eastwood, Consolidated Coal Co., Michigan. With the exception of Messrs. Ingle, Denman, C. W. Taylor and Eastwood, the directors named had been chosen to succeed themselves.

For directors at large, the following were elected: P. H. Penna, Indiana Bituminous Coal Operators' Association, Indiana; W. H. Cunningham, Burgess Branch Coal Co., West Virginia; P. J. Quealy, Gunn-Quealy Coal Co., Wyoming; Thomas DeVenny, Williamson Coal Operators' Association, Kentucky. Messrs. Penna, Cunningham and Quealy were elected to succeed themselves.

Voluntary statistical activities upon the part of the industry received the unqualified indorsement of the committee on trade information. Compulsory reporting was as unqualifiedly condemned. "As an industry," said C. E. Bockus, chairman, "we are opposed to any system of compulsory reporting to a federal agency, not because we desire to have the facts concealed, but because we believe that such a move may well prove the first step in the direction of federal regulation of the industry."

In the opinion of the committee there were many lines of desirable statistical activity which the industry should undertake. The association, however, has been concentrating on the promotion of past sales reports, with the idea that, as soon as those reports become general, the organization will then seek to foster other fact compilations.

TAX AND COST ACCOUNTING

The major problems to which the tax and cost-accounting committee had devoted itself during the past year, said R. C. Tway, chairman, in addressing the convention at the closing session on Friday morning, June 11, were the interpretation of Article 224 of the income-tax regulations and changes in the income-tax law of 1926. In this the committee had received the assistance of W. B. Reed, former secretary of the National Coal Association, and now its tax adviser. Routine work included the handling of taxation questions referred to the committee by individual members and the preparation, by Mr. Reed, of short digests of decisions and rulings affecting federal taxation.

Article 224 is the regulation in which distribution

is made between capital charges and expense items. The association has taken the position that expenditures to maintain production should be treated as expense items and expenditures to increase production should be capitalized. Efforts to maintain that position, however, have not been very successful. Each ruling promulgated has appeared more drastic than its predecessor. The most recent decisions, for example, have taken rails and lesser items out of the expense account and put them in the capital account.

The association still is fighting to secure acceptance of its position. The question of interpretation is now before the federal courts in *Beech Creek Coal Co. vs. Collector of Internal Revenue*. The association also is laboring to have the article liberalized in the redrafting of the regulations made necessary by the new income-tax law "to eliminate all reference to major and minor items of expense or to the probable duration of the life of the article for which the expense was incurred. It would base the distinction absolutely and solely upon the question of the effect of the expenditure upon output or upon cost of production."

CAPITAL-STOCK TAX IS PROPERTY LEVY

During the consideration of the new tax law by Congress the association filed a brief opposing the capital-stock tax, the stamp tax on original issues of stock and the retroactive features of section 204 of the act of 1924. The capital-stock tax, the committee emphasized, had to be paid regardless of earnings and was virtually a property tax. "Though definite figures are not available as to capital investment in the bituminous industry on which the tax was based, yet a conservative estimate would be that the repeal of the capital-stock tax law saved the bituminous operators something between \$2,000,000 and \$3,000,000 annually."

Trade information, stream pollution, a threatened transfer of safety work to the Bureau of Labor Statistics, proposed modifications of the Sherman anti-trust law and the campaign for regulation of the coal industry were the subjects discussed in the report of the government-relations committee presented by W. H. Cunningham, chairman. The committee commended the revival of statistical activity and indorsed the recom-

mendations of the trade information committee for an expansion of that work. While stream pollution was a local, not a federal, matter, so many mines are affected that the organization should keep in touch with developments to prevent injustice being done.

The committee reported success in its representations to Congress that the proposal to establish a division of labor safety in the Department of Labor should exempt the mining industry and leave the safety work under the control of the Bureau of Mines.

FACING ALL ISSUES SQUARELY

Reviewing the drive for federal legislation on coal, Mr. Cunningham declared that "the association conducted no lobby, it made no pussyfooting efforts. It faced the issue squarely. It believed the industry had nothing to hide. The effort against legislation was made without apology; the record of the industry was cited with pride.

"The present Congressional session is nearing its end, and it is the belief of many who are in touch with the situation that there will be no further activity for coal legislation before adjournment. The bills mentioned (the Copeland and Parker measures) will go over to the December session, where efforts may again have to be made on behalf of the industry.

"In fact, gentlemen, this is a continuing effort for the protection of the industry. There is a part of our citizenry constantly striving for increased governmental activities. Bituminous operators must always be on the alert. They should strengthen their position by strengthening their local associations and in turn strengthening their national association. Further, they should make it their business at all times to fully acquaint their fellow citizens—and that includes members of Congress—with the fact that the bituminous industry is fueling this great nation at a lower cost than that enjoyed by any other coal-consuming public in the world."

In the discussion which followed the reading of the report, C. F. Richardson, West Kentucky Coal Co., urged members to keep in touch with the national law-makers. J. G. Bradley, Elk River Coal & Lumber Co., declared that the coal industry did not want the



R. C. Tway



Melvin Traylor



H. B. Lindsay

government to deprive it of its initiative and to take away the responsibility the operators had towards their stockholders and their employees. E. C. Mahan, Southern Coal & Coke Co., said that the efforts of the National Coal Association at Washington had prevented legislation and had placed the industry in a more favorable light with the public.

WHAT THE COAL INDUSTRY NEEDS

The essentials required for the successful and independent conduct of the bituminous industry, as seen by Melvin A. Traylor, president of the First National Bank, Chicago, and first vice-president of the American Bankers' Association, who addressed the convention on "The Layman's Viewpoint," are:

(1) Peace within the industry, meaning thereby freedom from labor troubles, and continuous operation with an adequate supply of coal.

(2) Constant striving for more efficient salesmanship and such better marketing conditions as will bring fair prices at all times—fair prices to the operators, the miners and the public.

(3) Provision for continuous fact-finding and publication of statistics by the industry itself.

The wisdom displayed in the coal industry, said the banker, "seemingly has not kept pace with its importance and its extent. The history of coal mining is an account of a long series of quarrels between operators and employees, and the blame has apparently lain with both parties to the quarrel." In support of this contention, Mr. Traylor traced the union movement in Great Britain and the growth of the socialistic conception among the mine workers there. On this side of the water, he admitted, socialism has been less rampant, but labor disturbances have been too frequent.

"The public," he maintained, "should not be expected to tolerate periodic dislocation of our economic structure simply because the various parties in an industry seem unable to compose their differences without a complete cessation of work for some months." Eleven per cent of the strikes in this country have been in the coal industry. This record is exceeded only by the building trades, with 19½ per cent, but these latter strikes were less important and involved far fewer men. Strikes are followed by investigations, but little or no improve-

ment in the situation. "Are we going to admit the failure of individual enterprise and end with nationalization?"

Unless the industry can demonstrate its ability to settle its own affairs, warned Mr. Traylor, government control will be inevitable. Federal supervision was not the curse commonly painted, but it can cure no ills. It can merely watch the symptoms and give the alarm if danger approaches. The ills of coal have been diagnosed with care and precision. Overdevelopment, accentuated by the war, is generally recognized as the fundamental cause of bituminous instability.

"Inseparably bound up with the factor of overdevelopment is the factor of labor relations. That strikes tend to cause overdevelopment has been well understood, but it is quite as important to understand that overdevelopment causes strikes. Competition between fields with a fixed labor cost and other fields with a flexible labor cost makes the industry fundamentally unstable and tends to increase overdevelopment. Hence, a permanent cure for overdevelopment must provide something like uniformity of labor standards.

"In a broad sense it is economically unsound that one-half of the industry should be governed by a fixed and the other half by a flexible labor cost. A rigid wage rate spread uniformly over a wide territory where working conditions and living costs vary materially is also illogical. The ideal wage contract, flexible to the point of adjusting earnings to various working conditions and to the changes in living costs and profits in the industry, is not in sight for the immediate future, but we may expect a gradual improvement in the mutual understanding by employers and employees of each other's problems and needs, from which improved relations between them, contractual and otherwise, will naturally ensue."

This development of better labor relations, continued Mr. Traylor, must be left to the industry itself. "The government can do no more than enforce the law and protect both sides in the exercise of their rights as citizens so that the issues can be settled by peaceful means and not by force. This calls for the suppression of lawlessness, both in union communities like Herrin and in the non-union mountains of West Virginia and Kentucky. The public should insist that the



J. G. Bradley



John H. Jones



D. H. Pape

collective bargaining question should be decided in each district on its merits by the employers and the men who work in the mines, and should condemn any resort to violence by either party."

Elimination of high-cost operations is the obvious remedy for the present unstable conditions. It had been hoped to accomplish this by the long-term Jacksonville agreement, but this hope was blasted by the competition of non-union mines. The law of supply and demand has been working against the union fields. "The penalty has, in many cases, fallen upon operations not basically uneconomical, but placed in that category by a situation which imposed on them a higher cost of production than prevailed in competitive fields in non-union territory."

Larger units of production were recommended as one of the steps in the ultimate solution of the problem. "Gradually we are beginning to realize that under modern conditions large corporations offer the only means of handling certain of our industries effectively and economically. Under unified control of financial and physical operations it would be possible to accomplish more effectively the economies inherent in co-operative marketing associations. The elimination of unnecessary costs in distribution, improvements in methods and standards of quality, building up wider markets, adjustments of production to fluctuations in demand, and the disappearance of surplus mines and workers are possibilities which can most effectively be realized under consolidations of ownership. The first practical step in promoting the plan is to impress the idea upon operators, financial interests and the public."

STUMBLE ALONG AFTER GREAT BRITAIN

In the closing minutes of the session, Retiring President Gould conducted his successor to the chair amid applause. Mr. Barnum declared that he saw three major problems confronting the association—government relations, research and membership. "Unless we are careful," he said, "we may find to our dismay that Great Britain has written the history of our coal industry in advance."

Turning to research he stated that if the gas companies could market their product at 50c. per 1,000 cu.ft., fuel-oil competition would be eliminated. The disparity between summer and winter loads at this time prevents this and holds back the campaign for domestic heating business. The gas interests, however, are trying to find new summer markets or methods of storing gas in summer for winter use. The accomplishment of either of these ends means a broader market for coal.

Another possibility is the development of an automatic stoker for domestic furnaces. Experiments are being made with equipment to carry a hopper charge of 500 to 1,000 lb. of coal and to be electrically controlled. One test with high-ash, low B.t.u. coal had given 7 lb. of steam per pound of coal. The perfecting of such equipment also would put fuel oil at a disadvantage. With these possibilities in mind, President Barnum felt that the day when increased coal consumption would offset the deductions due to increased efficiency was not so far distant.

The resolution of the National Retail Coal Merchants' Association for co-operation in working out and using a slogan to advertise the use of coal was read and referred to the publicity committee.

Association Shows Active Interest in Safety

Records of Employees Essential to Keep Compensation Rates at Minimum—Problems of the Convalescent

Staff Correspondence

COMPLETE ELIMINATION of all preventable accidents was the goal set for the coal mining industry at the safety conference held at the Drake Hotel, Chicago, June 10, as part of the program of the ninth annual convention of the National Coal Association. There was general agreement among the coal men present that education of the workers was the most necessary step in accomplishing this result. This educational campaign, it was felt, could be made most effective if put upon a competitive basis. More complete records on the accident history of individual employees and more intensive studies of accident curves plotted from mine records also were urged as aids in reducing the number of accidents.

MAN THE BIGGEST OF OUR HAZARDS

The human element is the biggest factor in accident-prevention work, declared Phil H. Penna, chairman of the committee on safety, in opening the discussion. "Recklessness is a typical American characteristic. It is not only in the coal-mining industry that deaths in the United States are at a higher rate than in European countries. The same thing is true of practically all occupations and is to be accounted for to a considerable extent by the unfortunate readiness of American workmen to take chances.

"In many industries the individual pays the penalty of his own heedlessness. In our industry, on the other hand, only too frequently the carelessness of one causes the injury of others, as well as the destruction of property and loss of time to the operator. Your committee believes that it cannot put too much emphasis on the importance of training the individual in 'safety-first' knowledge and habits. It believes that money expended in promoting proper carefulness on the part of mine employees will be returned manyfold to the operators incurring it."

Mr. Penna cited the rapid increase in the number of chapters of the Joseph A. Holmes Safety Association as proof that interest in the safety movement is growing. The association at its last annual meeting divorced itself from all legal control and responsibility for the local chapters, which now are members of an unincorporated society known as the Holmes Safety Association. The parent body continues as a national incorporated organization.

How one company by reorganizing its safety work was able to reduce its accident rate per 1,000 man-days from 1.33 to 0.71 per cent in less than three years was explained to the convention by J. William Wetter, general manager of the bituminous operations of Madeira, Hill & Co.

Competition is the keynote of the accident-prevention campaign undertaken by producers in the Southeast, according to R. E. Howe, secretary, Southern Appalachian Coal Operators' Association, who addressed the convention on "One Way to Interest Employees in Safety Work." His organization has formed a sub-



Phil H. Penna

Secretary-Treasurer
of Indiana Coal
Operators Association
and Chairman
of the Committee
on Safety.

subsidiary body known as the Southern Appalachian Efficiency Association to which superintendents, mine foremen, safety inspectors, fire bosses, electricians and other key men belong.

Accident prevention, of course, is the most certain method of keeping the cost of compensation insurance to the minimum, stated J. T. Rupli, superintendent of the compensation department of the Chicago, Wilmington & Franklin Coal Co. Without minimizing the importance of preventive work, however, it was the speaker's opinion that the industry had not given enough attention to the efficient handling of the accident situation after the accident has occurred. One great drawback to this consideration has been the "compensation complex." Operators have treated compensation claims as a matter of insurance instead of as an operating problem, despite the fact that insurance rates are based upon the physical and moral hazards of the industry and its accident experience.

As the first step in reducing compensation costs after accidents, Mr. Rupli recommended the establishment of compensation or personnel bureaus to maintain personal contact with injured employees and function as a connecting link between the operating department and the insurance agency. Another necessary step is to employ only men physically fit for the jobs to which they may be assigned. Administration of first-aid by specially trained men is essential. Inexpert first-aid treatment in many cases does more harm than good and may aggravate the injury.

REPORT BEFORE AGGRAVATION OR INFECTION

Every injured man should be required to report to the company surgeon or doctor for examination at the earliest practical moment. Such a requirement safeguards all parties of interest. The injured man receives proper treatment, the employer receives the necessary statistical and medical data, and malingering and fraudulent claims are effectively discouraged. The personal contact maintained with the injured by the compensation bureau likewise reduces the number of unnecessary claims and also impresses the employee with a sense of company interest in his welfare. Working of the "compensation complex" under such conditions is impossible.

When the injured man is ready to return to work, the decision whether he is able to resume his former tasks or should be given lighter duties should rest with

someone competent to pass judgment. Mine bosses as a rule, said Mr. Rupli, are inclined to act upon the theory that the man's discharge from medical care is proof that he is ready to take his old job. At other times, they will encourage exaggerated claims by giving the returned worker a lighter task.

Every accident, however, trivial, should be reported. Neglect of slight injuries sometimes leads to serious permanent disabilities. Such reports will furnish data for a statistical study of accident curves which may be compared with similar data from other mines. This comparative study will give the groundwork for further investigation of accident-prevention methods. These studies should be made by mine safety committees consisting of the operating executive, mine superintendent, bosses, safety inspector and manager of the compensation bureau.

"And when I say safety inspector," Mr. Rupli declared, "I do not mean the old practical miner who has seen his best days at the face or the technical engineer fresh from college, but one who has had sufficient technical and practical experience to give him the balance of discretion. Such safety inspector should report direct to the executive management." His duties should include "periodical inspections of the mine properties with the view of checking unsafe and dangerous mining practices and violation of mining law and company rules from the standpoint of accident prevention."

The Harlan County Coal Operators' Association, W. A. Ellison, president of that association, told the convention, has installed a system of centralized reports to show the location of any employee and his credit standing with former employees and a complete record of accidents.

DOES RATE OF PAY AFFECT ACCIDENTS?

Mr. Ellison criticized the insurance companies for their varying rates. Some companies, he said, are withdrawing from the mining fields and refuse to renew expiring policies. Ratings are not always based on performance. He knew of cases where a mine with a low accident rate had been penalized and one with a high accident rate had had its premiums reduced. The National Coal Association, he thought, should look into the question of ratings so that safe mines might receive the proper consideration.

J. G. Bradley, Elk River Coal & Lumber Co., Dundon, W. Va., and Tom L. Lewis, New River Coal Operators' Association, Charleston, W. Va., took sharp issue with the statement of one speaker who claimed that high rates of pay discouraged accidents. Mr. Lewis asserted that wages had nothing to do with the question. E. C. Mahan, Southern Coal & Coke Co., Knoxville, Tenn., indorsing what Mr. Ellison had said upon the attitude of the insurance companies, declared that many operators were being forced to carry their own insurance. One company, taking its chances under its common-law liabilities, had cut its compensation costs \$30,000 in nineteen months. Undue liberality on the part of insurance companies in paying claims had caused increased rates.

The session closed with the first showing of "The Story of a Rock-Dusted Mine," a film produced under the direction of the U. S. Bureau of Mines in cooperation with the Chicago, Wilmington & Franklin Coal Co. Most of the scenes had been taken underground at New Orient. A few sequences pictured some of the experimental explosions at Bruceton.

By Pooling Purchases of Mine and Store Supplies Operators Hope to Reduce Expenditures

Standardization Makes Pooling Easy—Bituminous Industry Spends 157 Million Dollars Annually for Mine Maintenance Supplies—Co-operative Buying Makes Smaller Stocks Permissible

Staff Correspondence

THE BUYING POWER of the bituminous industry and how it may be marshalled effectively to reduce costs through pooled purchases, was the theme of a group meeting of operators' purchasing agents held at the Drake Hotel, Chicago, June 9, as part of the program of the ninth annual convention of the National Coal Association. At this meeting, the methods by which the operators in one field—the New River district of West Virginia—were substantially reducing the cost prices on merchandise purchased for resale in company stores were explained. This development still is in its infancy, but those participating in it already are studying how the movement can be extended to take in some of the mine supplies for which the bituminous industry spends over \$157,000,000 per year.

John C. Dinsmore, assistant professor, commercial organizations, and purchasing agent for the University of Chicago, opened the presentation with a discussion of the general principles of pool buying. Walter Muir, purchasing agent, Raleigh Coal & Coke Co., and chairman of the purchasing agents division of the New River Coal Operators' Association, followed with a recital of what was being accomplished in his district in group buying of merchandise for company stores. Allan H. Willett, director, Bureau of Coal Economics, National Coal Association, brought the discussion to a close with a review of the buying power of the industry and a consideration of some of the problems to be met in pooled purchases of mine supplies. M. L. Garvey, president, New River Coal Operators' Association, presided.

The American plan of distribution, said Prof. Dinsmore, is built up around the fact that larger volumes make it possible for the factory to operate more economically and for the distributor to reduce his unit costs. "The problem of the pool buyer is to secure the co-operation of the individual members of a certain group in order that their joint order might be large enough to warrant the lower price." When an attempt is made to secure this co-operation, the pool buyer immediately discovers a wide variation in the standards used by the individual members. This means that there must be a careful analysis and comparison of existing standards and general agreement upon new ones.

With something approaching standardization in specifications, cost variations quickly challenge attention and the way is opened for a campaign for uniformity in prices. Variations on identical commodities, said Prof. Dinsmore, have ranged from 10 to 3,000 per cent. "It

is evident that the mere act of routing the orders for any group of individuals through one central office must automatically call attention to so many price variations on identical commodities that big savings would result."

Reciting the savings effected by pooling purchases for small colleges, social agencies, universities and building managers' associations, Prof. Dinsmore felt that the experiences of these groups made it "safe to conclude that any group of purchasing officers who will co-operate can through their joint purchasing power reduce the average unit costs of supplies 10 per cent. Pool buying, to be effective, must go hand in hand with a study of the relative effectiveness of the various commodities offered, and these studies should result in further reducing material costs. These savings from

both sources sometimes cut unit costs in half. The direct financial returns on these studies and these pools should never be less than four times the expense, and they frequently run higher. Pool buying, skillfully directed, should sometimes mean just the difference between writing the result of the year's business in black ink instead of red."

The principle underlying the associated purchasing plan of the New River producers, said Mr. Muir, "is the application of the power of concentrated effort as distinguished from individual effort." Quantity buying means lower unit prices and, in many cases, carload, instead of the higher less-than-carload freight rates. So pleased are the companies with results already attained that "it is our intention to gradually work this up to a point

where we will be buying a large volume of our merchandise in pooled cars, which will make a tremendous saving at the end of the year."

Dr. Willett carried the discussion a step further by presenting some of the problems to be met if the plan is extended to take in purchases of mine supplies. Psychological drawbacks to such an extension are inertia and the ultra-competitive conditions under which the bituminous industry is operated. "Of the practical obstacles in the way of the success of co-operative buying, the most serious is due to the large number of styles, sizes and shapes of some of the common kinds of mine supplies. The companies entering into the co-operative purchasing of mine supplies will benefit most in the purchase of those materials which are widely used in standard forms. The final result of the present active interest in standardization will be to widen the profitable field of operation of co-operative buying."



John C. Dinsmore

Maintenance of a common store of surplus mine supplies, however, is not necessarily an exclusive complement of co-operative buying. But such common stores are necessary if the full benefits of co-operative buying are to be realized. There are, of course, obvious

limitations to the profitable application of the common store. Where mines were widely scattered, high distribution costs might easily negate the gains made in pooled buying. "An essential condition of the successful operation of the plan," said Dr. Willett, "would be a group of mines located so near one another that supplies could be distributed among them from a common



Allen T. Willett

center at comparatively slight expense."

In the opinion of the speaker, the gains from co-operative buying were so patent that they required no detailed consideration. Occasionally individual companies attempt to obtain these benefits by purchasing large quantities of material in advance. In those cases, however, these gains are diminished by losses "that are almost sure to occur" from deterioration or disappearance of materials between the time of purchase and the time of utilization. One large operator had estimated that the cost of carrying excess stores and supplies approximated 3 per cent per month. This cost, equal to \$360 per annum for every \$1,000 invested in supplies not needed in the near future, included interest, deterioration and disappearance.

"It is precisely in the minimizing of such losses," continued Dr. Willett, "that there is to be found the chief advantage of the maintenance of a common stock of mine supplies. The gain from co-operative buying is positive and is realized through lower prices. The gain from a common stock of supplies is negative, and consists in avoiding the loss and expense involved in maintaining large individual stocks. It is obvious that a dozen or twenty or fifty mines drawing supplies from a common warehouse could safely maintain a much smaller stock than the aggregate of the individual stocks of all mines if each provided for its own possible needs. This reduction in stocks would mean a smaller investment and lower interest charges, reduced cost of storage and supervision, and less loss and deterioration of the materials themselves. And even where the maintenance of a common store of supplies is impracticable because mines are too widely scattered, or for any other reason, co-operative buying is entirely feasible and practical."

The average annual realization at the mines on bituminous coal produced in the past three years has been \$1,207,727,000. Dr. Willett estimated that \$905,795,250 of this amount is distributed as salaries and wages and \$157,004,510 is expended for materials and

supplies. Most of the disbursements for wages and salaries are in turn expended by the recipients for the necessities and the luxuries of life. In other words, the bituminous industry as a whole has a combined buying power in excess of \$1,000,000,000 per annum and anything that affects that buying power unfavorably must necessarily have like reaction upon general business.

In addition to these direct disbursements, the bituminous industry also contributes several hundred millions of dollars (estimated at \$856,242,000 in 1923) to the railroads for transportation. At the same time the industry is furnishing the carriers millions of tons of coal (126,340,181 tons in 1924) at declining prices. The average cost of railroad fuel, including freight, has dropped from \$4.10 per ton in 1921 to \$2.62 for the first two months of 1926—a decline of \$1.48, or 36 per cent. Another large item not included in the estimate of the buying power of the industry is the expenditures for new equipment and replacements charged to the capital account.

NO DATA ON STORE AND IMPROVEMENT PURCHASES

There also must be considered the expenditures to supply employees with the necessities and comforts of life, including company-store purchases, expenditures for town improvements and the maintenance of company houses. "From the scanty information available on this class of expenditures," stated the speaker, "one is justified in going no further than the broad generalization that in the aggregate it represents scores of millions of dollars of investment and many millions of annual upkeep and turnover."

Mine supplies cover a wide range of commodities, for many of which, said Dr. Willett, there were no accurate data on costs and quantities purchased. Therefore, he confined his analysis of this phase of the buying power of the industry to expenditures for explosives and mine timber. The soft-coal mines consume more than one-third of the explosives manufactured in this country for domestic use. Approximately 323 lb. are used per 1,000 tons of coal produced, as compared with 446 lb. in 1922. During the period 1917-24, black blasting powder constituted 77.8 per cent of all explosives used. By 1925 the proportion had dropped to 70.8 per cent and the proportion of permissible explosives had increased from 15.8 to 23.8 per cent. "This substitution of permissibles for black powder is an evidence of the disposition on the part of the operators to adopt methods dictated by consideration of safety as it is well known that high explosives are more expensive in themselves and more detrimental to the grade of coal produced than black blasting powder."

The bituminous industry consumes approximately 1.6 per cent of the annual timber cut. Consumption since 1906 has increased 26 per cent, but the production of coal in 1923 was nearly 80 per cent greater than in 1906. "The incentive to economy in the consumption of mine timber, as well as the use of substitutes is to be found in the rising cost." In 1906 this cost averaged \$5.16 per thousand board ft.; in 1923, it averaged \$16.17, an increase of 213 per cent. This increase has inspired mine managers to seek diligently for methods of economizing in the use of mine timber and for new sources of supply at reduced costs. This latter search is responsible for the rapid expansion in reforestation projects by Pennsylvania mines. This movement, predicted Dr. Willett, will spread to other states as the native supply of suitable forest timber diminishes.

A Selling Organization Should Concentrate on Merchandising a Single Kind of Coal

Independent Jobbers Charge Ten per Cent of Sales Price Whereas Company Department Will Handle It for Six per Cent—Coals Sold by Sales Department Should Be from Same Seam and Railroad

Staff Correspondence

BETTER MERCHANDISING METHODS as the key to a profitable bituminous coal industry were advocated at a group meeting of sales managers and executives held at the Drake Hotel, Chicago, on June 10 as part of the program of the ninth annual convention of the National Coal Association. "It is very common for an operating company to spend thousands of dollars to save 10c. per ton in production costs," declared one of the speakers in epitomizing the spirit of the meeting. "It seems to me entirely possible, if the same brains and effort, and only a part of the money were appropriated for proper merchandising methods, to add this 10c. to our realization much more easily."

"It would be difficult to imagine a more appropriate time than the present to give serious consideration to the sale and distribution of the products of our industry," asserted Ralph Knode, president, General Coal Co., Philadelphia, Pa., who was the first speaker at this meeting presided over by John H. Jones, president, Bertha-Consumers Co., Pittsburgh, Pa. "I cannot imagine," continued Col. Knode, "a more valuable asset for capital invested in the coal industry than a capable sales organization."

H. A. Glover, vice-president, Knox Consolidated Coal Co., Indianapolis, Ind., laid down the dictum that "every operating company of whatever size should sell its own coal either directly to a consumer or retailer or through a sales agency of common ownership." The most expensive and least efficient method of distribution is through independent jobbers, where the costs run as high as 10 per cent of the selling price. Sales through a separately organized, but mine controlled, selling agency absorb 6 to 8 per cent of the selling price. The most efficient method of selling is through the operating company's own sales department, where costs are considerably below 6 per cent. The average cost for all classes was estimated at approximately 6 per cent of the selling price.

The only solution for the industry, as Mr. Glover saw it, "lies in concentrating our physical properties and selling organizations into larger units, the intelligent use of a larger percentage of our gross income in modern merchandising and the co-ordination of sales activities through close co-operation." Physical consolidations cannot be successful unless proper weight is given to sales consolidations. "In other words, the mere gathering together of a heterogenous group of physical properties, either large or small, will not make a successful consolidation."

The essentials of a successful consolidation, as outlined by the speaker, were:

- (1) Each property must have an established business.
- (2) The coals controlled must be from the same seam or seams, have the same preparation and, usually, be

served by the same railroad. "One small isolated mine of a different seam or a different preparation will require as much attention from the sales department as an infinitely larger tonnage in the main group. In the Middle West, and I think it applies in the majority of fields, the originating railroad helps the operator by taking certain resultant sizes upon the movement of which the mine must depend for its successful operation. For this reason, coal is not fully interchangeable unless it originates on the same railroad."

Material progress toward general centralization of marketing can be made by the formation of local associations to co-operate in production and distribution and to report closed transactions, average realizations and unfilled orders. "By close co-operation among any small group of operators, it will be found that almost invariably some one in the group can take resultant sizes of which his neighbor may have a surplus and thus avoid dumping them on the market." Once mutual confidence has been established in this group the way is open for the formation of a single selling company owned entirely by the operators.

The third, "and the only permanently effective, step is the actual consolidation of ownership into a single company of the mines and selling agencies. It is possible, in fact desirable, to form larger units, even taking in tonnage in many fields. However, I insist, no concentration, consolidation, or even close co-operation, can achieve the greatest measure of success unless the foundation is laid in small groups of properties with the same identical operating and marketing problems. Sales efficiency lies in concentration of effort on one particular thing. It is no more possible for a sales organization to efficiently market five or six competing coals than it is for an automobile agent to properly represent five or six different cars in the same price class."

Chairman Jones agreed with the speaker that too little has been spent on marketing. One of the sore spots in selling is the fact that large consumers, particularly the railroads, dictate prices and operators are stampeding into accepting business at such prices because some competitor is willing to ship coal on that basis. C. F. Richardson, West Kentucky Coal Co., Sturgis, Ky., concurred in that view and complained that the majority permits a minority which does not know its costs to set the prices for a whole field.

In answer to a question from Mr. Richardson, Mr. Glover said that the common selling agency was only a step in a process which must end with the actual consolidation of mines as well as sales departments. F. W. Wilshire, Consolidation Coal Co., New York, stated that a common selling agency had worked successfully in the Fairmont district for a number of years, but that with the development of new mining companies not in the

*H. A. Glover**F. W. Wilshire**W. H. Cunningham*

original group "we reached a point where we have had serious price wars in Fairmont, just as serious as in any place I know of."

Mr. Richardson again emphasized the drawbacks of competition from uninformed operators. Alabama, he remarked ruefully, appears to have been fairly successful in "organized selling" despite variations in grades. "We can't do it. We haven't done it. The only time we make money is when we can't help it. We are dependent as a rule and as a whole on weather conditions, car shortage or a strike, and anybody knows that there is not one of those three things that is sound. If we would spend more money in getting higher-class men, who know what it means to reduce the price a nickel, they would fight for that nickel rather than cut it to get the order."

Failure of many operators to maintain standards of preparation hurt those who took pride in their coal, declared Mr. Jenkins. When business is slack "every one commences to figure how low he can sell to keep from losing money, rather to shut down the mine and lose a lot more." If they lose a piece of business upon which they have quoted a fair price, they go out and quote 5c. less on the next bid. "Right there is the missing link."

In the absence of J. G. Puterbaugh, president, McAlester Fuel Co., McAlester, Okla., the question of fuel-oil competition was discussed extemporaneously by W. L. A. Johnson, commissioner, Southwestern Interstate Coal Operators' Association. The mines in his organization, he pointed out, are in the heart of the Mid-Continent field and have lost heavily to fuel oil in both the industrial and the domestic trade. These losses probably approximated 5,000,000 tons. Kansas City alone has over 18,000 oil-burners.

W. H. Cunningham, Basic Coal Co., Huntington, W. Va., believed that the meeting proved that the industry was alive to the value of improved facilities and methods of marketing. He knew that he was selling coal in competition with oil, but admitted that he knew little about oil. Here was a field in which the National Coal Association might well play a larger part.

That the coal industry was not as greatly overdeveloped as many believed was the contention of Warren

Blauvelt, Vigo Mining Co., Terre Haute, Ind., who pointed to the excess capacity in steel and copper despite the smaller number of units in those industries. There was, too, less variation in demand for coal than in many other lines of business enterprise. Coal men, however, often make the mistake of trying to put their coals where they do not belong and cannot compete.

Fred W. Braggins, Lorain Coal & Dock Co., Columbus, Ohio, assailed speculative production and open billing of coal as demoralizing factors.

Mr. Johnson stressed the necessity of greater confidence between competing operators. He wanted help in spreading the doctrine of centralized selling agencies and was ready to volunteer to call group meetings of producers "in a private place where I could hold them all together long enough to tell them some of the things we have talked about today." C. F. Richardson expressed the thought that the association could assist in such work if funds were provided.

Just as soon as a group is assembled, remarked Mr. Johnson, the question of legality crops up. The purchasing agents, said F. W. Braggins, meet frequently to discuss coal supply and prices, "and yet we as coal operators don't meet often enough in bodies to discuss sales and production problems. If every association distributed figures on past transactions as is done in the furniture business, in the cement business and in a lot of other businesses, all the sales departments of the different companies would soon get on their toes to see that their department was not selling coal at less than the competitor's rate."

"I should like much," said Mr. Jenkins, "to see a committee appointed and immediately asked to get all the information it can from a legal standpoint and at the same time requested that there be a committee appointed in each district under the jurisdiction of this association. Then when this national committee has obtained all the information it can, I would suggest that that committee call a meeting of all the other committees and at the time of that meeting they should have something concrete and constructive to put up which the other committees could take back to their districts."

This suggestion was accepted as a motion and adopted by the meeting. The meeting then adjourned.

Coal-Mine Commissaries Lessen Costs by Co-Operative Buying

By Walter Muir

Store Manager and Buyer Raleigh Coal & Coke Co.,
Raleigh, W. Va.

THE OLD MAXIM that "goods well bought are half sold," even in this age of advanced efficiency, still holds good. Consequently the efforts of the store manager should be directed more to intelligence in buying than to urgency in selling, though I would not like to feel that our managers were lacking in a keen appreciation of the importance of selling their merchandise.

Because of the necessity of buying good merchandise at the lowest price attainable the New River store managers decided to co-ordinate their purchases and unite their buying strength, and they are confident that this is only the beginning of a great movement in an essential part of the bituminous coal industry. This movement will enable them to make definite savings in their purchases and to extend greater advantages to their patrons while adding materially to the income obtained from the conduct of their stores.

Every purchasing agent knows that most manufacturers set a lower price on one hundred cases of their product than on ten cases, and that on carlots there is a still greater differential. Moreover where carlots can be purchased, there is the further freight saving not only because of the difference in rate between a carload and less than a carload, but also because the goods can be shipped direct from the factory, which is often less distant than some central "headquarters" from which any smaller quantities of the commodity are usually shipped. Thus, by concentrating buying power and unit-

Abstract of paper entitled "Benefits Derived Through Associated Buying" read at the sectional meeting of the Coal Operators' Purchasing Agents at the Ninth Annual Meeting, National Coal Association, Chicago, June 9. Mr. Muir is chairman of the Purchasing Agents' Division, New River Coal Operators' Association, Mount Hope, W. Va.



Walter Muir

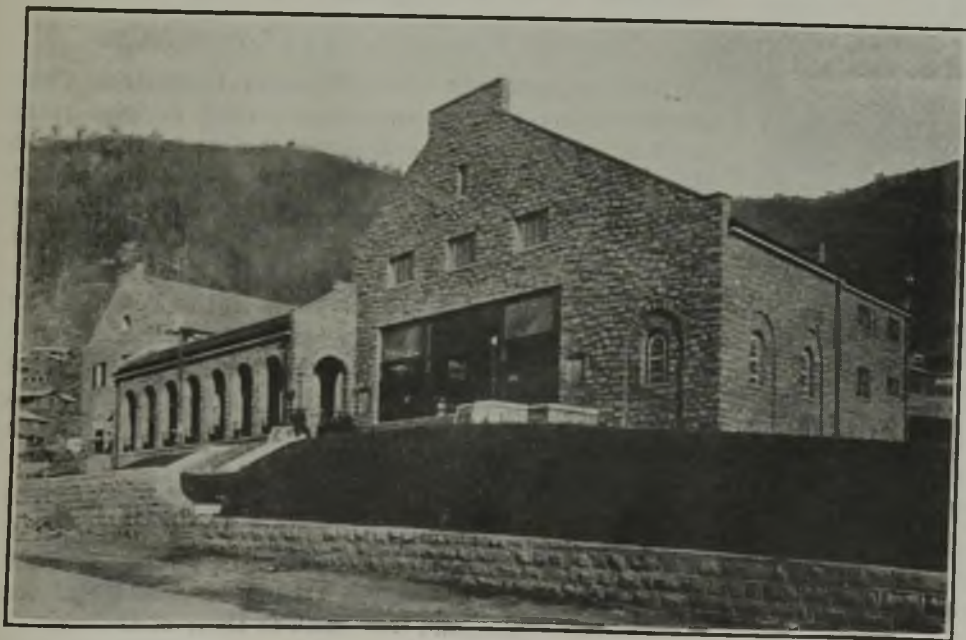
ing purchases, it is possible to make worthwhile savings.

This has already been demonstrated in the New River field, where in the past few months several buyers have pooled their orders in the purchase of many commodities, thereby gaining carload prices on less than carload quantities. They have been able also to arrange to pool their purchases of canned vegetables so that they will be able to handle two cars of corn in the New River field and about the same quantity in the Winding Gulf field, thereby getting quite a concession in prices, and saving the difference between carload freight and local freight. They intend to develop gradually this practice so that they will be buying a large volume of their merchandise in pooled cars, thus making a large saving at the end of the year.

Of course, in commissaries a great variety of merchandise is handled, and some of it is put in stock in a small way for the convenience of only a few patrons. But if the hundred-and-one things dealt in at each individual commissary were multiplied by a hundred, it would make a formidable quantity of every article, even of the smaller items.

These are possibilities lying wide open to store managers. They have many units from which to draw. Each manager has need for definite and fixed quantities of merchandise. By combining his requirements with those of others and purchasing with others at such times as would best serve all, great benefits would undoubtedly be derived.

I realize of course, that the volume of business on every article varies in our different commissaries. Some



Store and Office Building, Pocahontas Fuel Co., Ittman, W. Va.

This beautiful building is located in Wyoming County. The structure adds dignity and attractiveness to the little mining village, being built of native stone and made attractive by well-kept lawns. It is unfortunate that mining towns do not usually have so many fine store buildings bear the manifest

articles sell more freely in one place than in another, and one commissary will frequently close out the goods it has purchased and will want more when most of the others still have plenty of the same goods on hand.

To meet that contingency it will be a comparatively easy matter for those whose stock is short to draw on those whose stock is long. Indeed, an arrangement for exchange under such circumstances can be made a valuable adjunct to the general plan, prevent the accumulation of dead stock and furnish an outlet for the disposal of articles that now and again have been bought injudiciously, and yet with the best of intentions.

No buyer, no matter how expert he may be, fails, at some time or another to get merchandise in his stock, which at the time of the purchase looks like a good "buy," but which when placed on the shelves for sale soon turns into dead stock. It is also true to some extent, more perhaps than is thought, that certain goods which are sold in one section are not used at all in another. This would be offered as proof that the plan could not be applied uniformly.

CANNOT APPLY SCHEME TO ALL COMMODITIES

But the scheme is not expected to be of universal application. Every commissary would still have to buy much merchandise independently in addition to what it bought in association with other companies. The idea is to utilize the strength of the combined commissaries in a district as users of large quantities of standard lines of merchandise, in buying all together instead of separately.

Some will claim that the saving in lower prices, etc., through associated purchases, would be more than offset by interest, storage, insurance charges and the risk of overbuying. In addition some may think that pool buying would detract from the initiative of the individual manager and cause him to lose interest in the conduct and success of his store. It would in other words, take away that personal touch that counts for so much in the success of any project.

There is only one answer to such objections. The proposal is sound in principle, and proven by experience. It will not grind out merchandise at 50 per cent profit or eliminate 25 per cent of the help in the stores, but it will save something on every associated purchase made and, on the large volume turned over in a year, substantial savings should be obtained.



Shoe Department in Big Mine Commissary

The largest saving in co-operative buying will probably be in comestibles where carload lots can be handled, but even in shoes big savings are possible.

Railroads Give Good Service But Some Ask Increases

Try to Obtain Greater Scale Tolerance—Western Roads Demand Higher Rates of Interstate Commerce Commission

By Ira Clemens

Clemens Coal Co., Pittsburg, Kans.

FOR THE FIRST TIME in the history of the National Coal Association more than a year has passed without the efficiency of the transportation service making a meeting of the transportation committee necessary. Throughout the winter the car shortages were insignificant and confined to small areas. Transportation facilities are ample to meet the needs of the industry at the present time and for some time in the future.



Ira Clemens

Several minor matters have been handled by correspondence and have been either disposed of satisfactorily or are being handled to a conclusion. Among them is the effort which some of the railroads have made to increase the scale tolerance on coal. Realizing that this is a question that more directly con-

cerns the wholesalers and retailers, the traffic manager of the National Coal Association has been instructed to co-operate with those branches of the industry in opposing general increases in tolerance. This is being done. The question of prepayment of freight charges on coal to Canada has received the attention of the traffic manager, in co-operation with the foreign trade committee of the Association.

WESTERN OPERATORS WANT LOWER RATES

About a year ago the Interstate Commerce Commission undertook an investigation of freight rates on all commodities in the Western section of the United States. After carefully considering the scope of the Commission's investigation, it was concluded that the matter was of sectional interest and that the national organization therefore should not participate in it. Hearings were held in various cities in the West during the Fall and Winter, and the Commission has recently listened to oral arguments at Washington. The coal industry in general in the Western section is urging a decrease in rates, and the carriers are asking for an increase.

The secretary of the transportation committee, who is also the traffic manager of the Association, keeps the membership informed as to transportation and traffic matters. In this way frequent meetings of the committee are made unnecessary.

Report of transportation committee at ninth annual meeting of National Coal Commission, Chicago, June 9. Mr. Clemens is chairman.

How Madeira-Hill Co. Has Reduced Accidents 40 per Cent Since 1924

By J. W. Wetter

General Manager, Bituminous Operations, Madeira, Hill & Co.,
Philipsburg, Pa.

UNTIL THE FALL of 1924, the safety effort of Madeira, Hill & Co. was directed along the same lines as is pursued by most other coal companies. It had as a member of its organization a competent safety engineer who devoted the greater part of his time to making physical examinations of the operations, both inside and outside, in an effort to detect all substandard conditions.

At the regular monthly organization meetings, at which the safety engineer was always present, his recommendations were carefully considered, and none were permitted to be carried over without definite action being taken. If the recommendation of the safety engineer entailed much time and expense, such as providing additional clearance on a main haulage road in old workings, a cost estimate was prepared as well as a time estimate, and provision was made to correct the substandard condition over a period of time, expending thereon a fixed sum each month. In some unusual cases, the removal of a substandard condition was spread over as long a time as two to four years.

The company felt it was making progress, as every month certain conditions which it thought contributed to accidents were removed, and the rating sheets showing the physical condition of each mine indicated a vast improvement. In the Fall of 1924, a survey of the operations showed that practically every major substandard condition had been removed, but notwithstanding this fact, neither the number of accidents, nor the number of days of disability had materially decreased.

AFTER ALL THE MAN COMES FIRST

The company then began to realize that its safety work was not producing results and this for the reason that it had been dealing with the physical mine conditions and neglecting the human element entering into the mine hazard. This brought a realization of the fact that no substantial and permanent results could be expected until every employee was impressed with the necessity of his complying with the mining law and with the safety rules and regulations of the company.

A survey of the organization was then made to determine whether all the men in the organization holding supervisory positions were competent to advise the workers as to the requirements of the mining law and instruct them in safe practices. It was found that a number of supervisors needed instruction in safety. From this it was plain to be seen that a safety program could not be impressed on the minds of the individual workers unless the men responsible for it were fitted and sufficiently informed to pass along the information. In other words, a successful safety program could not be made to reach all the individual employees until the top of the house had been put in order. The first step, therefore, was to organize schools for the supervisory



J. W. Wetter

forces, the benefits of which will be fully reflected in the results to be given later.

The second step was to devise a daily reporting system which would show the exact situation in each assistant mine foreman's territory. Each assistant foreman was required to keep a written report of every working place and condition coming under his observation during the day. This at first met with much opposition from the superintendents, who took the position that it would require the assistant foreman to do too much clerical work. However, the company finally formulated a reporting system in the form of a code which would eliminate as much clerical work as possible but at the same time would convey to the general foreman the conditions as the assistant foreman found them. This plan met with favor and made the superintendents willing to give it a trial. The report book consists of a leather binder in which is inserted a pad of the assistant foreman's daily report. On the inside of the cover the code letters are printed as in Table I.

REPORTS BROUGHT QUICK RESULTS

The report form is divided into five columns showing the name or number of the heading, the room number, the check number of the miner, the code letter and the time of visit. These reports were first used Jan. 1, 1925, and an improvement in the accident record was almost immediately noticeable.

In fact, after using this reporting system for about three months, the superintendents requested that we furnish a summary sheet upon which the assistant foreman could post the daily reports each night, for they felt that thereby they would be better able to study them. The question was raised as to the manner in which this extra clerical work would be handled.

To this, the superintendents replied that the general

Abstract of paper entitled "Reducing Hazards in Mining of Coal" read at the ninth annual meeting of the National Coal Association, Chicago, June 10.

foreman and the assistants were so enthusiastic over the plan that they would gladly post the records on the summary sheet each night before going home.

This summary sheet was furnished and covers one-half month. At the top of the sheet is shown the period, such as the first half of May or the second half of May, with the year, the name of the mine and the names of the assistant foremen. The sheet is 14 in. long and 25½ in. wide. The first vertical column is headed with the room, heading and check numbers, and then the dates for each half-month period, namely, from the first to the fifteenth, and from the sixteenth to the thirty-first.

Across the sheet under these captions are inserted the numbers of the rooms and headings inspected, together with the check numbers of the men working therein, and then below the check number under the dates the condition of each place as found on the day of inspection is entered.

This summary sheet shows the general foreman at one glance the conditions prevailing in every working place at the mine, and he gets this information before he goes home at night. The result is that the general foreman is informed regarding any unusual condition which needs his personal attention, and he can visit these places early the following morning and can take proper steps to remove any substandard condition. The code letters in the table cover not only safety matters, but also much valuable information relating to operating matters.

The system, therefore, permits the general foreman to put immediately his finger on the important items, and he knows at all times exactly what is taking place. For instance, if the assistant foreman's report shows that a number of men in one section of the mine has lost time waiting for cars, it is immediate notice to the general foreman that his haulage system is at fault. If, on the other hand, the report shows that a number of places have not been mined or cut, he knows that something is wrong with the cutting in that particular section. The summary sheet is also invaluable to the general superintendent and the safety engineer. They would not think of going into the mine without first having reviewed that record because it shows at a glance the places where normal conditions prevail and those which are subnormal and need attention.

The company formerly held one organization meeting each month at which both operating and safety problems were discussed, but these new reports furnished so much valuable information, both from a safety and an operating standpoint, that each month thereafter two organization meetings were held, one of which was devoted to operating questions and the other to safety matters.

Before each monthly safety meeting, two separate detailed statements are prepared for each mine. One shows a classification of every accident occurring during the month under each supervisor and the man-days lost due to each accident. This statement is 15 in. long and 16 in. wide and covers four mines.

In the first vertical column is entered the name of each general foreman, and in the second opposite this

name are listed the names of the assistant foremen. The third vertical columns shows opposite the name of each assistant foreman, the accidents during the month and the man-days lost due to such accidents. The remainder of the sheet is divided into twenty-four vertical columns, the first twenty-two of which classify the various accidents such as fall of rock, fall of coal,

handling of material, etc. The last two vertical columns show the totals for the month and the totals for the year.

It will readily be seen that this form enables the management to compare the degree of operating safety attained by each general foreman as well as by each assistant foreman. Copies of this form are furnished to the general manager, to each general superintendent for his district and to the safety engineer. One copy is posted at the mine for the benefit of the general and assistant foremen. At these organization meetings each accident is discussed as to its cause, and such action taken as will, in so far as possible, prevent a recurrence of an accident from that same source.

Another form is prepared covering the operations in each district, and this form shows the accident experience for the month. On this sheet is entered for each mine the details shown in Table II and in addition the number of compensable accidents, that of no-time-lost accidents, the number of temporary accidents, the number of specific accidents, the estimated compensable days lost, the estimated days lost from temporary accidents, the days lost from specific accidents, the accidents per 1,000 man-days worked, the accidents per 1,000 tons mined, the days lost per 1,000 man-days worked and the days lost per 1,000 tons mined.

KEEP RECORD OF FATALITIES SEPARATELY

In entering the days lost due to accidents the fatalities are not included because, though many ways of figuring an equivalent for these accidents have been devised and used, these accidents are of such vital importance that they are kept separate for special consideration and are not included with the non-fatal injuries.

It will be noted that the latter form, having been computed on a basis of 1,000 man-days worked and 1,000 tons mined, places each mine on a comparable basis, and in a like manner each district is placed on a comparable basis, because the form shows the average for each district for the current month and then also the average monthly experience for these same mines for the year to date as well as for the preceding year. The results of the campaign of Madeira, Hill & Co. at its bituminous operation are given in Table II. It covers six operations in one district.

TEMPORARY JOBS NOT DEDUCTED

The item, "number of man-days" in Table II covers only the days when the mine was working, whereas the total number of man-days lost due to accidents includes every day lost not only for compensable accidents but for non-compensable and temporary accidents as well. If a man was injured and could not follow his usual occupation, the total days lost from his usual occupation are included even though the man might have

Table 1—Code Letters for Assistant Foreman's Daily Report

E	—Care and use of explosives
MC	—Handling of mine cars
P	—Preparation of coal
R	—Condition of roof
S	—Spragging of coal and boney
T	—Timbering of working place
NM	—Place not mined or cut
NC	—No coal
WC	—Waiting on cars
W	—Water in working place
FR	—Fall of roof
MF	—Misfire
NR	—Short of rails
DO	—Disobeying orders
CV	—Clay veins or rolls
M	—Miscellaneous items coming under your observation that should be brought to the Mine Foreman's attention.

Note—It is important that all time lost be marked below the code letters.

worked temporarily at some job other than that in which the accident occurred.

Also in the "days lost" each month is included the total loss incurred due to each accident. That is to say, if twenty accidents occur in any one month and five of them are specific accidents entailing a loss of 300 days each, the total loss would be 1,500 days, and if the other fifteen accidents are of a temporary nature entailing a loss of, say, ten days each, there would be another 150 days lost, or a total of 1,650 days, which total time would have to be included in the month in which the accidents hereinbefore specified occurred.

If a man sustains a specific accident, such as the loss of a finger, which requires under the Pennsylvania Compensation Law the payment of a fixed sum, this compensation would be divided by the compensation rate per day and included in the figure for "total days lost." I make mention of this because the number of days lost as shown on the experience record might be considered as exceedingly high unless it were clearly understood that the total incurred loss is included in the figures. The yearly figures are, of course, computed on the same basis.

The figures given for the year 1924 give the experiences before this system was put into effect. It will be seen that the days lost per 1,000 man-days worked is 30 per cent less for 1925 than for 1924, and 50 per cent less for the first four months of 1926 than for the year 1924. The decrease in the number of accidents is just about in the same proportion.

The cost of compensation and medical service at the mines in this district was approximately \$6,000 less in 1925 than in the year 1924. And at the present rate, the 1926 cost will be about \$4,000 lower than that of 1925. In addition to this saving, the valuable operating data obtained from this system has greatly increased operating efficiency, and the cost sheets reflect the fact that the improvement in safety performance has also carried with it an improvement in production costs.

HELPS TO PROMOTE DISCIPLINE

This system has not only promoted better co-operation between the members of the organization and all the employees, but it also permits the exercise of strict discipline in enforcing the provisions of the Pennsylvania state mining law and the company's safety rules and regulations. Any employee who willfully or negligently violates a safety order is cited by the assistant foreman on his daily report. For the first offense, such employee is admonished, and, for the second offense, he is notified that the third breach of an order will mean instant dismissal.

In over two years, it has been necessary to resort to a discharge in only two cases, and in both instances the officials' action was upheld by the state mine inspectors. The employees all realize today that the instructions which are given are issued from a standpoint of protecting every individual, and the management has

noted in many cases that where a man at the working face has been cited once for, say improper timbering or failure to set timbers, upon the next visit of the assistant foreman he has shown great concern as to whether his place has been timbered in a manner satisfactory to the assistant foreman so as to make certain that he would not be cited the second time and classified as an unsafe workman.

Strictly from a business point of view, the financial saving has more than made the effort worth while, but aside from this, the point of chief consideration is its value to the men themselves and their families. The management finds much gratification in the fact that in less than a year and a half nearly 50 per cent of the accidents at the mines under its supervision have been eliminated, together with the suffering of the injured employees and the hardships that would have been imposed upon their dependents.

More Timber Is Cut for Fuel Than for Any Other Single Purpose

Allen T. Willett, statistician of the National Coal Association, in discussing mine timber uses in his paper on the "Buying Power of the Bituminous Industry" at the ninth convention of the Association said:

"It is somewhat surprising to learn that of the timber cut in the United States 38.33 per cent is consumed for fuel and only 33.31 per cent goes into the next smaller class of product consisting of lumber, dimension material and sawn ties. In contrast with these important uses mine timbering furnishes a market for only 1.60 per cent of the annual cut. Nevertheless the actual amount so used is considerable. The data relate only to mine timber used underground, and do not cover lumber used outside the mine.

"In 1906 bituminous mines consumed the equivalent of 1,236,500,000 board feet of timber underground. In 1923 the consumption had increased to the equivalent of 1,559,000,000 board feet, an increase of only 26 per cent, although the output of bituminous coal in the latter year was nearly 80 per cent in excess of that of the earlier year. The report does not show the number of tons of coal produced by the mines from which figures for lumber consumption were obtained.

"If we assume that the output of these mines represented very nearly the same percentage of the total production in the two years, we find that the amount of lumber used underground per 1,000 tons of coal produced declined during that period from four to two and three-quarters thousand board feet, a decrease of more than 30 per cent. However far short of precision this percentage of decrease may be, it is a matter of common knowledge that the quantity of mine timber per ton of coal has actually decreased, the decrease being accounted for partly by greater economy in the use of timber, partly by the more general use of timber preservatives, and partly by the use of substitutes chiefly in the form of iron and steel or concrete."

Table II—Accident Record, Six Operations, Madeira, Hill & Co.

	1924	1925	First 4 Mos 1926
Number of employees.....	1,043	864	1,101
Number of working days.....	272	284	91
Number of man-days.....	283,696	245,357	92,108
Number of gross tons mined.....	640,842	608,501	277,540
Number of fatal accidents.....	2	1	1
Total number of accidents.....	307	231	66
Total number of man-days lost due to accidents.....	5,759	3,419	933
Accidents per 1,000 man-days worked.....	1.33	0.94	0.71
Accidents per 1,000 tons mined.....	0.48	0.39	0.29
Days lost per 1,000 man-days.....	20	14	10.1
Days lost per 1,000 tons mined.....	9	5.6	4.11

Have Statistics Any Value to the Coal Industry?

By C. E. Bockus

President, Clinchfield Coal Corporation, New York City

UNTIL THE LOCAL membership associations have inaugurated sufficient statistical work to give an adequate conception of market conditions the officers of the National Coal Association are not disposed to attempt to compile district returns believing they would not be representative of conditions in the industry.

There are many lines of desirable statistical activity, and the trade-information committee does not believe it would be well for the National Coal Association to start the work with only one line of statistics, that of the past sales report. It must be realized that though some local associations engage in much broader statistical efforts, many still do not collect and disseminate any trade information. The committee has been, and is, of the opinion that as soon as past sales reports are general, the National should take up another desirable line of reports and develop it until such trade information is available as will enable the industry to know more about itself.

At the time of the committee meeting in September, past sales reports were being compiled in the Williamson field and in the low-volatile fields of southern West Virginia through the Stover Bureau. Since then Harlan, Virginia, northern West Virginia, southern Appalachian, Kanawha and Alabama have inaugurated such activity. Kanawha has entered into an agreement with the Williamson field under which both these districts report to a common agency located at Huntington, W. Va. It is predicted that other nearby high-volatile fields in eastern Kentucky and the western part of West Virginia may become members of the same statistical bureau.

In accordance with the recommendations of the committee, the National is making up two tables weekly based on the district reports now received from seven high-volatile fields. Of these tables, one shows the average price received for coal sold during the previous week, distinguished as between prepared sizes, run-of-mine and screenings and the other arranges the same transactions for all the fields combined in price groups varying by 25c. intervals.

These tables are not given general circulation,

Abstract of report of trade information committee presented to the ninth annual meeting of the National Coal Association, Chicago, June 10. Mr. Bockus is chairman of the trade information committee.

They are sent only to the secretaries of the organizations sending in the district tables. The committee does not feel that, as yet, a sufficient tonnage is covered by the reports to justify giving them to the public. It is its hope that, as operators in other districts become acquainted with the work now being done and of its value to the operators receiving such reports, other associations will inaugurate similar work and that before long the National will be receiving reports from a sufficiently representative tonnage to justify it in giving out a combined tabulation as an approximately accurate picture of sales conditions in the industry.

CALL A HALT ON SELLING BELOW MARKET

The committee urges that the most careful consideration should be given to the advantages obtainable by gathering and distributing statistical reports dealing with conditions in the industry. It seems unnecessary to enter into a lengthy argument in favor of such work, but brief reference will be made to a few specific lines of statistical information, the usefulness of which is obvious even on superficial examination.

The bituminous-coal mining industry is highly competitive. As a result of that condition too much coal is being put on the market at unremunerative prices, often at materially less than production cost. Would not the operator be in a better position to bargain with buyers if he was informed about prices being obtained by other suppliers in the same market? Past sales reports will enable them to see what prices have been obtained currently for their commodity and should enable them to call a halt on their selling agents if the former find that the latter are making sales at prices below the market average.

Reliable figures on the geographical distribution of coal from each field would serve a similarly useful purpose in assisting the operators to decide in what consuming territories it would be particularly advantageous to attempt to push the sale of their product. It is to be hoped that such statistics showing week by week the volume of coal moving from the several fields into different consuming areas would ward off the possibility of such excessive congestions of distress coal as sometimes result from the uninformed efforts of operators anxious to find a market for their coal and would thereby remove from



C. E. Bockus

market a most demoralizing factor. In many industries great economies of operation have been brought about through the inauguration of a system of so-called comparative cost reports, that is, reports in which detailed costs of every separable step in production are brought together by a central agency and a compilation of average costs for each such step is then sent to the individuals furnishing the information.

SHOW OPERATOR HIS SHORTCOMINGS

Such reports in the case of bituminous-coal mining would enable an operator to discover those phases of his production in which his costs run higher than the average and, at least, be an incentive to him to institute inquiries into the reasons for this variation. In an industry in which methods of operation vary greatly from field to field there might be little practical advantage in comparative cost reports on a national scale, but separate district reports of that sort would be a yardstick for all the operators in the district.

There are other lines of statistical activity well worth considering as possibilities such as transportation, including car supply, safety measures required by law or introduced by other companies, together with reports on mine accidents, workmen's compensation measures, taxation, insurance, credit and improvements in the methods of burning bituminous coal and new uses for its byproducts. On all these the mine operator should have full, accurate, up-to-date information, if he is to

be in a position to make the most of his business opportunities and responsibilities.

It is now several years since the National first considered the question of inaugurating an adequate statistical service. For some years, however, it was deterred from such activity by the uncertainty of the legality of such inquiries which, by the way, cleared up only last year. Some of the large companies do some of that work at their own expense and for their own guidance.

It is obvious, however, that only companies operating on a large scale can afford to incur the expense involved in individual efforts of that kind. If the majority of operators are ever to receive the benefit to be derived from statistical information, such information must be compiled on a co-operative basis. The committee urges operators to give careful thought to the question of expanding this profitable form of association work.

Nothing has been said about the public aspect of statistical reports. The members of the National Coal Association are all familiar with the efforts at Washington to procure the enactment of legislation making it compulsory upon bituminous-coal operators to send in reports to the Department of Commerce. The industry is opposed to any system of compulsory reporting to a Federal agency, not because it desires to have the facts concealed, but because it believes that such a move may well prove the first step in the direction of Federal regulation of the industry.

Pool Buying No New Idea But One Well Attested

By John C. Dinsmore

Assistant Professor, Commercial Organizations,
University of Chicago, Chicago, Ill.

IN THE UNITED STATES more than in any other country distribution is built up around the fact that larger volumes of business make it possible for the factory to operate more economically and for the distributor to reduce his unit costs.

There is therefore every desire upon the part of most vendors to quote materially lower unit prices for large orders. The problem of the pool buyer is then usually to secure the co-operation of the individual members of a certain group in order that their joint order might be large enough to warrant the lower price.

Purchasing agents like to feel that they are buying every commodity at the lowest possible price but that is not so. The price differences for identical commodities vary ordinarily from 10 to 3,000 per cent. For instance a certain purchasing agent in Cook County recently paid 44c. per lb. for saltpeter which is worth about 4c. per lb.

It is evident that the mere act of routing the orders for any group of individuals through one central office must automatically call attention to so many price variations on identical commodities that large savings would result. If this routine scrutiny is coupled with organized research to determine just the particular commodity best fitted to do a particular job the savings effected are astounding. The supply investigator for the American Telephone and Telegraph

Company recently told me that such studies frequently reduce annual costs 50 per cent.

With these generalizations as a background let me relate briefly the pertinent facts concerning two of five buying pools with which I have been associated.

About nine years ago there was in Chicago the executive office of the Association of American Colleges with a membership of some 600 small denominational colleges. As a part of the service rendered their members the Association helped prepare advertising copy. This led to the purchasing of "boiler plate" insides for booklets and this in turn led to the purchase of the paper and the printing as a joint venture. This service reduced the cost of the finished booklets about 40 per cent.

The plan worked so well that a committee was formed to buy other items on the same basis. I was called in as purchasing consultant and directed the studies which developed some interesting data. The experiment was interrupted by the war but a final survey showed that purchases had been made for eighty-six colleges in twenty-six states, had reduced average unit costs 38 per cent, and that the money saved was at the rate of a little over \$100 for each hour of service rendered. In one instance a much better product was supplied at less than one-third the average price paid before the pool was formed.

The next study was made for the Chicago Council of Social Agencies. This is an organization of nearly two hundred charitable organizations in Chicago ranging all the way from the great hospitals to the visiting nurse's association and the settlement houses. This study showed that the cheapest price on liquid soap was 8c. and the highest price \$2.75 per gallon. The fact also was developed that the price paid for similar quantities of bulk milk varied nearly 100 per cent.

With Competition as Incentive Employees Will Back Safety Movement

By R. E. Howe

Vice-president Climax Coal Co.,
Knoxville, Tenn.

ACCIDENTS are expensive and for that reason should be avoided as well as for the larger reason that their elimination is a duty that the operator owes to humanity. They disorganize the mine force and cost much money; they run up the compensation-insurance rates and often take the men who are most valuable in the operation of the mine. However, the chief reason for the prevention of accidents is the saving of life and limb.

Safety, however, has a three-fold aspect; First and foremost, the protection of the men employed in the mine. Second, the preservation of equipment and supplies. Whenever a machine, track or wire is in jeopardy from bad top, it should be removed, bearing in mind the safety of the men whose duty it is to remove it. The safety of equipment from outside influences, such as lightning, storms, vandalism and other preventable causes, should have constant attention. Third and finally, the protection of the investment of those who have put their money into the business.

We should not, through our own negligence—and in the final analysis it is the negligence of the operator—permit our employees to overlook or forget safety in its three-fold aspect.

How much safety work in the mines can accomplish is shown by innumerable instances. One large company in the Tennessee field, which has several mines, gives a prize once a month to the keymen of the mine which has the least number of accidents in proportion to output. For the last three consecutive months the most hazardous mine in this group has received the award, showing conclusively that carefulness prevents accidents.

Records kept by one company in the South, employing 1,400 men show that the percentage of injuries to men who have not had first-aid training, is eight times that of those who have. This shows the desirability that all employees should take such first-aid training and some large companies in the West, I understand, do not permit a man to work for them until he has had this instruction.

With these facts in mind, the Southern Appalachian Coal Operators' Association has formed a subsidiary



R. E. Howe

organization, known as the Southern Appalachian Efficiency Association. Its purpose, as the name indicates, is efficiency, and the greatest single division of efficiency is safety.

This organization consists of the superintendents, mine foremen, safety inspectors, fire-bosses, electricians, and other key men employed by the members of the Southern Appalachian Coal Operators' Association. The mine inspectors of the insurance companies that carry our compensation insurance, the State Mining Department and the Bureau of Mines all hold honorary memberships. Meetings are held once a month, at which there are round-table discussions on accident prevention and the production of coal.

This association has fostered safety and first-aid teams, has awarded prizes, both money and medal, has conducted contests and, in fact, done almost everything to keep before the

employees the question of efficiency. The great problem we have found is to maintain the interest of all the men in the mines in the safety movement. The Association has found that competition is the keynote. Prizes are offered for new ideas which will prevent accidents or reduce costs and to the teams exceeding in first aid. Medals are given for meritorious service.

Much has been accomplished in this organization by merely bringing operating men together where they can learn of one another how best to meet their difficulties. Some sage has said that we are part of all we touch, and one hundred of these operating men cannot get together without increasing their interest in their work and absorbing something from others. Having this in mind, the Association has fostered local organizations, everyone where possible being given some definite work.

Mine discipline is an important matter. One large Alabama concern which employs a large number of colored men, kept a record of accidents covering a period of ten years. These records show that per number of white men and per number of colored employed, there were twice as many white men injured as there were colored, the natural assumption being that this was because the colored men obeyed orders better than the white men. A white man will obey orders if he sees the reason behind the order.

Every general and every leader no matter in what walk of life knows that team work is what counts, and if competitive co-operation can be established at the mines safety can be brought to its highest pitch.

Abstract of paper entitled "One Way to Interest Employees in Safety Work," presented at ninth annual meeting, National Coal Association, Chicago, June 10. Mr. Howe is secretary of the Southern Appalachian Coal Operators' Association, of Knoxville, Tenn.

Coal Salesmen Should Know How Coal Is Prepared and Mined

Thus Being Stimulated to Maintain a Reasonable Price and Enabled to Defend Quality

By Ralph Knode

President, General Coal Co., Philadelphia, Pa.

NOT FOR A long time has the salesman had as his sole function the duty of explaining just why the operating department could not make full shipments against its orders. Certainly, that condition never occurs today. Every salesman is busy selling coal.

No more valuable asset can capital invested in the coal industry have than a capable sales organization, in which every salesman believes heartily in the coal industry and in his company. Every salesman meeting the consumer should be fully familiar with all general phases of the production of coal, the general chemical analysis of the product and the comparative values of the coal he is selling as compared with that marketed by others. This knowledge can be obtained in a practical way only by having the salesman spend a reasonable length of time at the mines by which the coal is produced where he will learn in a general way just how coal is mined, prepared and inspected for the market.

ESTABLISHED STANDARDS OF PREPARATION

Most producing companies have, I believe, a standard of preparation and inspection for the particular coal they are mining. Some coals require little preparation, others receive all the preparation at the face, some are prepared over picking tables, and still others cleaned by various mechanical methods. When these facts are realized by the salesman he can the more intelligently carry on a conversation with possible consumers.

The companies with which I am associated have a standard preparation for the particular coal being mined, and it is the duty of each mine superintendent to prepare the coal each day to that standard, and he is held responsible for the results.

In order further to satisfy the sales organization that the coal is being mined and prepared to that standard, an inspector is stationed at each mine that is of sufficient size to justify the practice. If an inspector finds one or more cars of coal which have not been prepared to the standard previously determined, the coal in that car or group of cars is re-prepared or used for business where a coal of the agreed standard is not required.

In order that the inspection department shall be absolutely unbiased in its work, these companies have found it advisable to put the inspection department directly under the sales department or under an executive officer in charge of not only the mining of coal, but its sale and distribution, so that there will be no organic connection between the local operating department at the mines and the inspection of the coal.

Abstract of a paper on "Coal Salesmanship" delivered at the sectional meeting of bituminous coal sales' managers during the ninth annual meeting of the National Coal Association, Chicago, June 10.



Ralph Knode

One can readily see how much more confident a salesman will be in discussing intelligently a spot order or a contract, when he realizes that each car of coal is and must be prepared to the standard which has been fixed and is maintained by his company.

The time spent by the salesman at the mines gives him a direct idea of the expenditures of capital needed to produce a ton of coal, so that he is more able to explain intelligently why a reasonable price must be obtained for the coal which he is to sell than perhaps is paid for other coals offered in competition where the question of value seems to be of little concern.

Many operating and sales organizations have developed a real pride in the quality of coal being produced and sold and, when the individual salesman is imbued with that spirit of pride in his own particular coal and company, it is not a great effort to pass that feeling to the consumer.

INDIVIDUALIZING ONE'S PRODUCT

I cannot think of a more important phase of coal salesmanship than the practice of individualizing and trade-marking a particular coal, for this unquestionably takes even average-quality coals out of the average class and puts them in position to command a better price than coals lacking this distinction. English coals are thus marketed perhaps to a greater and more satisfactory degree than those of any country in the world. Outside of the coal industry in this country are many concrete illustrations of what can be done by specializing and trade-marking a product.

Representatives of sales organizations meeting the public should be familiar not only with the method of mining and standard of preparation of their coal, but should understand also the conditions prevailing in the various competing fields. Thus they will be in position to carry on an intelligent conversation with possible

consumers and be helpful in providing consumers with information that will prevent their coal supply from being in any way embarrassed.

It is not difficult to realize that the salesman who has fitted himself in this respect is a much more welcome visitor at a consumer's plant than one who is not so well fitted. Sales organizations should keep their salesmen informed of prevailing conditions in their own and competing fields by semi-monthly or monthly meetings.

The salesman with such knowledge is frequently in position to clarify in the minds of consumers the erroneous opinions many of them have today with regard to the coal industry as a whole.

It does not seem practical to provide that each member of a sales organization meeting the public should be a qualified combustion engineer, but he unquestionably should have a general knowledge of how his particular coal will perform and the purposes for which it is best suited. Many organizations have individuals who have made a careful study of the consumption of their coal for special purposes, such as illuminating-gas manufacturing, byproduct coking and other uses, where most efficient results must be secured.

Every sales organization should have a combustion engineer who can be helpful in demonstrating the coal to the consumer, in meeting complaints that often are not caused by the coal, but by the methods of combustion. To him, salesmen can submit their troubles in their daily contact with consumers.

Consolidations in the coal industry have been given much consideration during the past three years. They have been hailed as a solution of the difficulties of the coal business. The subject can in a general way be divided into two phases. First, consolidation of physical properties and second, consolidation of sales and distribution units. In an effort to accomplish the first phase in a proportion worthy of consideration we are faced with two major difficulties. The large capital required and the vast difference of opinion which exists with regard to the values of mines.

EASY TO CONSOLIDATE SELLING FORCES

These two factors are, however, of little importance when considering the consolidation of sales and distributing units. The main feature necessary to accomplish this purpose which unquestionably would be helpful for the industry is complete agreement of purpose by the parties involved. There is unquestionably real merit to this form of consolidation, but we do not seem to have reached the point of action on the subject, as nothing worthy of mention has been accomplished up to this time. Therefore, meanwhile, sales organizations will do well to adopt as their slogan the rule "No sale is worthy of consideration unless the return represents a reasonable profit on the capital invested," from the standpoint of an average cost and reasonable investment.

Just as soon as the sales organizations in the industry dispose of their products, with their value in mind, just so soon will those companies that have a cost that is in general competitive be able to market their products at a price which will represent a reasonable return on the capital invested. The great majority of consumers do not wish to purchase their coal below the actual cost of production of mines able to meet competitive conditions.

Substantial consumers have told me that many times, particularly during the past two years, but they add

that they deserve to be assured that their competitors will not be able to purchase like grades of coal for similar purposes at prices materially lower than they receive. We cannot in all fairness to the consumer expect him to pay a reasonable price for coal when he can at materially lower prices, purchase approximately the same quality of coal from others.

I believe, therefore, that the industry can go a long way toward improving its situation, if salesmen are given proper training and education before coming in contact with consumers, so that they will be better able to understand why it is uneconomical, and in fact ridiculous, to dispose of the product of the mine without any regard to value.

I have a high regard for the sales organization or individual salesman that has the courage to say to a consumer that they or he, as the case may be, cannot accept business at other than a reasonable price; when other sales organizations are perhaps doing a larger volume of business but without regard to value.

Foreign Trade Increases Only Temporary

By H. N. Taylor

President, Sheridan-Wyoming Coal Co., New York City

Little, if any, progress has been made in increasing the quantity of coal exported during the past year, except during the past few weeks due entirely to the British strike. It is yet too early to state the real effect of this disturbance in England on our future foreign coal trade. Some coal was brought into this

country from various European countries during the anthracite strike, but the importation ceased with the conclusion of the strike, and was never large.

Among the subjects that the foreign-trade committee has studied are the American merchant marine and the requirement that coal consigned to Canada should have the freight



H. N. Taylor

prepaid. The ships of this country are handicapped by arbitrary laws which hamper them in competition with ships of foreign countries. The American people need to be awakened to the fact that there will be no real American merchant marine until our ships are permitted to meet world competition on a more equal footing.

The negotiations as to the prepayment of freight charges on coal to Canada is in general making satisfactory progress, but the matter is not entirely settled. Efforts are being continued toward a complete elimination of this requirement.

Report of foreign-trade committee of National Coal Association at its ninth annual meeting, Chicago, June 9. Mr. Taylor is chairman of this committee.

Centralized Service-and-Accident Reports: Their Advantages to the Coal Operator

By W. A. Ellison

General Manager, Southern Harlan Coal Co., Harlan, Ky.

THE HARLAN COUNTY Coal Operators' Association at its office in Harlan, Ky., has established a system of records to accomplish the following results: First, to be able to locate any employee and to record his indebtedness, if any, to his former employer; Second, to provide information regarding accidents showing the name of the injured employee, the date, cause and nature of injury.

In our field, as no doubt in others, the problem of how to prevent overdrafts gives much anxiety. This was especially true during, and following, the war period. A scarcity of labor and a desire to increase output at the mines always has a tendency to encourage the operator to take chances in the giving of credits to his employees.

Retail and wholesale businesses protect themselves through the medium of credit associations or bureaus, but the coal mine office and commissary are at the mercy of the dishonest employee. It was thought, and it has since proved to be true, that a Bureau similar to a credit association could be conducted by the association for the protection of its members. Consequently the association installed a card-index system showing the name of the man employed, the mine at which he worked and the date on which he left the service, together, with his indebtedness on leaving, if any.

Each operating company makes a weekly report to the association, giving this information which is transcribed to 4x6-in. cards, and which are filed alphabetically in a desk filing cabinet according to the names of the employees.

If an employee leaves "Company A" owing that company, say \$50, and is employed by "Company B," the service record form of "Company A" would show the date of the employee leaving its service and a similar form of "Company B" would show when he entered the employment of that company.

When this happens, the association office, on receipt of the service record report, from "Company B" sends to "Company A" a form reading as follows: "Mr. X who left your service April 1, 1926, owing you \$50 is now employed by 'Company B' at ———, Ky." The function of the asso-



W. A. Ellison

ciation ceases with the transmission of this information. The collection of the debt is left to the creditor company.

This method has reduced losses by overdraft to a minimum. There are, however, no attempts made on the part of the association to ascertain the amount of money

collected, and it has no way of discovering how much "Company B" has saved by knowing in advance that the man newly hired is a "debtor employee," but it is natural to suppose that caution will be taken in extending credit to him.

During the latter part of 1925, a safety-first meeting was held in our field, at which meeting several insurance carriers were on the program. They explained that the high cost of compensation insurance appeared to be due to the large number of malingerers. Lack of a clearing house seemed to be the reason for this situation as well as for other conditions that resulted in high compensation costs.

The only information any mine had of accidents and their causes was the experience supplied by that mine alone, so the association devised a system of reporting accidents and recording them, which, though it has been in effect only since Jan. 1 of this year, has materially improved conditions already.

The operators belonging to the association are requested to send it a copy of the accident report which they make to the compensation board. These reports, when received, are classified, both as to the cause of the

Table 1—Causes of Accidents

As reported to Harlan County Coal Operators' Association.

Slate or roof falls
Coal from face
Mining machines
Cars, tools, etc., at working face
Handling explosives
Explosions
Timbering, inside
Haulage, to employees thus engaged
Haulage, miscellaneous
Wrecks
Replacing or re-railing cars
Track, construction or upkeep
Wiring, bonding, etc.
Miscellaneous, inside, not otherwise specified
Knucklemen
Inclined planes
Tippelmen
Handling railroad cars
Timbermen, woodsmen outside.
Shop, repairs to tools, cars etc.
Carpenters, outside
Handling live stock outside
Foremen, office men, storemen, etc.
Miscellaneous, outside, not otherwise specified
Total this month
Total last month

Article entitled "Centralized Accident Reports—Their Advantages and Benefits" presented at the ninth annual convention of the National Coal Association, Chicago, June 10. Mr. Ellison is president of the Harlan County Coal Operators' Association.

accident and the nature of the injury. The causes are classified as in Table I and the injuries in Table II.

A report is made by the association showing the various causes of the accidents for the month, together with the nature of the injury. In addition to this, a bulletin is issued each month, showing the names of the various employees who for any cause have been injured in the previous month, also the total number of times injured is carried forward for each employee.

The bulletins are posted at the various operations, one at the mine mouth, one on the tippie and one on the bulletin board at the mine office. These bulletins show each month, in addition to the name of the injured party, the number of tons of coal mined in the field per accident. A plea is made in the bulletin that this record be improved from month to month. The publicity given to the men injured has a telling effect on all employees.

With the record thus installed in the office, each mine in the field is rated according to the tons mined per accident, and a circular is sent to each mine monthly showing how its tonnage per accident compares with that of other mines in the same field. Fatal accidents at any mine place it automatically at the bottom of the list. The officials of the various mines try to get near the top of the list and stay there.

Table II—Nature of Injury

As reported to Harlan County Coal Operators' Association.	
Fatal	
Arms,	contused, lacerated, etc.
Arms,	fractured, broken, etc.
Back and hip fractures	
Back strained	
Bad air or gas	
Body, external injuries to	
Body, internal injuries to	
Ear	
Eye	
Fingers	mashed, cut and broken
Fingers amputated	
Feet and toes,	minor injuries to
Feet and toes,	fractured, broken, etc.
Feet and toes amputated	
Hand injuries to	
Hands amputated	
Head,	major injuries to, fractures, concussions
Head,	minor injuries to, contusion, lacerations, burns
Hernia	
Legs,	contused, lacerated
Legs,	fractured, broken, etc.
Mouth, jaws, and teeth	
Neck and throat	
Total for this month	
Total for last month	

When the accident reports are received by the association, proper records are made according to the classifications mentioned and the name of the injured person, the date of the accident, the mine at which it occurred and a brief description of the cause and nature are card-indexed in the service record. This entry is made on a card 4x6 in. and of a color different from that of the card previously described. The service record of the man is also transferred to this card, which is regarded as the permanent record.

After accidents have been recorded, should the injured employee move to another mine in the field, his accident record follows him on a form as follows:

"Mr. X whom you have recently employed was injured at Mine No. — on ——. Cause of accident was — and nature of injury was —."

This information acquaints the new employer with evidence of the care or carelessness of the new employee and has been helpful in establishing the malingerer. To illustrate its effectiveness, it uncovered one case where a man had been paid compensation for a double hernia on three different occasions.

Only the high spots of the system have been covered in this paper but it should be added that the members have found it most helpful.

Research the Life Blood of Commercial Progress

By **Walter Barnum**

President, Pacific Coast Co., New York City

SEVERAL MONTHS ago an article appeared in the Membership Bulletin of the National Coal Association, which quoted Dr. O. P. Hood, Chief of the Fuels Division of the U. S. Bureau of Mines as follows: "The hope of the coal industry lies in the fields of research and invention." I was pleased to note this comment on Dr. Hood's statement in an editorial in the *West Virginian*. "Nothing truer has been said about the coal industry in years, but the importance of the remark lies in the impression it has made upon the national organization of coal producers. It is going to take a lot of pressure to make the coal men of this country take an interest in the possibilities of research and it would be a hopeless undertaking if the coal men's organization were not sympathetic."

In replying to this newspaper, I think I can safely speak for the members of the National when I say that the operators' association is sympathetic towards research. I pledge my personal efforts to press the cause of research in every possible direction. I hold

to the creed that the price of progress is research. Just as soon as the ranks of the National are augmented by a sufficient number of non-member coal producers who owe it to their industry to contribute financial support to this organization of the industry, it will be possible for us to pay the price of progress, whereupon we shall enjoy progress. In the meantime, however, we will do as much missionary work as possible and co-ordinate activities of engineering societies and others employed in research as effectively as means permit.

On this point permit me to quote from the preliminary program of your Research Committee, prepared last winter. "The Committee has determined upon a policy which contemplates in the beginning at least no original research work as that word is usually understood, but on the other hand, the closest possible contact with and first-hand study of the work of the numerous research bodies, private, institutional and corporate, whose work is in any way related to coal, to the end that it may collect in permanent form knowledge and information to be used (1) for the library, (2) for distribution to the members of the National Coal Association, and (3) for distribution to the users of coal and the public generally.

"Thus the Committee will keep producers informed of what consumers are developing, so that the producers can realize all the opportunities and possibilities in their respective territories. The Committee will be a clearing house of practical and progressive information, serving both producers and consumers."

Excerpt from an address on "Research and Its Value to the Coal Industry" delivered at the ninth annual convention of the National Coal Association, Chicago, Ill., June 9. Mr. Barnum, now president, was then chairman of the research committee.



News Of the Industry



Court Refuses Injunction Sought to Enforce Union Wage Agreement With Mines in Scott's Run Field

The United Mine Workers was unsuccessful in its first effort to use injunctions to prevent non-union operation of coal mines covered by a union wage agreement. Judge I. Grant Lazelle in the Monongalia County Circuit Court at Morgantown, W. Va., on June 9, refused a restraining order sought by members of the union against four companies operating in the Scott's Run coal field, which he had been asked to enjoin from operating at wages lower than the union scale, from employing men not members of the union and from ousting union members from company houses.

Saying not only that contracts ought to be enforced if enforceable, but that labor unions should be granted injunction, in proper cases, as quickly if not quicker than other parties, Judge Lazelle, however, ruled he could not consider the one in question an enforceable contract.

Finds Baltimore Pact Obscure

The so-called Baltimore agreement between the union and the Monongahela Coal Association he declared to be one of the most difficult to understand that he had ever seen, but his principal point was that it could not bind the four companies defendants in this case because although he had little doubt that some of the signers for the operators were connected with these companies, there was nothing from which he could take judicial notice of that fact.

Reading the signatures of the scale committees, including those of Stephen Arkwright and Samuel Pursglove, he pointed out that it was not signed by the Monongahela Coal Association or by the Cleveland & Morgantown Coal Co., the Pursglove Coal Mining Co., the Arkwright Coal Co., the Connellsville By-Product Coal Co., the four defendants, nor by the United Mine Workers as corporations or organizations.

The agreement, he said, purported to be between the membership of the union and the membership of the coal association and the membership does not constitute such an entity that it can contract and be contracted with.

In regard to the employment of non-union men the Court said he believed that if the contract were not too broad, so that it would cover the entire coal business, and if it were for a proper consideration, one could be made pro-

vided it could be carried out. The time has not come, he said, when a few men can sit down at a table and sell the labor of thousands without their consent and compel them to work. He added that he did not believe such was the purpose of the organization, but that a man has the right to quit just as he has the right to start work and that, if a better opportunity offered, he had the right to go there, which could not be taken from him by a court or by anybody else.

The Court said the third phase of the injunction petition, eviction of the miners from company houses, included no allegation that there was not an adequate remedy at law for any grievance of this sort, although if there had been a violation of contract he conceded obtaining of damages might not be an adequate remedy.

Judge Lazelle expressed the belief that the renting of houses to the miners by the operating companies was a separate contract, though it was true they could not work without the houses.

The four defendant companies closed down the mines as union operations and shortly afterward reopened them, offering a scale of wages substantially the same as the 1917 scale. All are now operating on a non-union basis, although union officials assert that their output has been much curtailed. The union men, defendants in many injunction cases, including several granted by Judge Lazelle, asked injunctions against the companies, charging they had violated a contract in ignoring the terms of the Baltimore agreement.

It had generally been expected that, whatever the decision in the Circuit Court, the case would be appealed to the Supreme Court. After the decision was announced, union counsel went into consultation without making an announcement as to their next move.

Rescue Men in Get-together.—The Smoke Eaters' Association, composed of mine-rescue men of West Virginia, Pennsylvania and adjoining states, will meet in the Hotel Morgan, Morgantown, W. Va., on June 19, beginning at 1:30 p.m. A banquet will be one of the features.

The West Virginia Mining Institute will hold its summer meeting July 13 and 14 at Bluefield, W. Va.

Big Advance in Efficiency Of American Industry

Increased manufacturing efficiency of American industry since pre-war days is strikingly evidenced by figures recently issued by the National Industrial Conference Board, New York. The volume of production in 1923, according to an analysis of industrial productivity in the United States made by the Board, was 33 per cent greater per wage earner than it had been in 1914, and required 25 per cent less labor, 13 per cent less power, 17 per cent less management personnel per unit of production, and 7 per cent less actual working time per man.

The explanation of our increased industrial productivity, according to the Conference Board's study, is largely to be found in the greater application of power, more intensive mechanization and increased managerial efficiency. In 1923, 16 per cent more primary installed power was back of each worker in American factories than in 1914, correspondingly increasing his productive capacity and making possible the higher wage level. Labor cost per wage earner per month in 1923 was 36 per cent greater than it had been in 1914, against a production increase of 33 per cent, and although 25 per cent less labor was required per unit of production in 1923 than in 1914, the total amount of wages paid for an equal amount of production was still nearly 2 per cent higher. The cost of management, on the other hand, or the total of salaries paid to management personnel, decreased 12 per cent from 1914 to 1923 per unit of production.

Pineville, Ky., Soon to Have Mine Rescue Station

A mine rescue station with a mine rescue car and a trained force of operatives will be established at Pineville, Ky., within a week, according to a telegram from Congressman J. M. Robson. The matter of establishing a mine rescue station there has been under advisement for some time.

The Bureau of Mines has agreed to open the new station so that the car and equipment can be used throughout the Harlan and Bell coal fields, it was said. The car and equipment for this field will be sent from Columbus, Ohio.

Little Optimism at Meeting Of Southwest Operators

Members of the Southwestern Interstate Coal Operators' Association met in the offices of the association, Keith & Perry Building, Kansas City, Mo., June 7 and 8, made four changes in the list of officers of the organization, unanimously agreed that business was "rotten," and adjourned. It was the twenty-third annual convention of the association.

The one optimistic note in the annual report of W. L. A. Johnson, general commissioner, concerned the efficacy of the Interstate Joint Commission, consisting of Mr. Johnson for the operators and John P. White, formerly international president of the United Workers, for the miners, in settling disputes with employees.

Its success not only in the immediate adjustment of disputes referred to it but in establishing precedents in the interpretation of the contract by which subsequent misunderstandings of a similar nature may be avoided is evident in the steadily decreasing number of disputes reported.

Figures quoted in the commissioner's report showed that the production in the four states of the Southwestern district, which in 1918 was 20,470,493 tons, had dropped to 10,511,000 in 1924, and to 10,248,000 in 1925. Of the 1924 production, 6,340,279 tons was produced by members of the Southwestern Interstate Coal Operators' Association, paying the union scale. Of the 1925 production, only 5,352,817 was from that source.

Officers elected for the coming year are as follows: President, George J. L. Wulff, St. Louis, Mo.; vice-president at large, John A. Sargent, Kansas City, Mo.; vice-president for Kansas, Frank Thomas, Pittsburg; vice-president for Arkansas, Robert Boyd, Huntington; vice-president for Oklahoma, William Harkes, Kansas City, Mo.; vice-president for Missouri, A. E. Marriott, Moberly, Mo.; secretary, C. H. Markham, Kansas City, Mo.; treasurer and assistant secretary, George Manuel, Kansas City, Mo.; general commissioner, W. L. A. Johnson, Kansas City, Mo.

Norfolk & Western Cuts Rate To Cincinnati

The long sought reduction on coal freight rates has finally been granted by the Norfolk & Western Ry., which recently announced a cut of 10c. a ton on coal shipped to Cincinnati and Cincinnati switching points. Effective Sept. 1 next, the new rates on coal from the Tug River and Pocahontas fields will be \$1.89 per ton and the Thacker and Williamson fields will be given a rate of \$1.79 a ton.

Efforts to obtain this reduction in rates have been going on for several years and the operators feel that they are now on an equal footing with the western and southern Kentucky fields served by the Louisville & Nashville Ry. Prior to granting of the new rate West Virginia operators said that they were unable to compete on a parity with the Kentucky fields in the Cincinnati district.

Illinois Institute to Hold Four-Day Meeting

The Illinois Mining Institute will hold its annual meeting aboard the steamer "Cape Girardeau," which will make a 450-mile trip from St. Louis, Mo., to Nauvoo, Ill., and return, lasting from June 24 to 27. Besides the scenic attractions an interesting program has been arranged. Six business sessions will be held on June 25 and 26, including the following papers:

Opening address by F. G. Lewis, president of the Institute, followed by Frank Farrington, president, District 12, United Mine Workers; "Freight Rates on Competitive Coals," W. Y. Wildman, Illinois Coal Traffic Bureau; "The Geological Story of the Mississippi Valley Above St. Louis," Dr. M. M. Leighton, chief, Illinois State Geological Survey; "Sealing Fires in Gaseous Mines," John T. Ryan, Mine Safety Appliances Co.; "Open-Pit Coal Mining," Chas. Gottschalk, consulting engineer; "Predominating Hazards in Coal Mines and Their Remedy," H. T. Bannister, safety inspector, Madison Coal Corp.; "Safety Practices in a Southeast Missouri Lead Mine," J. H. Steinmesch, superintendent, Desloge Consolidated Lead Co.; "Cleaning and Preparation of Mechanically Loaded Coal," F. F. Jorgensen, general superintendent, Superior Coal Co.

Merger of 41 Midwest Mines Reported Under Way

Negotiations for the merger of forty-one Illinois and Indiana coal mines are under way, according to advices from Pinckneyville, Ill. Capital stock of \$5,000,000 and a \$17,000,000 bond issue is said to be contemplated. Twenty-four mines in Illinois and seventeen in Indiana are said to be involved in the big deal.

The report gained strength following the sale on June 8 of three coal mines and 3,000 acres of coal land owned by the Southern Gem Coal Corporation and \$145,000 of bonds of the Wabash, Chester & Western R.R. owned by the coal corporation to W. A. Brewerton, wealthy mine operator of Chicago. The price bid for the Southern Gem holdings was \$60,000 subject to taxes and other liens. The purchasers are said to contemplate the purchase of the remaining \$455,000 bonds of the railroad outstanding.

Coal properties mentioned in connection with the reports of the big deal include the O'Gara Coal Co., Greene County, Illinois; John A. Logan Coal Co. and Franklin County Coal Co., Franklin County; several mines of Southern Gem Coal Corporation in Jefferson County, Perry County and Franklin County; Chicago Fuel Co. mines in Perry and Jackson counties, and several mines operated by W. A. Brewerton in Sangamon County.

Burning Shaft of Ebbw Vale Mine Still Sealed

Since May 12, when fire was discovered at 11 p.m., the Ebbw Vale Coal Co.'s mine at Sullivan, Ind., has been burning. A 3-ft. clay-and-sand seal lies over the mouth of the shaft, this having been placed on the shaft head following the fire. This fire is believed to have originated in the locomotive charging station about 40 ft. from the bottom of the shaft. Thence it spread to the main shaft feeding on the wooden lining and buntons.

Three men were in the mine when the fire was discovered but could make

no headway in fighting the blaze. Before the seal was completed the flame had traveled to the top of the 250-ft. shaft, and one cage which stood at the ground landing was "white hot" when the rope parted and let it drop. Arrows on the illustration point to the points where the steel warped and the guides were charred.

The Ebbw Vale mine is a new development. The first coal was hoisted in the winter of 1922-23. Production has been at the rate of 2,000 to 2,500 tons per day. The mine is gaseous. There is considerable speculation as to the fate of the mine because it is said that the wood-lined shaft penetrates a thick bed of quicksand.



Ebbw Vale Coal Co.'s Shaft After Sealing Against Fire

Arrows show where the intense heat has bent the bracing girders. This headframe was braced in three directions.

Acrimonious Debates Mark Meetings Of British Miners and Operators; Charge Falsity in Owners' Figures

Despite the hopeful indications recorded last week the coal operators and mine workers of Great Britain appear as far apart as ever. In fact, the relation between the two was rather envenomed than improved by the pourparlers of June 8, which are reported to have been acrimonious. The miners not only declined to budge an inch from their position not to work longer hours or to accept less pay but denied the facts submitted by the operators as to economic ability of the industry to pay the present wages; even declaring that the figures were falsified.

Evan Williams, C. B. Crawshaw, Sir Adam Nimmo and W. A. Lee represented the operators and Herbert Smith, A. J. Cook, W. P. Richardson and T. Richards spoke for the miners. The latter wanted a voice in the setting of coal prices and suggested a joint arrangement for the creation of a joint selling agency to regulate the price of coal to domestic users. The miners proposed that a subsidy be given by the government to enable the mine owners to enter the foreign market, recognizing that prices could not be raised arbitrarily in foreign countries as they were determined they should be in Great Britain.

"Make some consumers pay more for coal," said Mr. Cook and his coadjutors, "so that the miners' status can be maintained. Charge more or obtain a subsidy for the export of coal or sell to foreign competitors just what you can. Let the miners join with the operators in establishing a coal monopoly."

Show Price of Reorganization

In vain the operators pointed out that a reorganization of the industry would close 50 per cent of the mines and permanently dispossess of employment 500,000 miners. In vain they protested that higher prices for coal would put the British manufacturer who had to pay the price at a disadvantage which he could not overcome in selling his product in Europe. In vain they declared that a ton of steel in its manufacture required four tons of coal and that therefore the cost of coal was an important item in the market price of that product. Discussing the conference, A. J. Cook for the miners said:

"The coal owners at yesterday's meeting declared the only terms they would consider included an eight-hour day and the 1921 wage agreement. This would mean a reduction of 13½ per cent from the national minimum. Failing this, they said wages would have to be based upon the capacity of the various districts to pay, which would mean that in some districts they would be lower than the 1921 agreement."

"All suggestions of reorganization of the selling agencies and the shutting up of uneconomic pits they treated with the utmost contempt, stating there was nothing in them."

Much condemnation has fallen on the mine workers because of their acceptance of Russian contributions. Said

Lord Birkenhead June 9 at the British Imperial Conference:

"The moneys received by the British miners do not come from the Russian miners, but officially from the Soviet Government, whose intentions, openly avowed, are to foment revolution in this country."

"We are furnished by the miners' leaders with the suggestion that a higher price for coal should be charged to the domestic consumer than to the foreigner. It appears never to have struck them that if you charge a higher rate for coal to our manufacturers than that paid by foreign manufacturers you will deal one fatal and final blow to every industry except their own."

"And this higher price is to be paid in the interests of men working shorter hours and receiving higher wages than any others in the world except those in America. It is too ridiculous."

"Mr. Cook, who once described himself as a humble disciple of Lenin, and recently 'thanked God for Russia,' has explained that £400,000 is being received 'from comrades in Russian mines to support the dependents of their English colleagues.'"

"This confession has revived, if it ever flagged, our faith in our common human nature. It is indeed a touching reflection on the miners of Russia, who have to work ten hours a day so that their British colleagues may work seven and subscribe a portion of their wages of 25s. a week so that their British comrades may get 40s."

"Prominent representatives of the Soviet openly boasted that they attempted to assist the general strike here, and it has been claimed by persons speaking in Moscow that the money sent to the miners here is being paid officially not by the Russian miners but by the Russian Government."

See Revolutionary Motive

"Therefore it becomes necessary to ask from what motive these moneys have been advanced which have led Cook to 'thank God for Russia.' They are undoubtedly sent to encourage revolution in this country. The government has not yet had time to deal with the latter, but it will eventually make time to deal with it."

Colonel Lane-Fox, answering a question in Parliament, stated that Russian miners work from eight to ten hours daily to get the equivalent of a \$6.50 average weekly wage. The conclusion is that they are incapable of making a sacrifice for their British comrades and, if capable, it would be hypocritical, for their own condition is much worse.

Government intervention in the coal strike is thought by some to be probable. Meantime some of the miners show a more reasonable spirit, and A. J. Cook has been trying to discipline them, but has found the miners' executive board deemed it best to leave the matter to the Miners' Federation. The men whose action has angered Mr. Cook are Frank Hodges and F. B. Varley.

Merryweather Named to Head Wholesale Association

G. H. Merryweather, Chicago, was elected president of the American Wholesale Coal Association at the closing session of the tenth annual convention of that organization held at the Hotel Secor, Toledo, Ohio, June 7-9. Leonard F. Leighton, Boston, Mass. succeeds Mr. Merryweather as vice-president of the organization. Roscoe B. Starek, Chicago, was re-elected secretary-treasurer.

The directors named were E. H. Hemingway, Hartford, Conn.; J. W. Dykstra, Detroit, Mich.; B. H. Read, Baltimore, Md.; W. N. Clark, Omaha, Neb.; F. H. Hoag, Buffalo, N. Y.; G. N. Snider, New York City; R. M. Buck, Watertown, N. Y.; Fred Legg, Cincinnati, Ohio; John M. Taylor, Columbus, Ohio; Arthur Kuppinger, Philadelphia, Pa.; Warren Bixler, Pittsburgh, Pa.; W. J. Prescott, Memphis, Tenn.; S. L. Platka, Burlington, Vt.; E. S. Simpson, Richmond, Va.; W. C. Maas, Milwaukee, Wis.; C. C. McGill, Toronto, Ont.; G. W. Harsh, Toledo, Ohio, and H. E. Northrup, Troy, N. Y.

The association formally reiterated its opposition to federal control as unnecessary, inadvisable and a contradiction of the principle of less government in business.

Industrial Coal Stocks Fall To 36,876,000 Tons

Coal stocks in the hands of industrial consumers on May 1 totaled 36,876,000 tons, a considerably lower figure than that shown for April 1, according to the National Association of Purchasing Agents. Conservative retrenchment has principally caused this depletion of supply on hand. The fact that only twenty-six days' supply was the estimated amount of stocks on hand at the end of April indicates the result of the above policy. Industrial coal consumption for the month of April is estimated at 39,048,000 tons.

Production in the bituminous fields fell off over six million tons during April, the total for the month being 40,079,000 net tons. Unusual weather conditions maintain the anthracite production rate, a 7,929,000 tonnage showing a decrease of approximately 300,000 tons from last month's figure.

The coke industry slowed up slightly on production during April, the by-product plants operating at 91 per cent of their capacity, producing 3,602,000 tons. The beehive ovens produced 981,000 net tons, 15 per cent less than the figure for March.

Comparative Estimates of Output, Consumption and Stocks

	(In Thousands of Tons)		
	Output	Industrial Consumption	On Hand in Industries
December	55,281	39,040	67,433
January	52,328	41,892	68,399
February	48,654	43,747	66,190
March	54,038	46,313	60,014
April	48,008	39,048	49,150
May	.....	.....	36,876

Days' Supply on Hand May 1 In Selected Industries

Steel plants	20
Electric utilities and coal-gas plants	48
Byproduct coke plants	15
Railroads	24
Other industries	18
Canada	60

How Coal Produced in
And Imported Into the
United States Is Used

The sources of coal used in the United States are well covered by statistics relating to the quantity of coal produced in various territorial subdivisions of of this country. The question "Where does the coal go?" cannot be so readily answered by statistical material because of difficulty in tracing coal through the numerous channels of distribution and consumption, which offer many chances for misstatement and

Balance Sheet for Coal, 1923
Anthracite (a)

Coal to Be Accounted For		Net Tons
Production.....	93,339,000	
Imports.....	300,000	
	93,639,000	
Less exports.....	5,090,000	
	88,549,000	
Less increase in stocks during year.....	1,635,000	
Balance—United States consumption	86,914,000	

Distribution of United States
Consumption

	Net Tons	Per Cent of Total
Power and heat at coal mines(b)	8,018,000	9.2
Railroads.....	4,578,000	5.3
Artificial gas plants.....	1,101,000	1.3
Electric utilities, including electric railways.....	2,273,000	2.6
Domestic trade(domestic sizes not included elsewhere).....	52,344,000	60.2
Steam trade (steam sizes not included elsewhere for heat- ing and industrial use).....	18,600,000	21.4
Total.....	86,914,000	100.0

Bituminous (a)
Coal to Be Accounted For

		Net Tons
Production.....	564,565,000	
Imports.....	1,882,000	
	566,447,000	
Less exports.....	21,447,000	
	545,000,000	
Less increase in stocks during year...	26,000,000	
Balance—United States consumption	519,000,000	

Distribution of United States
Consumption

	Net Tons	Per Cent of Total
Power and heat at coal mines.	8,765,000	1.7
Mines and quarries, other than coal.....	4,190,000	.8
Railroads.....	155,795,000	30.0
Public Utilities:		
Electric, including electric railways.....	36,800,000	7.1
Gas.....	5,150,000	1.0
Beehive coke plants.....	30,085,000	5.8
Byproduct coke plants.....	54,280,000	10.4
Bunkers:		
Foreign.....	5,095,000	1.0
Coastwise and Lake trade..	2,940,000	.6
Iron and steel works, not in- cluding coal for coke(c)....	30,220,000	5.8
General industrial and other unspecified uses.....	119,280,000	23.0
Domestic consumers.....	66,400,000	12.8
Total.....	519,000,000	100.0

(a) Figures are in part estimates based on information contained in Bureau of Foreign and Domestic Commerce, Census, and Interstate Commerce reports. (b) Includes 167,000 tons, or 0.2 per cent of coal used at mines and quarries other than coal mines. (c) Includes blast furnaces, steel works and rolling mills.

error. Therefore, distribution statistics are not so often compiled. Many factors influence the movement of coal to the ultimate consumer. Besides the vagaries of weather, and customs and

U. S. Coal Miner's Output
Tops All Others

The American coal miner produces almost three times as much per man as a worker in the mines of any of the other leading coal countries, according to the U. S. Bureau of Labor Statistics, which has made an analysis of the recent report of the British Coal Commission. This report contained a table giving the annual per capita output for some 50 years past.

In 1924 American bituminous miners produced an average of 781 tons a year; American anthracite miners, 550, with a total average for all miners of 731. This is an increase over the period 1919-1923, when the total average was 698. From 1879 down to the World War, our production rose conspicuously and steadily. There was a setback after 1918, and the high total average of 795 for the period 1914-1918 has not been reached.

The British production per man, however, the Commission pointed out, was decreasing. As long ago as 1879-1893 per capita output was 358 tons. In 1924, however, it was 246, and in 1925, 243.

In France the average yearly output of coal per person employed in 1925 was only 170 tons; in Belgium, 158; and in Germany, 262.

The principal reason for the great increases in American output is the widespread use of machinery and the development of better methods of production, it was said.

preferences which obviously play their part in controlling the movement of household fuel, far greater influences are exerted by varying demands among industries, which are the principal users of coal. In accounting for the disposition of the annual supply of coal, imports and exports must be considered, as well as net changes in quantities moving into or out of storage.

The apportionment to major consumptive groups of anthracite and bituminous coal used during the calendar year 1923, the latest year for which information is sufficiently complete to afford estimates, as compiled by the U. S. Bureau of Mines, is as in the accompanying table.

Editors Nominate Officers

The Nominating Committee of the Editorial Conference of the New York Business Publishers' Association, Inc., reports the following nominations for officers and directors of the Editorial Conference for the business year 1926-1927: Chairman, Robert J. Patterson, *American Hatter*; vice-chairman, W. W. Macon, *Iron Age*; secretary and treasurer, Sidney D. Kirkpatrick, *Chemical and Metallurgical Engineering*; directors, Roy V. Wright, *Railway Age*; Ray W. Sherman, *Motor*; S. A. Dennis, *Electrical Record*.

Program for Fall Meeting of
A.I.M.E. Takes Shape

A tentative program for the 134th meeting of the American Institute of Mining and Metallurgical Engineers, which is to be held in Pittsburgh next autumn, was drawn up by the members and the ladies' auxiliary of the Pittsburgh section, following a dinner at the Pittsburgh station of the U. S. Bureau of Mines on April 26.

According to the plans thus far arranged, the meeting will open Wednesday, Oct. 6, and technical sessions will be held in the morning and in the afternoon. In the evening a smoker will be held for the men and a special entertainment arranged for the women.

On the second day an all-day trip will be taken on the Monongahela River to Clairton and return. This trip will give the various members an opportunity to become acquainted and at the same time get a glimpse of the various industries located along the banks of the Monongahela River. A visit will be made to the Clairton byproduct coke plant of the U. S. Steel Corporation and possibly to the National Tube Works at McKeesport. In the evening a private view of the International Art Exhibit at the Carnegie Institute is being arranged for the members and guests of the Institute in advance of the regular opening.

A technical session is to be arranged for the morning of the third day, but those who do not care to attend this session will be guided on several trips to various industrial plants in the district. The afternoon will be taken up by a visit to the Experimental Mine of the Bureau of Mines at Bruceton, Pa., and by trips elsewhere. The meeting will close with a banquet.

Coal Used and Power Output
By Utilities Waning

Public-utility power plants in the United States consumed 3,482,347 net tons of coal in March, according to the U. S. Geological Survey, compared with 3,312,902 tons in the short month of February and 3,722,597 tons in January. Fuel-oil consumption by these plants in March totaled 724,308 barrels, as against 735,807 barrels in February and 1,025,746 barrels in January.

The daily production of electricity by public-utility power plants in March was about 1½ per cent less than the output for February. In 1925 the decrease in average daily output from February to March was about 2½ per cent. The average daily production of electricity by the use of water power again exceeded all previous rates for the month, amounting to 72,500,000 kw.-hr. per day. This rate is about 7 per cent larger than the rates for February, 1926, and April, 1925—the two months whose average daily production by water power ranks next. The proportion of the total output produced by water power in March, however, was slightly less than that in March, 1925.

The total output for the first quarter of this year was about 15 per cent larger than for the same period in 1925.

Inflexible Attitude of Operators and Lewis Feared as Wage Pact Nears End; Senate to Resume Retail Price Probe

By Paul Wooton

Washington Correspondent of *Coal Age*

While some members of Congress are convinced that the bituminous operators are spoiling for a showdown with the union, they also feel that the United Mine Workers have been just as lacking in constructive suggestions for safeguarding the public fuel supply as have the operators. They discern that the union does not accept the idea of a mediation board. This is in spite of the fact that it is much more to the interest of the union to avoid a strike than it is to the operators.

Recent testimony before the House committee on interstate and foreign commerce brought out clearly that the offensive power of the United Mine Workers in the bituminous field is less today than formerly. This has given rise to the hope that Mr. Lewis will see that the wise thing for him to do is to settle with the operators in October and avoid an open break. If he does not do so many expect him to learn by experience that the expansion of non-union capacity and the drift away from the union have made it possible for the non-union fields to supply the needs of the country. Even Pennsylvania now has enough non-union tonnage to meet its urgent requirements.

Strike Would Hurt Union Prestige

With the prospect of a suspension, consumers would stock up months ahead of time. Under present conditions there would be little prospect of bringing them to their knees. These considerations lead to the hope that the miners will do their part to avoid a fight.

At the same time it is realized that a strike would have a particularly harmful effect on business under conditions which exist now and which may continue next spring. The effect of a coal strike always is demoralizing. The threat of a strike arouses great uncertainty and is especially hurtful when business is somewhat on the downgrade. In a situation likely to prevail for the next year it is regarded as important in the interest of the country that no feeling of uncertainty be permitted to allow the decline to proceed to the point of a depression.

An indication of the prevailing sentiment in Congress toward the coal industry may be had from the action of the District of Columbia committee of the Senate, which has voted to continue its investigations of retail prices of coal in the District. The committee began its investigation during the anthracite strike. Not satisfied with the presentations of the retailers, the committee appointed an expert accountant from the office of the Comptroller General to get a more accurate idea as to the prices which had been paid for coal and the profits which had been taken. The accountant just has reported to the committee that the dealers refused to make available the

information necessary to determine these facts.

Members of the committee were outspoken in their criticism of the attitude of the retailers and it was voted to confer with representatives of the Department of Justice as to what steps that agency could take.

This is a straw which indicates the way the wind is blowing in Congress. This Congress is distinctly conservative and the majority is disposed to listen to the pleas of business, but there can be no disputing the fact that the impression is general that neither the operators, the retailers, nor the mine workers are taking a constructive position, and have withheld any assurance of better service in the future.

Ohio Pig Iron Men Discuss Coal Problems

Coal production and distribution came in for extensive consideration at the annual meeting of the Ohio Pig Iron & Coke Association, recently held in Cincinnati. Frank A. Ray, of Columbus, presented a proposal that the union fields adopt a bonus system whereby the mine workers would be paid a portion of the profits—if any—in six-month periods. J. R. Burton gave a talk on the sampling of Elkhorn coal; Samuel A. Taylor, president of the A.I.M.E. delivered an address on stream pollution, and C. E. Leshner, assistant to the president, Pittsburgh Coal Co., spoke on the evaluation of coal.

Illinois Associations Merged In New Organization

The three operators' associations in Illinois were consolidated in Chicago last week in a new organization called the Coal Operators' Association of Illinois. Rice Miller, of Hillsboro, was elected president; Herman C. Perry, of St. Louis, vice-president; C. L. McLaughlin, Chicago, secretary, and Luce H. Smith, Chicago, treasurer. The merger, which was the culmination of efforts to that end extending over ten years, includes the Illinois Coal Operators' Association, the Central Illinois Coal Operators' Association and the Coal Operators' Association of the Fifth and Ninth Districts of Illinois.

Coming so close to the opening of the National Coal Association convention at the Drake Hotel in Chicago, June 9, there was considerable talk on the prospects of the new association joining the National Coal Association. The Illinois operators withdrew from membership in the National four years ago when differences of opinion arose while the negotiation of the wage agreement with the United Mine Workers was on. Illinois operators objected to methods employed by the National Association officials. The National took no direct part in the agreement, however, and since then, it is believed, the major part of the dispute has been ironed out.

A board of directors of the new association and an executive committee has been formed.

The executive committee, composed of nine members, follows: L. H. Smith, Spring Valley Coal Co.; M. S. Peltier, Peabody Coal Co.; S. A. Shafer, Pana Coal Co.; O. L. Lumaghi, Lumaghi Coal Co.; E. C. Searls, Crerar-Clinch Coal Co.; J. D. Zook, O'Gara Coal Co.; George B. Harrington, Chicago, Wilmington & Franklin Coal Co.; M. S. Coleman, Saline County Coal Corporation, and F. S. Pfahler, Superior Coal Co.

Increased Industrial Efficiency, Says Mellon, Holds Future of Prosperity in United States

America can no longer depend on her natural resources but must place her faith in increasing the efficiency of her industrial system, Secretary of the Treasury Mellon stated recently in an address by radio to the annual convention of the National Electric Light Association at Atlantic City.

Comparing economic conditions in this country and Europe, Mr. Mellon declared that America had adjusted herself to the economic laws of the new industrial era, and has evolved an industrial organization which can maintain itself, not only because it is efficient but because it is bringing about a greater diffusion of prosperity among all classes.

The success of American industry and America's rapid growth in wealth, he said, is based on private initiative. The foundation of her present development was laid in a system in which free play was given

to the energy and initiative of the individual and which at the same time encouraged competition and permitted corporate organization in industry, he continued.

"Whether we shall continue to grow and expand depends upon whether we pursue an intelligent and constructive, or a hostile and destructive policy toward those forces which have brought about our present development," Mr. Mellon said.

"A sound industrial policy must square with economic laws. And a consistent policy is necessary in order that capital, labor and the public may know what to expect. President Coolidge has pursued a clear, consistent course and has made it plain that his administration will not interfere with legitimate business merely because it is big, but desires that business and industry, so far as possible, shall work out their own problems, provided they conform strictly to the law."

Industrial Conference Board
Elects Officers

Loyall A. Osborne, president of the Westinghouse Electric International Co., was elected chairman of the National Industrial Conference Board at the tenth annual meeting of that organization in New York City.

In accepting this office, Mr. Osborne assumes the chairmanship of a body whose members are the delegates of 27 national and state industrial organizations and four government departments, comprising more than 50,000 manufacturing concerns employing a total of more than 7,000,000 men and women. The board maintains a large staff of economists, statisticians and engineers who are continually investigating domestic and foreign problems of economic-industrial interest, and since its organization in 1916, has issued 115 research and 35 special reports and many monographs on subjects of timely and practical concern.

Mr. Osborne, who is a graduate of Cornell University, '91, joined the Westinghouse organization immediately upon leaving college, and was made vice-president of the Westinghouse Electric & Manufacturing Co. in 1902. He is now senior vice-president of that organization. During the war, he was a member of the Council of National Defense, a member of the War Labor Planning Commission, and of the War Labor Board. He succeeds Frederick P. Fish, Richardson & Neave, Boston, as chairman of the Conference Board.

Other officers of the Conference Board are: Frederick P. Fish, honorary chairman; Charles Cheney, of South



Loyall A. Osborne

President of the Westinghouse Electric International Co., who was elected chairman of the National Industrial Conference Board at its tenth annual meeting.

Manchester, Conn., vice-chairman; John W. O'Leary, of Chicago, vice-chairman; Magnus W. Alexander, New York City, president; Fred I. Kent, New York City, treasurer; James M. Robertson, New York City, secretary. These with William W. Coleman, of South Milwaukee, Wis., Irene du Pont, Wilmington, Del., Russel H. Leonard, Boston, and William H. Nichols, Jr., compose the Executive Committee of the Conference Board.

Co-operative Mining Banned
By Ohio Union

Members of the United Mine Workers are prohibited from participating in co-operative mining operations in all sections of Ohio by an order issued June 9 by the Ohio union. Since competition under the Jacksonville scale has become so strong and many southern Ohio operations have suspended, many co-operative mining ventures were started in which union miners produced coal, sold it on the market and divided the profits. These operations were generally small ones and were leased from the owner on a royalty basis. A considerable tonnage had been produced in that manner and it is said that miners participating did not realize the union scale, according to the Jacksonville agreement.

The order was the result of a meeting held at Nelsonville recently by about 1,500 idle miners, who brought the matter to the attention of the union officials. The threat is made that unless the miners comply they will be disbarred from the union. Operators do not expect the order to be complied with by all miners, especially in the Pomeroy field, where some special agreements are in force.

Coal production in West Virginia in 1925 was a record breaker, with 123,061,985 tons produced, according to an announcement made on June 12 by Robert M. Lambie, chief of the state Department of Mines. This is an increase of 20,000,000 tons over the previous year. The final figures have just been struck.

Coal-Mine Fatalities During April, 1926, by Causes and States

(Compiled by Bureau of Mines and Published by Coal Age)

State	Underground											Shaft					Surface						Total by States			
	Falls of roof (coal, rock, etc.).	Falls of face or pillar coal.	Mine cars and locomotives.	Gas explosions and burning gas.	Explosives.	Suffocation from mine gases.	Electricity.	Animals.	Mining machines.	Mine fires (burned, suffocated, etc.).	Other causes.	Total.	Falling down shafts or slopes.	Objects falling down shafts or slopes.	Cage, skip or bucket.	Other causes.	Total.	Mine cars and mine locomotives.	Electricity.	Machinery.	Boiler explosions or bursting steam pipes.	Railway cars and locomotives.	Other causes.	Total.	1926	1925
Alabama.....	5		3									8													8	11
Alaska.....																									0	0
Arkansas.....																									0	1
Colorado.....		1	1									2		1											3	3
Illinois.....	6											7	1		1										9	10
Indiana.....	1						1					2													2	3
Iowa.....												1													0	0
Kansas.....	1											1													1	1
Kentucky.....	6		2		1		1					10													10	16
Maryland.....																									0	1
Michigan.....																									0	0
Missouri.....																									0	0
Montana.....																									0	0
New Mexico.....																									0	3
North Dakota.....																									0	0
Ohio.....	6		1				1					8													8	8
Oklahoma.....	1											1													1	2
Pennsylvania (bituminous).....	15	1	6				1					23						1					1	24	27	
South Dakota.....																									0	0
Tennessee.....	3											3													3	1
Texas.....																									0	0
Utah.....	3											3													3	1
Virginia.....	1											1													1	5
Washington.....																									0	0
West Virginia.....	12		6		4		1				2	25						1				1	1	3	28	25
Wyoming.....																									0	2
Total (bituminous).....	60	2	19		5		5				3	94	1	1	1		3	2				1	1	4	101	119
Pennsylvania (anthracite).....	15	3	5		3	1					1	28										1	1	1	101	41
Total April, 1926.....	75	5	24		8	1	5				4	122	1	1	1		3	2				2	1	5	130	
Total April, 1925.....	86	7	24	13	6		5		7		5	153						4		1				7		160



News Items From Field and Trade



ARKANSAS

Speedy Trial for Dalrymple.—William R. Dalrymple, suspended president of the District No. 21, United Mine Workers, will be given a trial before international board members immediately, L. R. Kendricks, District Board member announced at Fort Smith last week. Charges will be pressed by the District Board, which ordered his suspension and named Gomer Jones, district vice-president, to succeed him. Dalrymple was given a trial at Muskogee, Okla., recently, but the findings were incomplete and were never announced.

Coal mines at Prairie View which have not been operated for several months, have been reopened, with about 20 men at work.

ILLINOIS

New Orient After More Records?—The New Orient mine of the Chicago, Wilmington & Franklin Coal Co., generally known as the world's largest mine, has resumed operations with full force. This plant laid off about three-fourths of its normal working force on March 30 and confined the activities of the remaining limited force to developing new territory in order to increase daily output. New men will be added to the force as the newly developed territory can be made ready for them and the force of about 1,400 now employed will be increased probably to 1,600 by the time snow flies.

During April 158 Illinois mines averaged 15.1 days work and produced 4,647,003 tons of coal, 51,879 miners were employed, 9 were killed and 1,463 injured. In April, 1925, 3,700,159 tons was produced.

IOWA

Corn Belt Dealers Organize.—H. J. Bane, of Iowa City, was elected president of the Corn Belt Coal Dealers' Association, formed by Iowa and Minnesota coal men at a recent meeting at the Hotel Savery, Des Moines. Des Moines was designated as the location of the central office.

KANSAS

Three Mines to Reopen Soon.—Three large mines in the Pittsburgh district are reported to be preparing to resume operations within three weeks, after a long period of idleness. The mines said to be getting ready to resume are No. 9 of the Hamilton Coal & Mercantile Co., north of Cherokee; No. 19 of the Sheridan Coal Co., near Mulberry

and No. 17 of the Jackson-Walker Coal & Mining Co., near Frontenac. The last two will be operated by sub-lessees. The three operations employ a total of more than 500 men.

The Frontenac State Bank, of which J. S. Patton is president, closed its doors June 4 after 22 years of continuous operation. Mr. Patton for many years has been a coal operator in the Pittsburgh district, largely in steam shovel mines. Frozen assets were given as the cause of closing. There has been little activity the last year or two in the coal mining zone from which the Frontenac bank drew its business.

To Try Coking Kansas Coal.—A test to determine the adaptability to coking of southwestern Kansas coal will be financed by the Pittsburgh Realtors' Association. This decision was made at a meeting of the association June 2. It was announced arrangements have been made with a coking plant to make the tests.

John Fulton, lessee of the Jackson Walker Coal & Mining Co.'s mine No. 16, near Pittsburgh, reopened it June 4, with thirty-nine men, after it had been closed down nearly a month.

KENTUCKY

Walkout Short-Lived.—After being out just one and one-half days, 350 workers in the plant of the Norton Coal Mining Co., Nortonville, near Madisonville, in western Kentucky, returned to work on June 3. The men quit work at noon over a disagreement on the wage scale, alleging that the company attempted to work them nine hours at an eight-hour price. The old scale was ratified before the men returned to work.

State Institutions Want Coal.—The Kentucky Board of Charities & Corrections has announced that bids will be opened and contracts let on July 1 for approximately 45,000 tons of screenings to be supplied to seven state institutions, located at Eddyville, Hopkinsville, Lakeland, Greendale, Lexington and Frankfort. Milton F. Conley, Commissioner of Public Institutions, stated that 550 forms had been sent to operators and jobbers. More than a hundred bids were received last year, and the average contract price was \$1 per ton f.o.b. mine.

Columbus Mining Co. Expands.—The Columbus Mining Co., Chicago, is reported now to control the largest tonnage in the Hazard field of eastern Kentucky, having taken over the production of the Meem-Haskins Coal Corporation at Carrs Fork, which operates two mines; one mine of the Diamond

Block Coal Co., at Hazard, and one mine of the Apex Coal Co., in the Elkhorn field, all of which was formerly sold through the Pocahontas Coal Sales Co. The Columbus outfit now handles the production of twelve mines.

A fire loss of around \$25,000 was reported at the Elkhorn-Shelby Creek Coal Co. plant at Esto, near Pikeville, on June 2, when commissary, supply house, post office, etc., burned. Dynamite was used to prevent the spread of the flames.

MONTANA

The Chicago, Milwaukee & St. Paul Ry. is testing a Montana lignite at the shops at Aberdeen, S. D. It is called Geneva coal and is expected to furnish a cheaper fuel. The shops use from 700 tons a month in summer to 1,400 tons a month in cold weather, and if the new coal maintains its promise of economy, it will make a material saving.

OHIO

Consumers See Ohio Mines.—A special train containing owners of coal-consuming factories in Cleveland, Akron, Canton and Kent visited the eastern Ohio coal fields during the last week as part of a "Use-Ohio-Coal-Campaign." The mine owners financed the trip.

Mine No. 119 of the Sunday Creek Coal Co., of Columbus, located at Millfield, has been reopened after a suspension of several months.

Toledo Docks Busy.—The Hocking Valley docks at Toledo dumped 321,957 tons during the week ended June 2 as compared with 356,401 tons during the corresponding week last year. The New York Central docks loaded 208,989 tons as compared with 84,195 during the corresponding week last year. The total tonnage loaded to date by the Hocking Valley was 1,766,062 as compared with 2,110,566 tons last season up to June 2 while the New York Central docks handled 719,575 tons as compared with 485,217 tons in the season of 1925 up to June 2.

Starr Mine Equipment Sold.—The Southern Ohio Coal Co., with headquarters in the Brunson Bldg., Columbus, recently purchased at receiver's sale, the equipment of the Starr-Jackson Mining Co., which operated the old Starr mine on a lease, but which was forced into bankruptcy several months ago. The mine is owned by the Southern Ohio Coal Co., of which J. S. McVey is president and manager. Joseph P. Eagleson was receiver. The property

consisted of mining machines, mine cars, three 6-ton electric locomotives, blowers and pumps.

The Green's Run Coal Co., of Nelsonville, recently chartered with a capital of \$25,000, has taken over the property of the Northern & Southern Coal Co., located at Jacksonville, on the New York Central lines. C. C. Sharp has been elected president, and Edwin Sharp, secretary and treasurer. The property consists of 500 acres of coal, with modern equipment. The mine is now being put into shape for operation when market conditions improve. The capacity of the mine is about 700 tons daily.

PENNSYLVANIA

Many Idle as Mine Slows Up.—More than 100 men have been laid off in the mines of the McKinney Steel Co. at Wolfpit, where, it is reported, the mining of the lower seam of coal is suspended and only one seam is now being worked. A similar situation faces the Greasy Creek mines, a few miles away operated by the same company. Fewer men are out of employment at Greasy Creek as it is a smaller operation.

Receiver for Pennsy Coal Co.—The Pennsy Coal Co., of Franklin, the sales office of which was formerly at Buffalo, with E. T. Bline general sales agent, has gone into the hands of a receiver. The liabilities are given as \$500,000, with less than \$100 cash on hand and no means for paying on either sinking fund or coupons. The company has five mines, four at Summerville and one at Sligo, all on the Lake Erie, Franklin & Clarion R.R. The receiver is I. W. Leshner, of Clarion. The mines had been taken over by W. R. Calverly, of Pittsburgh, who failed to make good on the operation of them. Production was at one time nearly 1,000 tons a day.

The Jones & Laughlin Steel Corporation has awarded a contract for four miles of railroad to its new coal mine in Greene County on which work is now being rushed to permit its opening for production by the end of the year.

Two Firms Taxed for Same Tract.—It developed recently at the Northumberland County court house that the Colonial Coal Co. and the Coxe estate, of Hazleton, have been paying large taxes on the same property in Shamokin for a number of years. The Colonial has paid on a valuation of \$200 an acre while the Coxe interests have been assessed on a \$50 acre basis. It is held that the Coxe interests are the real owners of the tract, which consists of 174 acres in Coal Township. It is understood there are thousands of tons of unmined coal in the property.

Bituminous coal (revenue) transported by Reading Company during April, 1926, totaled 1,454,854 gross tons. In the corresponding month a year ago the company moved 1,262,490 tons.

Glen Alden Dividend \$5.—Directors of the Glen Alden Coal Co., Scranton, at their meeting June 8 declared a dividend of \$5 covering the past six months. It also was announced that hereafter dividends will be declared quarterly. The previous dividend has been \$3.50 semi-annually, the last being paid Dec. 31, 1925. The dividend is payable June



No. 42 Mine of Bethlehem Mines Corporation, near Fairmont, W. Va.

The name of this operation is Dakota Mine. A tributary of the Monongahela River can be seen in the rear. Owing to the narrowness of the valley the plant is located near the water. The railroad is the Baltimore & Ohio.

21 to stock of record June 10. It is generally believed that the present declaration of \$5 a share places the Glen Alden stock on a \$10 annual basis.

Coke Plants Slower.—The H. C. Frick Coke Co. closed down a number of plants in the Connellsville coke region last week, including Wynn, Brownfield, Fairchance and Continental Nos. 1, 2 and 3. The Oliver & Snyder Steel Co. closed down No. 1 and 2 plants and is operating No. 3 mine about full, shipping to its byproduct coke ovens at Troy, N. Y. W. J. Rainey, Inc., and the Hillman Coal & Coke Co. coke region plants are operating about full, being nearly the only companies doing so.

SOUTH DAKOTA

The state has placed orders for fuel for state institutions for the first time on a guaranteed performance basis. Successful bidders were the Sioux Falls Fuel Co., Schoenemann Bros., Mills Grain & Supply Co. and H. T. Parmley, all of Sioux Falls, besides the state owned mine. The state mine is to furnish 20,405 tons; 11,400 tons of Western coal will be used and about 10,000 tons will come from Illinois, Kentucky and Virginia.

TENNESSEE

O. P. Pile, Chief Mine Inspector, and the board of mine foreman examiners will hold an examination for mine foremen at the Post Office building in Knoxville on June 9 and 10.

The storeroom of the College Coal & Mining Co., Pikeville, recently was destroyed by fire with a loss of \$20,000.

UTAH

Certain stockholders of the Sevier Valley Coal Co., with headquarters in Richfield, are to be prosecuted, according to the State Securities Commission, for the alleged act of offering personal stock of the company held in escrow. Some time ago the company was authorized to sell 60,000 shares of its stock at \$1 a share, and it is charged that while this treasury sale was in

progress some of the stockholders violated the escrow agreement and sold some of their personal holdings, handicapping the treasury sale and the proper financing of the company.

B. F. Bauer was the successful bidder for the lease of the 80-acre tract of coal land located near Thompsons, in Grand County. Bauer outbid N. B. Knight, on whose petition the land was offered. The successful bid went \$1,000 above the terms of the lease. The land adjoins the property of the Chesterfield Coal Co., of Salt Lake City.

The Rains mine in Carbon County, operated by the Carbon Fuel Co., has been on fire for a few days, but it is now under control and plans are under way to reopen it on June 7.

The 1926 school year book of the Carbon County High School at Price is dedicated to the coal mining industry of Utah. Illustrations show mines and tipples and the like.

VIRGINIA

Rail Orders for Virginia Mines.—Contracts for more than 2,000,000 tons of railroad coal in the Virginia field have been announced. The Southern Ry. will get approximately 1,000,000 tons from the Stonega Coke & Coal Co. Between them the Seaboard Air Line and the Atlantic Coast Line will purchase 1,203,000 tons from a dozen different mines in the Virginia field. It is stated that the Toms Creek mines of the Virginia Iron, Coal & Coke Co. will obtain a liberal portion of the orders. Much of the Seaboard Air Line and Coast Line business was placed through the Whitney-Kemmerer Company, some tonnage coming through other agencies and some being placed direct with the contracting mines.

To Extend Coal Development?—W. E. D. Stokes, Jr., who has succeeded his father, the late W. E. D. Stokes, as president of the Chesapeake & Western Ry., a 40-mile road that runs across the Shenandoah Valley from Elkton to Stokesville, will bring engineers to Virginia within a few weeks to investigate the anthracite deposit near Stokesville,

which his father discovered. Young Stokes plans to extend the railroad west to the mining field, if such a project is found feasible. If conditions warrant, Mr. Stokes will operate the road on a more comprehensive scale.

The Raleigh Smokeless Fuel Co. has been awarded the contract to supply 12,000 tons of Pocahontas or New River Navy Standard coal to the city of Norfolk, at \$1.74 per net ton, mines. The State of Virginia divided its 60,000 ton annual contract between several firms, the bids ranging from \$1.60 to \$1.75.

WEST VIRGINIA

Scholz Denies Deal Is Closed.—The Raleigh-Wyoming Coal Co., of Charleston, announced recently that it had started work on 100 additional miners' houses, 50 at Edwight, in Raleigh County, and 50 at Glen Rogers, Wyoming County. The firm expects to spend \$200,000 for houses at these towns. The work will be completed in 75 days. An additional fan will be installed by the company at Glen Rogers, which will be completed in 60 days. Carl Scholz, vice-president and general manager of the company, was in new York City last week, presumably in regard to the deal with the Old Ben Coal Corporation, of Chicago, which has been reported as being closed frequently, but which the management of the Raleigh-Wyoming company contends is not a fact. There are 1,800 acres of coal land in the two properties, 9,000 acres at Glen Rogers, which is smokeless coal, and 9,000 acres at Edwight, which is byproduct coal land. There are 175 houses at each mining town.

Fletcher & Farley are erecting a storage plant for bituminous coal at Alderson, Monroe County. The coal will be retailed locally.

Seven men will be graduated from the mining engineering department, University of West Virginia at Morgantown this year. They are Percy Henry Gillie, Harry Greene Kennedy, Russell Warden King and Patrick Daniel McMurrer, all of Charleston; Ivan Allen Given, of Sutton; Grier Hartzell Pierce, of Huntington, and Franklin Pierce Tallman, of Beech Hill.

Thompsons May Build Plant.—It is reported that the Thompson interests are preparing to begin the construction of a plant at their holdings on the Darbin branch of the Western Maryland R.R. in Pocahontas County. This will be the first coal mine opened in that field. A seam of smokeless coal has been found there, it is reported.

Ocean Mine Resumes.—Officials of the Elk Horn Coal Corporation announced a resumption of operations at the Ocean mine, between Clarksburg and Bridgeport, on June 1. The mine has been shut down since about the middle of March. The company expects to be in a position to operate the mine regularly until the middle of November, when the lake season closes, and possibly even for a longer period. About 125 men are being employed.

May Develop Large Lorain Tract.—The Lorain Coal & Dock Co. may open up a 16,000-acre tract of coal land on Big Wheeling Creek, south of Elm

Grove, in Ohio County, according to a semi-official report. Engineers of the company in eastern Ohio have been surveying the area during the last few weeks, with a view to making certain openings. The tract was purchased by the company about four years ago, but no development work has ever been undertaken. If new mines are opened, coal will be produced on a non-union basis. Three of the five mines of the company in Belmont County are now closed down, ostensibly because of inability to operate under the Jacksonville agreement.

Tait Mine Resumes Open-Shop.—Operations were resumed on an open-shop basis May 28 at the Tait mine, in the Maidsville section of Monongalia County, after an idleness of three years. The mine, which is owned by John and Gordon Tait, of Morgantown, has a capacity of about 10 cars a day. It is proposed by the owners to push production to capacity. About 20 men were at work on the day the mine was opened, but the force will be increased as additional men are needed. The Maidsville section, which has now become exclusively open-shop, was one of the last strongholds of the union prior to March 31.

Keen Competition on Railway Fuel.—Railroad fuel business closed recently included contracts for 500,000 tons for the Seaboard Air Line placed with firms in West Virginia along the Chesapeake & Ohio. This road paid \$1.30 to \$1.50 for mine-run. Keen competition marked the bidding, with the result that the price levels are down to a point close to the production cost. The Atlantic Coast Line placed 370,000 tons in southern West Virginia, paying \$1.30 to operators along the C. & O., \$1.35 to concerns located on the N. & W. and \$1.50 to firms with mines in the Clinch Valley.

A new sternwheel steamboat of the Ohio River Co., a subsidiary of the West Virginia Coal & Coke Co., has been launched at Charleston. The boat will be operated in the coal towing trade between Huntington and Cincinnati.

Eagle Mine Under Hammer.—The Gauley By-Products Coal Co.'s Eagle

mine, located near Vaughan, Nicholas County, recently was sold at a trustee's sale and the property was purchased under a leasehold by the Federal Coal Co., of Scranton, Pa., which owns the coal land. Six hundred and fifty acres of splint and gas coal land is included in the tract together with the equipped mine, which produces 250 tons of gas coal a day. The property was put under the hammer at the Nicholas County court house, at Sommersville.

The Detroit Mining Co., owned by Fred Essex, of Columbus, Ohio, and associates, recently opened up a new mine on White's branch of Little Coal River, Boone County, near Van. The mine is now under development and produces 6,000 tons of coal a month, but ultimately will mine 20,000 tons a month. A wooden tippie and a rope and button conveyor have been installed. Twenty miners' houses have been built. Splint and high-volatile low-sulphur coal is being mined.

CANADA

To Reorganize British Empire Corp.—The British Empire Steel Corporation, Ltd., and constituent companies, which include the Dominion Coal Co., for the year ended Dec. 31, 1925, had an operating loss of \$1,133,443 before depreciation, depletion, interest, etc., comparing with operating profit of \$923,774 in 1924. President Roy M. Wolvin announces that the deficit in operation since the inception of the corporation amounts to a total of \$5,738,018. He anticipates that the interest and sinking fund payments on the company's bonds probably will not be met when due on July 1 next. Among the causes assigned for this unsatisfactory condition of affairs are keen competition with European and American steel products owing to inadequate tariff protection and the losses occasioned by the five months' strike of the Cape Breton miners. Under these unfavorable circumstances a reorganization of the corporation and its subsidiary companies has been decided upon, and it is expected that within the next sixty days some plan will be formulated for submission to all who may be concerned in the corporation's affairs.



Fan Installation at Mine No. 41, Bethlehem Mines Corporation

Here, as may be noted by the two short evasé stacks, is a double fan installation, one driven by a uniflow engine and the other by an electric motor. This was installed about 1923. The village is that of Barrackville, W. Va. The picture is taken from the rear of the fan houses.

Among the Coal Men

Thomas F. Farrell, a vice-president of Burns Bros., New York City, has been elected a director to succeed Mason B. Starring, who resigned because of his removal to the Pacific Coast.

Ed Holyoke, formerly of the Wyoming Coal Sales Co. and the Cory-Mann-George Co., has been appointed Western manager for the Indian Run Coal Co. and its offices have been moved to the Fourth National Bank Building, Cincinnati. **James C. Layne Jr.**, who formerly had this position, is now devoting all of his time to the Katoma Coal Co.

Erskine Ramsey, chairman of the board, Alabama By-Products Corporation, Birmingham, Ala., who recently left to attend the Kiwanis International Convention, at Montreal, Can., will be away about a month. He will return by auto, stopping at New York on the way.

C. Bascom Slempe, chairman of the board, Wakenva Coal Co., representing a merger of fourteen companies, and former secretary to President Coolidge, recently joined the "hole-in-one" coterie of golfers. He did it at the Burning Tree Club, near Washington, D. C., on a hole of a little more than 150 yards.

A Dorman, managing director, and **W. L. Johnson**, an associate director, of Dorman, Long & Co., and **E. D. Morgan**, general works manager of the Port Clarence Iron & Steel Co., were among a party of prominent English industrialists who visited the Birmingham (Ala.) district recently to inspect the steel plants, coal and ore mines and for a study of industrial and trade conditions. They were conducted on a tour of the plants of the Tennessee Coal, Iron & Railroad Co. by **George Gordon Crawford**, president, who later entertained the visitors at an informal dinner. They proceeded from Birmingham to Chicago.

H. E. McDonnell, superintendent of blast furnaces, Weirton Steel Co., Weirton, W. Va., was elected president of the Eastern States Blast Furnace & Coke Oven Association at the recent annual meeting held at the Edgewood Country Club, Edgewood, Pa. He is a charter member, was secretary-treasurer in 1924-1925, and vice-president last year. **Charles R. Meissner**, superintendent of coke plant, Weirton Steel Co., who has been secretary-treasurer of the association during the last year, was elected vice-president. **B. W. Winship**, superintendent of the coke plant of the Bethlehem Steel Co. at Steelton, Pa., was named secretary-treasurer.

Eugene C. Hultman, chairman of the Massachusetts Commission on the Necessaries of Life, calls the attention of commercial and industrial coal consumers of New England to the possibility of serious effects on the coal market from the British strike. He says that the foreign demand for Amer-

ican coal is likely to increase considerably, and the result is likely to be felt more quickly in New England than in any other section of the country. While admitting that bituminous mines might increase output sufficiently to take care of the larger demand, he thinks that the foreign demand would be largely for the kind of coal desired in New England and would, therefore, be more likely to interfere with supplies to that part of the country.

J. W. Powell, since 1924 chief mining engineer of the Autonomous Industrial Colony, Kuzbas, which is located in the Kuznetz Basin, Southwestern Siberia, sailed on the Cunard liner "Carmania," on June 12 for London, where he will embark for Riga, Latvia. From this point he will travel by rail to Siberia. Mr. Powell was formerly Inspector of Mines in the Province of Alberta, Canada, and later was general superintendent of the Elkhorn division of the Consolidation Coal Co., Jenkins, Ky. Mr. Powell has been in the United States for the past three months on a vacation, during which time he has availed himself of the opportunity of investigating the latest types of coal mining machinery and equipment adaptable to conditions in the Kuznetz coal basin. He expects to remain in Siberia for three years to develop and carry to completion projected plans. He reports great progress during the 1½ years he has been connected with the Kuzbas enterprise.

Obituary

Joseph Louis, age 62, general superintendent of the Chicago, Wilmington & Franklin Coal Co., better known as Uncle Joe, died on June 8 as the result of a fall and head injury in alighting from his automobile near Vandalia, Ill. Prior to the accident he enjoyed good health. Mr. Louis had been in the services of the Chicago, Wilmington &



Joseph Louis

Franklin Coal Co., and the old Chicago, Wilmington & Vermillion Coal Co. for about 40 years. His early years were spent at work in the mines of the last-named company in the Wilmington field of northern Illinois, where he rose from his first mine job of weighman to superintendent in 1905. In 1912 he was transferred to southern Illinois and appointed superintendent of Orient No. 1, and in 1920 was promoted to general superintendent. His headquarters and residence were in Benton, Ill. He leaves his wife and six daughters.

Charles James Myles, head of the firm of Thomas Myles, Sons, Ltd., Hamilton, Ont., died at his home in that city on June 7, following an illness of three weeks. Mr. Myles, who was 82 years of age, was born in Limerick, Ireland, and had lived in Hamilton nearly all his life. He entered the coal business with his father when very young, and carried it on successfully until his death. In the early days Mr. Myles owned several sailing vessels, in which the first coal was brought to Hamilton by water. These gave place to steamboats in 1876. He was a promoter of the Hamilton, Grimsby and Beamsville Radial Ry., and was a former president of the road.

Association Activities

The Central Pennsylvania Coal Producers' Association and the Association of Bituminous Coal Operators of Central Pennsylvania held their annual meeting in Altoona on June 10. The Producers' Association elected the following officers: President, B. M. Clark, Indiana; vice-president, G. Webb, Shillington, Clearfield; secretary-treasurer, Charles O'Neill, Altoona; statistician, W. A. Jones, Altoona. The association of operators, which deals with labor problems, elected Charles O'Neill president-secretary-treasurer. Plans were completed for the appearance of the association's representatives at the rate hearings in Washington on June 14 and at Atlantic City on June 21.

The Pennsylvania Retail Coal Merchants' Association at its recent annual meeting, re-elected Samuel B. Crowell, of Philadelphia, as president. Other officers re-elected were: Vice-president, Walter L. Montgomery, Harrisburg; treasurer, J. Arthur Strunk, Reading; directors, Frank Sener, Lancaster; James C. Tattersall, Trenton; John Robinson, Camden; Leon Walker, Wilmington, and Thomas J. Murphy, Phillipsburg, N. J.

The West Virginia State Coal Association met in the Kanawha Hotel, Charleston, on June 1, and re-elected the following officers for the ensuing year: President, J. G. Bradley, of Dundon; vice-president, G. H. Caperton, of Charleston; secretary, Walter H. Cunningham, of Huntington, and treasurer, C. C. Dickinson, of Charleston. Plans were made to close the mines in the state on Mine Safety Day, which will be observed on Aug. 21, when mine-rescue contests will be held in Huntington. The association at its meeting went on record as being opposed to the passage of the proposed Parker bill.



Production And the Market



Seasonal Dullness Pervades Soft-Coal Market; Lake Movement a Steadying Influence

There has been comparatively slight surface change in the bituminous coal trade of the country during the last week. While the customary seasonal dullness is in evidence in most sections, the market is holding its own in good style. An important factor, of course, is the steadying influence of the heavy movement of coal to the lakes, which, after a belated start, is exceeding the weekly flow at this time last year. Last week 13,171 carloads passed through Cincinnati headed lakeward, an increase of 964 over the total for the corresponding week of 1925.

A further factor of favorable effect is the continuance of the British strike. From a speculative standpoint, however, this development has been a distinct disappointment, for the demand has fallen far short of expectations, and as a consequence the effect upon prices has been almost negligible. The export trade at Baltimore has increased noticeably, though not to an extent sufficient to exert a marked effect on the home market. On the other hand, in New England, where the possible effect of demand from consumers usually supplied by British coal was most feared, a distinctly weaker tone is evident from the standpoint of both demand and price.

Midwest Mines Curtail Running Time

Midwestern markets reflect such an indifferent attitude on the part of consumers that Illinois and Indiana operators are curtailing running time. The dullness extends to steam as well as domestic grades, and prices show a wobbly tendency. Kentucky coals are moving with a little more freedom and prices are somewhat firmer. Shipments from the Northwest docks are no better than normal, but a firmer tone has appeared with the cessation of price cutting. A backward disposition

prevails in regard to contracting. The balancing effect of tidewater demand and lake movement, however, has served to preserve some semblance of price stability.

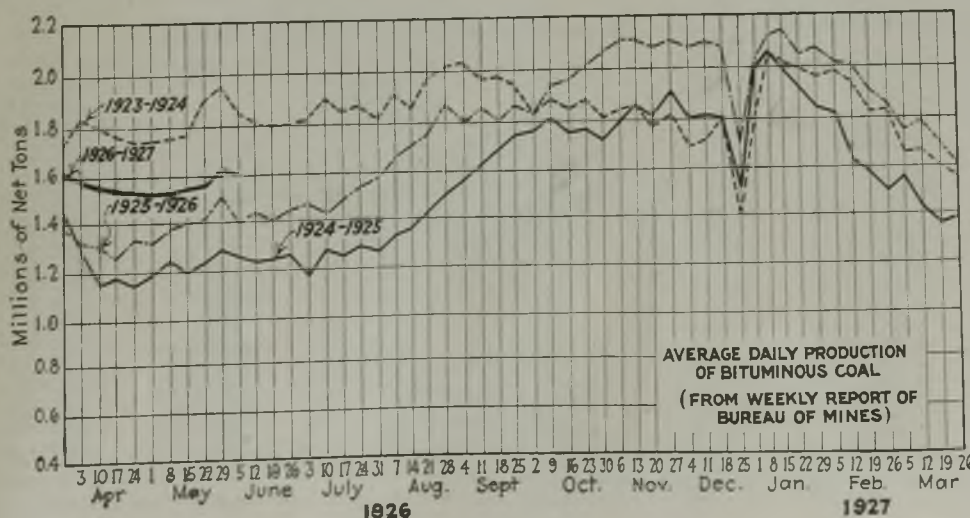
Average spot quotations registered a further decline during the week. *Coal Age Index* of spot bituminous prices on June 14 stood at 156. The corresponding price is \$1.89. The figures for the previous week were 157 and \$1.90, respectively.

The observance of Memorial Day caused a pronounced falling off in the output of bituminous coal during the week ended June 5, the total for which is estimated by the Bureau of Mines at 8,651,000 net tons, or 1,032,000 tons less than during the preceding week. Lake dumpings during the week ended June 13 totaled 1,038,369 tons of cargo and 48,885 tons of vessel fuel. Anthracite production during the week ended June 5 was 1,665,000 tons, a decrease of 424,000 tons from the week previous.

Hard-Coal Demand Easing Off

The decline in anthracite output was a development devoutly to be wished, as distributing channels are hard put to keep pace with production. As a matter of fact, some of the independent producers have already placed their operations on part time. Though fill-up orders are far behind the volume usual at this time, some consolation is felt in that much business of this character is still to be placed. Demand for stove coal is good and company egg moves without much difficulty. Independents are shading egg a little, and chestnut drags. The steam sizes are quite weak and surpluses are accumulating. One company shipper is said to be willing to shade prices on good sized tonnages.

In the Connellsville coke market production has been more evenly adjusted to contract requirements, with prices and demand practically unchanged.



Estimates of Production

(Net Tons)

BITUMINOUS

	1925	1926
May 22.....	8,451,000	9,282,000
May 29 (a).....	8,141,000	9,683,000
June 5 (b).....	8,375,000	8,651,000
Daily average.....	1,396,000	1,602,000
Cal. yr. to date..... (c)	203,970,000	233,395,000
Daily av. to date....	1,543,000	1,765,000

ANTHRACITE

May 22.....	1,708,000	1,750,000
May 29 (a).....	1,681,000	2,089,000
June 5 (b).....	1,634,000	1,665,000
Cal. yr. to date.....	(c) 37,881,000	28,967,000

BEEHIVE COKE

May 29 (a)	132,000	194,000
June 5 (b)	130,000	195,000
Cal. yr. to date.....	(c) 4,794,000	5,972,000

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

Midwest Buyers Indifferent

In the Chicago market the buying public, both steam and domestic, shows no interest in the purchase of fuel, and mines in Illinois and Indiana are curtailing operation. Demand for anthracite is extremely quiet, but coke is moving in fair volume, as is smokeless coal in prepared sizes. Prices in smokeless, however, are anything but firm. Mine-run is offered at \$1.65 to \$2.10, according to the grade, and prepared sizes vary widely. The demand for high-volatile coals from eastern Kentucky and West Virginia is weak, price concessions having failed to stimulate the demand. The steam-coal market is extremely unsatisfactory. Those who have 2-in. or 1½-in. screenings are having difficulty in finding buyers at a satisfactory price, though production has been sharply curtailed.

Railroad coal is about all that keeps the southern Illinois field going. True there is a little steam trade and some mines are crushing mine-run to carry

out their contracts and here and there a little lump, egg and nut is moving, but for the most part the larger sizes have blocked up the mine tracks and all mines have a large number of "no bills" in these sizes. Strip mines are working practically all the time.

In the Duquoin field the mines are working about three days a week. In the Mount Olive district some mines are working and crushing mine-run for steam contracts and others are shipping lump on railroad mine-run orders. In the Standard field conditions are unusually bad. The mines getting the best working time are co-operatives.

At St. Louis domestic business continues quiet. Practically nothing is going into storage—neither anthracite, smokeless nor southern Illinois. Coke also is unusually quiet.

Movement Gaining in Kentucky

Kentucky coals are moving somewhat better, and prices have stiffened a little in both eastern and western Kentucky. Except for a little off-grade distress

coal not much 4-in. block is being offered at \$2 in eastern Kentucky, and mine-run is \$1.35@1.60. In western Kentucky 6-in. block is \$1.75@1.85 and mine-run \$1.10@1.40. Screenings are holding firmly.

Demand for screenings is increasing somewhat due to public institutions and others stocking winter supplies and steady movement to utility and industrial plants. Steam coal has been in good general movement, and railroad consumption is normal.

Movement of coal from eastern Kentucky to the lakes is increasing steadily. There also is a fair scattered movement to the Southeast, and also north of the Ohio. Western Kentucky hasn't moved as much coal North and West as had been expected as a result of arrangements made with Chicago and Northern jobbers, but buying is improving.

Northwest Market Steadier

Conditions at the Head of the Lakes are more stable than a week ago. The price war for contracts with industrial

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

Low-Volatile, Eastern					Midwest				
	Market Quoted	June 15 1925	May 31 1926	June 7 1926	June 14 1926†		Market Quoted	June 15 1925	May 31 1926
Smokeless lump.....	Columbus....	\$2.85	\$3.10	\$3.10	\$3.00@3.25	Franklin, Ill. lump.....	Chicago.....	\$2.60	\$2.60
Smokeless mine run.....	Columbus....	1.85	2.05	2.05	2.00@2.15	Franklin, Ill. mine run.....	Chicago.....	2.35	2.40
Smokeless screenings.....	Columbus....	1.30	1.25	1.25	1.20@1.35	Franklin, Ill. screenings.....	Chicago.....	2.10	1.90
Smokeless lump.....	Chicago.....	3.10	3.10	3.00	2.75@3.25	Central, Ill. lump.....	Chicago.....	2.35	2.30
Smokeless mine run.....	Chicago.....	1.95	2.00	1.90	1.85@2.00	Central, Ill. mine run.....	Chicago.....	2.10	2.05
Smokeless lump.....	Cincinnati.....	2.85	3.00	3.10	3.00	Central, Ill. screenings.....	Chicago.....	1.75	1.75
Smokeless mine run.....	Cincinnati.....	1.85	1.85	2.00	2.00	Ind. 4th Vein lump.....	Chicago.....	2.60	2.40
Smokeless screenings.....	Cincinnati.....	1.25	1.35	1.35	1.25@1.35	Ind. 4th Vein mine run.....	Chicago.....	2.35	2.15
*Smokeless mine run.....	Boston.....	4.25	4.65	4.50	4.25@4.40	Ind. 4th Vein screenings.....	Chicago.....	1.85	1.80
Clearfield mine run.....	Boston.....	1.75	1.80	1.80	1.65@1.90	Ind. 5th Vein lump.....	Chicago.....	2.25	2.15
Cambria mine run.....	Boston.....	2.10	2.10	2.05	1.90@2.15	Ind. 5th Vein mine run.....	Chicago.....	1.95	1.95
Somerset mine run.....	Boston.....	1.95	2.00	1.90	1.75@2.00	Ind. 5th Vein screenings.....	Chicago.....	1.50	1.35
Pool 1 (Navy Standard).....	New York.....	2.55	2.60	2.60	2.50@2.75	Mt. Olive lump.....	St. Louis.....	2.50	2.35
Pool 1 (Navy Standard).....	Philadelphia.....	2.60	2.65	2.65	2.50@2.80	Mt. Olive mine run.....	St. Louis.....	2.25	2.15
Pool 1 (Navy Standard).....	Baltimore.....	1.85	2.00	2.00	1.95@2.05	Mt. Olive screenings.....	St. Louis.....	1.75	1.55
Pool 9 (Super. Low Vol.).....	New York.....	2.00	2.05	2.05	2.00@2.25	Standard lump.....	St. Louis.....	2.25	2.25
Pool 9 (Super. Low Vol.).....	Philadelphia.....	2.00	2.10	2.10	2.00@2.25	Standard mine run.....	St. Louis.....	1.80	1.80
Pool 9 (Super. Low Vol.).....	Baltimore.....	1.75	1.80	1.80	1.75@1.85	Standard screenings.....	St. Louis.....	1.70	1.30
Pool 10 (H.Gr.Low Vol.).....	New York.....	1.85	1.85	1.85	1.75@2.00	West Ky. block.....	Louisville.....	1.50	1.75
Pool 10 (H.Gr.Low Vol.).....	Philadelphia.....	1.70	1.85	1.85	1.75@2.00	West Ky. mine run.....	Louisville.....	1.15	1.20
Pool 10 (H.Gr.Low Vol.).....	Baltimore.....	1.60	1.65	1.65	1.60@1.70	West Ky. screenings.....	Louisville.....	1.15	1.10
Pool 11 (Low Vol.).....	New York.....	1.55	1.65	1.65	1.60@1.80	West Ky. block.....	Chicago.....	2.00	1.75
Pool 11 (Low Vol.).....	Philadelphia.....	1.55	1.55	1.55	1.45@1.70	West Ky. mine run.....	Chicago.....	1.30	1.15
Pool 11 (Low Vol.).....	Baltimore.....	1.40	1.60	1.60	1.55@1.65				
High-Volatile, Eastern					South and Southwest				
Pool 54-64 (Gas and St.).....	New York.....	1.50	1.40	1.40	1.30@1.55	Big Seam lump.....	Birmingham.....	2.10	2.30
Pool 54-64 (Gas and St.).....	Philadelphia.....	1.50	1.45	1.45	1.35@1.55	Big Seam mine run.....	Birmingham.....	1.75	2.00
Pool 54-64 (Gas and St.).....	Baltimore.....	1.45	1.40	1.40	1.40@1.45	Big Seam (washed).....	Birmingham.....	1.85	2.00
Pittsburgh sc'd gas.....	Pittsburgh.....	2.40	2.25	2.25	2.20@2.30	S. E. Ky. block.....	Chicago.....	2.25	2.40
Pittsburgh gas mine run.....	Pittsburgh.....	2.15	2.01	2.00	1.90@2.10	S. E. Ky. mine run.....	Chicago.....	1.70	1.65
Pittsburgh mine run (St.).....	Pittsburgh.....	1.95	1.80	1.80	1.60@1.90	S. E. Ky. block.....	Louisville.....	2.25	2.00
Pittsburgh slack (Gas).....	Pittsburgh.....	1.45	1.35	1.35	1.20@1.25	S. E. Ky. mine run.....	Louisville.....	1.50	1.35
Kanawha lump.....	Columbus.....	2.10	2.05	2.05	1.85@2.25	S. E. Ky. screenings.....	Louisville.....	1.10	1.15
Kanawha mine run.....	Columbus.....	1.40	1.55	1.55	1.40@1.75	S. E. Ky. block.....	Cincinnati.....	2.25	2.15
Kanawha screenings.....	Columbus.....	1.10	.95	1.05	.95@1.15	S. E. Ky. mine run.....	Cincinnati.....	1.45	1.50
W. Va. lump.....	Cincinnati.....	2.10	2.10	2.25	2.00@2.25	S. E. Ky. screenings.....	Cincinnati.....	1.10	1.05
W. Va. gas mine run.....	Cincinnati.....	1.45	1.50	1.50	1.40@1.65	Kansas lump.....	Kansas City.....	4.00	4.00
W. Va. steam mine run.....	Cincinnati.....	1.40	1.35	1.35	1.25@1.50	Kansas mine run.....	Kansas City.....	3.00	3.00
W. Va. screenings.....	Cincinnati.....	1.10	1.05	1.15	1.00@1.15	Kansas screenings.....	Kansas City.....	2.60	2.50
Hocking lump.....	Columbus.....	2.15	2.35	2.35	2.25@2.50				
Hocking mine run.....	Columbus.....	1.50	1.55	1.55	1.40@1.70				
Hocking screenings.....	Columbus.....	1.30	1.10	1.10	1.00@1.20				
Pitts. No. 8 lump.....	Cleveland.....	2.20	2.15	2.15	1.85@2.50				
Pitts. No. 8 mine run.....	Cleveland.....	1.85	1.70	1.70	1.80@1.85				
Pitts. No. 8 screenings.....	Cleveland.....	1.40	1.30	1.25	1.25@1.35				

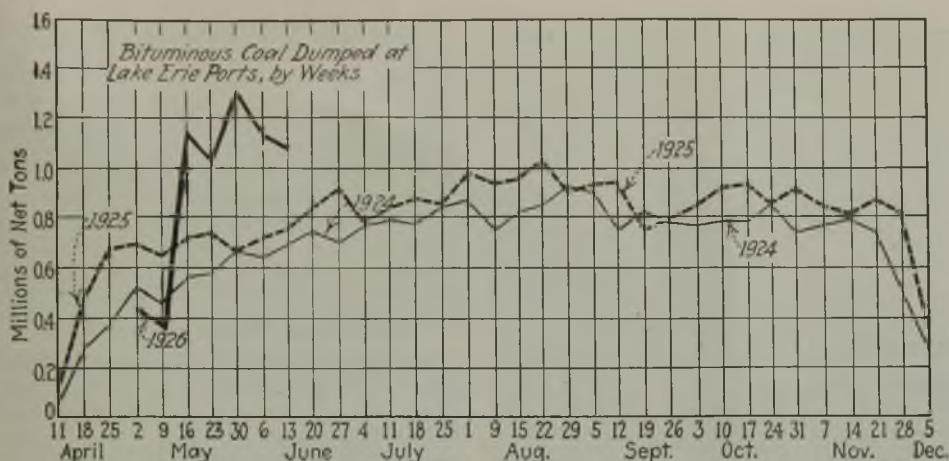
* Gross tons, f.o.b. vessel, Hampton Roads.

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

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

		June 15, 1925		June 7, 1926		June 14, 1926†	
	Market Quoted	Independent	Company	Independent	Company	Independent	Company
Broken.....	New York.....	\$2.34		\$8.10@8.70	\$8.25@9.25		\$8.25@9.25
Broken.....	Philadelphia.....	2.39		8.60	8.50@9.15		8.50@9.15
Egg.....	New York.....	2.34	\$8.50@8.75	8.45@8.70	8.75@9.25		8.75@9.25
Egg.....	Philadelphia.....	2.39	8.70@9.30	8.50@8.70	9.15@9.85		9.00@9.15
Egg.....	Chicago.....	5.06	7.86@8.50	7.44@8.18	8.48		8.13
Stove.....	New York.....	2.34	8.90@9.25	8.95@9.20	9.25@9.50		9.25@9.50
Stove.....	Philadelphia.....	2.39	9.30@9.65	8.95@9.10	9.35@9.50		9.35@9.50
Stove.....	Chicago.....	5.06	8.22@8.70	7.92@8.10	8.84		8.33@8.58
Chestnut.....	New York.....	2.34	8.35@8.65	8.45@8.70	8.75@9.25		8.75@9.15
Chestnut.....	Philadelphia.....	2.39	8.70@9.55	8.60@8.70	9.00@10.05		9.00@9.15
Chestnut.....	Chicago.....	5.06	8.14@8.35	7.69@8.00	8.71		8.38@8.53
Pea.....	New York.....	2.22	4.75@5.50	5.00@5.70	6.25@7.00		6.00@6.25
Pea.....	Philadelphia.....	2.14	5.50@5.75	5.00@5.40	6.25@6.75		6.00@6.35
Pea.....	Chicago.....	4.79	4.91@5.36	4.69@5.00	6.03		5.65@5.80
Buckwheat No. 1.....	New York.....	2.22	2.00@2.50	2.50	1.75@2.25		3.00@3.50
Buckwheat No. 1.....	Philadelphia.....	2.14	2.15@2.75	2.50	2.15@2.50		2.25@2.75
Rice.....	New York.....	2.22	1.75@2.00	2.00	1.50@1.85		1.40@1.85
Rice.....	Philadelphia.....	2.14	1.85@2.00	2.00	1.75@2.00		1.65@2.00
Barley.....	New York.....	2.22	1.40@1.50	1.50	1.20@1.50		1.10@1.40
Barley.....	Philadelphia.....	2.14	1.40@1.50	1.50	1.50@1.75		1.50@1.75
Birdseye.....	New York.....	2.22	1.50@1.65	1.60	1.30@1.60		1.30@1.60

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



consumers seems to have spent itself.

May receipts at the docks were 115,538 tons of anthracite and 1,691,569 tons of bituminous. Compared with the same month last year hard-coal receipts decreased 269,840 tons and soft-coal increased 115,938 tons. The latest weekly report shows the arrival of 46 cargoes, including 2 of anthracite, and 26 cargoes, including 4 of anthracite, were reported en route.

Shipments of coal from the docks during May totaled 11,808 cars, as compared with 11,855 cars during April and 12,302 cars during May last year. Shipments so far during June have been about the same as last month.

Buying at the Twin Cities is confined to current needs. There is little stocking for the future, though prices now quoted are tempting. Coal is moving out so slowly at Milwaukee just now, while receipts by cargo continue so heavy that it is difficult to keep the docks clear for incoming cargoes. The dullness is largely seasonal. Prices are unchanged since the recent shading of Pocahontas to stimulate bin filling.

Storage Buying Brisk in Southwest

Only a few Kansas shafts are working on contracts. Most of the coal from this field now marketed is from shovel mines, and much of it is being crushed. Shaft screenings, when they can be had, sell for \$2.50, but this trade for the most part, is being supplied with crushed shovel mine run at \$2.35@ \$2.50. There is a good demand for Kansas coal for threshing. Orders for Arkansas semi-anthracite for summer storage are so brisk that operators expect no difficulty in keeping the mines working full time all summer.

Domestic trade is sluggish in Colorado, but steam demand is somewhat better. The mines are at about 50 per cent running time and the trade is not in the mood for much storage coal. Prices reflect little change.

In Utah the market is unusually active for June, due to the low prices of larger sizes to induce summer storage. Lump of the best quality is retailing at \$6.50 and \$6.45 c.o.d., compared with \$9 not long ago. "No bills" have been cut down about 80 per cent. The slack situation is improving.

Dullness Settles in Cincinnati

Dog day dullness is beginning to settle on the Cincinnati market. During the past week demand from the lakes has been just strong enough to keep pace with that from tidewater and keep prices on an even keel.

A little better tone to the west helped prepared smokeless, but there were a few concessions under \$3 for both lump and egg. Stove holds about to the June circular as does nut. Mine-run is still firm at \$2. The heavy "make" for the lakes precluded much change in screenings.

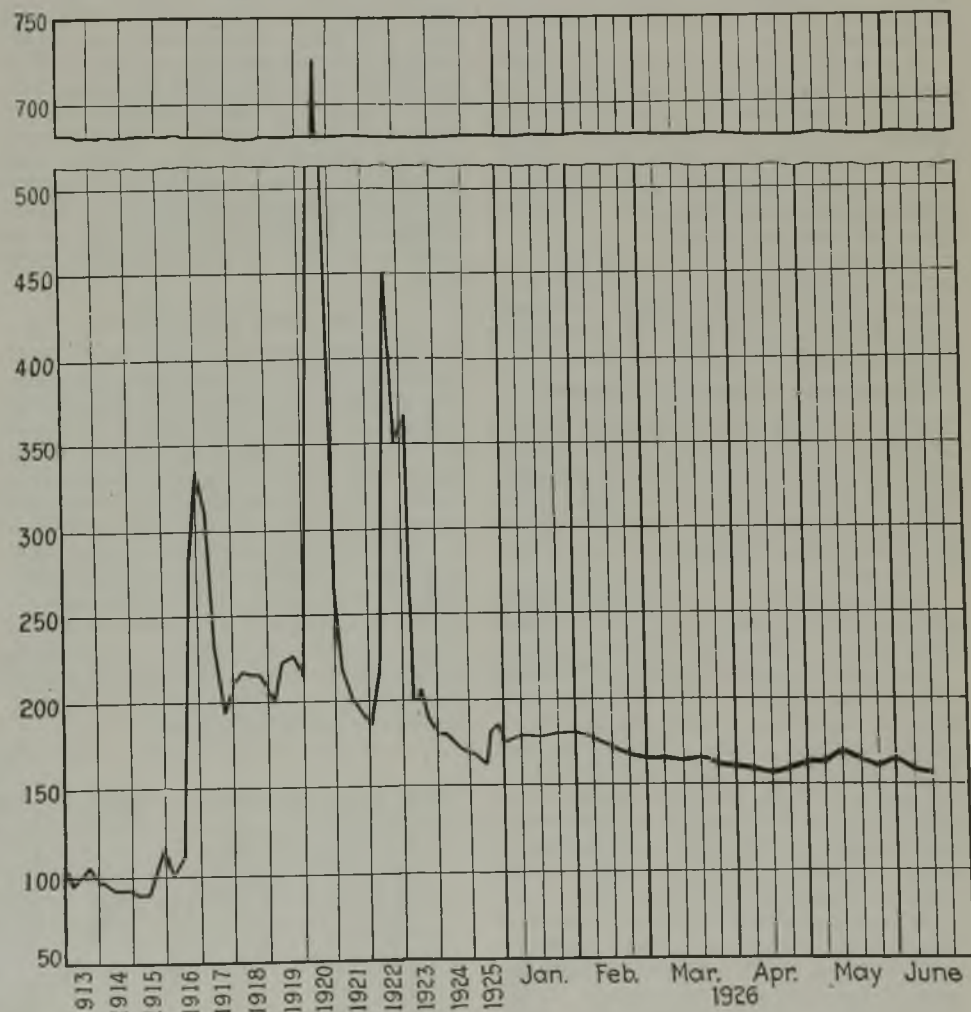
The spread in the price of high-volatile lump is \$2@ \$2.50. Egg business has been fairly good since the price has advanced. Mine-run, after a spurt, has lulled a little, but slack holds its own.

Last week 13,171 carloads of coal moved through the Cincinnati gateway. This total, which was a decrease of 1,693 compared to last week, but an increase of 964 compared to same week last year, included 3,635 cars of lake coal en route to Toledo and Sandusky. There was an increase of 60 in the number of empties sent to the mines.

Columbus More Active

With the lake trade running along smoothly and a better feeling developing in domestic circles, slightly more activity is reported in the Columbus market. Retail stocks as a rule are not heavy and buying to replenish them is expected to be steady.

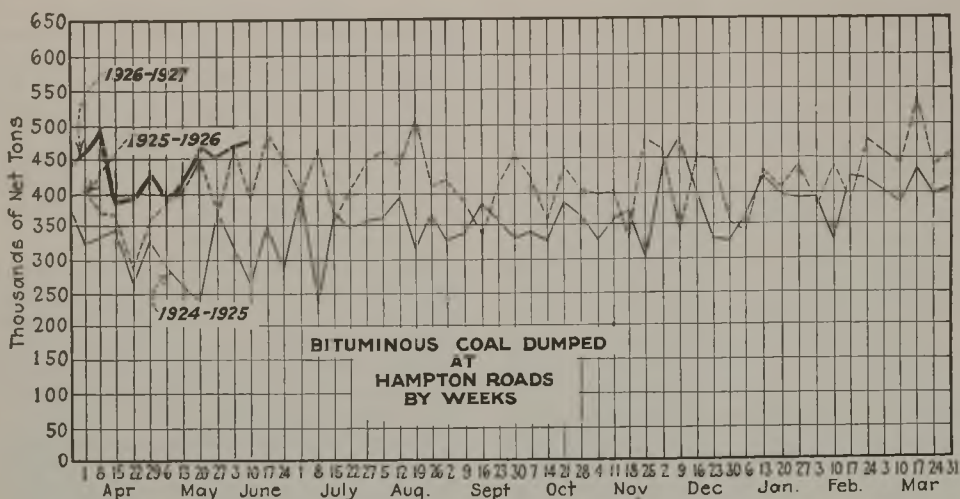
Steam business shows no particular change in the last week. Many manufacturing plants have been cutting in on their reserves, which has reduced spot purchases and contract shipments. Public utilities are about the only exception to this rule. Railroads are taking their usual requirements, but in some cases are buying on the open market. Contracting is slow in every way, owing to the low prices on distress coal. Individual embargoes against lake shipments during the past week forced considerable cheap coal onto the Columbus market.



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

	1926				1925	1924
	June 14	June 7	May 31	May 24	June 15	June 16
Index	156	157	160	157	160	166
Weighted average price	\$1.89	\$1.90	\$1.94	\$1.89	\$1.94	\$2.01

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



Output in the southern Ohio field is now about 15 per cent and will be lower soon as the result of an order by the Ohio Mine Workers, closing all mines being operated on a co-operative basis.

In eastern Ohio a slight improvement is discernible, in that coal is less abundant and prices are a little firmer.

The railroads are taking normal tonnage, and the No. 8 field is participating to at least one-third of the weekly output, but the retailers are very quiet, especially in so far as Ohio coals are concerned.

About 75 per cent of the lake movement is via the ports of Toledo and Sandusky and the No. 8 field is participating in this movement less during the present season than ever before. Ohio mines, however, are furnishing considerable vessel fuel, but not in the same volume as formerly.

Eastern Ohio production for the week ended June 5 aggregated 161,000 tons, or about 27 per cent of potential capacity. This was 45,000 tons under the corresponding week a year ago.

Pittsburgh Trade Still Slipping

Conditions in the Pittsburgh market continue to grow poorer. The field of distribution is being narrowed by offerings of West Virginia and other fields, which is sharpening competition among the Pittsburgh operators who are trying to run.

The steel industry has been tapering off less than it did a year ago. Prices still show a softening tendency.

Seasonal dullness and keen competition are reflected in short working time and low earnings in the central Pennsylvania field. The district is now working about one-half normal.

Conditions at Buffalo show little change. Prices maintain recent levels. Low volatile is very quiet and the movement of high volatile is light. The hard-coal trade is not improving.

At Toronto there is a fair volume of business in anthracite. The yards are well stocked, with plenty of supplies coming through from the mines. Little activity is reported in soft coals, however, as industrial concerns have not yet begun placing orders. Prices are unchanged.

New England Still Sinking

The bituminous market in New England is a shade nearer the bottom, although the low point of the season doubtless is yet to be reached. Prices all along the line have slumped, al-

though the modifications from day to day are not so noticeable.

Hampton Roads accumulations are not large, but prices are depressed. No sales in the last few days have been noted at more than \$4.35 per gross ton f.o.b. vessel for No. 1 Navy Standard, and it is possible that \$4.25 has actually been touched. Distributors at this end also are finding the going hard.

Pennsylvania coals are at a minimum, and this means that consumers in the twilight zone are trying their luck here and there with all-rail coal to the exclusion of the smokeless grades. This accounts for only a small tonnage, however, though it has a bearing on the large stocks on hand at most of the storage yards. On cars Boston and Providence it can hardly be said that the current level is anything in excess of \$5.50 per gross ton, if indeed actual sales are made at figures higher than \$5.35.

New York Market Quiet

The New York market is dull. Railroads as well as industrial consumers are holding off contracts in many cases and either buying from month to month or living on their stockpiles. Stocks have got down to a point, however, where many consumers who have not been in the market recently will have to do some buying before long. Exports are quite heavy as a result of the British coal strike, but this business is confined largely to Southern coals. A little extra bunker business is coming to this port, but it has had no noticeable effect on the market, tidewater prices remaining stationary.

A tendency to mark time still pre-

vails in the Philadelphia market. Many large railroad contracts are still unsigned, but the roads have a receptive ear if the price is in accordance with their ideas. The market in slack seems to be an in and out affair. Tide conditions are quiet outside of bunkers.

The only element of decided interest in the Baltimore trade is an increase in demand for exports and bunkers, though this has not been heavy enough to cause any flurry in the home market.

Birmingham Trade at Low Level

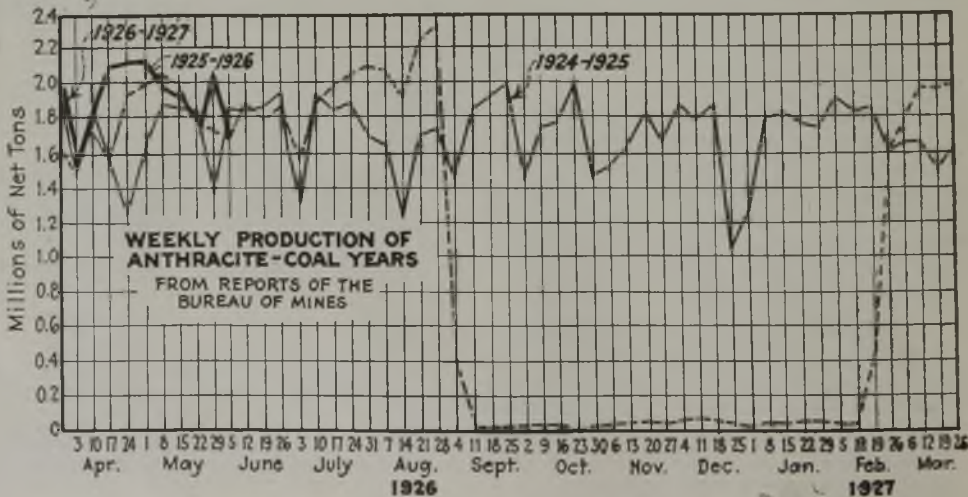
At Birmingham the volume of business is at the lowest point for the year. Most all the regular industrial contracts have been renewed. The Southern and Seaboard Air Line awards, the last of the large rail contracts, are still pending. Bunker trade shows no stimulus from the British strike. Quotable prices are virtually unchanged. The average running time is about four days per week. Spot demand for foundry coke is fairly good at \$6, and some contracting is being done for the third quarter at \$5.50 per ton. Domestic sizes are \$3.50 to \$5, with only a moderate inquiry.

Anthracite Demand Weakens

Demand for anthracite at New York is easing off to such an extent that the selling end is unable to keep up with output. Some of the independents, in fact already are operating part time. There is still a good demand for stove coal, and company egg is moving well. Independents also have no trouble in disposing of egg at a price, but chestnut is hard to move on any terms, and as a result the price has weakened further. Independent stove is short in supply but has come down a little in price. No. 1 buckwheat and rice are about equally soft, with some extremely low prices heard of on distress lots at tidewater. Barley also is weak.

A further falling off is noticeable at Philadelphia. Retailers cannot induce customers to take in coal, but are standing quite firm on prices. The steam market is dull and there is much surplus coal. Independent prices for distress coal are quite low, and now it is reported that at least one company shipper is willing to accept \$2.25 for buckwheat and \$1.75 for rice in fairly sizable tonnages. Extreme dullness prevails at Baltimore.

Anthracite shipments by lake from Buffalo during the week ended June 10 totaled 53,700 tons, of which 25,200



Car Loadings and Supply

	Cars Loaded—		Car Shortages
	All Cars	Coal Cars	
Week ended May 29, 1926.....	1,081,164	177,600	
Preceding week.....	1,039,385	165,212	
Week ended May 30, 1925.....	913,087	149,604	
	Surplus Cars		Car Shortages
	All Cars	Coal Cars	
Week Ended May 31, 1926..	257,926	75,253	
May 23, 1926..	259,788	82,304	
May 31, 1925..	323,624	133,559	

tons cleared for Duluth and Superior, 14,300 tons for Chicago and 14,200 tons for Milwaukee.

Spot Coke Market Tone Firmer

Connellsville spot furnace coke is quotable at \$2.75@ \$2.90, but there seems to be a better adjustment of pro-

duction to contract shipping requirements, which presages greater firmness if any considerable tonnages have to be bought.

Negotiations on third-quarter or second-half contracts are dragging, not so much through haggling about prices on renewals as because some consumers would like to switch to better brands.

Standard foundry coke remains quotable at \$4@ \$4.50. Some contracts for second half have been made at \$4.75, while others, for practically standard coke, have been made at slightly less.

Production in the Connellsville and Lower Connellsville region in the week ended June 5, according to the *Courier*, was 80,400 tons by the furnace ovens, a decrease of 5,100 tons, and 61,590 tons by the merchant ovens, a decrease of 2,950 tons.

Western Europe Takes Most of British Coal Exports

Great Britain's principal markets during the coal year from April 1, 1925 to March 31, 1926, were in western Europe. British shipments to that area of more than 16,000,000 tons almost equalled the total United States coal exports during the same period, according to the Minerals Section of the Department of Commerce.

Northern Europe was second in importance as a receiving area of British coal, with imports for the period mentioned above amounting to 10,000,000 tons; southern Europe followed with 7,000,000 tons; South America took 4,000,000 tons; Africa 3,000,000 tons and North America about 1,000,000 tons.

France was the largest importer of British coal during the year with receipts totaling 7,962,000 tons. Italy was second with imports amounting to 6,124,000 tons; Argentina followed with receipts of 2,489,000 tons; while Egypt ranked in fourth place with a total of 1,946,000 tons. Following Egypt in the order of the size of their imports were Brazil, 1,149,000 tons; French Africa, 994,000 tons; Canada, 573,000 tons; Uruguay, 339,000 tons, and Chile, 102,000 tons.

Canada Increases Coke Production

The increasing use of coke as a household fuel in Canada is indicated by the production of 152,480 net tons during March, an increase of 10 per cent over the same month last year, but an 8 per cent decrease from February, 1926. Coke imports during March totaled 102,485 tons, compared with 73,796 in February. Most of this fuel was brought into the Province of Ontario, which always has been the principal market in Canada for imported fuel. The marked advance in imports appears to have been accompanied by an increase in coke consumption to 249,633 tons in March, compared with 235,359 tons in February and 200,364 in March, 1925.

Of the 237,565 tons of bituminous coal used for coke-making, 151,005 tons was imported from the United States and the balance supplied by domestic mines. Of the total production, 65,619 tons was sold to consumers, 67,967 used in smelters and 18,919 in coke plants. The Province of Ontario led with a production of 75,720 tons, followed by Eastern Canada, with 53,386 tons.

Exports decreased from 5,453 tons in March, 1925, to 5,332 tons in the corresponding month of the current year.

Penna. Soft-Coal Output

135,266,612 Tons in 1925

Total output of bituminous coal in Pennsylvania in 1925, according to figures just compiled by Frank Hall, Deputy Secretary of Mines, was 135,266,612 net tons. The total production of coke was 10,589,359 tons. The largest production of both bituminous and coke was in Fayette County, which produced 28,684,339 tons of coal and 6,273,261 tons of coke.

The Department of Mines' figures on bituminous coal and coke production in net tons by counties follow:

Counties	Production of Coal	Production of Coke
Allegheny.....	11,644,959	.....
Armstrong.....	3,126,898	.....
Beaver.....	80,006	.....
Bedford.....	452,286	.....
Blair.....	298,051	8,672
Bradford.....	9,181	.....
Butler.....	1,945,287	.....
Cambria.....	16,656,181	*1,702,636
Center.....	946,112	.....
Clarion.....	1,462,529	.....
Clearfield.....	5,440,701	14,085
Clinton.....	182,964	.....
Elk.....	1,052,684	.....
Fayette.....	28,684,339	6,273,261
Fulton.....	168,357	.....
Greene.....	4,992,995	20,701
Huntingdon.....	669,587	.....
Indiana.....	8,008,676	160,740
Jefferson.....	2,967,590	221,633
Lawrence.....	279,183	.....
Lycoming.....	23,919	.....
Mercer.....	279,087	.....
Somerset.....	9,629,892	.....
Tioga.....	144,680	.....
Venango.....	8,197	.....
Washington.....	15,421,542	54,546
Westmoreland.....	20,720,626	2,133,085
Totals.....	135,266,612	10,589,359

* 1,504,209 tons of coal purchased.

Anthracite Output by Counties in 1925

(In Net Tons)

Counties	Coal Shipped to Market	Used at Collieries for Steam and Heat	Total Production
Carbon.....	1,807,586	139,529	1,999,427
Columbia.....	582,571	82,003	685,300
Dauphin.....	652,419	91,662	773,400
Lackawanna.....	12,636,595	862,847	13,962,503
Luzerne.....	21,078,597	2,086,751	24,495,676
Northumberland.....	4,166,065	588,010	4,949,763
Schuylkill.....	12,009,041	1,659,348	14,073,904
Sullivan.....	117,176	19,443	142,435
Susquehanna.....	170,184	36,088	221,850
Wayne.....	52,566	351	53,061
Totals.....	53,272,800	5,566,032	†61,357,319

† Includes 2,518,487 tons sold to local trade and used by employees.

Coal Produced in Iowa in 1924^a

(Exclusive of Product of Wagon Mines)

County	Net Tons			Value			Number of Employees				Average Number of Days Worked	Average Tons Per Man Per Day
	Loaded at Mines for Shipment	Sold to Local Trade and Used by Employees	Used at Mines for Steam and Heat	Total Quantity	Total	Average Per Ton	Underground—	All	Surface	Total		
Adams.....		7,796	3	7,799	\$33,000	\$4.23	31	5	5	41	171	1.11
Appanoose.....	711,641	88,128	14,031	813,800	2,860,000	3.51	2,408	483	240	3,131	134	1.95
Boone.....	227,799	63,727	3,568	295,094	1,189,000	4.03	471	208	49	728	176	2.30
Dallas.....	516,011	14,534	4,306	534,851	1,772,000	3.31	603	265	87	955	196	2.86
Davis, Jefferson, Lucas, and Warren.....	630,368	14,790	24,051	669,209	1,966,000	2.94	548	197	84	829	182	4.43
Greene.....		3,156		3,156	16,000	5.07	15	3	3	21	114	1.32
Guthrie.....		5,112	36	5,148	25,000	4.86	24	4	3	31	137	1.21
Jasper.....	77,08	25,867	6,682	109,638	377,000	3.44	122	70	34	226	154	3.14
Keokuk.....		9,673		9,673	32,000	3.13	16	7	7	30	126	2.71
Mahaska.....	4,729	52,208	513	57,450	175,000	3.05	136	41	35	212	105	2.58
Marion.....	767,102	44,150	24,389	835,641	2,525,000	3.02	869	276	114	1,259	195	3.41
Monroe.....	992,828	63,544	29,511	1,085,883	3,549,000	3.27	1,660	577	152	2,389	151	3.01
Page and Taylor.....	5,998	26,250	50	32,298	146,000	4.52	64	8	9	81	207	1.92
Polk.....	400,538	478,612	13,932	893,082	3,028,000	3.39	1,140	474	174	1,788	176	2.84
Story and Webster.....		6,692	200	6,892	28,000	4.06	17	5	5	27	216	1.18
Van Buren.....	4,189	4,406	50	8,645	27,000	3.12	17	6	5	28	142	2.18
Wapello.....	1,800	69,397	1,213	72,410	255,000	3.52	150	31	27	208	154	2.26
Wayne.....	11,160	15,351	708	27,219	94,000	3.45	91	17	9	117	128	1.81
Total.....	4,351,252	993,393	123,805	5,468,450	18,097,000	\$3.31	8,382	2,677	1,042	12,101	161	2.80

(a) Note that the coal statistics of the Geological Survey for a given year include only the mines that had an output in that year. Many mines that operated in 1923 produced no coal in 1924; moreover, many of the mines that did produce in 1924 worked for a short time only. The number of active mines of commercial size in Iowa was 151 in 1923 and 256 in 1924.

(b) Includes also loaders and shotfirers. Statistics issued by U. S. Bureau of Mines.

Foreign Market
And Export News

Strict Regulations as Well
As Continuance of Strike
Tie Up British Coal Trade

London, June 4.—The strictness of the regulations governing release very nearly prohibits export business in Welsh coals, and transactions are closed only in rare instances. The intention at present is to bunker vessels at Welsh ports from cargoes due from Germany. Exporters are handling American and German coals for home and depots, and through coal f.o.b. Rotterdam is 25s. 6d.@27s. 6d., and American mine-run, \$7.50@\$8, Hampton Roads. Some bunkers have been sold f.o.b. Brixham at 42s. 6d. The growing list of lost contracts includes the Portuguese State Railways, which have bought 15,000 tons of American and German coal and the South American Railways, which have purchased 50,000 tons of American coal.

Stocks of British bunkering coal at foreign depots have been exhausted and are being replenished from America and Germany. Some of the British Channel ports still hold fair stocks of domestic coal, and in some cases these have been augmented by French supplies. The public utilities, foreseeing industrial trouble have laid in good stocks, but all the chief railways are operating on a reduced schedule.

Coal is being strictly rationed to householders at the rate of 56 lb. per week for each house. Those houses which have gas or oil cookers or any alternative form of heating or cooking are not allowed any coal at all. There is no restriction on coke. Prices at foreign depots have risen from 10 to 50 per cent in the past few weeks.

French Coals in Brisk Demand
Due to British Strike

Paris, May 28.—Owing to the stoppage of British collieries, French coals are much sought at the present time and most of the French mines are behind in deliveries. Some British steamers are bunkering at French ports. Transportation from the Nord and Pas-de-Calais coal field both by rail and by water is unimpeded.

Canal freight rates are on the increase; the Bethune to Paris rate is now 30 fr. to 30 fr. 50c.

The Nord and Pas-de-Calais collieries are regularly enforcing their new schedule of prices, which implies in the main, the following increases per ton as from May 16: 10 fr. on unwashed industrial coals, 13 fr. on washed industrial coals, 20 fr. on domestic sizes and 15 fr. on cokes. French miners in the other coal fields are now suing for an increase in wages similar to that obtained by workers in the Nord and Pas-de-Calais, namely, about 3 fr. per day.

The inland selling prices of the Sarre coal field have been increased by 5 per cent, namely, by 4 to 6 fr. for unwashed coals, 6 fr. for washed coals and 6 to 9 fr. for cokes. Ordinary coke of the Sarre is now sold at 152 fr. and special coke at 162 fr. per ton.

Deliveries of indemnity fuels during the first eight days of May, to the O.H.S. included 102,800 tons of coal, 69,700 tons of coke and 7,600 tons of lignite briquets. During the first twenty-five days of May the O.R.C.A. received from the Ruhr 219,275 tons of coke.

Belgian Market Rushed
For All Grades

Brussels, May 28.—The Belgian coal market has undergone a complete transformation in the last few days and there is now almost a run on all kinds of coal. No fresh orders are being accepted for anthracite, whatever the price offered by purchasers. Of course, the stoppage of British collieries is the cause of this reversal of conditions, as Belgian collieries have now practically no more foreign competition to contend with.

The inland demand is strong and that from the East of France also has increased. Prices have become quite firm both for industrial and for domestic coals.

During the month of April, Belgium received 254,969 tons of indemnity fuels from the Ruhr.

Reich Makes Cash Grant to Aid
German Coal Industry

An important decision which will materially benefit the German coal-mining industry, amounting in effect to a substantial subsidy, was recently reported in a Reuter dispatch.

Under the reparation agreement the price credited to Germany was the inland price of coal. Subsequently the British inland price was taken as the basis, but as the British subsidy to the mines was not taken into calculation, the German mines suffered heavy losses on reparation coal, averaging 3 marks a ton on average monthly deliveries of one million tons.

The German owners demanded that the Reich should meet this deficit on the ground that the Reich issues the orders for the reparation deliveries, and the government committee which deals with such economic questions has decided that the government is liable for the difference in price. The German industry will, therefore, receive immediately large cash payments, stated to exceed 15,000,000 marks.

The importance of the decision, however, lies in the protection it affords against future losses caused by the differences between German and British coal prices.

Export Clearances Week Ended June 10

	Tons
For Italy:	
Ital. Str. Marina O, for Genoa.....	1,821
Br. Str. Nile, for Genoa.....	8,218
Ital. Str. Clara, for Venice.....	5,193
Jugoslav. Str. Frederika Glavic, for Palermo	8,299
Ital. Str. Auranía, for Genoa.....	6,989
For Uruguay:	
Br. Str. Lancaster Castle, for Montevideo	6,970
For Brazil:	
Nor. Str. Tilthorn, for Rio de Janeiro	9,030
Braz. Str. Campos, for Pernambuco..	3,779
Br. Str. Boverton, for Para.....	4,161
Br. Str. Beatus, for Rio de Janeiro..	6,907
Br. Str. Portfield, for Rio de Janeiro	6,379
For Jamaica:	
Nor Str. Dampen, for Kingston.....	2,201
Nor. Str. Ottar, for Kingston.....	1,359
For United Kingdom:	
Br. Str. Queen Olga, for a port in England	7,376
Br. Str. Lady Brinda, for United Kingdom ports	4,561
Br. Str. Eastern Prince, for United Kingdom ports	9,774
Br. Str. Electrician, for Liverpool...	6,810
Br. Str. Falls City, for an English port	7,323
For Canary Islands:	
Br. Str. Merioneth, for Teneriffe....	6,923
For Argentina:	
Br. Str. Lenfield, for Buenos Aires..	5,999
Ital. Str. Artico, for Buenos Aires..	8,102
Nor. Str. Herakles, for Puerto La Plata	6,560
For Cuba:	
Br. Str. Berwindmoor, for Havana..	9,682
For Egypt:	
Grk. Str. Vasilevusa, for Port Said..	6,587
For Canada:	
Br. Str. Emperor of Port McNicoll, for Quebec	2,278
Br. Str. Wentworth, for Montreal...	7,203
Br. Str. Philip T. Dodge, for Port Alfred	6,486
For Virgin Islands:	
Br. Str. Mountbank, for St. Thomas	3,743
For Spain:	
Dan. Str. Josey, for Gibraltar.....	3,613
For Colombia:	
Br. Atr. Almagro, for Puerto Columbia	518

FROM BALTIMORE

	Tons
For United Kingdom:	
Dan. Str. Kronberg, for Garston....	5,216
Br. Str. Llanberis, for Dublin.....	5,511
Gr. Str. Poseidon, for Queenstown...	5,579
Dan. Str. Uranienborg, for Garston..	5,721
Span. Str. Gorbear Mendi, for Liverpool	5,747
For France:	
Gr. Str. Emanuele Stavrondis, for Havre	6,512
For Italy:	
Ital. Str. Mincio, for.....	6,941
For Porto Rico:	
Am. Str. Delfini (coke) for San Juan	137

Hampton Roads Coal Dumpings*
(In Gross Tons)

	June 3	June 10
N. & W. Piers, Lamberts Pt.: Tons dumped for week.....	149,842	150,268
Virginian Piers, Sewalls Pt.: Tons dumped for week.....	85,260	78,268
C. & O. Piers, Newport News: Tons dumped for week.....	182,954	193,115

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

Pier and Bunker Prices, Gross Tons
PIERS

	June 5	June 12†
Pool 1, New York....	\$5.45@5.70	\$5.40@5.15
Pool 9, New York....	4.90@ 5.15	4.90@ 5.68
Pool 10, New York....	4.65@ 4.85	4.60@ 4.00
Pool 11, New York....	4.35@ 4.55	4.35@ 4.56
Pool 9, Philadelphia..	4.95@ 5.30	4.95@ 5.50
Pool 10, Philadelphia..	4.70@ 5.00	4.70@ 5.00
Pool 11, Philadelphia..	4.35@ 4.65	4.35@ 4.35
Pool 1, Hamp. Roads.	4.45@ 4.50	4.40@ 4.55
Pool 2, Hamp. Roads.	4.20@ 4.30	4.25@ 4.35
Pool 3, Hamp. Roads.	4.00@ 4.10	3.90@ 4.00
Pools 5-6-7, Hamp. Rds.	3.90@ 4.00	4.00@ 4.15

BUNKERS		
	June 5	June 12†
Pool 1, New York....	\$5.70@5.95	\$5.70@5.95
Pool 9, New York....	5.15@ 5.30	5.15@ 5.30
Pool 10, New York....	4.90@ 5.10	4.90@ 5.10
Pool 11, New York....	4.60@ 4.80	4.60@ 4.80
Pool 9, Philadelphia..	5.20@ 5.55	5.20@ 5.55
Pool 10, Philadelphia..	4.95@ 5.25	4.95@ 5.25
Pool 11, Philadelphia..	4.60@ 4.90	4.60@ 4.90
Pool 1, Hamp. Roads.	4.50	4.50
Pool 2, Hamp. Roads.	4.30	4.35
Pools, 5-6-7, Hamp. Rds.	4.10	4.10

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

Coming Meetings

American Society for Testing Materials. Convention at Haddon Hall, Atlantic City, N. J., June 21-25. Secretary, C. L. Warwick, 1315 Spruce St., Philadelphia, Pa.

American Institute of Electrical Engineers. Annual convention, White Sulphur Springs, W. Va., June 21-25. Secretary, F. L. Hutchinson, 29 West 39th St., New York City.

Illinois Mining Institute. Annual summer meeting on steamer "Cape Girardeau," leaving St. Louis, Mo., June 24 and returning June 26. Secretary, Frank F. Tirre, Central National Bank Bldg., St. Louis, Mo.

American Society of Mechanical Engineers. Spring convention at San Francisco, Calif., June 28-30. Secretary, Calvin W. Rice, 29 West 39th St., New York City.

Illinois and Wisconsin Retail Coal Dealers' Association. Thirty-first annual convention, Highland Hotel, Lake Delavan, Wis., June 28-30. Managing Director, N. H. Kendall, Great Northern Hotel, Chicago, Ill.

Fifth International First-Aid and Mine-Rescue Contest, San Francisco, Calif., during the first week of September, 1926, under the auspices of the Bureau of Mines, Department of Commerce.

Coal Mining Institute of America. Annual meeting, Chamber of Commerce, Pittsburgh, Pa., Dec. 8, 9 and 10. Secretary, H. D. Mason, Jr., Box 604, Ebensburg, Pa.

New Companies

The Washington Star Mining Co., 230 South Clark Street, Chicago, has been incorporated with a capital of \$18,000 to own and operate mining properties. The incorporators are J. F. Spoerri, W. A. Bradford and H. C. Nagle.

The Talbot Coal Corp., New York City engaged in coal mining, has been chartered at Albany, N. Y., with a capital of 750 shares of no par value. F. H. Butehorn, F. C. Taylor and J. T. Aspbury, 120 Broadway, New York City, are directors and subscribers. Weeks Brothers, 52 William St., New York City, are attorneys for corporation.

Gulf Roan Smokeless Coal Co., Clarksburg, W. Va., was organized recently to mine coal, manufacture coke and coal briquets in Harrison County, with Levi W. Keaster, George G. Lynch, Walter Elliott, Mamie Lee Morris and Dennis S. McIntire, all of Clarksburg, as incorporators. The capital stock is \$300,000.

The Watts Coal Co., capital \$20,000, has been incorporated in Corydon, Ky., by Alex. Watts, Wm. Kavanaugh and others.

The Logan-Central Coal Co., of St. Albans, W. Va., was organized recently to mine coal. The incorporators are E. R. Milligan, N. E. Milligan, C. L. Milligan, W. C. Sharpe and I. F. Somerville, all of St. Albans.

New Equipment

Full-Revolving Shovel with Upsetting Scoop

The underground loading machine invented and developed by R. S. Butler, assistant manager of the Barnsdall Zinc Co., Joplin, Mo., first placed on the market by the Lake Superior Loader Co., of Duluth, Minn., is now made by the Nordberg Manufacturing Co., of Milwaukee, Wis.

Since its acquisition by that company, the design has been materially changed. The new shovel operates in the same general way as did the earlier model—that is, it is of the full-revolving type, and the dipper is pushed into the material, loaded, filled and dumped. The design, however, has been changed throughout. Instead of using castings for the dipper arms and side frames, steel bars and rolled shapes are employed. It is also stated that in the old shovel the dipper, when dumped, operated in the same manner as the dipper of the ordinary steam shovel—that is, the bottom dropped open, permitting the material to fall through. In the new shovel the bucket is rotated and dumped in an entirely different manner. This may readily be seen from the accompanying illustration of the shovel.

DIPPER TURNS COMPLETELY OVER

With the old shovel, it is also stated, it was somewhat difficult to handle coarse broken material, as there was a tendency for this to clog in trying to pass through the bucket. With the up-to-date machine, it is possible to load a single rock that is much larger than the dipper, as it does not have to pass through the dipper when being discharged. On the old machine, furthermore, there were hydraulic cylinders or pots to control the lifting stroke of the dipper. These have been eliminated entirely in the new machine.

The design, says the company, has been strengthened and simplified in many ways, which will eliminate the breakage that was not uncommon with

earlier models. It is furthermore stated that the new shovel is extremely rapid in its operation.

The new model consists of three principal parts: the base, the operating cylinder, and the dipper assembly. The base casting or truck frame is of steel, to which is attached the wheels for transporting the machine underground; also the clamping device for securing the machine to the rails. This casting serves to support the rotating portion of the shovel, which revolves on a set of steel balls. This revolving member consists of two side frames that support the cylinder and arms of the dipper assembly. The power required for rotating is supplied by a small four-cylinder air engine attached to the base.

ONE CYLINDER GIVES ALL MOVEMENTS

All the movements of the dipper arm assembly are supplied from one operating cylinder. This cylinder has a 10-in. diameter and 42-in. stroke, in which there are two pistons acting as one when imparting the crowding motion or lifting motion to the dipper. For the digging and dumping motions, air is introduced between the pistons, which forces them apart and then by means of cables and links gives a positive and effective dipper action. The dipper when digging exerts most of its reaction against the floor of the mine, thus absorbing the pressure and preventing strains from being imparted to the frame of the machine. The dipper assembly is made of materials well suited for such severe service. Side arms are of heavy bar steel, but the design is such that strains encountered in digging are borne by the dipper and not by the arms.

CARS CAN BE LOADED ON ANY TRACK

The shovel is of the full-revolving type and will therefore load cars at either side or at the rear as desired. The compact design of the shovel permits its use in drifts 5½ x 7 ft., and its wide clean-up radius of 18 ft. 6 in. makes it suitable for use in large tunnels, rooms, and other underground

Butler Loader

Small in size and full-revolving, with its scoop turning over in discharge this loader is well adapted to use underground. Its comparatively light weight also makes it easy to move from place to place. It can load cars spotted either beside or behind itself.



workings. It can dig below grade in any direction and will load cars 48 in. or higher, and will leave the floor and corners clean.

Its air consumption is low, not exceeding 135 cu.ft. of air per minute at 70 to 90 lb. pressure, according to the manufacturers. Large capacity is claimed for the shovel, inasmuch as the quarter-yard dipper is operated at a speed of $3\frac{1}{2}$ passes a minute. In actual performance, under ordinary conditions, this means that it will handle from fifteen to thirty tons an hour. Tonnage, however, will depend on the specific gravity of the material handled.

SHOVEL IS EASILY TRANSPORTED

The shovel is light, weighing only 4,000 lb., and can, therefore, easily be transported about the mine on its roller-bearing wheels. It can be run on a mine cage 36x54 in. without disassembling. If necessary, the operator's platform, which extends 12 in. from the side, can be unshipped to reduce the width.

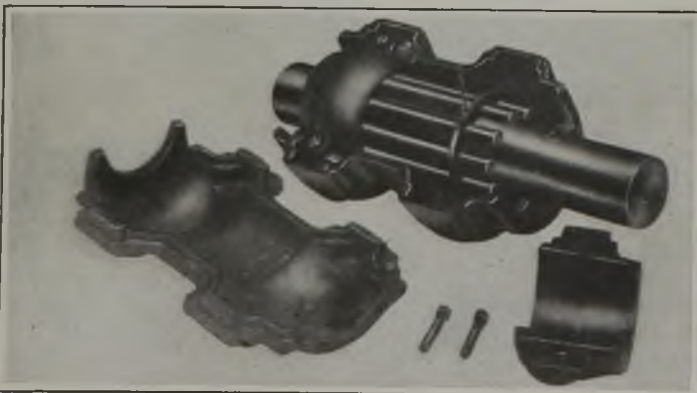
The two controls for the shovel's movements are simple, convenient, and naturally positioned, according to the company. This makes it possible for a new operator to handle the shovel without difficulty.

Roller Bearings That Adjust Themselves on Each Turn

The bearing shown has at the bottom of its housing two oil wipers of copper, one at each end, to prevent oil drifting along the shaft and out of the bearing.

The two load collars are built wide, so as to carry a heavy load, and they are split and held together by long screws, so that the housing can be taken apart and re-set together over the shaft in a very short time. The collars have a groove in the middle for housing the steel spacing rings, which keep the rolls in their respective places and apart without friction, thus insuring smooth running.

It is claimed that no end thrust is produced in these bearings, as the rolls readjust themselves on every turn, the two load collars that carry the rolls being self-aligning in a vertical as well as in a horizontal direction. The lubrication of this bearing is one of its particularly interesting features. The rolls rotate around their axes as well as around the shaft, and on each turn dip into the oil cellar, which actually creates an oil bath all around the shaft. The bearing described is manufactured by the Chandler Machine Co., of Ayer, Mass.



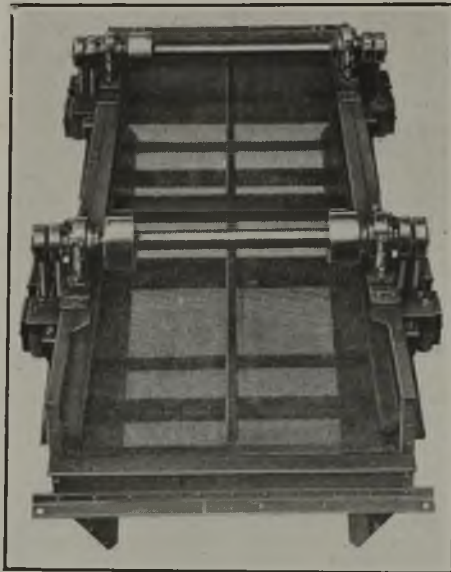
Split Bearing

Being split horizontally this bearing is easily put in place or removed. Two oil wipers prevent oil drifting along shaft and out of bearing.

Screen Imparts Vibration To Material Sifted

Another new model of vibrating screen has recently been added to those on the market by the Pittsburgh Coal Washer Co., of Pittsburgh, Pa. This is a so-called "vibratory" screen, the action being attained by an eccentric shaft mounted in self-aligning ball-bearing pillow blocks, the eccentric connecting rods being carried on self-aligning ball bearings and attached to the screen-frame supports. Other details of the screen are as follows:

A screen cloth of suitable mesh is mounted on a steel frame, securely fastened to supporting members located outside the sheet-metal frame. These members are carried on four coil springs, which float the frame and permit it to vibrate freely under load.



Screen and Its Frame

Positive vibration of the wire cloth screening surface prevents clogging. Light weight and positive lubrication assures easy operation.

Attached to each of the spring-suspended supports at each side of the frame is a rigid connecting rod, the upper end of which is connected to the main driving shaft through the connecting-rod bearings.

Both the self-aligning main bearings and the connecting-rod bearings are equipped for high-pressure lubrication.

The screen cloth is made of sections of standard meshes and is attached to the screen frame in a manner which stretches and holds the cloth securely in place. The frame may easily be removed by taking out four bolts.

Trade Literature

Cableways for Coal Storage and Reclaiming. Lidgerwood Mfg. Co., New York City. Bulletin No. 36. Illustrates and describes the systems in use at the Westport generating station of the Consolidated Gas, Electric Light & Power Co. of Baltimore and the Toronto super-power station.

Climax Engineering Co., Clinton, Iowa, recently published the following: **Gasoline Power Units**, portable and stationary types. Bulletin E., 11 pp. **Electric Generators, Direct-Connected, Alternating and Direct Current**, 20 to 75 kw. Bulletin F, 6 pp. **Centrifugal Pumps, Direct Driven.** Bulletin G, 6 pp. These are all $8\frac{1}{2}$ x11 in. and illustrated.

Steam Economy. Republic Flow Meters Co., Chicago, Ill. Catalog No. S-33. Pp. 55; $8\frac{1}{2}$ x11 in.; illustrated. Covers steam, water and gas meters, liquid level recorders and indicators, pyrometers, draft instruments, CO₂ recorders and coal meters.

The Pyramid Grate. Pyramid Iron Products Corp., New York City. Pp. 12; $8\frac{1}{2}$ x11 in.; illustrated. This grate is designed for the use of any size or kind of coal and can be installed in any size or type of boiler.

Brown Pyrometers. The Brown Instrument Co., Philadelphia, Pa. Catalog 15. Pp. 80; $8\frac{1}{2}$ x11 in.; illustrated. Recorders, new moisture-proof rotary switch, thermocouple protecting tubes, are some of the equipment illustrated and described.

Handling and Preparing Coal at the Mine. Link-Belt Co., Chicago, Ill. Book No. 555. Pp. 72; $8\frac{1}{2}$ x11 in.; illustrated. Describes some of the preparation plants built by this company.

Direct-Injection Oil Engines for All Purposes. Ingersoll-Rand Co., New York City. Pp. 31; $8\frac{1}{2}$ x11 in.; illustrated. Describes the "PO" oil engines of 55, 110 and 150 hp.

Engberg's Electric & Mechanical Works, St. Joseph, Mich., have issued bulletin No. 302B, supplement to catalog No. 302 covering vertical engines. Bulletin 302b contains horsepower tables. This company also has issued Bulletin No. 601, describing and illustrating the Engberg Direct and Alternating-Current Generators and their application to internal combustion engines, and bulletin No. 801 covering Alternating Current, Direct-Connected Generating Sets.

Crouse-Hinds Co., Syracuse, N. Y., has issued the following: **Condulets for Grounding Service Wire and Conduit System.** Bulletin No. 2089, four-page $3\frac{1}{2}$ x6-in. folder, illustrated. Bulletin No. 2075, illustrating and describing their New Service Entrance Condulets.

Steel Cross Ties. Carnegie Steel Co., Pittsburgh, Pa. Ninth edition. Pp. 45; 5x8 in.; illustrated. Covers mine ties, ties for portable tracks and ties for steam and electric railroads.

Ernest E. Lee Co., Chicago, Ill., has issued catalog 26, illustrating and describing the power plant equipment of the concerns the company represents. The book has 15 pp., is $8\frac{1}{2}$ x11 in., illustrated.