Oct. 20, 1925. 1,558,400

L. F. SARGENT

FURNACE CASING

Filed June 9, 1925 2 Sheets-Sheet 1

Fig. 1

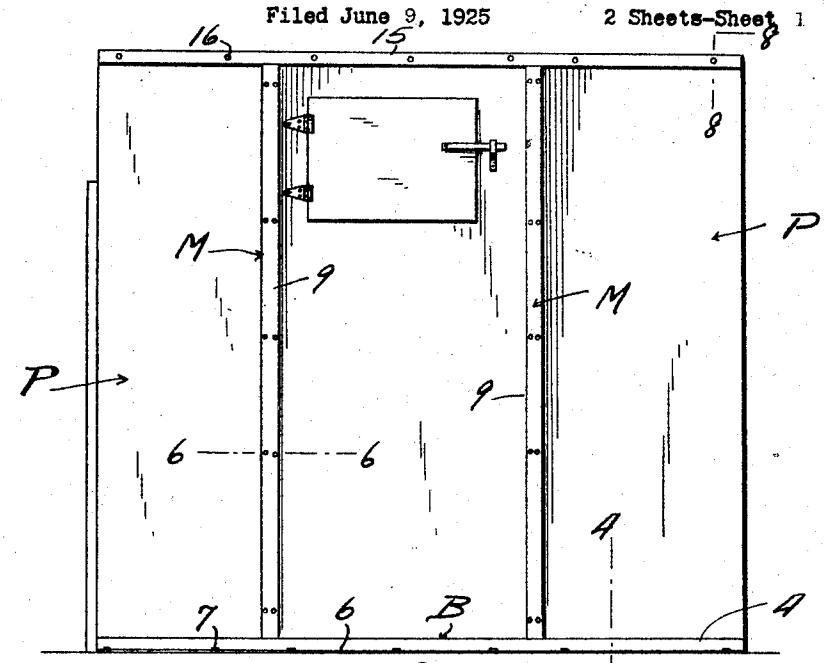


Fig. 2

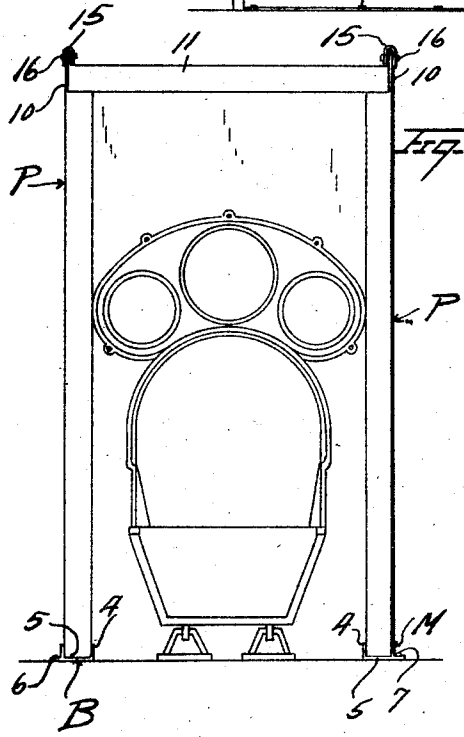
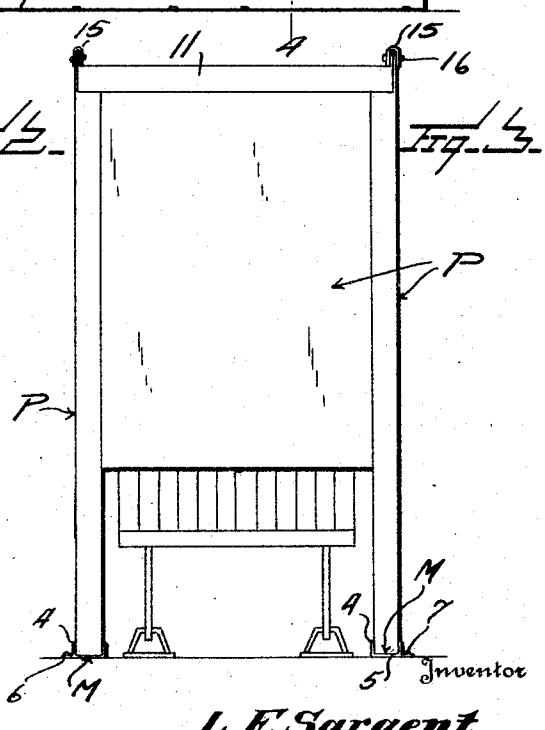


Fig. 3



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Filed June 9, 1925 2 Sheets-Sheet 2

Fig. 4.

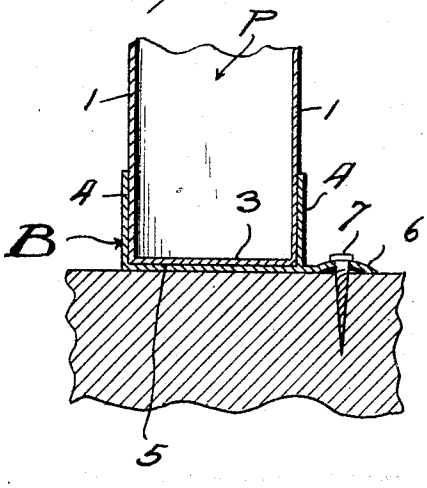


Fig. 5.

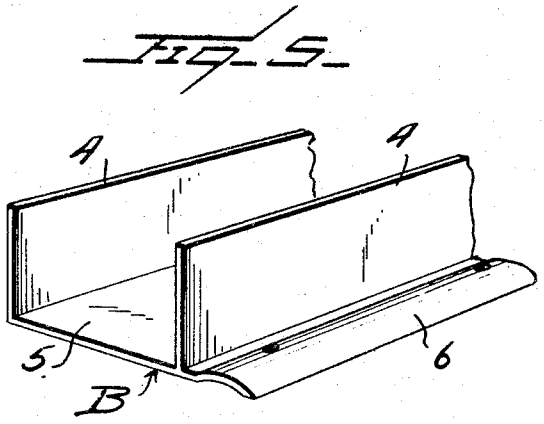


Fig. 6.

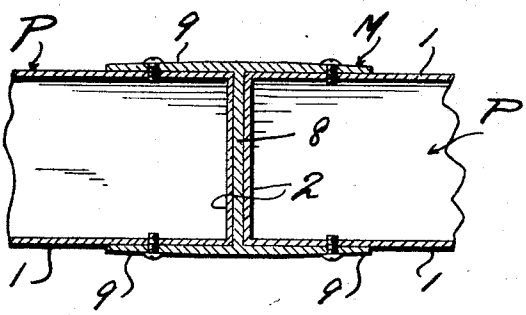


Fig. 7.

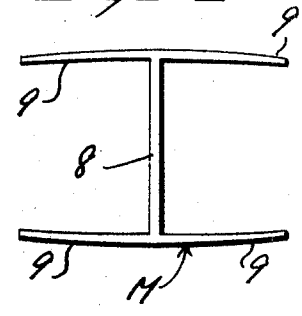
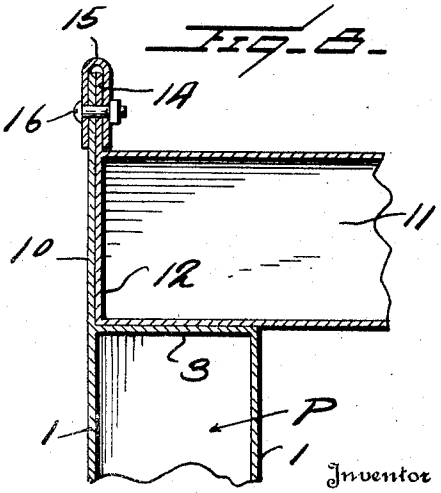


Fig. 8.



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Patented Oct. 20, 1925. 1,558,400

UNITED STATES PATENT OFFICE.

LEONARD F. SARGENT, OF WAUSAU, WISCONSIN.

FURNACE CASING.

Application filed June 9, 1925. Serial No. 35,977.

To all whom it may concern:

Be it known that I, LEONARD FRANCIS SARGENT, a citizen of the United States, residing at Wausau, in the county of Marathon and State of Wisconsin, have invented certain new and useful Improvements in Furnace Casings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in furnace casings and has relation more particularly to a device of this general character of a sectional type, and it is an object of the invention to provide means to maintain the various sections or panels in effective assembled relation.

Another object of the invention is to provide a casing of this kind wherein a base is provided for the lower portion thereof and constructed in a manner to prevent air passing under the casing.

An additional object of the invention is to provide a device of this kind with effective means for effecting an absolute tight joint between adjacent of the vertical sections or panels together with means to effectively maintain the top section or panel in applied position.

Furthermore, it is an object of the invention to provide a casing constructed in a manner to reduce to a minimum leakage or radiation from within the casing.

The invention also has for an object to provide a casing of this kind particularly adapted to be disposed over a heating unit, either a single furnace or a battery, whereby a plenum chamber is provided from which air under forced draft or otherwise may be distributed.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved furnace casing whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view in side elevation of a casing constructed in accordance with an embodiment of my invention;

Figure 2 is a view in end elevation of the device as herein disclosed;

Figure 3 is a view in elevation taken at the opposite end of the device as herein set forth;

Figure 4 is an enlarged fragmentary view taken substantially on the line 4—4 of Figure 1;

Figure 5 is a view in perspective of a portion of the base member as herein set forth;

Figure 6 is an enlarged fragmentary sectional view taken substantially on the line 6—6 of Figure 1;

Figure 7 is a view in top plan of the joint member as particularly illustrated in Figure 6;

Figure 8 is an enlarged fragmentary sectional view taken substantially on the line 8—8 of Figure 1.

The side walls of my improved casing comprise the vertically disposed panels or slabs P of requisite dimensions and each of such panels or slabs is formed of sheet metal consisting of the face or side walls 1, the end walls 2 and the top and bottom walls 3 resulting in a hollow structure. In the assembly of the casing, the slabs are set edge to edge with the lower portion of each of said slabs or panels seated in a base member B. This base member B is U-shaped in cross section with its side flanges 4 vertically disposed.

The intermediate portion 5 of the base member B has extending outwardly therefrom a lip 6 normally slightly curved. In setting the base, cement is adapted to be placed under this lip 6 so that when the lip is secured to the floor by lag screws 7 the base member B is effectively anchored in desired position and in a manner to prevent air from passing under the casing. This base member B also serves to maintain the panels or slabs in requisite alignment.

Interposed between the vertical edges of adjacent slabs or panels comprised in a wall is a joint member M in the form of an H, said member M being preferably made of double heavy sheet metal. When the member M is applied, the intermediate portion 8 of the member M is arranged between the vertical edges of adjacent panels or slabs P with the flanges 9 of said member overlying the marginal portions of said slabs or panels.

In engaging the marginal portions of the slabs or panels between the flanges 9 it is necessary that said flanges be spread or separated so that when a member M is in applied position an absolutely tight joint is provided. Kalon screws or the like are then used to make such joint still more tight and rigid.

The outer face or side walls of the panels or slabs P have their upper portions extended to provide the flange 10 defining the top of the casing and with which has close contact the edge walls of a top panel or slab 11, said slab being also preferably of a hollow structure. The edge walls 12 of the top slab or panel 11 are also extended upwardly to provide a defining flange 14 having close contact with the upper portion of the flange 10 hereinbefore referred to. Sprung over the flanges 11 and 14 from above is the member 15 U-shaped in cross section resulting in a very tight top joint and further making rigid the assembled casing. This member 15 is held in applied position by the bolts 16 or the like. The upper portions of the flanges 10 and 14 provide a rim around the top of the casing for the purpose of retaining or holding sand or other insulating materials. It is to be understood that the various vertical slabs or panels P will be provided with the requisite openings or connections as may be required by the necessities of practice.

My improved casing may be readily assembled or knocked down and can be easily constructed of a size to be disposed over a heating medium to provide a requisite plenum chamber or space and such heating medium may be a single furnace or a battery.

From the foregoing description it is thought to be obvious that a furnace casing constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. A furnace casing comprising, in combination, a plurality of vertically disposed panels and a joint member associated with adjacent panels, said joint member being substantially H-shaped in cross section and having its intermediate portion interposed between the panels and its flanges overlying the adjacent marginal portions of the panels.

2. A furnace casing comprising, in combination, a plurality of vertically disposed panels and a joint member associated with adjacent panels, said joint member being substantially H-shaped in cross section and having its intermediate portion interposed between the panels and its flanges overlying the adjacent marginal portions of the panels, said flanges of the joint member having pressure contact with the panels.

3. A furnace casing comprising, in combination, a plurality of vertically disposed panels and a joint member associated with adjacent panels, said joint member being substantially H-shaped in cross section and having its intermediate portion interposed between the panels and its flanges overlying the adjacent marginal portions of the panels, and means for securing the flanges of the joint member to the panels.

4. A furnace casing comprising vertically disposed panels arranged edge to edge, a substantially U-shaped base member receiving the lower portions of the panels, a top panel, an outstanding lip carried by the base member, and means coacting with said lip for anchoring the base member.

5. A furnace casing comprising vertically disposed panels arranged edge to edge, a substantially U-shaped base member receiving the lower portions of the panels, a top panel, an outstanding lip carried by the base member, and means coacting with said lip for anchoring the base member, said lip being initially curved in cross section.

6. A furnace casing comprising a plurality of vertically disposed panels arranged edge to edge, the upper portions of said panels having their outer faces continued by upstanding flanges, a top panel resting upon the upper walls of the vertical panels and in close contact with the upstanding flanges, the marginal portion of the top panel being defined by an upstanding flange in close contact with the upper portions of the flanges of the vertical panels, and a member U-shaped in cross section straddling said flanges from above.

In testimony whereof I hereunto affix my signature.

LEONARD F. SARGENT.