

the other hand, the depreciation of a modern steam plant, because of the excellence to which steam engineering has attained, is comparatively light, probably not exceeding ten per cent., whereas even in the best known types of electric generators and motors they are constantly being improved, and the present rate of depreciation cannot be considered as much less than twenty per cent. Then the question of utilization of steam power for other purposes in most manufacturing plants is an important consideration, the steam boiler being in most instances a necessity, even if electric power were utilized, for such purposes as heating, drying and other industrial uses.

Quite a large number of manufacturers also use refuse as a part of their fuel, which reduces the cost of steam production. As an illustration, one of our largest manufacturing concerns, which uses about 1,000 h.p. from steam boilers, produces it at a cost of about \$4 per h.p. per annum, most of the fuel being waste material, shavings, sawdust and blocks.

Then again in business enterprises, where the possibility of a cessation of power would be a serious loss, they cannot afford to take the chance of an occasional stoppage by a breakdown on a long transmission line, which, under present conditions, is not an altogether remote possibility.

Add to all this the fact that in manufacturing plants of any considerable size the percentage of the cost of power is such a small percentage of the cost of the output and the annual expense, and we believe the majority of our leading factories would not readily change to the electric power, even under quite favorable circumstances as to price.

(d) Gas and Gasoline Power.—Gas engines were used to a considerable extent for small powers in Toronto prior to the introduction of the electric motor. It is estimated by one engineer that the gas engine does not now figure as prominently in the city as it might do, especially since the engines of this type for both gas and gasoline have been so largely improved. Neither the gas nor gasoline engine can, of course, displace any of the present electric motor power, but they might be used to advantage, with economical results, in the place of many of the small steam plants now installed generating from, say, 25 to 75 h.p. The heat units of the gas supplied by the Consumers Gas Co. are said to be 650, and from this it is computed that from seventeen to twenty feet of gas would supply a h.p. for one hour, with the latest improved engine. Putting it at twenty feet per hour—the present price of gas being ninety cents—would mean \$54 per h.p. per annum of 300 ten-hour days.

With the latest type of gasoline engine, if, as guaranteed, a wine gallon will give a h.p. for ten hours, at the present price of gasoline (fourteen cents per wine gallon, or 17½ cents per imperial gallon) the price would be about 12.5 cents per h.p. per hour. The gas or gasoline engine could not, of course, compete against electric current at Hamilton or Niagara prices.

(e) Compressed Air.—So far this new power has not come into any considerable use in Toronto. There are, however, several large isolated plants utilizing this wonderful force to a considerable extent. In one of our chief factories an air-compressor plant was recently installed, involving an outlay of nearly \$10,000 for the purpose of delivering through the works both low and high pressure air for atomizing fuel oil in oil furnaces, and also for air lifts, pneumatic machines and air tools of various kinds. It would seem that the air motor, if proved a success elsewhere, would, in course of time, get into use here also, which would, no doubt, result in a public service of compressed air being provided in our city.

3. POWER FACILITY AS A FACTOR IN ATTRACTING NEW INDUSTRIES.

The name of "cheap electric power," accompanied, as it generally is, with so many false suppositions regarding its cheap, inevitable, and universal application to industrial

PITT & SCOTT

ESTABLISHED 1876.

Foreign Freight Brokers and Express Carriers TO ALL PARTS OF THE WORLD.

THROUGH BILLS OF LADING ISSUED AND RATES QUOTED TO ALL PARTS OF EUROPE, ASIA AND OCEANIA.

SENDERS INVOICES COLLECTED AGAINST DELIVERY OF GOODS ANYWHERE ABROAD.

PITT & SCOTT, - - 39 Broadway, NEW YORK.—121 Water Street, BOSTON.

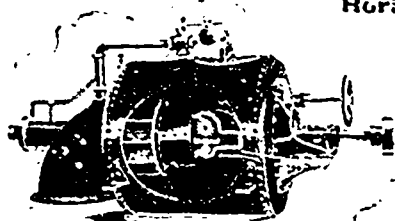
ALSO AT..... LONDON, LIVERPOOL; PARIS, HAMBURG.

AND AGENCIES EVERYWHERE ABROAD.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

THE CROCKER Patent Turbine

Horizontal Setting, with Quarter Turn Elbow.



Where the nature of the location will permit its use this type has many advantages. It is very suitable for direct connection to dynamos, and many are in operation in this class of service.

Notice how complete and compact this arrangement is, and how easily it may be installed. Can you use anything of this kind? Your inquiries will receive prompt attention.

WATER POWERS examined and
Reports made Estimates
submitted for Complete Equip-
ments. - - -

The JENCKES MACHINE CO.,
42 Lansdowne St., Sherbrooke, Que.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.