Oct. 10, 1933. J. HILT 1,930,050

METALLIC VENTILATED CAP FOR SMOKE STACKS

Filed March 23, 1932

Fig. 1

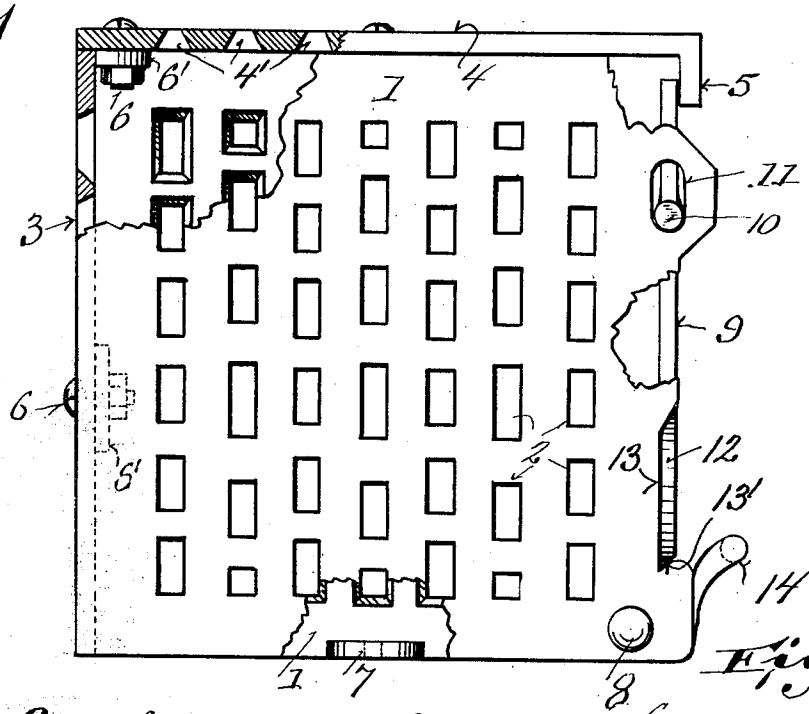


Fig. 3

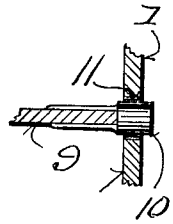
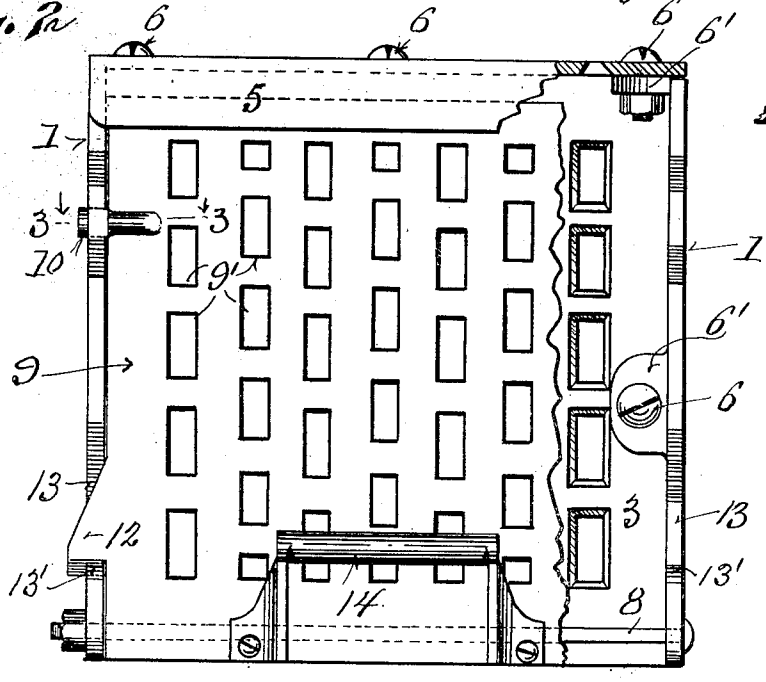


Fig. 2



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METALLIC VENTILATED CAP FOR SMOKE STACKS

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4 Claims. (Cl. 98—58)

My invention refers to vented caps for smoke stacks, or the like, and it has for its primary object to provide a cap particularly applicable to refuse burners, which is durable, weather and acid-proof, and which will at all times prevent the escape of sparks or ignited refuse, the same being provided with a simple door which can readily be opened in the event of fire, or for cleaning purposes.

Heretofore, as far as I am aware, refuse cages in common use have been manufactured from screening, or the like, and this material, when subjected to chemical action of acids and weather, will quickly disintegrate in such manner that large holes will develop therein, whereby coarse material, such as ignited paper, or the like, can escape and cause serious damage.

Furthermore, these standard cages will cause accumulation of partly ignited material to thus choke off the draft, and in the event of fire, where access is required immediately, these screens have to be broken away, or be completely dismantled, by firemen in order that access may be had to the burning waste which will frequently develop in the use of standard refuse cages.

Specific objects of my invention are to provide:—

A vent cap built up from a plurality of metallic, chemical-proof, non-corrosive plates, having apertures therein of sufficient area to always maintain the desired volume of draft;

Simple means for attaching these plates to form a rectangular structure when completed;

A pair of side plates, with means for attaching the swinging or removably apertured door plate, whereby access may readily be had to the interior of the cap; and

A knock-down structure, whereby the top, side, end and door plates may be shipped knock-down to thus save space in shipment, it being understood that the assemblage of the parts may be effected by those unskilled in the art of mechanics.

With the above and other minor objects in view, the invention consists in certain peculiarities of construction and combination of parts, as will be hereinafter set forth with reference to the accompanying drawing and subsequently claimed.

In the drawing:

Figure 1 represents a side elevation of a metallic vented cap for smoke stacks, or the like, embodying the features of my invention, parts being broken away and in section to more clearly illustrate structural features.

Figure 2 is a front view of the same, with parts broken away and in section to more clearly illustrate details of construction, and

Figure 3 is a detailed cross section on line 3—3 of Figure 2, the same showing a trunnion connection for the swinging door mechanism.

Referring by characters to the drawing, 1—1 represent side plates preferably provided with a series of elongated apertures 2—2, 3 and end plate, the same being provided with similar apertures, and 4 the top plate, which plate is also provided with elongated apertures, as indicated at 4'. The top plate is provided with a downturned front flange 5, and said plate is secured to the side and rear plates by bolts 6 passing through the plates and ears 6', which extend from both the rear and side plates. This constitutes a simple means of assembling the various plates to form a rectangular box-like structure, apertured to obtain the desired volume of draft.

Attention is directed to the fact that the elongated apertures are tapered or bevelled upon the inside, whereby the draft suction is emphasized from the chimney to the outer atmosphere.

Suitable provision is made for attaching the box-like cap to the chimney, and in this instance the side walls 1—1 are provided with ears 7 which are adapted to receive anchor plates (not shown) which extend from the chimney walls.

It will be noted that the front of the cap forms a door opening and at the lower front edge of the side walls a tie-bolt 8 is arranged to pass through said side walls and thus firmly lock the same together at this point.

The door or panel 9 is provided, as best shown in Figure 2, with apertures 9', similar to those previously described in connection with the other plates. When the door is in its locked position, its upper edge projects slightly above and engages the top flange 5, and said door is also provided with trunnions 10 which extend into elongated slots 11 that are formed in the side walls 1. Adjacent to the lower corner of the door the edges thereof have projecting therefrom companion teeth 12 which are nested in locking notches 13 which are formed in the juxtaposed edges of the side plates. It will be noted that the bottoms 13' of these notches are of saw-toothed variety, whereby the teeth 12 effect an interlocking engagement so as to hold the door securely against movement in either direction when said door is in its normal position.

The door is also provided with a handle 14,

whereby it can be manipulated. Obviously, when it is desired to have access to the interior of the cap, the door is slightly elevated so as to free the teeth 12 from the notches 13, which movement is permitted by the plate between the trunnions 10 and slots 11, whereby the door can be swung upwardly and outwardly so that in cases of fire emergency or cleaning, ready access is had to the cap without injuring the same.

By employing a construction as just described, a simple and economical cap will result, which cap, due to its various features, will not quickly deteriorate under the severe conditions to which caps of this character are normally subjected, and, furthermore, the cap, owing to its peculiar ventilating arrangement, will permit free draft at all times, but at the same time it will act as a cowl to prevent back drafts, which will frequently result in high winds.

While I have specifically shown the cap in rectangular form, obviously the shape may be varied indefinitely, as for example it may be conical, cylindrical, or polygonal.

While I have shown and described one specific exemplification of my invention, it is understood that I may vary the structural features within the scope of the claims, as they may be hereinafter interpreted by those skilled in the art.

I claim:—

1. A metallic cap for smoke stacks including top, end and side wall plates provided with vent apertures, an opening in the side wall plates, and a removable door for said opening comprising a metallic panel having vent apertures therein.

2. A rectangular metallic cap for smoke stacks including top, end and side wall plates having a series of vent apertures therein, detachable means for securing the plates together, a door panel having apertures therein in pivotal union with the adjacent side panels, and provided with means for releasably locking the door to the side panels.

3. A rectangular metallic cap for smoke stacks including top, end and side wall plates having a series of vent apertures therein, detachable means for securing the plates together, a door panel having apertures therein in pivotal union with the adjacent side panels, and provided with means for releasably locking the door to the side panels through gravity action of the door.

4. A rectangular metallic cap for smoke stacks comprising a top plate having a depending flange, end and side wall plates having vent apertures therein, the side plates being provided with slots near their upper edges, means for detachably securing the end, side and top plates together, locking notches in the lower edges of the side wall plates, a vented door panel having trunnions engageable with the side wall slots, and teeth extending from the lower portions of the door panel for engagement with the locking notches.

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