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A DESCRIPTION OF A FUEL-SAVING DEVICE FOR DOMESTIC HEATING:

The "Stand-In" Fire*

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The Need For More Efficient Domestic Heating Appliances

To judge from the prominence it receives as a topic of conversation, one of the most keenly felt shortages at the present time is that of domestic fuel. It is clear from the efforts made by householders to supplement their rationed fuels by wood, lignite and peat that one of the most pressing needs is to increase the efficiency of the appliances used for room heating. Although much progress has been made in the development of new solid-fuel fires and one sees demonstrations of the newer designs in exhibitions and sometimes in merchants' showrooms, the vast majority of domestic consumers must continue to suffer from the shortage of fuel unless some comparatively simple and inexpensive device can be supplied which will produce more heat from the small amount of fuel obtainable.

The ordinary type of stool-bottom open fire, fitted in about 12 million living rooms in this country, is generally quite incapable of giving adequate heating in severe weather, even if a little more coal were available. With the amount of coal at present supplied, however, the standard of heating is extremely low, and any device which can be introduced without delay to save coal and produce better heating is therefore of the greatest importance.

Not only has the ordinary open fire a low efficiency (seldom exceeding 25 per cent, even under ideal conditions), but it creates excessive room ventilation causing cold draughts which reduce its efficiency still further.

The first defect can be overcome by making use of convection or warm-air heating in addition to radiation (as in many of the newly designed convector open fires and stoves); and the second by restricting the flue throat of the appliance to reduce the amount of excess ventilation produced in the room (as is done in most types of heating stove).

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* Patent applied for.