

# SAFETY IGNORED BY MINE BOSSES

THIS IS PROVED BY EXAMINATION OF MANY DISASTERS AND AT INQUESTS.

## LAW PROVISIONS UNKNOWN

Few Have Definite Knowledge as to Coal Dust Explosions — Following Advice of Bureau of Mines Would Save Many Lives.

By JAMES P. HORNADAY

Washington.—Examination of numerous disasters, such as fires or explosions, and the evidence at coroners' inquests following such disasters, have shown how frequently men in charge of the operation and safety of mines have forgotten, or have failed to learn, details of safe mining practices. After securing a position of trust as superintendent, or a certificate of competency to act as shot-firer, fire boss or mine foreman, some men seem to have felt it unnecessary to keep safety principles in mind, or to keep abreast of current progress in safety; they have concentrated on getting out maximum tonnage at minimum cost.

In coroners' inquests, the testimony, after disasters, has shown that fire bosses, foremen and coal mine superintendents are noticeably lacking in knowledge of the provisions of the state mining law relating to fans or doors, frequency of crosscuts, nature of stoppings necessary, electrical equipment, records of daily mine examinations, quantity of air required, or splitting and overcasting. According to the federal bureau of mines some mine foremen concern rarely or not at all with the fire boss, and do not comply with the law as to the daily reporting of the fire boss to the foreman, and the keeping of a daily written record by both, through ignorance of such requirements.

Some superintendents, foremen and fire bosses admitted they had not read the state law on coal mining; one superintendent considered enforcement of the state law the work of the state inspector. The latter impression is a more or less general one; for instance, in a gaseous (closed lamp) mine in a state having severe penalty against carrying matches into such mines, a man caught in the mine with matches in his shoes was not prosecuted, presumably because the state inspector was not present to take action.

### Few Posted on Coal Dust.

In spite of all that has been written on the dangers from coal dust, relatively few coal mine officials have any definite knowledge as to the agencies that ignite dust, as to the kind of dust that ignites, or the size or quantity of coal dust that is dangerous; or the kind of dust that propagates an explosion if started by another agency. Ideas as to the best methods to reduce the quantity of coal dust, or to render the dust non-ignitable are extremely hazy. Methods adopted for this purpose are often half-hearted and inefficient, and are based not on scientific study, but by haphazard guesswork. Explosions continue, with resultant heavy loss of life and property. Coal dust is frequently the most active factor in such disasters.

Rapid expansion of the use of electricity underground has introduced problems that have not been satisfactorily answered, or the information regarding them is not widely known. Coroners' inquests disclose the fact that mining men, even those who endeavor to keep informed, are hazy as to up-to-date safe practices. To what extent, or under what restrictions may electrical pumps, electrical cutting machines, electric locomotives, telephones, or electric signal wires be used in gaseous and dusty mines? What voltages may be used safely in any mine, and what precautions may be taken in gaseous mines to prevent short-circuiting in rock faults? These and other questions puzzle men responsible for safety in mines.

### Advice by Bureau of Mines.

The safety of coal mines and miners cannot be safeguarded if the men in charge are not familiar with safe methods. The following recommendations, therefore, are offered by the bureau of mines.

1. All persons in responsible charge of the direct operation of coal mines—including superintendents, foremen, fire bosses and shot firers—should be required to have certificates of competency issued by the state, showing that the applicant has passed an examination clearly establishing his knowledge of what constitutes up-to-date safe practices in the branch or branches of mine operations under his jurisdiction. All such certificates should be revocable by the state for cause, should expire after five years, and should be renewed only upon taking another examination. The latter requirement would compel all operating mining men to keep conversant with progressive safety practices.

2. Mining companies should require superintendents, foremen, fire bosses and shot firers to keep thoroughly familiar with requirements of state laws, as well as with up-to-date practices in regard to ventilation, dust, electricity in mines and explosives. If possible, this information should be conveyed by lecturers or specialists.

3. Each mine should make an especial study of its gas and dust conditions. During the second year of the

life of the federal water-power commission there have been filed with the commission applications aggregating a net total of 6,000,000 horsepower of proposed installation. These, added to the application of the preceding fiscal year, make a grand total of 321, involving in excess of 20,000,000 horsepower. This amount is more than twice the existing water-power installation of the United States. It exceeds the combined potential water-power resources of Norway, Sweden, Finland and the Arctic and Baltic drainages of Russia—the chief water-power region of Europe. It is nearly twice the combined resources of France and Italy. It is more than six times the aggregate of all applications for power sites under federal control in the preceding years.

Nearly one-half of the aggregate of 20,000,000 horsepower is represented by applications upon the St. Lawrence, Columbia and Colorado rivers, upon which, in general, action has been suspended. The St. Lawrence involves international relations and may require a treaty before action can be taken. The Columbia is under investigation by a special board to determine, before applications are approved, the relation between water-power, irrigation and navigation upon that stream. Action on the Colorado river is awaiting the findings of the Colorado river commission, an organization authorized by act of the congress for the purpose of negotiating between the states within the Colorado basin a compact in accordance with which the waters of the river may be apportioned among these states.

### Duties of the Commission.

By the terms of the federal water-power act the commission is required to investigate all projects applied for, to determine whether the structures are safe and properly designed and whether full utilization will be made of the resources of the stream. It is required to make valuation of all properties licensed under the act and constructed prior to the issuance of license. When declarations are filed of intention to construct dams in streams whose navigable status is doubtful it must investigate and determine whether the interests of interstate or foreign commerce would be affected. It must investigate and pass upon applications for restoration to entry of lands within power-site reserves. It is required to establish a system of accounting to be applied to the operations of its licensees and by means of which the net investment in the properties may always be known.

By confining its activities primarily to applications for power projects, declarations of intention and requests for restoration to entry, the commission has been able to take final action on more than half of the applications for permits and licenses, of which 118 were disposed of during the last year. It also rendered decisions during the year upon 22 declarations of intention, passed upon restorations to entry in 133 cases and made withdrawals of 675,000 acres of public lands in connection with applications for power projects.

### Much Used, More Waiting.

Up to June 30, 1922, the commission had authorized 60 preliminary permits and 49 licenses, of which 18 were for transmission lines. The 58 permits now outstanding involve an estimated installation of 2,386,000 horsepower and the 31 licenses for power projects, 1,932,000 horsepower, or a total of 4,318,000 horsepower. Of the projects covered by the 41 licenses, 17 involving an estimated installation when completed of 1,630,000 horsepower were either completed or under construction at the close of the fiscal year.

Says the commission: "There is more water-power development under way at the present time than at any previous period in the country's history. The greater part of it is being developed under the provisions of the federal water-power act. There is much more waiting to be used. If we are to preserve our diminishing fuel supply, are to reduce the burden of coal transportation, are to increase the supply of electric energy and reduce its cost, we must utilize our water power to the fullest practicable extent. Eighty-five per cent of our potential water powers are under federal control. We have a law which, though by no means perfect, does provide reasonably satisfactory conditions, and under which large-scale development is proceeding. Instead of being obliged to drift along with an administration of the law which, under existing circumstances, is necessarily insufficiently co-ordinated and only partially effective, the obstacles should be cleared away, whatever their nature, and there should be substituted a positive attitude both of encouragement and of assistance in the development of our water powers."

### Electro-Magnetic Brakes.

In England there is an electro-magnetic brake for street cars. It consists of a horseshoe electro-magnet suspended on spiral springs, and hung in such a manner that the poles of the magnet are directly over the rails. When the magnet is excited, the poles are forced downward so that the shoes of the brake grip the rail. By a system of levers connecting with the wheel-rim hand brakes of the car the reaction of the shoes of the electro-magnetic brake in gripping the rails increases the pressure of the hand brakes also. The brake is not actuated by the current that drives the car, but by an independent current derived from the momentum of the car, and the interruption of the driving current, instead of preventing the action of the brake, causes it to act automatically.—Washington Star.



1—Salvaging the wreck of Sempalo Correia, seaplane of the New York-to-Brazil flyers, off Cape Maysi. 2—Queen Titania (Miss Edna Freeman of East Orange) and her court at the Asbury Park baby parade. 3—First photograph showing the occupation of Milan by the Italian Fascisti to break a general strike.

## NEWS REVIEW OF CURRENT EVENTS

### Shop Crafts Policy Committee Called to Chicago; Strike May Be Settled.

### RAIL EXECUTIVES SAY NO

#### Government Will Not Enforce Injunction Too Drastically—Ending of the Anthracite Strike—Landslide for La Follette in Wisconsin—Greeks Whipped by Turks.

By EDWARD W. PICKARD

SETTLEMENT of the railway shopmen's strike may be at hand. Last week B. M. Jewell, head of the shop crafts, called their policy committee to meet in Chicago September 11, the day set for hearings on the motion to make permanent the sweeping injunction obtained by Attorney General Daugherty. There are 90 members of the committee, and some of them said freely that it was obvious that a settlement was in sight.

President Willard of the Baltimore & Ohio was said to be working on a plan for separate agreements.

On the other hand, various railway executives flatly denied that any movement was on foot looking to an agreement with the shopmen. Their chairman, T. DeWitt Cuyler, asserted the railways already had won the strike, that on September 1 they had 305,000 shopmen at work, and are adding thousands daily to their shop forces.

Criticism of the unparalleled in-justice of the injunction issued by Judge Wilkerson was not confined to labor circles by any means, being shared by members of congress, many editors and other presumably unbiassed persons. Probably taking note of this fact, the administration let it be known that the government had no intention of enforcing the injunction to the point of abridgment of the constitutional liberties of citizens. Attorney General Daugherty indicated that there would be no interference with labor meetings "held for lawful purposes," but that the government would step in if the strike meetings were for the purpose of "inciting riots" or other violation of the law. So far organized labor has practically ignored the restraining order, but the government agents, while keeping close watch on the proceedings, have done little in the way of attempting enforcement. Naturally, on Labor day, the union leaders, from President Gompers down, took the opportunity to attack bitterly the action of the attorney general. Later the labor chiefs mapped out a plan of attack on the injunction, seeking counter-injunctions.

Talk of a general strike largely subsided during the week, for all but the more radical laborites recognized that such a thing, hitherto unknown in the United States, could not succeed. They probably realize, also, that the workers, no less than the rest of the population, would be deprived of most of the necessities and comforts of life by a general strike.

OPERATORS and miners in the anthracite fields accepted the terms proposed by Senators Pepper and Reed, and the strike was settled by an agreement which, like that in the bituminous case, is almost a complete victory for the men. The old wage scale has been extended until August 31, 1923, both sides joined in recommending national legislation creating a separate anthracite coal commission, and the continuance of production after the extension date is to be upon such terms as the parties may agree upon in the light of the report of the commission.

The senate by a vote of 40 to 7 passed the administration coal distribution and price control bill. The grand jury at Marion, Ill., which is investigating the Herrin massacre, has indicted 39 persons so far, and more true bills are expected. President Farrington of the Illinois miners has

announced that the union will stand back of every union man who is accused of participation in the murders, and already he has declared that all such are innocent. Interest of the American Legion has been aroused by the discovery that two of the murdered men were overseas veterans.

JOHN H. CLARKE of Ohio resigned as associate justice of the Supreme court of the United States, and George H. Sutherland, former senator from Utah, was appointed to fill the vacancy and confirmed by the senate. Justice Clarke gave slight reasons for his resignation except that he had reached the age for retirement. He was appointed by President Wilson in 1913 and had sometimes been criticised by conservatives because of his decidedly liberal tendencies. Mr. Sutherland, whose great legal ability is widely recognized, is classed as a liberal. He was born in England in 1862 and received his education in the schools of Utah and the University of Michigan. He is a close personal friend of President Harding.

RUNNING true to form, the Republicans of Wisconsin renominated United States Senator Robert M. La Follette in the primaries last Tuesday. No one with any knowledge of the situation expected they would do otherwise. However, "Bob's" majority was probably a surprise even to him, being well over 200,000 according to incomplete returns. It was a landslide and carried with it the entire state backed by La Follette, including Governor J. J. Blaine, who won by more than 150,000. Rev. W. A. Ganfield, college president and candidate of the Anti-Saloon league, was unable to detach from the senator's support many of the Republican dregs although La Follette is openly wet. Then, too, the senator naturally received the votes of the large population of Teutonic origin. The one surprise of the day was the defeat of Congressman A. P. Nelson of the Superior district by H. H. Peavey. Nelson is a prominent leader of the dregs and his downfall was accomplished by a combination of the LaFollette organization and the Association Opposed to Prohibition.

The Democratic nominee for senator against La Follette is Mrs. Jessie J. Hoover of Oshkosh. In the second Democratic senatorial primary in Mississippi, according to partial returns, former Senator James K. Vardaman was beaten by Hubert D. Stephens, former congressman. Woodrow Wilson, when informed of this, expressed his satisfaction, which will be shared by the American public generally.

GREECE'S army in Asia Minor has been almost demolished by the forces of Kemal Pasha, the nationalist leader, and at this writing the latter is not far from Smyrna. The situation for the foreign colony in that city is critical and British and American warships have arrived there to protect their nationals. There have been some bloody encounters between the opposing armies, but for the most part it appears the Greeks have retired, in considerable confusion, without putting up much of a fight. The Turkish leaders are said to be much superior to the Greek commanders. It was reported that General Tricoupis, recently made commander in chief of the Greek forces, was captured by the Kemalists.

The Greek morale, both in Smyrna and Athens, seemed to have been broken. Movements were said to have been started to compel King Constantine to abdicate and there were rumors that the cabinet was about to resign and that Premier Venizelos would return to power. However, it was stated that the government would not consider the evacuation of Smyrna or the surrender of the Greek mandate in Thrace. Both of these things the Turks demand before they will talk of peace. The Kemalists, and the French who are friendly to them, blame Great Britain for its support of the Greeks and their claims. A rising of Turks on the south side of the Dardanelles has alarmed the British, who are concentrating on Gallipoli peninsula to check a possible march on Constantinople. Bulgaria has taken advantage of the situation by sending to Athens new demands concerning Thrace.

THE assembly of the League of Nations is holding another session in Geneva and Augustin Eduards, Chilean minister to England, was elected its president. The chief matter before the league is the Austrian situation. Chancellor Selpel presented the case for the suffering little republic and pled to make it clear that unless the allies granted immediate and liberal relief, Austria might have to merge with another nation, possibly Germany—which would violate the treaty of Versailles—or preferably Czechoslovakia, or maybe Italy, which desires such an outcome. The league council, after hearing the chancellor, soothed him with honeyed words and referred to a committee the entire question of how Austria shall be aided and under what guarantees. Selpel scored the British and French banks in Vienna whose manipulations added to the downward crash of the crown and prevented the Austrian government from taking constructive measures. "Austria realizes she must submit to financial control to obtain sums necessary to her salvation, but this must not affect her sovereignty," he said.

Great Britain's seizure of the entire phosphate deposit on the island of Nauru in the Pacific was the subject of protest to the league council by the United States, and Marquis Imperiali of Italy also demanded information concerning this. The treaty of Versailles provides for equal exploitation opportunity of national resources in mandated territory by the allied and associated nations. After a heated debate Lord Ralfour considered and finally consented to the "request for additional information as long as it is expressly understood there is no criticism of the British government's action."

HUGO STINNES, German industrial magnate, and Senator de Lubersac, president of the committee on French devastated regions, have made an agreement providing for the delivery by Germany of one billion dollars' worth of reconstruction material and work. To obviate the bad effect of having many Germans working in France, de Lubersac explains, it was arranged that the greater part of the labor will be utilized in Germany. The German manufacturers of the goods delivered are to have 6 per cent profit. The Socialist press in Germany attacks the whole plan as purely a selfish contract at the expense of the German government and labor, and it estimates Stinnes' profits at 45,000,000,000 marks.

Dr. Hermes, German finance minister, is negotiating with Belgium concerning guarantees for six-month treasury certificates which Germany is to give Belgium in lieu of cash. His difficulty is threefold, for he must satisfy not only the Belgians, but also the German cabinet and German financial and industrial leaders. It seems likely he will have to seek for the guarantees from foreign financiers.

SECRETARY OF STATE HUGHES and his party arrived at Rio de Janeiro, were given an enthusiastic reception and housed in a palace, and on Thursday the celebration of the one hundredth anniversary of Brazilian independence was inaugurated with impressive ceremonies and patriotic festivities. The centennial exposition is still far from complete but will be opened soon. It is interesting to note that at the presidential reception Secretary Hughes took second place to Mr. Cherubini, ambassador from the Vatican, because Brazil is a Catholic country. Two immense Vatican guards in red uniforms and gold helmets accompanied the representative of the Pope.

Although the aviators who started from New York for Brazil in the seaplane Sempalo Correia came to grief a few days after the start and their plane was wrecked, they are proceeding on their way in another machine, and are now in Caribbean waters.

ONE eminent American died last week—Rev. Samuel Fallows of Chicago, head of the Reformed Episcopal church. He was a veteran of the Civil war, from which he emerged a brevet brigadier general and thereafter he devoted his life to religious, educational and patriotic work of the highest order.

# MARKETS

U. S. BUREAU OF MARKETS Washington, D. C.

(For the week ending Sept. 7, 1922.)

Market generally weak with receipts equal to or slightly in excess of demand. Buying limited to immediate needs. Low quality hay slow sale. Country loading reported light.

Quoted September 6 No. 1 Timothy, New York \$26, Philadelphia \$19, Pittsburgh \$20, Chicago \$18, Minneapolis \$18, St. Louis \$18, Memphis \$18, No. 1 alfalfa Memphis \$22.50, No. 1 prairie, St. Louis \$16, Chicago \$16.

Mill feed market generally inactive. Buyers not inclined to accumulate stocks beyond current needs. Offerings of wheat feeds especially in reported light but production has increased and mills are reported as storing feed. Spring bran quoted \$1.40, Chicago, \$22.50, Philadelphia, winter bran \$18.50, St. Louis, Grey shorts \$25, St. Louis.

Grain Prices unsettled during the week but averaged higher on strength in corn, better foreign outlook, improved foreign demand, and buying by exporters. Chicago December wheat up 1/8-3/8, Chicago December corn up 3/4-1/2. In both prices continued to advance on strength in corn with sentiment much more friendly to buying side despite lower Liverpool market. Crop export from northwest house estimates combined winter and spring wheat crop \$42,000,000 bushels compared with 75,000,000 bushels in 1921. Argentine acreage estimated by Brown-hall ten to fifteen per cent larger than last year. Cooler weather forecast over corn belt.

Closing prices Chicago cash market: No. 2 red winter wheat \$1.04; No. 2 hard winter wheat \$1.02; No. 2 mixed corn 64c; No. 2 yellow corn 64c; No. 3 white oats 36 1/4c.

Dairy Products Butter market firm. Light receipts and scarcity of fine grades of considerable influence. Reports from creameries indicate production showing relatively higher decrease each week.

Live Stock and Meats The trend of Chicago hog prices was downward during the week declines ranging from 10 to 30 cents per 100 lbs. Extreme lights, however, showed a 40c decline over a week ago.

September 7 prices good grade meats: Beef \$15.50@17; veal \$15@18; lamb \$23@27; mutton \$9@15; light pork loins \$25@29; heavy loins \$15@20.

Eastern wholesale fresh meat prices showed mixed movements during the week. Beef firm to \$1 higher. Veal weak to \$2 lower and mutton \$1.25 lower. Lamb weak to \$1.00 lower. On September 7 better grades of steer beef steady to weak with other grades weak to 50c lower.

Potato markets lower for the week. Eastern cobbler and giants and middle-western stock down 10c to 20c per 100 lbs. Western white varieties show similar declines. Onions weaker. Apple markets steady to firm. New York Wealthy slightly stronger. New York city. Peaches continue to decline. Cantaloupes down 50c at \$1.75 in leading markets.

Prices reported Sept. 7: New Jersey potatoes, sacked cobbler mostly, \$1.15 @1.40 per 100 lbs. Cincinnati steady at \$1.50@1.55. Giants 75c to \$1.00. New York city, \$1.15 in the middlewestern. Maine cobbler, Boston \$1.25@1.30. Minnesota, Michigan and Wisconsin round whites steady. Cincinnati, \$1.50. Potatoes Chicago 90c to \$1.10. Western white varieties \$1@1.60 in midwestern cities. New York white varieties, yellow onions mostly \$1.40@1.75 per 100 lb. sack. Boston \$2@2.15.

Michigan peaches, Elbertas, bushel baskets mostly \$1.25. Cincinnati and Detroit \$1.25@1.50. Eastern Elbertas \$2 @2.75 eastern cities.

East Buffalo Live Stock East Buffalo, Sept. 7.—Dunning & Stevens report—Cattle: Receipts, six cars; steady. Hogs: Receipts, 10 cars; strong; heavy, \$9.25@9.50; yorkers, \$10; pigs, \$5.50@5.75. Sheep: Receipts, 1500 cars; steady; top lambs, \$13.75@13.85; yearlings, \$8@10; wethers, \$7@7.50; ewes, \$6@6. Calves, \$14.50.

DETROIT QUOTATIONS Feed and Grain WHEAT—Cash No. 2, \$1.07; October, \$1.07; No. 2 white, \$1.07; No. 2 mixed, \$1.06. YELLOW CORN—Cash No. 2, 68c asked; No. 3, 67c asked; No. 4, 66c asked; No. 5, 65c asked. WHITE OATS—Cash No. 2, 35c for new and 41c for old; No. 3, 37c; No. 4, 34c. RYE—Cash No. 2, 72c. BEANS—Immediate and prompt shipment, \$4.75; October, \$4.50 per cwt. HAY—No. 1 timothy, \$17@17.50; standard, \$16@16.50; light mixed, \$16@16.50; No. 2 timothy, \$15@15.50; No. 1 clover, \$15@16; rye straw, \$11.50@12; wheat and oat straw, \$10.50@11 per ton in carlots.

FLOR—Fancy spring wheat patents, \$7.95@8.50; fancy winter wheat patents, \$7.50@7.90; second winter wheat patents, \$6.50@6.75; winter wheat patents, \$6@6.50; Kansas patents, \$7@7.50 per bbl.

LIVE STOCK AND POULTRY CATTLE—Best steers, \$8@9; best handy wt. butcher steers, \$7.25@7.75; mixed steers and heifers, \$5.75@6.00; handy light butchers, \$5@5.50; light butchers, \$4.50@5.50; best cows, \$4.75@5.25; butcher cows, \$4.50@5.00; \$2.50@2.75; canners, \$2@2.50; choice light bullocks, \$4.75@5; bologna bullocks, \$4@4.50; stock bullocks, \$3.25@3.75; feeders, \$2.50@3.50; stockers, \$4@5.50; milkers and springers, \$4@4.75.

CALVES—Best grades, \$13.50@14; fair to good, \$10.50@13; culls and grassers, \$5@5.50. SHEEP AND LAMBS—Best lambs, \$12.50@13; fair lambs, \$9@11; light to common lambs, \$6@9; heavy sheep, \$7.75@8; fair to good sheep, \$5@6; culls and common, \$1.50@2. HOGS—Mixed hogs, \$9.70; pigs, \$8.45; steers, \$4@4.50; heavy, \$8@9; roughs, \$6.40@7.50; boars, \$2. LAMBS—POULTRY—Best springers, 22@23; medium springers, 22@25; culls, 20c; large fat hens, 24c; medium hens, 22c; small hens, 18c; old roosters, 15c; geese, 12c; large ducks, \$2@2.25; small ducks, 18@20c; turkeys, 25c per lb.

BUTTER—Best creamery, in tubs, 32 1/2@34 per lb. EGGS—Fresh current receipts, 26@28c; fresh candled and graded, 21@24c per doz. FARM AND GARDEN PRODUCE GRAPES—Michigan, 23@25c per 4-quart basket. PEACHES—New, \$1@1.50 per bu. PEACHES—Western Michigan Elbertas \$1.50@2; island peaches, fancy \$1.75@2; AA \$1.50@1.75, A \$1.25@1.50, B 75c@1 per bu. CELERY—Michigan, 25@40c per doz. HONEY—Comb, 18@20c per lb. CABBAGE—Home grown, 50@75c per bushel. POTATOES—Jersey cobbler, \$2.50@2.75 per 100-lb. sack; Giants, \$2@2.25 per 100-lb. sack; Michigan, \$2.50@2.75 per 100-lb. sack. ONIONS—\$2.25@2.75 per sack of 100 pounds. DRESSED CALVES—Choice, 17@18c; medium, 15@16c; large coarse, \$11@12 per lb.