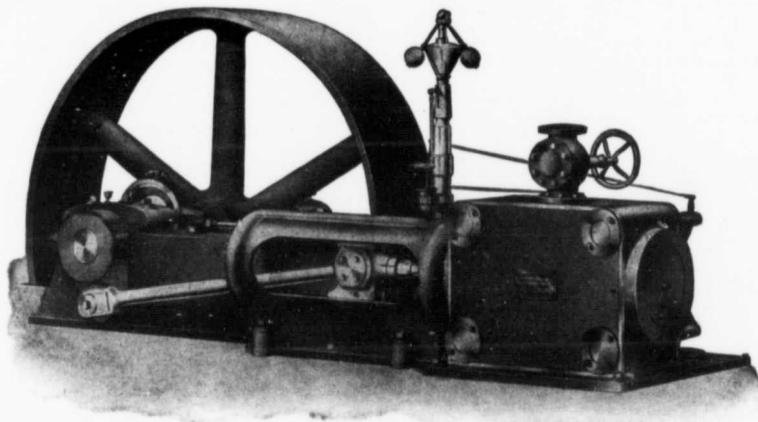


The box for retaining the concentrates is usually made at the mill; and this should be about six feet long, fourteen to sixteen inches deep and eighteen inches wide. Should it be desired to separate the first concentrates from the second, a partition should be placed in the centre. This box should be made of thick lumber, and very strong and tight.

The machine is 9 feet, by 11 feet 6 inches.

ALLIS-CHALMERS COMPANY'S NEW STANDARD REYNOLDS CORLISS ENGINE.

We illustrate herewith a new Corliss engine which is being brought out by the Allis-Chalmers Company from the designs of Mr. Irving H. Reynolds. The field of Corliss engine design has been so fully worked over in the past, and the accepted designs have become so simple, that no strikingly novel designs are to be expected. The present machine,



The Reynolds-Corliss Engine—New Standard.

however, represents the experience of twenty-six years in building of Corliss engines, and combines all of the desirable elements of the best designs.

Engines of the type illustrated are being built in seven sizes, ranging from 50 to 500 horsepower, and are designed for steam pressures up to 150 lbs. They are built of somewhat shorter strokes than have heretofore been customary in Corliss engines, with the idea of economizing in space and making the construction more rigid. The speeds are also somewhat higher than usual, ranging from 110 to 150 revolutions per minute, although these speeds are not higher than those at which the Reynolds-Corliss engines of older design are frequently operated.

The frame is cast in one piece with the slide, the construction being of the box type, resting on the foundation for its entire length. The main bearing shells are bored into the frame, thus insuring a solid bearing and also permitting the easy removal of the shells by rolling them out around the shaft.

The slide is of the barrel type with bored guides. The crosshead is fitted with babbit faced shoes with wedge adjustment. The piston rod is screwed into the crosshead and held firmly with a steel lock nut. The cylinder is of the round cornered type, is fitted with double ported steam and exhaust valves, lagged with planished steel. The cylinder is set on a cast iron base plate, which extends under the valve gear, serving as a drip pan.

The valve gear is of the usual Reynolds Corliss type, the wrist plate being of skeleton pattern and fitted with a new type of disconnecting device which, while clamping the hook rod firmly, is very easily detached by hand.

The dash pots are of differential plunger type without leathers or packing of any kind.

The regulator is of the high speed weighted type, designed to control the engine within narrow limits of speed variation.

The connecting rod is steel with solid forged ends, fitted with bronze boxes, babbit lined on the crank pin ends, the boxes being adjustable by means of screw actuated wedges.

The crank is of plain type, polished on the face and is protected by a planished steel oil guard (not shown in cut).

The engines are fitted either with belt fly-wheels, as shown, or with square rim wheels where used with direct-connected electric generators. The crank and crosshead pins and main journals are of a size ordinarily used with heavy duty engines.

In brief, the engine is strong, simple and compact, and while nothing has been added for ornamentation, nothing contributing to economy or durability has been omitted, and the machine should find a large sale among power users who appreciate quality.

TRADE NOTES.

The Trump Manufacturing Company, Springfield, Ohio, have issued a new descriptive catalogue of the "Celebrated Trump 'Model' Turbine." The catalogue is profusely illustrated and contains much useful information.

The Jeffrey Manufacturing Company, Columbus, Ohio, in Circular No. 77, describe the Jeffrey Grab Buckets which, it is asserted, are the most powerful buckets made. They will work in ore, mine-run coal, broken limestone, gravel and sand. They are absolutely self-filling, and will also excavate in clay, gravel and soft earth of any nature.

Queen & Co., of Philadelphia, Pa., established in 1853, send us an interesting account, published in pamphlet form, of their works where are manufactured all kinds of mathematical and engineering instruments, etc.

The Allis-Chalmers Co., Chicago, Ill., send us Catalogue No. 100, 5th edition, descriptive of several of their specialties in mining machinery, including the Overstrom concentrator, the Bradley Classifier mill and other appliances. The catalogue before us is printed in Spanish. Another pamphlet issued by this great manufacturing company giving a partial list of foreign users of Corliss and other engines built by Allis-Chalmers demonstrates the world-wide extent of the business done. Thus there is not a mining company on the face of the globe in which the Allis-Chalmers' machinery has not been introduced.

The firm of Charles Cammell & Co., Ltd., of Sheffield, is now known as "Cammell, Laird & Co., Ltd." This is in con-