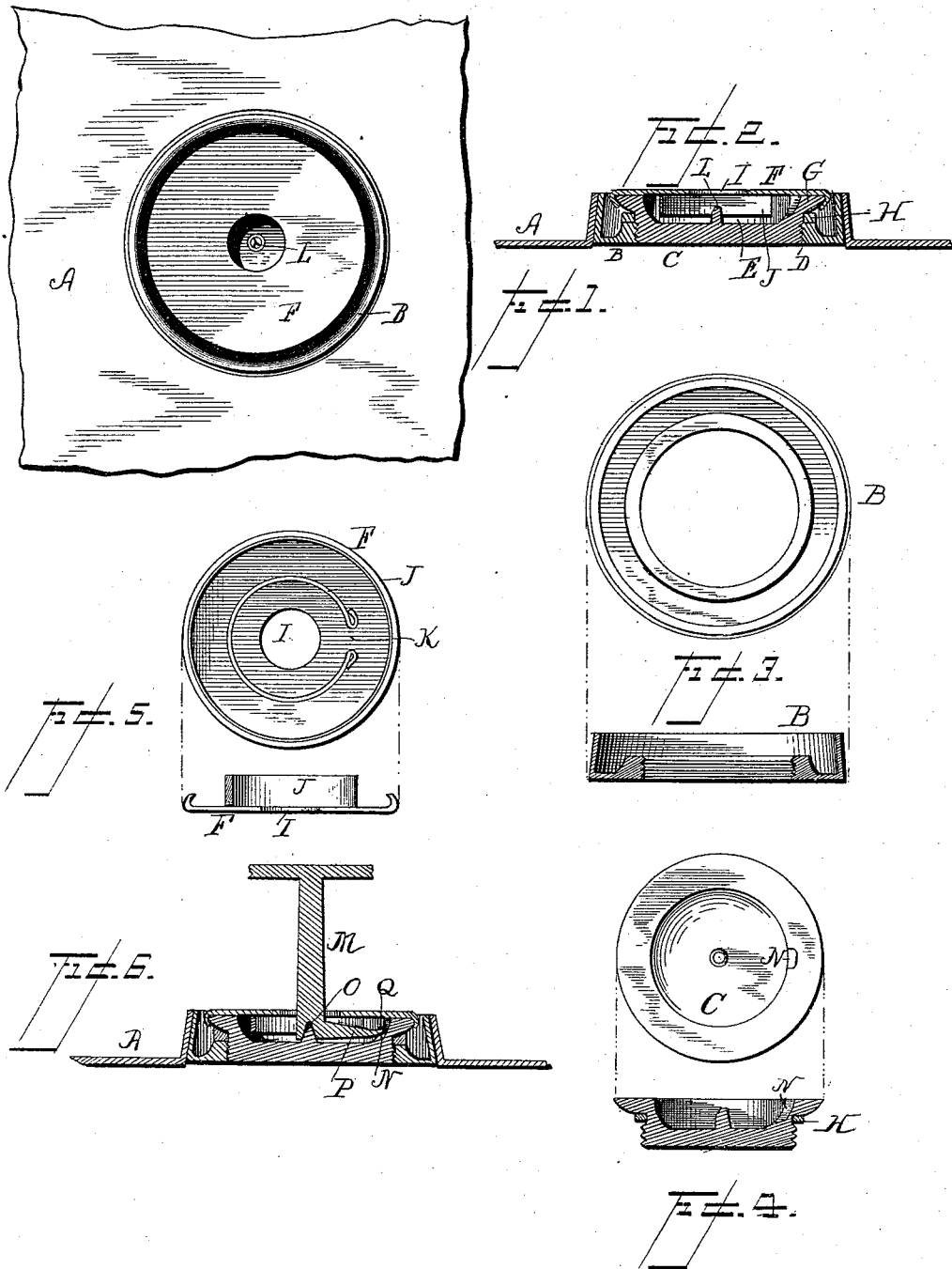


(No Model.)

E. W. LUCE.
SCREW STOPPER LOCK.

No. 490,356.

Patented Jan. 24, 1893.



Witnesses:

W. Johnson.
Charles Rose

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UNITED STATES PATENT OFFICE.

EDWIN W. LUCE, OF MEADVILLE, PENNSYLVANIA.

SCREW-STOPPER LOCK.

SPECIFICATION forming part of Letters Patent No. 490,356, dated January 24, 1893.

Application filed March 17, 1892. Serial No. 425,263. (No model.)

To all whom it may concern:

Be it known that I, EDWIN W. LUCE, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Screw-Stopper Locks; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to means for stopping openings, such as filling openings in cans, bung holes in barrels and the like, and is in the nature, broadly, of a screw stopper provided with means whereby it is inserted, and by reason of its peculiar construction, is, by such insertion, locked into its closed position so that a key, is required, for its removal.

My invention consists in the improved construction, arrangement and combination of parts which will be now fully described and specifically pointed out in the claims.

In the accompanying drawings: Figure 1 is a plan view of my improved stopper in its closed or locked position showing part of a vessel to which it is attached, in this instance part of the top of a metallic vessel being shown. Fig. 2 is a central vertical section through the same. Fig. 3 is a plan and section of the screw sleeve. Fig. 4 is a plan and section of the screw stopper. Fig. 5 is a reverse plan and section of the cap. Fig. 6 is a section through the cap, screw stopper and sleeve with the key in position for operation.

Like letters of reference mark the same parts in all the figures of the drawings:

Referring to the drawings by letters of reference, A marks the top of a can, cask or barrel having an opening in which a metallic threaded sleeve B is secured in any suitable manner, as by soldering or otherwise. A stopper or bung C fits into the sleeve B, the interior thread of sleeve B fitting and engaging with exterior thread of stopper C at D, (Fig. 2). The stopper C has in its upper surface a hollow E and this hollow is covered by a cap F having its outer edges turned over the annular flanges G of the stopper. A packing

ring H is placed between the sleeve and stopper to secure a close joint. I prefer to let this structure into the wall or top of the vessel to which it is to be attached so that it will, when constructed as described, present a smooth flush surface in which condition it will readily be seen that it will be extremely difficult to remove the stopper from its seat to open the vessel.

To provide means whereby it may be readily opened by authorized persons is the special object of my present invention and I carry out that object in the following manner. The cap F has a central opening I through which a suitable key may be entered and has on its under surface a depending guard J which forms almost a complete circle, an opening being left at K to permit the point of the key, which works on a pin L to pass through the guard and seat itself in a notch N in the inner wall of the hollow stopper. The key I have marked M and it is provided with a barrel O to fit over pin L, a finger or foot P to pass through opening K and guard J, and a raised toe Q to engage in a notch N. When the parts are secured together the opening K in guard J is opposite to the notch N. The opening I in cap F being circular in shape and only a little larger than the stem of the key, the key can only be inserted by passing finger P through the opening I in the cap, laterally, and finally inserting the stem. For this reason the pin L does not rise to the level of the cap but is slightly lower, and in order to facilitate the entrance of the key, the pin is made conical in shape. If the finger is started in any other direction than toward the opening K in the guard, the guard will prevent it reaching the stopper and it will be inoperative, but if it is properly entered, the stopper may be turned to release it, by turning the key whose toe will then be in engagement with the notch N. In order to facilitate the entry of the key by authorized persons, the proper direction may be indicated by any suitable marking upon the top of the cap, or otherwise.

Having thus fully described the construction and operation of my invention what I claim as new and desire to secure by Letters Patent of the United States is:—

1. The combination of the hollow screw stop-

per, the cap thereon having a central opening
for the insertion of the key, guards arranged
between the cap and stopper, and obstructions
in the path of the key to cause it to engage
5 with and turn the stopper as set forth.

2. The combination of the hollow screw stopper
having central pin and notch N, and the
cap having guard J and opening K, substantially
as and for the purpose set forth.

10 3. The combination with the top or wall of
a vessel, of a sleeve, a hollow screw stopper,
and a cap, engaging each other and let into
the wall or top flush with the surface thereof
and having an opening to admit a key, the
15 cap being provided with suitable key guards,
and the screw stopper with notches, to properly
obstruct and permit the entrance and
engagement of the key with the stopper, substantially
as and for the purpose set forth.

4. The combination of the sleeve B, the 20
screw stopper C engaging said sleeve and provided
with flanges G, pin L and notch N, and the cap F
having its edge turned over flange G and being
provided with opening I and guard J and having
opening K, substantially 25
as and for the purpose set forth.

5. The combination of the screw stopper
having a notched rim, and a cap having a key
aperture, said cap being attached to the stopper
and concealing the notch; substantially 30
as described.

In testimony whereof I affix my signature in
presence of two witnesses.

EDWIN W. LUCE.

Witnesses:

A. W. MCCLINTOCK,

H. A. CAMPFIELD.