

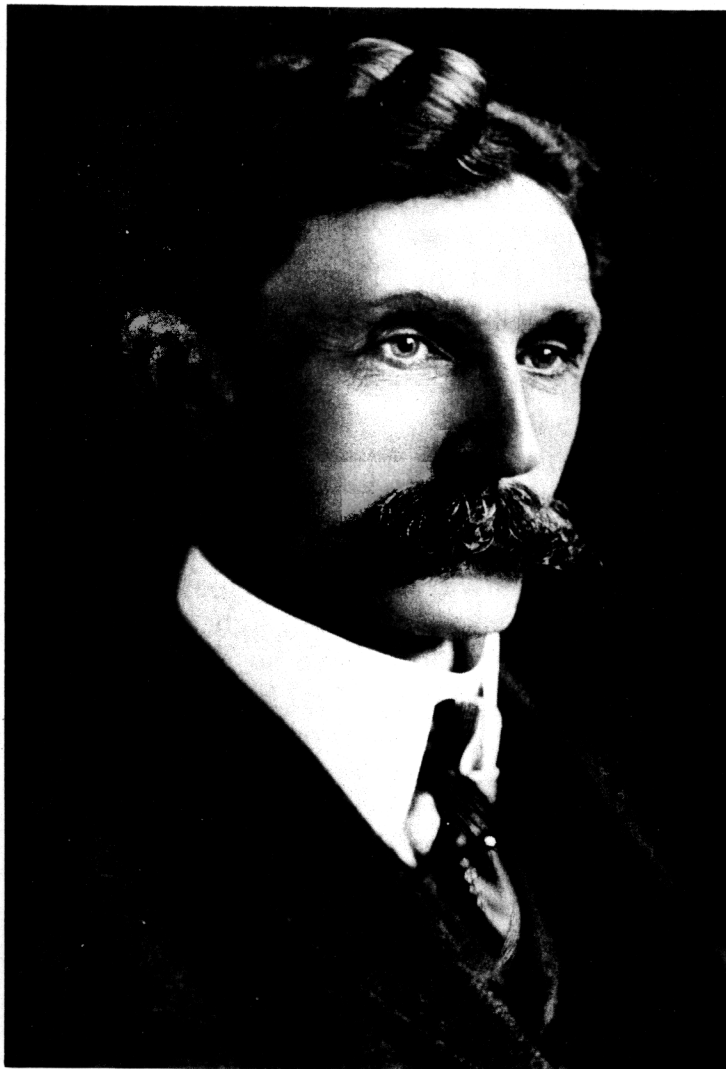
Joseph Austin Holmes—Part 1 of 2

Joseph Austin Holmes, first Director of the Bureau of Mines and originator of the slogan, "Safety First," was born at Laurens, S.C., on November 23, 1859, the son of a Presbyterian minister. He attended the Laurens Academy, noted in its day for the thoroughness of its curriculum, and then entered Cornell University. There he gave special attention to the natural sciences, chemistry, and surveying, and received the degree of bachelor of agriculture in 1881.

After graduation, he became professor of geology and natural history at the University of North Carolina. There he began an active campaign for the establishment of the State Geological Survey and for building good roads.

The State Geological Survey was established in 1891, with Dr. Holmes as State geologist, and through his efforts, the annual tax for public roads was increased from \$10,000 in 1885 to \$750,000 in 1900, with the result that more than 1,000 miles of macadamized roads were built.

Two grave problems in the Nation's mineral industries that were beginning to receive public attention appealed particularly to Dr. Holmes' imagination and sympathies—a tremendous waste of natural resources, and the death rate in mines, which was attaining frightful proportions. Their solution became his one great ambition, and re-



Joseph Austin Holmes, first director of the U.S. Bureau of Mines

mained so until his death. When he had the opportunity to take charge of the department of mining and metallurgy of the Louisiana Purchase Exposition at St. Louis in 1903, he seized it eagerly. His plan in organizing the exhibits of Fuels was to show how their utilization could be improved, and he was able to persuade the great fuel interested to spend large sums in demonstrating fuel economies, and in obtaining equipment for investigations to be carried on after the close of the exposition. The impression made by these studies persuaded the Congress in 1904 to authorize a general investigation into fuel economics, and early in 1905, as chief of the Technologic Branch of the Geological Survey, he was placed in charge of them.

Feeling that the problems were too great and pressing to be entrusted to a branch of a Government agency concerned mainly with other subjects, Dr. Holmes marshaled arguments for creation of a separate Bureau which led in 1910 to establishment of the Bureau of Mines. Although the Technologic Branch of the Geological Survey was transferred to the new Bureau, Dr. Holmes was not at first named Director, and as name after name was discussed for the post, he despaired and informed a friend that if the regents of the West Virginia State University offered him the presidency, which was then vacant, he would accept. However, after the post had

remained unfilled for several months, President Taft announced his selection as Director of the Bureau.

At a memorial session of the American Mining Congress in San Francisco on September 21, 1915, shortly after Dr. Holmes' death, Van H. Manning, who succeeded him as Director, said:

"Dr. Holmes' work as Director of the Bureau of Mines was characterized by the same spirit that marked all his previous endeavors.

"His achievements are matters of the Nation's industrial, economic, and sociological history. Even briefly to enumerate a few of them requires some little time. In the short period of its existence the Bureau of Mines has assisted in reducing materially the death and accident rate in the Mines:

"Completely demonstrated the explosibility of coal dust.

"Put into operation eight mine-safety cars and established six mine-safety stations in the various mining fields.

"Standardized mine-rescue and first-aid methods.

"Reduced the testing and selection of mining explosives to a scientific basis.

"Encouraged the various States of the Union to extend greatly their mine inspection and accident prevention systems.

"Demonstrated the practicability of an American radium industry and reduced the cost of production of this mineral.

"Brought about the saving of millions of dollars' worth of natural gas.

"Led the way in the adoption of scientific practices in the combustion of coal instead of the wasteful, haphazard methods heretofore employed.

"Demonstrated the practicability of the elimination of the smoke nuisance.

"Discovered a commercial method for the conversion of petroleum into gasoline.

"Shown the practicability of the successful utilization by briquetting of the lignites and peats of the West and South.

"Standardized methods of the analysis of coal, and established the feasibility of the purchase of coal under specifications.

"Determined, tabulated, and published the analyses and steaming and gas-producing qualities of thousands of American coals.



President William Howard Taft accompanied by Dr. Joseph A. Holmes, the first Director of the U.S. Bureau of Mines, is watching a safety demonstration at Pittsburgh's Forbes Field, October 13, 1911. James F. Burke stands between the two while Pittsburgh Mayor William A. Magee is at the right in a silk hat; Archie Butt, a presidential aide is in military uniform to the left of the President.



The faces of the crowd reflect the grave concern felt by family of the 362 missing miners waiting at the site of the Monongah explosion of December 6, 1907. This incident spurred Congress to create the Bureau of Mines.

"Obtained authorization from Congress for the establishment of mining experiment stations in the different mining fields of the country.

"Compiled and annotated the multitudinous Federal mining laws.

"Assisted in simplifying the smelter-fume problem.

"Arranged cooperative agreement with various State institutions for the utilization of low-grade ore deposits hitherto considered as waste; and published 250 reports relating to these various investigations."

Dr. Holmes arranged for the importation of oxygen breathing apparatus and training of men in their use; at the time, there were only three sets of apparatus in the United States; and subsequently for improving the design of such apparatus. In the Bureau's early days, when there were not funds for purchasing mine-rescue railroad cars, he persuaded the Pullman Company to donate cars, later replaced by steel ones. He also directed the incorporation in the Bureau's safety program of first-aid training, which up to that time was almost nonexistent in this country except in the Pennsylvania anthracite region. He also was instrumental in organizing the Ameri-

can Mine Safety Association; and the germ of the present National Safety Council, which later absorbed the Mine Safety Association as its mining section, was sown at a meeting of the Institute of Iron and Steel Electrical Engineers at Milwaukee, Wis., in 1912 in which he participated. He presided over a full session devoted to safety in the industries; it was the first time that any industry other than mining had held a great safety conference.

Dr. Holmes had the faculty of making every-

one he met feel that he was a personal friend, and the ability to impart his own enthusiasm to others so as to get them stirred up to help carry on projects in which he was interested. He won the confidence of both management and labor in the mining and allied industries, and held it; both recognized his deep interest in increasing safety and efficiency and reducing waste of resources, as well as his absolute neutrality regarding their disputes.

Dr. Holmes was a tireless worker, and he wore himself out traveling to attain the objectives of safety and conservation to which his life was dedicated. He visited Europe to confer with scientists and technologists of other lands conducting research on problems of mine safety and efficiency. He spent much time visiting various mining regions of the United States and Europe, and a strenuous trip into the interior of Alaska contributed to the development of tuberculosis, of which he died in 1915. Of this latter trip, W. R. Maloney, then Territorial mine inspector, who accompanied him, later said:

"I knew him on the trail to be a man who did his duty and his part of the work, and more. He was handicapped from the start of our trip to the

Alaskan Range by a horse stepping on his foot. From that time on he had to ride, making it very uncomfortable to the Doctor, as anyone who knew him knows how well he liked to walk around and see the surrounding country wherever he might stop, but nevertheless he was an indefatigable worker in the camp. He would cut wood and build fires and do anything he could to make things pleasant. At the time most of us in the party recognized that his constitution would hardly stand the trip, lying on the ground at night and traveling under difficult conditions in the daytime.

"We had to go through the snow and storm the better part of the time, and because of the snow and the thawing, and because of chills, it was a most disagreeable trip. We were making forced journeys of 35 and 40 miles a day, where ordinarily 15 miles was considered a good day's travel."

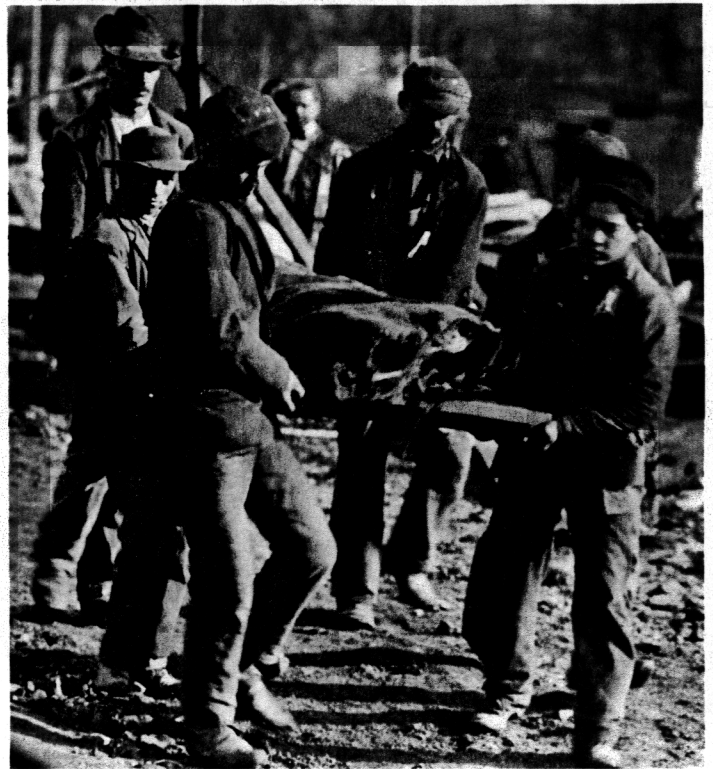
Another friend and associate, Dr. A. E. Ledoux of New York, recalls of Dr. Holmes that:

"While he was interested in the conservation of American natural resources and endeavoring to assist our citizens in the business of mining or agriculture, the human side of it all was always to the front; lifesaving and the uplift of poor and ignorant employees were the things which seemed nearest to his heart.

"Nor was his interest bounded by the area of the United States. He looked further afield, and was active in securing cooperation with foreign governments for the betterment of labor conditions throughout the world. It was my privilege to be appointed by the Secretary of the Interior as one of the consulting engineers of the Bureau of Mines, and to be sent as a special emissary of the Bureau and of the State Department for the investigation of a certain problem in the hope of establishing one more point of contact and usefulness between the governments of the civilized world. Although Dr. Holmes was at that time in failing health, and had to absent himself from his post, by letter and by cable he kept in touch with men, showing his keen interest in all these things."

Carl Sholz, then president of the American Mining Congress, recalled of him in 1915:

"The first introduction to a President of the



Workers carry victims of the Monongah explosion to a make-shift morgue.

United States which was afforded me was under the guidance of Dr. Holmes, at the time when I invited Mr. Taft to speak at the Chicago convention of the American Mining Congress in 1911, and at that time Mr. Taft very generously said, "What do you want of me? You have Holmes; he can tell you more about the work than I know."

A tribute to Dr. Holmes by President Wilson, reads:

"In the death of Dr. Holmes the country lost a public servant of unusual character and of singular devotion to duty. We are often called upon to note the career of some public benefactor, but we do not often enough note the services of the devoted men who, with little compensation and little public gain, seek to advance the interest of their fellow-countrymen through services of the department of the federal government at Washington, D.C. Dr. Holmes was one of the most disinterested and most serviceable of these. He devoted his whole time and thought to turning science to human and generous use."

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