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IMPROVED WATER WHEEL.

THE accompanying illustrations show a water wheel of improved pattern which is being manufactured by Mr. Robert Graham, of Ottawa. The manufacturer lays great stress on the fact that this wheel is one solid casting, and that the buckets are so shaped that 84 per cent. of power can and is guaranteed, being, it is claimed, the highest efficiency yet reached. The wheel being solid, the annoyance and expense of buckets getting loose and falling out is avoided. The gate is as easily worked as a steam valve; one-half turn of hand wheel turns the water full on or off, so that any ordinary governor will secure a perfectly steady power, no matter how fluctuating the machinery driven may be.

The manufacturer claims for this wheel superiority in the following points:

(1) The ease with which the gate of largest size wheel can be closed under any head of water, as the pressure of water does not in the least affect the working of the gate.

(2) The mode of applying and shutting off the water is so scientific that one half turn of the hand wheel does the whole work, making it just as easy to start, stop and govern as any steam engine.

(3) The construction is such as to almost entirely overcome delay and breakage of machinery by sticks getting into the wheel.

(4) The absence of complicated attachments. Five pieces include the whole of wheel case, either with cylinder or register gate.

The wheel and case, as well as the mode of producing the same, are covered by patents.

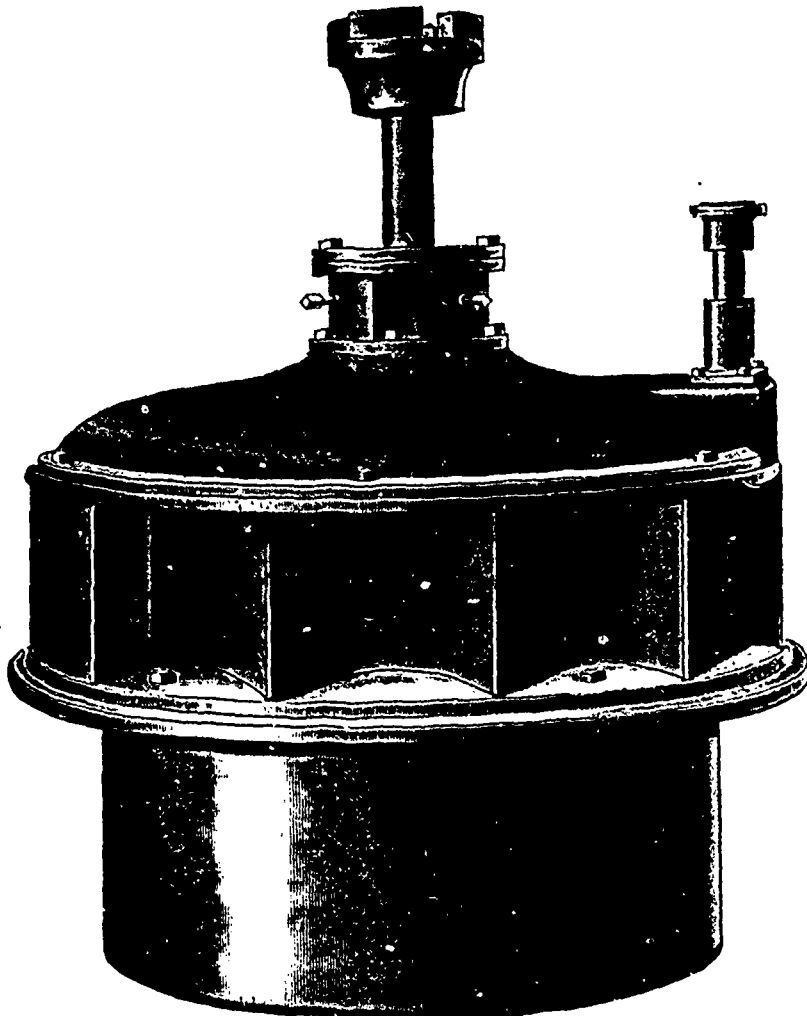
Further information may be obtained by addressing the manufacturer.

ELECTRIC LINES AND RAILROADS.

THOSE who keep track of the companies formed, or projected, as they appear in the official gazettes, says the Financial Chronicle, of Montreal, must have been struck by the number of enterprises organized, or proposed, for providing the towns westward of this city, with communication by an electric car service. If

this continues much longer, we shall be able to reach the western boundary of Ontario without travelling by either of the existing railways, as we could go on from one point to another by the local electric cars. Although this class of service has advantages, and pleasures, we are inclined to think it is in danger of being overdone. It will entail drawbacks, which may develop into more serious proportions than the promoters of these lines seem to foresee. They are reckoning upon the diversion of the great bulk of the passenger traffic between the two towns they

are severally proposing to connect by an electric service, away from the railway which is now available. Were this done, the railway so injured would certainly make reprisals, they would cut off a number of trains from stopping at such points and reduce freight handling facilities where local competition for passengers had reduced their earnings; almost certainly also, they would enhance freight rates to and from such points. Considering how all the towns from here to the Detroit River have been built up or developed by railway connections, and how necessary they are for business facilities, it seems somewhat ungrateful, as it must be also unwise, to antagonize the railway which has done such invaluable service to the country. One such enterprise that was devised to cut off local traffic from a railway has collapsed, and the people who encourage it, have been made to



IMPROVED WATER WHEEL, IN CASE, MANUFACTURED BY ROBT. GRAHAM, OTTAWA.

pay for their war on the railway, by increased fares and shortened accommodation. We do not think the municipal authorities who assist such new lines are well advised, unless the points proposed to be connected are not served by a railway. The mere running to and fro of the people of two towns is of very trifling benefit; it is a pleasant luxury, not a business necessity or a help to trade. Investors who are tempted to put money into these companies, would do well to think twice before risking it in an enterprise that may prove to have been based more on fancy than certainty. One thing is dead certain, in the case of two towns of unequal size being so jointed, the weaker one will go to the wall, as "shopping" is sure to be drawn to the larger place.