

THE WATEROUS GRIP PULLEY.

The accompanying illustration is of the Waterous Grip Pulley, a most useful adjunct to an electric light station. Among the many attachments used for this purpose, this appears to be exceedingly simple in its construction and operation, and possesses a number of points of excellence not usually found in pulleys of this class. A point of special value to electricians is the fact that this grip is always motionless when out of clutch. In other words, when the pulley is thrown out of clutch, the entire grip mechanism comes to a standstill, when it can be easily and quickly adjusted, and again started without interfering in any way with the shaft upon which it is. This is of particular advantage in an electric plant where there may be a large number of dynamo-driving pulleys. In other grip pulleys, should one of them require attention, the shaft, and, of course, all the machinery depending upon it, would come to a standstill. In contrast with this, with the Waterous Grip the pulley at fault would alone be stopped and adjusted. A prominent practical electrician, and manager of one of the largest electric plants in Canada, states that in his opinion this feature makes this grip worth one hundred per cent. more than those which do not possess this feature.

Another point of value to electricians whose pulleys and couplings have to transmit very heavy power for their diameter, is that in this pulley the friction, or driving ring, can be made almost as large as the pulley, increasing very materially the power and leverage of the grips; and also that in large pulleys the number of grips can be increased to eight or ten should it be required. Again, its patent sectional split hub enables the quick and easy replacing of a new hub when necessary without removing the pulley from the shaft. Two of these pulleys can be arranged on one driver, thus economizing space. In illustration of this the Waterous Company are now building for the Hamilton Electric Light Company twelve pulleys 58x14 inches, to be worked in six pairs on six double drivers; and thirteen pulleys and couplings for the Kingston Light & Power Company, several of which are to be worked in pairs.

We are in receipt of a letter from Mr. James Boughner, a mechanical engineer of keen observation and much experience, in which he states that recently in the station of the Royal Electric Company, Montreal, a power shaft three and a half inches in diameter was completely twisted apart by the action of a Waterous grip pulley in use upon it. There was no flaw or defect in the shaft, but the incident illustrates the powerful leverage exerted by the pulley.

The manufacturers of this pulley have recently issued a neat little primer in which it is fully described, and giving opinions of users of it in all classes of work. It will be sent on application to the Waterous Engine Works Company, Brantford, Ont.

Tariff tinkering is not responsible for the decline during the past year of two cents per pound in the price of domestic and one cent of Australian wools. The supply has been larger, as our market report indicates, but beyond this, one reason exists which alone sufficiently accounts for the decline.

We refer to the displacement of wool by shoddy. This evil is assuming enormous proportions. Not only does every pound of shoddy manufactured into cloth displace more than one pound of honest wool, but consumers are outrageously swindled by paying all-wool prices for shoddy cloths and garments. Moreover, while the sheepgrower is thus robbed of from one to three cents on every pound of wool he produces, the entire woollen manufacturing industry is depressed. Millions of capital invested in it yield scant returns and thousands upon thousands of workers in woollen mills are put on reduced pay or scant time, thus injuring all other business in their locality. Who profits by this depression, common alike to farm and factory? Only a limited number of manufacturers of the shoddy fraud. Because of the unequal, unfair and dishonest competition from such bogus wool products, the injury is becoming more serious than was the competition of oleo with honest butter. Why? Because it hurts not the farmer alone, but the woollen manufacturer and mill operative. If shoddy could be driven out of existence, the wool market would improve

sheep husbandry develop, wool production and manufacture increase, and cloth "all wool and a yard wide" could in a few years be sold as cheap as inferior shoddy now is. Imitation, substitution, counterfeiting and similar evils are at the bottom of much of the troubles in the business world that are reacting so seriously on the farmers.—Springfield, Mass., *Farm and Home*.

EXPERIMENTS have recently been made in Great Britain, in which the heat giving power of block petroleum was tested in a torpedo boat. The use of liquid petroleum has the objection of an excessive cost in the construction of special boilers and storage tanks, and experiments were restricted to solidified preparations. It was demonstrated beyond a doubt that the petroleum in blocks was much more powerful as a heat-giving agent than coal, and the speed attained with its use was three knots more in a given time than is possible with ordinary fuel.

