

THE "ECONOMETER."

THE following is a description of an instrument, called the Econometer, designed to indicate permanently the conditions of combustion in boiler and other furnaces. The apparatus is designed to prevent a loss of heat resulting from an excessive amount of superfluous air passed through the furnace, and which has to be heated to the high temperature of the exit gases. If just as much air could be conveyed to the fuel as it needs for perfect combustion, the combustion gases would contain about 21 per cent. of CO_2 , as atmospheric air contains 21 per cent of oxygen. Carbonic acid being formed by the combustion of the carbon with the oxygen of the air, it follows that the percentage of CO_2 in the gases is larger the less superfluous air is admitted to the furnace. As this instrument shows continuously the amount of CO_2 in the gases, it is a permanent indicator to the stoker to regulate its firing according to its indications.

The Econometer consists of a finely adjusted balance

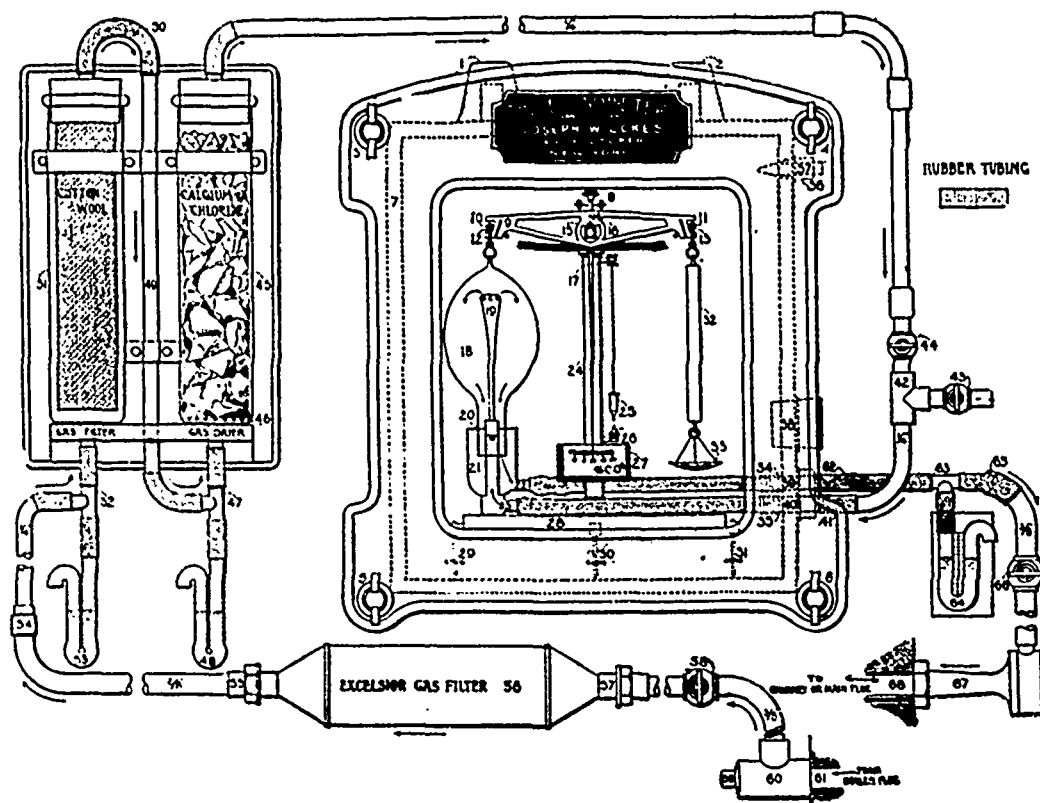
plus of air would be shown by lower readings. Thus the stoker is enabled by proper attention and regulation of the damper to get the best possible results from the fuel.

The Econometer is being introduced in the United States and Canada by Mr. Joseph Wilckes, of 100-108 Fulton street, New York. It is largely in use in most European countries, and several have also been installed in the United States.

Messrs H. McLaren & Co., 706 Craig street, Montreal, are the agents for Quebec and the eastern part of Ontario. They will be glad to give any further information.

DEVELOPING AN IMMENSE WATER POWER.

THE West Kootenay Power and Light Company, Limited, which was recently organized for the purpose of developing the magnificent water power available at the Falls of the Kootenay, in British Columbia, ten miles from Nelson, has just closed a contract for the hydraulic



enclosed in an iron case. The gases are taken from the boiler, led through two filters to retain the dust, and then passed through the drier to retain the moisture. The gases, perfectly clean and dry, enter the weighing globe 18. The CO_2 being 50 per cent. heavier than atmospheric air, fills, mixed with the gases, the inside of this globe. The heavier its contents, the more it is lowered and the more the balance indicates. The gases enter by inlet pipe 23 and 19, and are drawn out by 22 to the chimney. The chimney suction increased by an aspirator 67 draws the gases continuously from the boiler. The Econometer is fitted in plain view of the stoker on a cool wall or board in order to cool the gases down to atmospheric temperature. The inside of the Econometer case is constantly supplied with sufficient air through air inlet 56 to be able to weigh CO_2 in air. This is also drawn off to the chimney through cup 21.

In practice proper firing means from 12 to 15 per cent. of carbonic acid in the combustion gases. A sur-

and electrical machinery, to develop 2,000 horse power immediately, the ultimate scope of the undertaking being the utilization of the full power of the river at this point, estimated at from 8,000 to 10,000 horse power. At the head of the company is Sir Charles Ross, Bart., who is largely interested in mining properties, and with him are associated Messrs. C. R. Hosmer, Frank Paul, and other influential and well known capitalists.

The services of Mr. Robert Jamieson, formerly engineer in charge of the Lillooet, Fraser River & Caribou Gold Fields Co., Limited, have been secured to supervise the entire undertaking, and his wide experience in mining engineering work of all kinds will insure the most efficient working out of all the detail appliances necessary to apply the electric power in the most satisfactory manner for mining work.

Some interesting details as to the electrical features of the scheme have been made known. The apparatus, which will be furnished by the Canadian General Elec-