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J. A. HIGH

VENT GUARD

Filed June 13, 1922

Fig. 1.

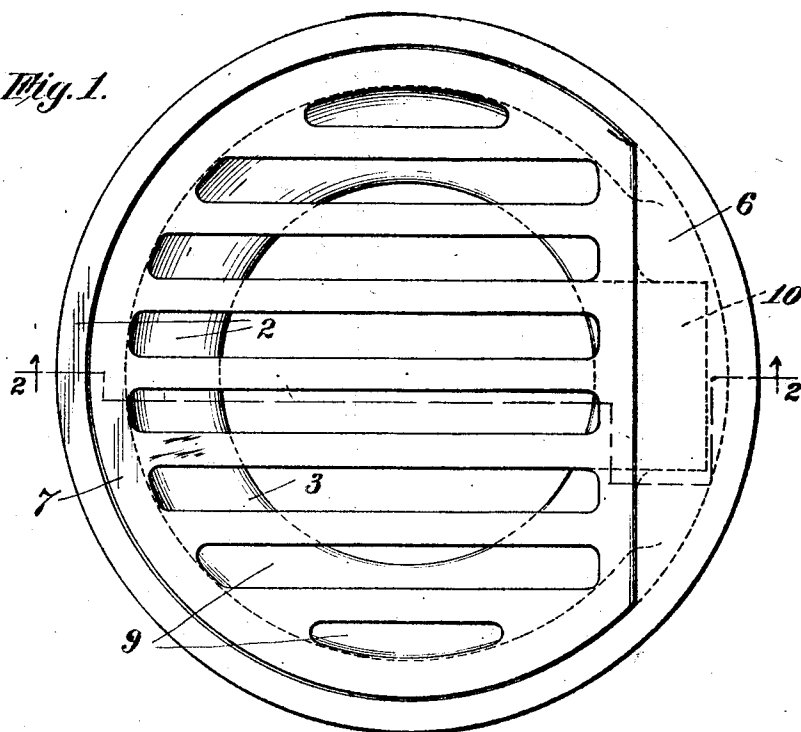
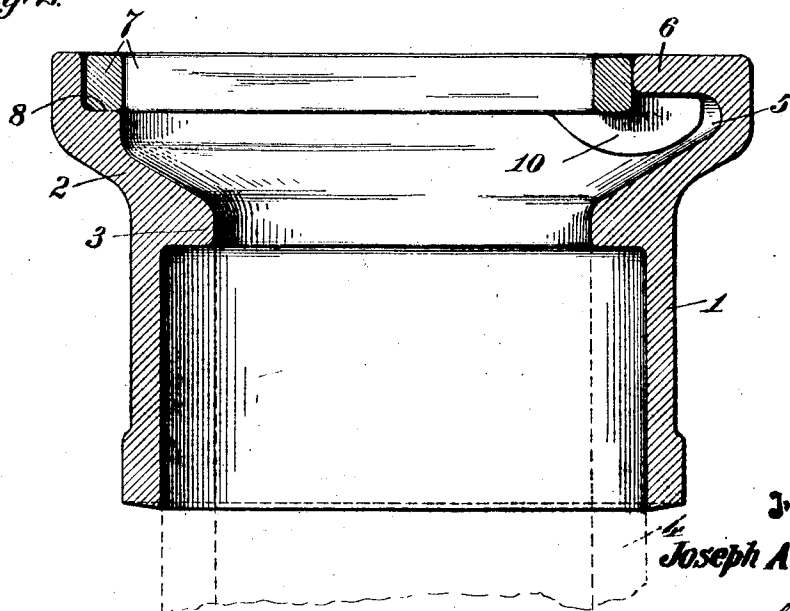


Fig. 2.



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UNITED STATES PATENT OFFICE.

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VENT GUARD.

Application filed June 13, 1922. Serial No. 563,064.

To all whom it may concern:

Be it known that I, JOSEPH A. HIGH, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Vent Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in fittings for drainage systems, and more particularly to guards or plugs for vent stacks and drains.

The primary object in view is the production of a simple, compact, short plug adapted to receive or be mounted upon the upper end of the drain or stack in a manner to protect the latter against foreign substances while facilitating access by a plunger of a diameter equal to the diameter of the drain or stack.

With this and further objects in view as will in part hereinafter become apparent and in part be stated, the invention comprises certain novel constructions, combinations and arrangements of parts as subsequently specified and claimed.

In the accompanying drawings,—

Figure 1 is a plan view of an apparatus embodying the features of the present invention.

Figure 2 is a vertical section taken there-through on the planes indicated by line 2—2 of Figure 1.

The present improved guard includes a cover and a tubular body, the tubular body comprising a sleeve-like portion 1 terminating in a bell or flared portion 2, the line of juncture between the bell and sleeve being marked by an inset annular flange 3 producing an annular shoulder against which the upper edge of a stack or drain, indicated in dotted lines at 4, is to be seated. The bore of the body at the place of the flange 3 is the same in cross sectional area as the cross sectional area of the stack 4, and the bell 2 allows free access of an operating tool, such as a plunger, whereby the contents of the stack 4 may be treated by air compression or otherwise by instruments known in the art and of a size snugly fitting the stack 4. These instruments may be introduced and withdrawn without the removal of the tubular body. The bell or flare 2 is relatively

short, being of considerably less length than the length of the sleeve-like portion 1, and having at one part the flare of the bell extending a greater distance laterally than at other parts, as indicated at 5, and said excess flare being overhung by a fillet 6 formed integral with the side walls of the body. A cover 7 is arranged within the upper terminus of the bell and rests on a parti-circular shoulder 8 formed in the material of the bell, the shoulder terminating at the ends of the fillet 6. The cover 7 is proportioned to fit the opening of the bell, and said opening is sufficiently greater than the transverse area of the bore at the place of the flange 3 to enable the employment of a cover 7 of very substantial thickness and formed with slots or apertures 9, 9, whose total area is equal to the area of the throat or bore at the place of the flange 3. The cover 7 is slightly smaller than the flange of bell 2 outstanding beyond shoulder 8, so that the cover is not liable to rust in place and be found difficult to remove when desired. The cover is formed at its under side with an underhanging, outstanding lip 10 shaped to underlie the fillet 6 and to form a hinge-like lock or retaining member for preventing accidental displacement of the cover 7.

This present improved plug possesses many phases of advantage and utility which will be obvious to those skilled in the art, including the saving effected in vertical space by virtue of the shortness of the plug and the great saving enabled by the possibility of the use of the plug on the tail end of pipe sections, especially pieces from which the bell has been cut for further use, and which pieces would otherwise be thrown away as waste.

What is claimed is:—

1. A plug or guard comprising a tubular body having a relatively short bell at its upper end, the throat or restricted portion of the bell being of a transverse area equal to that of the bore of a stack on which the tubular portion is adapted to be mounted, the bell being of less length than the remainder of the tubular body and being formed with a grid-receiving seat, and a fillet disposed above the plane of the seat for receiving a locking lug projecting laterally from a grid.

2. A fitting comprising a sleeve-like body proportioned to receive a pipe within itself,

the upper end of the sleeve-like portion terminating in an inset annular shoulder adapted to overlie the upper edge of the pipe received by the sleeve-like portion, 5 said shoulder surrounding and leaving open an area equal to the area of the bore of the received pipe, and said fitting flaring abruptly from the shoulder and forming a cover-receiving bell, one part of the flared portion outstanding laterally a greater distance than the balance and being overhung 10 by a fillet for receiving the underhanging lip of a cover, the bell being of less length than that of the sleeve-like portion.

In testimony whereof I affix my signature.

JOSEPH A. HIGH.