THE PRODUCTION OF ALUMINUM

In his report entitled "The Production of Aluminum and Bauxite in 1903," Mr. Joseph Struthers, of the United States Geological Survey, expresses regret that it has not been possible to obtain exact statistics of the production of aluminum, for the reason that the sole producer in the United States, the Pittsburg Reduction company, declines to state, even approximately, its output. This is unfortunate, as a free interchange of ideas on the reduction, refining, and working of the light metal, as well as on the special practices followed in making its various alloys would help to develop this branch of the metal industry, and in consequence would benefit each and every contributor to the general fund of knowledge.

In spite of the secretive policy of the Pittsburg Reduction company, it is safe, however, to estiamte the production of aluminum in the United States during 1903 at 7,500,000 pounds, as compared with 7,300,000 pounds in 1902, and 7,150,000 pounds in 1901. Mr. Struthers bases this assumption on the fact that the uses of the metal and its alloys have recently been greatly extended. Bauxite, the crude mineral from which aluminum is extracted, has been consumed during the last few years in successively larger and larger quantities, and this also would seem to indicate that the production of aluminum is steadily increasing.

The chief point of interest affecting the aluminum industry in the United States during the year 1903 was the final adjudication of the many lawsuits and counter lawsuits which have been instituted from time to time in behalf of the Electric Smelting and Aluminum company, of Cleveland, Ohio, and the Pittsburg Reduction company, of Pittsburg.

The Eelectric Smelting and Aluminum company appparently now controls the electric smelting industry in the United States, as the following companies are more or less subsidiary to it: The Cowles Smelting company, the Union Carbide company, the British Aluminum company, the Electric Gas company, the Acetylene Illuminating company, the Wilson Aluminum company, and the Acetylene company.

The progress of the aluminum industry in the United States and in Europe in 1903 is described in detail by Mr. Struthers. There are only three aluminum works in the United Sates (two at Niagara Falls and one at Massena Springs, New York), and one in Quebec, Canada, one in Scotland, two in France, one in Switzerland, one in Germany, and one in Austria.

A considerable portion of the report is devoted to a discussion of the tenchnology of aluminum. This metal is used mainly for the transmission of electric currents, in place of copper. A large proportion of the output is manufactured into articles for domestic and culinary use. Aluminum is used more and more extensively for the construction of parts of machines and apparatus which require lightness rather than great strength; in the manufacture of special alloys; as a substitute for stone and zinc in lithoraphic work; and for the production of intense heat by the combustion of the metal in the powder called thermit, which is the basis of three important branches of metallurgical work.

Aluminum is also used in the manufacture of a special explosive called ammonal; in the rubber indsustry for making lasts and boot trees upon which rubber boots and shoes are made; in cast-iron foundry practice as a substitute for the ordinary wooden patterns; as a substitute for wood in making bobbins for spinning and weaving machines treating silk fiber; and in powdered form for the manufacture of white metallic paints, a use to which it is particularly suited, on account of of its nonsusceptibility to atmospheric influences. Among the proposed new uses of alumnum is its substitution for glass or earthenware in carboys or vessels employed for the transportation of nitric acid, and also as a substitute for zinc in lining cisterns and other receptacles for storing water.

QUACKERY AMONG MINING ENGINEERS

Laws have been enacted in all states to deal with the quack doctors, and quack lawyers are frequently disbarred from practice in the courts. The individdual that represents himself as a physician when he has not been authorized by the state to practice, on the strength of a diploma is apt to find himself in the county jail. A lawyer is reckoned as an officer of the court, and it would be difficult for a man to represent himself as an attorney without being quickly caught up. Moreover, a lawyer who indulges in quack practices runs the risk constantly of being deprived of his privilege. One may have both a knowledge of medicine and of law without being a practioner, and in either case he may put his knowledge to good use, but misrepresentation as to his personal authority will sooner or later get him into trouble.

At the present time there is no general authorized authority to supervise the use of the title of mining engineer and to require evidence of education and experience from those who pose as members of this profession. Indications are not lacking, however, that the engineer everywhere will soon have to bow to restrictions similar to those imposed upon other professions. In many cities the authorities require that the plain engineer, who handles steam engines, pass an examination and secure a license. Why should not the same be required of the mining engineer, epecially since large financial interests are dependent upon his integrity and ability? The reputable mining engineer can only welcome such a restriction for himself, for it constitutes a protection to him against the quack; while so-called engineers who are not entitled to be so consideerd cannot put forward any objection to the restriction that they would be willing to air before the public.

The chief danger from engineering quackery is not to the man with whom the quack directly deals, though the management may be deceived by him. It lies rather in deception which may be practiced upon those who, while not directly in touch with the circumstances under which the quack report is made, nevertheles are furnishing the funds or development. No dishonesty whatever may be apparent, but at the same time, if the report is based on ignorance of the subject, the investor runs the risk of loss. Where dishonesty in this connection is practiced, it of course naturally involves not only the so called engineer, but the management that employs him, because he is a quack. Only a quack will permit himself to be used as a tool by an unscrupulous promoter, for he will be of no use to the latter unless he is willing to vouch for falsehoods and to stand sponsor for all manner of reckless promotion methods. It may be said in this case that it is the promoter rather than the socalled engineer who deserves the criticism, but this is only an evasion of the issue. The unscrupulous promoter will be criticised anyhow, but this power for evil would be greatly hindered if he were not able to stand upon the authority of professional lies. To begin with, the law should make it imposible for the unqualified to pose as engineers, and those who are proven to be engaging in fraud in the practice of their proession should be held liable to the extent of losing their license to practice.

There is no moral reason why any reputable engineer shold not accept the employment of anyone who has a mine to be examined, but such an engineer will see to it that his reports are properly represented. If his reports are garbled he has grounds for damages before the law, and if he is held up as saying things that he has not uttered he at least owes it to himself to repudiate his connection with it. In the long run his reputation is more to him than the few dollars he might lose by offending his dishonest empolyer.—Daily Mining Record.

Presiding at the Glasgow, Scotland, Charity Organization society's meeting last week, the Duke of Monrose expressed a fear that trade prospects on the Clyde were poor. In London and Manchester most pessimistic views were taken. His grace deplored the increasing number of foreigners amongst those seeking charity in Glasgow, and denounced the government for permitting pauper aliens to land in Great Britain. Twenty-six per cent of the relief cases were traced to intemperance. Intemperance might be lessened by legislation and better housing, he said, but the best remedy is the incarceration of drunkards, who are a drain on the charity of every large city. If they overcome intemperance, they will do away with one-fourth of the charity societies. These statistics may be correct, so far as Glasgow is concerned, and if they are, this appalling percentage of intemperance breaks the world's record, and is due to conditions that surely must be the accumulated evil result of generations. His highness' remedy, legislation, is that of a quack. The cause must be removed, which legislation cannot do.

In the village of Altenberg, on whose borders three countries meet, there are no soldiers, no police, no taxes, and its people are ruled by no monarch. The inhabitants speak a queer jargon of French and German combined, and spend their time cultivating the land or working the valuable calamine mine, which is the boast of the village.

Ira Isaacs is in town today from the hills.

Timber and Homestead Filings.

Timber and homestead filings, as well as final proofs, can be made before Charles H. Chance, United States Commissioner, office in First National Bank of Sumpter building, Sumpter, thus saving applicants expense of a trip to La Grande.