Dobson & Brodie's, PERFECTION SMOKE CONSUMER AND FUEL ECONOMIZER.—The advantage of an apparatus which will really act as a Smoke Consumer are so throughly patent to all users of steam power that it is not surprising that many efforts have been made to supply the want, but up to this time no Smoke Consumer has been produced which will effect its purpose without interfering with the draft of the furnace, or increasing the expenditure for fuel.

Besides this, most of the Smoke Consumers which have been offered to the public require a special construction of furnace, thus involving in making the necessary alterations, heavy expense and loss of time.

The proprietors of "The Perfection Smoke Consumer and Fuel Economizer," in presenting it to the public, confidently state that the defects of previous smoke consuming devices are obivated.

The principal of its construction is that a certain regulated proportion of the air admitted into the ash-pit is taken in a heated condition into an air chamber placed immediately in rear of the bridge, and thence passes out in finely divided streams to mingle with the gases holding in suspension the particles of carbon arising form the fuel, at the point at which they are most highly heated, igniting them and consuming the carbon which would otherwise be carried away into the atmosphere.

The draft in the fire-chamber proper will be increased by the more perfect combustion in rear of the bridge, and inferior fuel or even waste products can be used to fire with.

Our Smoke Consumer is in first cost and in comparison with others inexpensive and requires *no alteration in the construction of any existing furnace.* It can be placed in position ready for operation within a very few hours, say between 11 p.m. and 4 a.m., or at the end of the week's work, so that absolutely no time need be lost by its introduction.

The Canadian Pacific Railway Company were the first steam users to adopt it and after a year's use the parts are found to be perfect, and a saving of about 12 per cent. steadily maintained, The Canadian Rubber Company, The Montreal Warehousing Company, and the City's Water Works all have it attached to Lancashire boilers, to which it is specially adapted. In his report to the Water Committee the Chief Engineer states that never in the history of the Water-works has the consumption of coal been so low as since the use of this appliance. The saving being estimated at about one ton per day. To effect ordinary combustion of bad provincial coal, the fires have to be frequently stirred up and the firing is of the roughest and heavist manner. The apparatus has therefore, been subjected to the severest test during these eight months at those works, and is pronounced by experts to be the best appliance for this purpose that science has produced. The precaution of smoke in flued boilers is by no means its least recommendation. The universal and ever deepening feeling against the pollution of the atmosphere with black smoke is one which with every right thinking mind must sympathise. Indeed it is difficult to see why any manufacturer should trangress in this matter when by adopting suitable appliances he may not only cease to annoy his neighbors, but also greatly benefit himself, for any economy in fuel materially lessens the cost of production.