In the final operation, the wipers are transported to the baling departments, where the bales are lined with heavy wrapping paper. Machine balers press approximately 500 pounds into a bale measuring 44x28 inches and 50 inches high. The outside of the bales are covered with good burlap, then securely bound with eight wire ties. This insures a delivery to transportation lines of a clean, pure, dry, aseptic, sanitary wiping rag. The wipers are shipped bone or paper dry. If kept in a dry storage, they will not mould, as the chemicals in the washing fluid are germ and moth destroyers.

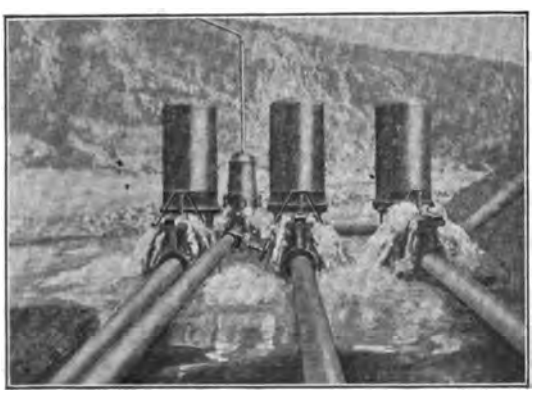
The point of economy in the use of rags was raised and subsequently tested by a Toledo machine tool manufacturer, who issued alternately waste and rags to his machinists. After several weeks he is said to have announced a saving of approximately 50 per cent in favor of the rags.

HYDRAULIC RAMS FOR ELEVATING WATER.

The hydraulic ram, as now built by the Rife Engine Co., with its automatic air feeding device, makes these machines available for town water works, railroad tanks and irrigation, as well as the smaller demands for country residences. With two or more feet of fall, water may be elevated 30 feet for each foot of fall used, so that water can be pumped to nearly every country residence and farm from a spring or stream at any distance. When overhead tanks and towers are objectionable, the rams will deliver into pneumatic tanks and automatically supply sufficient air to maintain an air cushion in both ram and pneumatic tank.

Hydraulic Ram on Penn. R. R.

Over forty railroads use these machines to supply their water tanks. As the rams require no fuel or attendants, they are superseding the steam plant with its attendant pump men, particularly at isolated points along the line. The accompanying illustration shows a plant installed for the Pennsylvania Railroad Co. The water used to operate the rams is conveyed through a 6-inch pipe line 1,400 feet to the intermediate reservoir, to which the drive pipes are connected, as shown. The fall is 12 feet, water used 120 gallons per minute, pumping head 39.4 feet, water delivered 28 gallons per minute, efficiency developed 77 per cent.



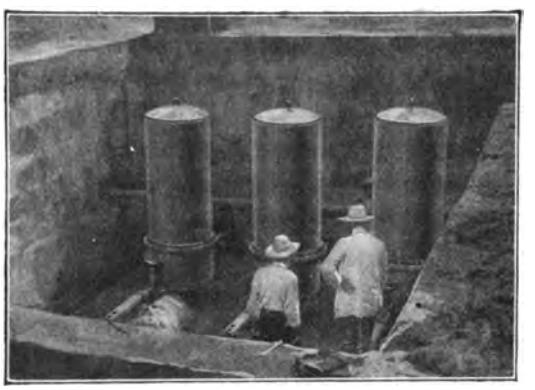
Battery of Rams Supplying Mexican Ry.

Another illustration shows a "battery" of rams installed for the Mexican Railway, all pumping through the same pipe line 10,000 feet long, supplying water to the railroad shops, water station and town of Apizaco, Mexico.

The next illustration shows three large rams, with a capacity of 700 gallons per minute each, pumping water a distance of 13,000 feet to an elevation of 262 feet, for the Colombian Government in Colombia, South America.

Many small towns and institutions find the cost of pumping water by steam or gasoline prohibitory, absorbing all the income. A case in point: A town which was paying $25 daily for fuel, pump men, repairs, etc., installed rams which pump 600,000 gallons daily at a cost of less than 50 cents daily for operation.

Land lying above ditches and streams is practically valueless without water. Rams pumping into an upper ditch or reservoir render such land of the highest value and make it possible to irrigate one to one hundred acres practically without cost for operation.



Columbian Government Plant.

The Rife Engine Co. also construct a ram that is operated by muddy or impure water as power to deliver water from a spring in which the necessary volume or fall cannot be secured to operate a single-acting ram. They guarantee an efficiency of from 60 to 90 per cent and will furnish drawings and estimates free upon receipt of the data of water supply, fall, elevation and requirements, sent to their office, 111 Broadway, New York City.

New Literature

The Peerless Rubber Mfg. Co., of New York, has issued a leaflet illustrative of gaskets, hose and "Rainbow" packing.

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The Simplex melting furnace for oil or gas fuel is the subject of bulletin 28 of the Rockwell Furnace Co., New York.

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Allis-Chalmers Co., of Milwaukee, has issued bulletins 1079 and 1624, the former being devoted to steam turbines and generators and the latter to centrifugal pumps. The Allis-Chalmers turbines are of the Parsons type and are made high-pressure condensing, high pressure non-condensing, and low pressure condensing. The centrifugal pumps are furnished within a wide range of sizes.

* * *

A very neat booklet has been published by the American Asphaltum & Rubber Co., of Chicago, giving the advantages of asphalt mastic floors over wood and concrete floors. It is well illustrated with half-tone reproductions of these floors in machine shops, brewery and packing rooms.

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