(No Model.)

J. H. SCHOLDING.

FURNACE OR STOVE.

No. 493,947. Patented Mar. 21, 1893.

Fig. 1.

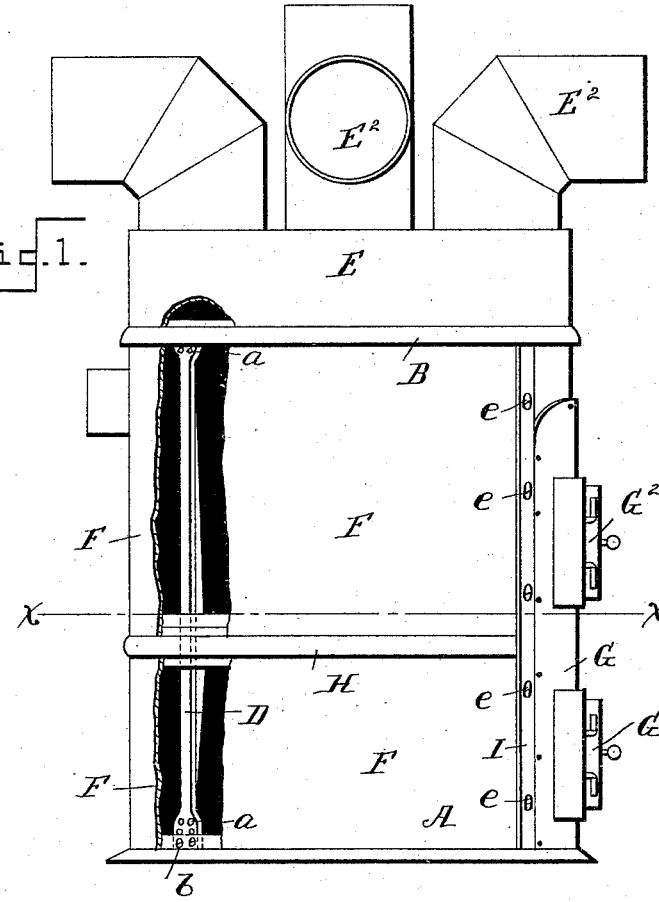


Fig. 3.

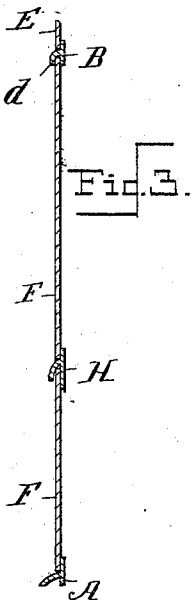


Fig. 4.

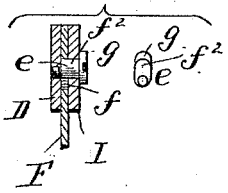
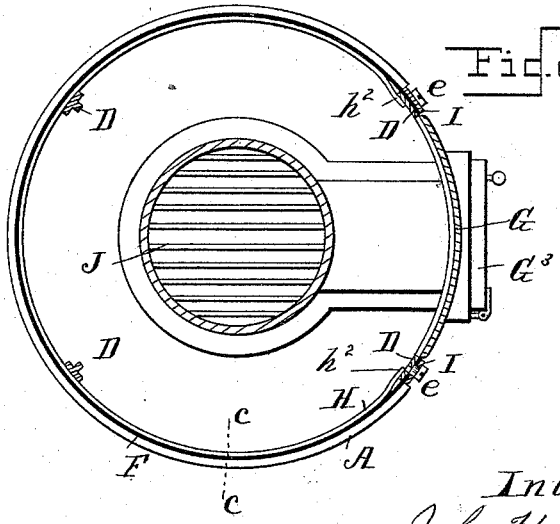


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. SCHOLDING, OF YONKERS, NEW YORK.

FURNACE OR STOVE.

SPECIFICATION forming part of Letters Patent No. 493,947, dated March 21, 1893.

Application filed June 24, 1891. Renewed August 22, 1892. Serial No. 443,800. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SCHOLDING, a citizen of the United States, and a resident of Yonkers, Westchester county, New York, have invented certain new and useful Improvements in Furnaces or Stoves, of which the following is a specification.

My invention relates to furnaces and the like and more particularly to that class having external sheet metal casings, and it has for its object to permit ready access to the interior of the furnace.

The invention consists in the novel details of improvement and the combination of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part hereof wherein Figure 1. is a partly broken side elevation of a furnace embodying my invention. Fig. 2. is a horizontal section on the plane of the line *x x* in Fig. 1. Fig. 3 is a vertical sectional detail on the plane of the line *c c* Fig. 2, and Fig. 4 is a sectional detail view hereinafter more fully explained.

In portable furnaces heretofore made, as known to me, the external casings have been bolted or riveted to the frame of the furnace thereby tightly inclosing the fire pot, &c., whereby access to the latter for repairs, &c., is hindered or prevented. According to my invention I make the external casing detachable and removable and one means of accomplishing this is as follows:

A is the base and B is the upper part or ring of the main frame, which are connected by posts D. whereby a skeleton frame is produced. The base A and upper part or ring B. are or may be adjustably connected with the posts D, so that the height of the ring B. can be regulated and for this purpose, I have shown the posts D. provided with a number of apertures *a* at different heights at either or both ends thereof to receive screws, bolts or the like *b* that pass through the base A and ring B. whereby said parts are adjustably held together.

E. is the cap or hood at the top of the furnace, which rests on the ring B. and from which the hot air pipes E^2. extend.

F. is the external casing usually made of sheet metal and shown in Fig. 2 in the shape of a nearly complete ring surrounding the frame A. B. D.

The casing F in Fig. 3. is shown resting on the base A. and at its top entering a groove *d* on the under side of the ring B. whereby tight joints are produced. The casing F is shown outside of the posts D. and adjustably connected to said posts preferably to the two front posts as in Fig. 2. To said posts the front part G. of the furnace is or may be connected which latter is shown provided with coal and ash doors G^2 G^3.

The casing F. in Figs. 1 and 3 is shown as made in two parts or sections between which a grooved ring-like-bar H. is placed the free ends h^2 of which latter are shown behind the forward posts D. while the other posts D. are behind said ring H. whereby outward movement of the ring-bar H. at its ends is prevented.

The external casing F is detachably connected with the posts at the front of the furnace and for this purpose I have provided the latter with swivel studs *e* that pass through apertures *f* in the ends of the casing F. See Figs. 2 and 4. The swivel studs *e* preferably have oblong or eccentric heads *g* so that when they are passed through the apertures *f* and turned partially around the casing F will be prevented from slipping off the studs. The studs *e* at the parts that remain in the apertures *f*. are preferably made eccentric as at f^2 so that as they are turned they will draw the casing F tightly around the frame A. B. D.

I are furnishing strips of metal that are placed over the ends of the casing F. and are held in place by the studs *e* which pass through them, see Fig. 2, by which means a finished appearance is given to the casing and a tight joint is made between the ends of the casing F. and its posts D.

J. is a fire pot or beater within the frame as usual.

When it is desired to inspect or repair the fire-pot J. according to my invention, the studs *e*, are first turned a suitable distance, the strips I are then removed and the ends of the casing F. disconnected from the studs *e*, whereupon it can be removed from the frame and the fire pot is thus exposed. This can be done in a very short space of time, and after the repairs have been made the casing can be

quickly returned to its position and secured. By this means a great deal of time, trouble and expense can be saved in repairing furnaces &c. over the practice heretofore followed in this class of furnaces where it was necessary to cut away the casing which often damaged it. But with my improvements the casing can be returned to place in as good condition as before its removal. If the casing F is made in two or more parts they and the ring H. can be removed with very little trouble.

Another advantage of my improvement is that the cap or hood need not be disconnected from its pipes E^2 (which is necessary in the old style of furnaces in order to reach the fire pot) as the ring B. can remain in position supported by posts D, when the casing F is removed, and thus another saving in adjustment of parts is effected.

My improvements can also be applied to furnace pots &c. already in use and in position and in this case the posts D. would be connected to the top and bottom of the old furnace by tapping holes in the same to correspond with the apertures *a* and then connecting said posts thereto. The adjustable casing F would then be put in position as heretofore described.

My improvements will be found of great convenience as by their use the furnace can be so readily cleaned between the casing and fire pot, which in the furnaces heretofore constructed is a difficult task.

Of course the details of construction can be varied from that shown and the studs *e*, can be replaced by any other suitable means for detachably connecting the ends of the casing F. with the frame.

Of course my invention is applicable to furnaces, stoves and the like, whether for hot air, steam or hot water.

In manufacturing furnaces embodying my invention the front portion G. can be provided with the studs or fasteners to hold the casing F and thereby the posts D, at the front of the furnace can be dispensed with, the casing being connected to the part G. direct.

Having now described my invention, what I claim is—

1. A frame for a furnace or the like combined with a casing detachably connected with said frame and eccentric swiveled studs carried by said frame for holding said casing and for drawing the latter tight substantially as described.

2. The combination of the frame, a detachable casing carried thereby, fastenings carried by said frame for holding the casing, and covering strips I at the ends of said casing, substantially as described.

3. The base A. and upper part or ring B. combined with posts adjustably connected to said base and ring together forming a frame and with a casing detachably connected with said frame, substantially as described.

4. The combination of a frame, swiveled eccentric studs carried thereby and having oblong heads, with a casing having apertures to receive said studs, whereby said casing will be held in position and also drawn tight, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of June, 1891.

JOHN H. SCHOLDING.

Witnesses:
FREDERICK W. SCHOLDING,
T. F. BOURNE.