

by 16 independent jet condenser, boiler feed pump and feed water heater, all complete, and recently shipped by the Jenckes Machine Co., Ltd., of Sherbrooke, Quebec.

The new shaft house and gallows frame at the St. Eugene mine, Moyie, are described by the Moyie *Leader* as being much larger than those destroyed by fire a few weeks ago. The shaft house is 210 ft. in height and more than 40 ft. in width. The house for the gallows frame is 100 ft. in height. Work has been commenced on the framing shed, which will run parallel with the shaft house; this will be 35 by 100 ft. There are now 175 men employed at the mine and the number is being steadily increased. After the new buildings and machinery shall have been completed the working force will be in excess of 300. It is intended to operate the mine on a larger scale than before the fire; 31 machine drills will be worked. The concentrating mill is being overhauled in readiness for a continuous run, which is intended shall be commenced early in December.

The Granby Consolidated Mining, Smelting & Power Co. has ordered from the Jenckes Machine Co., Ltd., of Sherbrooke, Quebec, the following additional machinery for its copper mines at Phoenix: One 150-h.p. double drum electric hoist; dimensions of drums, which will be conical in shape, 7 ft. diameter at the larger end, 5 ft. diameter at the smaller end, and 5 ft. long; by means of friction clutches each drum can be operated independently; both drums controlled by powerful brakes; capacity of hoist is a load of 10,000 lb. raised at a rate of 700 ft. a minute; shipping weight is in excess of 50,000 lb. One Farrel-Bacon crusher, B pattern; receiving opening of crusher, 42 by 30 in.; capacity per day of 10 hours is 1,400 tons of ore crushed to 8-in. cube; heaviest single piece of machine will weigh about 75,000 lb. The Granby Co. already has in operation at its mines two crushers of similar make, size and capacity.

#### TRADE NOTES AND CATALOGUES.

Fairbanks, Morse & Co. have sent their Catalogue No. 101A, Sheffield Gasoline Motor Cars.

The Westinghouse Machine Co. has issued a new catalogue of the Westinghouse Standard Engine, which has behind it a history of more than a quarter of a century of uninterrupted success, fully demonstrating the correctness of the principles on which it was designed. Various types of this engine are described and illustrated, both complete and in detail of parts. The pamphlet contains much information of interest to those who have to do with steam engines.

The Jeffrey Manufacturing Co.'s Catalogue No. 20, illustrating machinery specially designed for handling coal at the mines, contains representations of a great variety of coal mining and handling machinery. The illustration of more than a score of tipples, each of different construction, exhibiting arrangements of screening and loading apparatus and other appliances, and of washing plants, gives an excellent idea of the suitability of one or other of the structures to particular conditions obtaining at different mines. Other illustrations, whether of complete plants or of parts of machinery, are equally useful. The catalogue should be obtained by all engaged in coal-mining.

Messrs. W. F. Stanley & Co., Ltd., of Holborn, London, England, have issued another catalogue of drawing and surveying instruments. Apart from its merits as a comprehensive price list, the catalogue is an interesting publication. From the short preface it is learned that this firm, founded in 1853, has passed its jubilee under the continuous management of Mr. W. F. Stanley—a record not often beaten in the history of business houses; and Mr. Stanley's experiences during that half-century would surely be worth reading. At the commencement of his career a theodolite was made by hand and would consist of some 226 separate parts, while at the present time this instrument, by the application of the highest class machinery, can be produced with only 102 pieces. The catalogue is larger than its immediate predecessor by some 60 pages, included in these being a list of scientific works.

#### PATENT OFFICE REPORT.

Mr. Rowland Brittain, patent attorney of Vancouver, sends the following report on patents issued to British Columbians during October:—

Messrs. D. Inches and E. J. Hosker, machinist and locomotive engineer, respectively, on the Pacific section of the C. P. R., received a United States patent on their improved lock handle for stop-cocks. This handle has been particularly designed for application to what is known as the angle cock at each end of a vehicle on the Westinghouse air brake train pipe, to prevent such stop-cocks being inadvertently closed. The unintentional closing of an angle cock by cutting off the rear portion of a train from connection with the air brake system has been the frequent cause of railway accidents which hitherto could hardly be considered as preventable. The handle, which is the subject of this patent, is provided with a detent which locks it in either the open or shut position as required, so that it cannot be accidentally moved. The invention is a very ingenious and eminently practical one, and should be readily adopted by the various railway companies, as no modification of the body of the stop-cock is required, the old handle merely requiring to be removed and the new one substituted at a comparatively trifling expense, while it will save the recurrence of a class of accidents which are usually disastrous to rolling stock, and the cause of serious interruption of traffic. The air brake companies will also be only too willing to adopt an invention which will enhance the usefulness of their brake system.

Mr. Alfred Taylor, of Victoria, was the recipient of Canadian and Spanish patents on an improved push-button fire-alarm, patents on which are pending in several other countries. The device is designed to combine in an ordinary electric call service such as is in common use in hotels and public buildings, the advantages of a fire alarm system. It consists in the introduction within the push-button of an electric call of an hermetically sealed endwise extensible chamber charged with a material which is readily volatilized by heat. The chamber is interposed between the push-button and the terminals of the electric circuit so that while under ordinary circumstances the push-button may be used to establish contact and ring an alarm, the same function is performed in the event of fire by the expansion under the increased temperature of the volatile material within the chamber. The advantage of being able to obtain the security of a fire alarm system without the necessity of a separate alarm installation will commend the invention to hotel proprietors and others. The alarm may be readily adjusted to ring at any given temperature, and is so sensitive that it may be used to indicate very slight increases of temperature so that the application of it may be extended to any purpose where elevation beyond a certain temperature requires to be carefully guarded against, as in incubators, etc.

#### BOOK REVIEWED.

*Pyrite Smelting*.—A discussion, edited by T. A. Rickard. Published by *The Engineering and Mining Journal*, New York, U.S.A., and London, England. Price \$2 (or 10s.) postpaid.

This is a valuable contribution to metallurgical literature, covering in an exhaustive and thorough manner one of the most fascinating phases of economic smelting. It presents in compact form all of the various articles on the subject of *Pyrite Smelting* which appeared in *The Engineering and Mining Journal* during nearly 18 months, to February, 1905. Among well known contributors who took part in the discussion were Dr. E. D. Peters, Messrs. Herbert Lang, L. D. Godshall, G. F. Beardsley, W. A. Heywood, T. T. Read, W. H. Nutting, E. A. Weinberg, R. F. Lloyd, W. H. Freeland, H. W. Hixon, J. W. Malcolmson, H. Haas, J. Parke Channing and numerous others. The discussion elicited the views of this subject of men who are without doubt the highest experts on the actual practice and technology of smelting.