To all whom it may concern:

Be it known that I, JOHN TIBBETTS TURNBULL, of the city of Edmonton, in the Province of Alberta, Canada, have invented certain new and useful Improvements in Self-Feeding Devices for Furnaces, of which the following is the specification.

My invention relates to improvements in self feeding devices for furnaces and the object of the invention is to devise means, which may be easily attached to or immediately detached from a furnace door frame whenever required and which will serve to hold and feed a supply of coal into the furnace to take the place of the coal consumed and it consists essentially of the following arrangement and construction of parts as hereinafter more particularly explained.

Figure 1, is a general perspective view of my device applied to a furnace door frame.

Fig. 2, is a sectional view through Fig. 1 and also showing the means for lifting the fuel container when removed from the furnace.

In the drawings like letters of reference indicate corresponding parts in each figure.

1 indicates the wall of a furnace, and 2 the door frame provided with a flange 3. 4 indicates a rectangular plate, which is preferably provided with a surrounding outwardly extending flange 4*. 5 indicates a fuel container or hopper provided with a receiving orifice 6 at its upper end and an inclined spout 7 extending from its lower end, such spout extending through the plate 4 and being formed integral therewith.

8 and 9 indicate braces connecting the upper portion of the hopper 5 to the lower portion of the plate 4. 10 indicates a flange extending inwardly from the inner face of the plate 4, such flange being adapted to rest upon the lower portion of the surrounding flange 3 of the furnace door frame so as to support the weight of the hopper 5 thereon. 11 indicate upper plates secured to the furnace door frame and 12 indicate lower plates also secured to the furnace door frame.

13 indicate hook members hingedly secured to the upper plates 11, the hook portions depending downwardly so as to extend around the upper edge of the surrounding flange 4* when the hopper 8 is in position. 14 indicate hook members hingedly connect-

ed to the plates 12, the hook portions of which extend upwardly so as to engage the outer edge of the lower portion of the surrounding flange 4*. The hook portions of the hook members 14 are preferably provided with perforations 15 through which securing pins 16 are passed, such pins extending over the flange 4* so as to obviate any danger of the hooks disengaging therefrom. 17 indicates a peep orifice formed in the plate 4, such orifice being provided with a suitable withdrawable cap 18. 19 indicates a hinged cover for the hopper.

When it is desired to remove the hopper from the furnace all that it is necessary to do is to withdraw the pin 16, throw the hook members 14 downward and the hook members 15 upward and then lift the receptacle from its position in front of the door frame.

If it is necessary to support the hopper during this operation a bail member 20 may be provided having hooked lower ends 21 engaging laterally projecting pins 22 extending from each side of the hopper 5.

23 indicates a beam forming part of the structure of the building from which depends a pulley block 24. 25 indicates a cord extending over such pulley block provided with a hook 26 on which the bail 20 is hung. It will thus be seen that when the hook members 14 and 13 are disengaged from the flange 4* as above described the hopper may be drawn upwardly by means of the cord 25 out of engagement with the furnace door and supported in such position until it is desirable to return it.

What I claim as my invention is:

In a self feeder for furnaces, a covering plate adapted to fit over the opening of the furnace door frame having an out-turned flange therearound and an inturned flange adapted to bear upon the lower wall of the door frame opening, upper and lower bracket shaped hinge members adapted to engage the out-turned flanges of the plate to hold it in position, a removable pin for securing the lower hinge members to the out-turned flange, a hopper having an inclined spout carried by the plate, and braces between the hopper and the plate.

JOHN TIBBETTS TURNBULL.

Witnesses:

HERBERT C. BOYD,
JAMES ARMSTRONG.