

time it has remained idle. The Reward company recently acquired the plant, which is in excellent condition, considering that it has not been used for so long a time.

The Canada Foundry Company, Limited, received, last month, an order from the Western Fuel Co., of Nahaimo, B.C., for two 150 h.p. horizontal tubular boilers.

The equipment of the Betts and Hesperus mines was increased a short time ago by the addition of another power drill.

The Nova Scotia Steel & Coal Co., New Glasgow, N.S., have put in two of Barr's automatic spike machines, manufactured by the Smart-Turner Machine Co., Hamilton, Ont.

The Allis-Chalmers-Bullock, Limited, have introduced a change in the British Columbia branch, which heretofore has been in charge of the agency of the Canadian Fairbanks Co. Recently, however, Mr. G. C. Hinton, of the Hinton Electric Co., was appointed sales manager for British Columbia. Offices have been opened on Seymour Street, Vancouver, and here a complete stock of the Allis-Chalmers-Bullock products will be kept, including rock drills, and rock drill parts and electric and saw mill machinery. Mr. Hinton, though becoming local manager of Allis-Chalmers-Bullock, still retains an interest in the Hinton Electric Co.

Among the recent sales of the Allis-Chalmers-Bullock, Limited, Montreal, are a mining outfit to the Canada Metal Company, Ainsworth, B. C., including one 15 h.p. vertical boiler, one 40 h.p. vertical boiler, two No. 5 Cameron Sinker pumps, one  $6\frac{1}{4}$  x 8 inch hoisting engine, one 7 x 10 hoisting engine, ore buckets, etc., and to the Souris Coal Mining Co., Bienfait, Assa., one 75 h.p. Lidgerwood hoisting engine of the combined friction drum and brake and reversible link motion type.

A hoisting engine of very heavy design has just been shipped to the Centennial Copper Co. from the Chicago works of the Sullivan Machinery Co. It is of the direct-acting type, and consists of two 36 x 60 inch simple, reversible Corliss engines of the heavy duty type, connected to a straight-faced drum, 15 feet in diameter by 15 feet winding face. The drum is grooved for  $1\frac{3}{8}$  inch wire rope, and is keyed direct to the engine shaft. The plant is designed to hoist from a vertical depth of 5,000 feet at the rate of 4,000 feet per minute, with a boiler pressure of 150 pounds. The reverse engine is of novel design, and may be operated by either steam or air. The brake mechanism is arranged for steam, hand or gravity operation with independent control in each case. The main throttles are on the cylinders, moved by hand from the engineer's platform, which is elevated to a point higher than the drum. The dial indicators are provided with fast and slow moving pointers. A very sensitive and powerful automatic stop and throttle closing device is another important feature, diminishing the danger of over-winding with the high speed used. This hoist is complete in every detail, being equipped with the latest and most improved auxiliaries.

The plant, business and goodwill of M. Beatty & Sons have been purchased by M. Beatty & Sons, Limited. The new company will be under the same management and control, and continue the manufacture of the same lines of high-grade machinery as heretofore.

## DIGEST OF RECENT PATENTS—MINING AND METALLURGICAL.

Specially Reported for the Canadian Mining Review.

794,198.—Process of removing or recovering zinc from ores. William Stewart, Mount Florida, Glasgow, Scotland. A process consisting of pulverizing the ores, mixing therewith bisulphate of an alkali metal and common salt, fuming at a red heat and thereafter lixiviating or leaching and precipitating the zinc salts.

794,555.—Ore Concentration. Hannibal Scovell, Harlie J. Scovell, Leslie E. Scovell and Wilsie E. Scovell, Galena, Kansas. The combination with a fluid-holding tank, shafts mounted in suitable bearings on said tank, and a set of cams secured on each of the said shafts, one cam near each end of each of said shafts, of a screen suspended in said tank, the forward end of said screen having a sharp upward curve, and the tail portion thereof being slightly upwardly inclined to permit an easy discharge of the waste matter from said screen, a suitable hanger secured to each side of said screen and supported on the cams of the shafts, a cam secured on one of said shafts, and a pitman, one end pivoted to the hangers and the other end provided with a strap adapted to embrace said cam, whereby, when a motion is imparted to the shaft the screen will be given a compound vertical and horizontal motion.

794,272.—Method of reducing Copper Mattes, white-metal and blister-copper in a single furnace. Ralph Baggaley, Pittsburg, Pa. A method which consists in producing a bath by melting mattemaking material in such vessel or chamber producing thereby a low-grade matte, removing slag and adding to the molten bath from time to time ore in small quantities at a time, namely in less quantities than the molten bath, blowing air through the bath, and by the heat thereby developed fusing and fluxing such additions of ore.

794,274.—Dumping Mechanism for Cars. Anton Becker, Chicago, Ill., assignor to Joseph S. Ralston, Chicago, Ill. A car, in combination with load-retaining doors, a shaft adapted to be rotated to operate said doors, two ratchet-wheels upon said shaft, an operating-lever journaled upon said shaft between said ratchet-wheels, pawls on opposite sides of lever, each engaging one of said ratchet-wheels and a mechanical connection between pawls so that they move in unison.

794,255.—Electric Furnace. Cecil Saunders, Cleveland, O. The combination with a horizontal continuous trough forming a hearth, of means for continuously rotating the same, positive and negative electrodes supported on said hearth and adapted to convey current to and from the material thereon, stationary contact-pieces with which said electrodes make temporary contact and connections from said contact-pieces to the source of electricity.

794,876.—Ore or Rock Crusher. Edgar S. Moulten, Central City, Colo. The combination with a casing, of a buffer-block secured thereto, crushing-plates secured to said buffer-block, an eccentric-shaft journaled upon said casing, an oscillating jaw carried by said eccentric shaft, comprising a lever member, a plurality of crushing plates secured thereto upon one side thereof, a removable plate secured to said lever member upon the opposite side to which said plates are secured, a flexible member secured to said casing and connected with said lever member, a revoluble member engaging said plate carried by said lever member, and means for moving said revoluble member and retaining the same in an adjusted position.

795,193.—Treatment of Chromiferous Iron. Harry H. Campbell, Steelton, P. A method which consists in charging the same into a basic Bessemer converter, producing a basic slag, oxidizing the chromium by blowing air through the body of the metal, thereby causing the chromium to become part of the slag, and separating metal and slag.