

The Jeffrey Manufacturing Company, of Columbus, Ohio, U.S.A., have sent an illustrated bulletin descriptive of the Jeffrey Centrifugal Fan for mine ventilation. This fan is of the highest efficiency and best mechanical construction; it develops large volumes at low speeds, large capacity against high gauges. For testing and show purposes, the company has installed at its works at Columbus a complete 10x5-ft. fan, and with this tests are made for interested parties.

A timely publication is the booklet issued by the Canadian Westinghouse Company, Limited, of Hamilton, Ontario, describing the Westinghouse Pipe-Thawing Apparatus. The text deals with outfits for two classes of service—light service such as thawing out the pipes of a dwelling house, and heavy service such as thawing out large underground mains. Other publications received from this company are the following circulars: No. 1097, Westinghouse Types K and KG Motors, direct-current series wound for use on cranes, hoisting machinery and similar service; No. 1107, Westinghouse Automatic Circuit Breakers, carbon break; No. 1147, Westinghouse Relays for alternating and direct-current service.

Peacock Brothers, engineers, of Montreal, Quebec, who are sole Canadian representatives of Hathorn, Davey & Company, Limited, of Leeds, England, are inviting the attention of Canadian buyers to the especial merits of the Hathorn-Davey pumping machinery for waterworks and mines. In their publications appears one striking illustration showing three sets of geared three-throw horizontal ram pumps, 9 runs each 10 in. diameter by 20 in. stroke, while another illustrates the triple expansion engines of the Leeds Waterworks, the official trial of which indicated steam per pump horse-power per hour 13.051 lb. and per indicated horse-power per hour 11.91 lb., with a mechanical efficiency of 91 per cent.

BOOK REVIEWED.

Mining, Mineral and Geological Laws of the United States.

By Charles H. Shamel. Pp. 627; illustrated, 6x9 in.; cloth, \$5. New York, 1907; Hill Publishing Company.

Contents: Geology and allied sciences—definitions. Property in minerals. Legal definitions of mineral and ore. Theories of ore formation and classification. Right of extralateral pursuit of vein. Public domain and mining laws applying. Acquisition of mining rights. Scientific definition of vein, etc. Legal definition of vein or lode. Legal definitions of apex, strike, dip, etc. Extralateral rights. Tunnels, etc. Discussion of proposed repeal of extralateral law. Placers. Water. Miscellaneous uses of geology in law. Forms and procedure for locating mining claims. Forms and procedures for obtaining patents. Appendix. Bibliography. Classification of rocks and geological formations.

Reviewing this book for the *Engineering and Mining Journal*, Dr. R. W. Raymond, who is eminently fitted to pass judgment upon such a work as the one under notice, bears testimony to the fact that the views of the author are "clearly, forcibly and courteously expressed, and constitute a timely contribution to the discussion of a question by no means yet out of date." Dr. Raymond says, in part:

"1. The author disclaims the purpose of supplanting by this treatise either, on the one hand, the classical works on the U. S. mining law, which will remain indispensable to lawyers, or, on the other hand, the books and monographs on geology and ore deposits, which will remain indispensable to experts in those departments of science; but he thinks there is room between these two classes for a useful book, which will enlighten the intelligent layman, interested in mining, as to the legal relations of that industry, and the geological

conditions which (as I think, unnecessarily and most unfortunately), profoundly affect those relations in certain parts of the United States, though nowhere else in the civilized world. In his perception of the probable usefulness of such a book, he may be right, but I cannot help feeling that he has missed the opportunity of supplying a much more pressing general need. For the mining law which he expounds is mainly (apart from certain incidental items, which I will not here stop to enumerate), not mining law at all, but simply the system regulating the disposal of public mineral lands by the United States and the subordinate conditions imposed upon holders of possessory title by the several States and Territories included in the region to which the U. S. law applies. Now, the immensely greater part of our mining industry is carried on in States wholly outside of the region favoured (or cursed) with the U. S. law of mining titles. In all those States, there are real mining laws, i.e., laws governing the operating of mining, apart from the conditions of mining titles. A summary of these statutes which have been much more useful, and would have appealed to a much larger constituency, than any abridged re-statement of the U. S. law for the sale of mineral lands, which entirely ignores the actual subsequent operations of the purchaser.

"2. The method by which the author proposes to carry out his own conception is to give a summary outline of geological theories, and a summary statement of legal principles, legislative enactments, and judicial decisions, to which are added, *passim*, historical and critical comments of his own, which belong in an entirely different class, since they constitute, not declarations of existing science or law, offered for the guidance of the reader, but arguments and explanations which, however suggestive or weighty, cannot be deemed authoritative. It seems to me that nobody can be misled by the intercalated individual opinions of the author, and therefore that they do not impair the practical value of his work. Consequently, I accept his method as entirely legitimate, and worthy of such candid praise as the manner of its execution may deserve.

"3. In the performance of his design, so far as the department of geology is concerned, the author has done about as well as anybody could be expected to do. Geological facts and theories ought not to be involved in the title to real estate; they are not thus involved, outside of certain regions in this country; the U. S. law for the sale of mineral land in those particular regions was framed in total ignorance of geological science as it now exists; nobody can state that science today so as to make it fit the terms of that law; and and statement of it, as a mere auxiliary portion of a manual of U. S. mining law, is likely to take up more room than it is worth, and possibly to do harm by giving the reader that 'little knowledge' which is 'a dangerous thing,' especially as it leads him to feel that it is all he needs to know. Dr. Shamel has guarded against this mischievous result by abundant references to technical literature; and his outline of the subject, though necessarily sketchy, and perhaps somewhat uncritical, is intelligent and suggestive.

"The same may be said of his statement of the law, as expressed in the U. S. Rev. statutes, together with their judicial exposition down to the present date. His statements under this head are always intelligent, generally correct, and very seldom open to hostile criticism from a legal standpoint; and, since he furnishes, for the use of those readers who desire more detailed guidance, ample references to classic authorities and official reports, I do not see how his book can be otherwise than instructive and suggestive, even to those whom it may only stimulate to further research.

"In the third department of the treatment of his subject, namely, that of historical review and critical argument, and especially the author's defence of the 'extralateral right,' as a feature of the 'law of the apex,' statements and opinions are advanced with which I cannot concur, and important facts and conditions are ignored, which, in my judgment ought to be taken into consideration * * *