

AN OPEN POND FOR WINTER SAWING.

The problem of keeping an open pond for logs, in order to permit of winter sawing, is one which is receiving some attention in the United States. The Mississippi Valley Lumberman publishes a description of the system used by the Yawkey Lumber Co., of Hazlehurst, Wis., which we reproduce, believing that it may offer some suggestions to Canadian lumbermen:

The mill of the Yawkey Lumber Co. was built in 1889, and has been operated every winter since that time. As Mr. C. C. Yawkey, the manager of the company, is one of the most enterprising and progressive lumber manufacturers of the north, it goes without saying that anything that has proven satisfactory to him must be about right, and an experience covering the sawing season of ten winters ought to make his system of sufficient value to recommend its adoption elsewhere.

As Mr. Yawkey says, each saw mill presents its own problems, and where a certain method employed would be all right for one plant, it might not meet the conditions of another. He says the first thing necessary to keeping a pond open all winter is to have a tight board fence around the pond and plenty of hot water running into it. It is also desirable to have the pond as large as possible so that the logs will lay for some

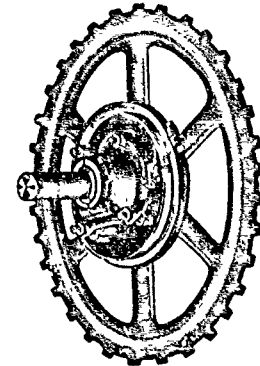
the exhaust steam entering the condenser, and with a sufficient supply of cold water they find that there is little or no back pressure.

The outlets from the condenser consist of two pipes. One of these is a large one entering the pond in front of the condenser, and the other a smaller one extending around the other side of pond, where it delivers water into the pond at two places.

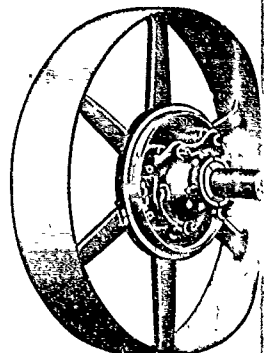
They also have a small pump which pumps water through their refuse burner, where it is heated and delivered into the pond in three different places along the shore. Inside the burner the outfit consists of eight iron cylinders, 14 inches in diameter and about 20 feet long, placed upright, and connected alternately top and bottom with three inch fittings. These cylinders are made from old drums, or flues, and hold considerable water which is heated as it passes through.

The suction for the pumps should be taken from the inside of the pond, so as to circulate the water. They have found out, however, that the water for the boilers should be taken from outside the pond, as the water in the pond becomes saturated with pitch and other impurities, and it is impossible to use it in the boilers after it has been in use a few weeks. The ends of the pipes through which the hot water is delivered to the pond are horizontal and on a level with the water

leading difficulty experienced in the use of clutches have loose, trappy parts and lever connections. An ordinary laborer, it is said, can easily erect and adjust the Dodge clutch. The extended sleeve is arranged so as to allow for its removal for repairs without disturbing the clutch or any of the line shaft equipments. In erecting making subsequent repairs, it is contended that a clutch may be handled at less than one-quarter the



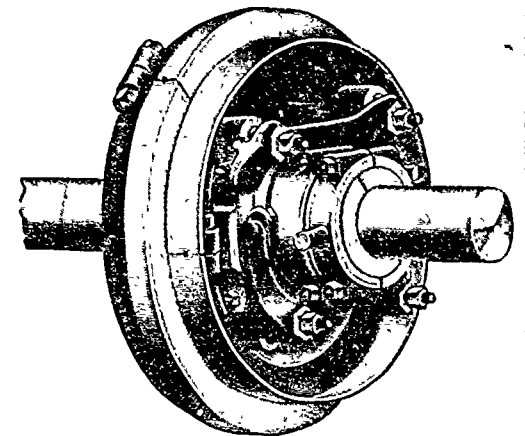
FRICTION SPROCKET.



FRICTION PULLEY.

pense of a solid clutch. In many cases the expense incurred is more than the first cost of the clutch.

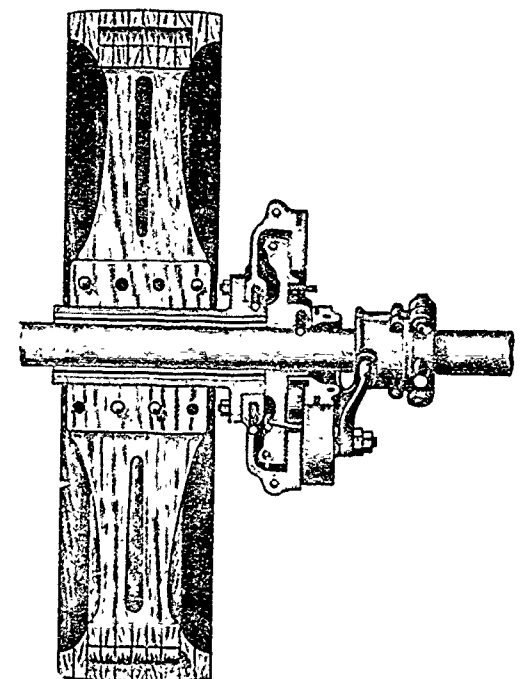
The frictional contact consists of two flat surfaces brought in contact by powerful levers with a heavy wood-filled disc which presents two "end grain" surfaces for compressional contact. The large area for friction gives positive results without straining or over-wearing any of the parts, and wear in the friction rings is easily taken



CLUTCH COUPLING.

by adjusting bolts. The toggle levers are not affected by centrifugal force, and the clutch will run successfully at any speed.

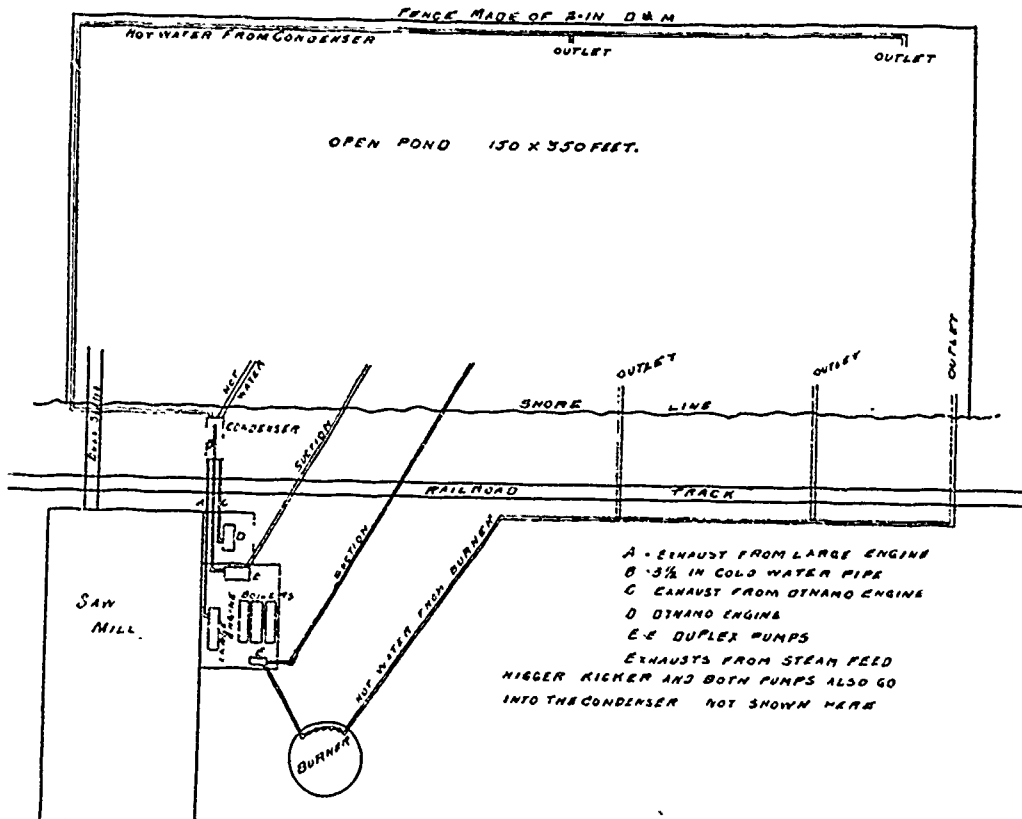
The clutch coupling is of great advantage in cutting out portions of the shafting, and departments when not in use, or where it may be desired to shut down quickly. The Dodge Manufacturing Company of Toronto are



SHOWING SPLIT CLUTCH IN SECTIONAL VIEW.

manufacturing friction clutch pulleys and clutch couplings for all purposes, and, we understand, are meeting much success. The Dodge clutch is in successful operation in some of our largest electrical plants, handling as high as 600 h.p., also small clutches handling as little as one and two horse power are turned out.

The Dodge Company issue a handsome 270 page catalogue covering their full line of power transmission machinery, and mail same free on application.



time before passing into the mill, for in this way the frost is taken out of them more thoroughly.

The fence surrounding the pond at the Yawkey mill is built of 2 x 6 and 2 x 8 D. & M., which are driven into the bottom so as to make the fence perfectly tight. They have two methods of getting hot water, one by a condenser in which they condense the exhaust steam with cold water, and the other by passing cold water through their refuse burner, and thus heating it.

The condenser is made of an old two flue boiler, the tubes having been taken out and patches put on to make it tight. This condenser is placed on the bank of the lake, near the pond, and is set low enough so that the pipes connecting it can be brought through the ground under the railroad track. They have pipes carrying the exhaust steam from all the steam appliances into the end of this condenser. The exhaust pipes from both engines, steam feed, nigger, kicker and both pumps, all extend into the condenser, the idea being to utilize all of the exhaust steam about the mill. They have a large pump with a 3 1/2 inch water pipe extending to the condenser, passing through the head nearly through to the end. Inside the condenser this pipe is perforated so that the water passing from it is delivered into the condenser in a spray. The water is heated by

so as to shoot the hot water over the surface of the pond. The pipes are all placed underground with the exception of the one that delivers hot water to the opposite side of the pond. This is fastened to the fence after it leaves the bank.

With this system the Yawkey company is able to keep its pond open at no running expense. The cost all came when the system was put in. The exhaust steam and the waste heat from the burner do all the work. They have been able to keep the pond open in the coldest weather, even at forty or fifty degrees below zero, the water being warm even when the weather is coldest.

THE DODGE SPLIT FRICTION CLUTCH.

The Dodge patent split friction clutch pulley and split clutch cut-off coupling is one of the most recent improvements in friction clutch pulleys. This clutch is admirably adapted for use with split pulleys which have become so popular during recent years. The Dodge clutch is particularly a compact and simple clutch in construction, with no trappy parts to get out of order. All parts are easily accessible, and not much space on shaft is required. The fact of the clutch being split, the manufacturers claim, makes it a ready seller, because the cost of a clutch or any shafting appliance does not cease until it is erected and ready to run. It is claimed that it will save many times its cost to the purchaser owing to its being split or in halves.

Each lever has two points of compression. This reduces the number of joints to a minimum and obviates the