L. W. DOYLE.

MUG HOLDER.

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1,190,128.

Patented July 4, 1916.

FIG. 1.

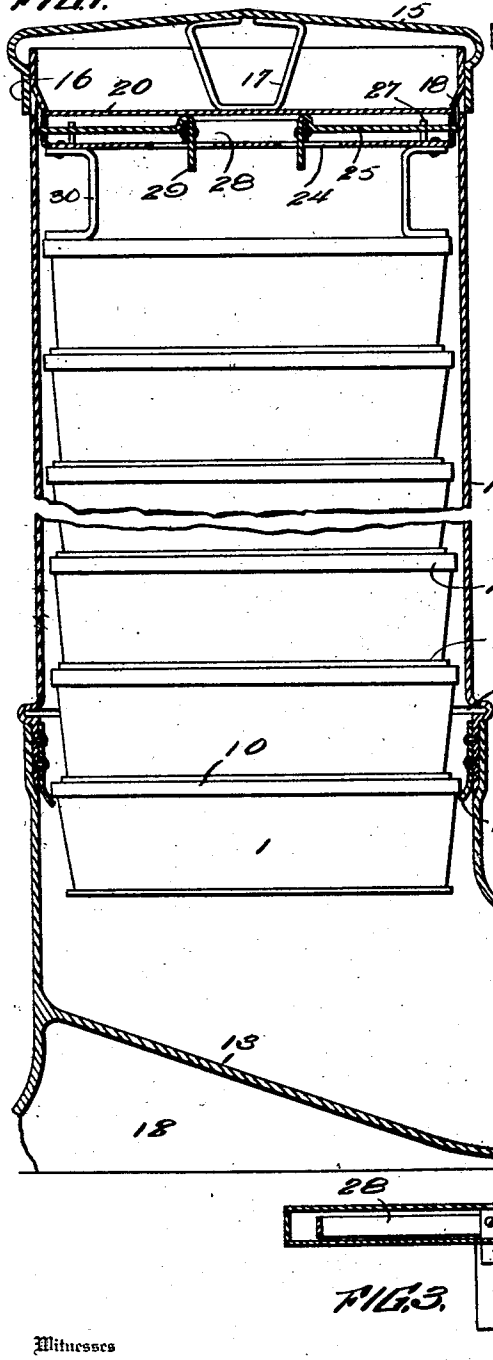
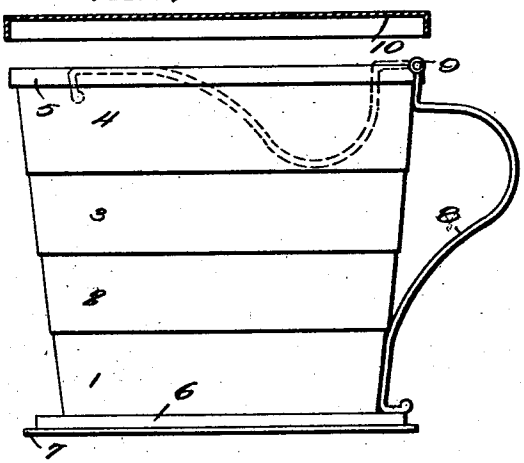



FIG. 4.



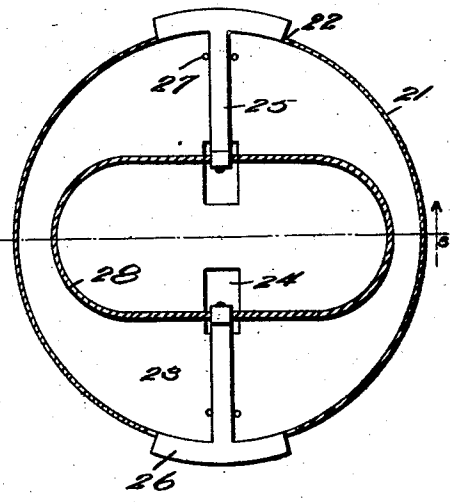




FIG. 2.

FIG. 3.

Witnesses

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## MUG-HOLDER.

1,190,128. Specification of Letters Patent. Patented July 4, 1916.

Application filed August 27, 1915. Serial No. 47,664.

*To all whom it may concern:*

Be it known that I, LUKE W. DOYLE, a citizen of the United States, residing at Port Chester, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Mug-Holders; 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 cabinets, and more especially to those having means for delivery of the articles therein; and the object of the same is to produce a holder for shaving mugs and the like intended initially to contain a stack of clean mugs but to receive soiled mugs successively at the top of the stack as clean ones are delivered from its lower end. This object is carried out by the construction hereinafter more fully described with reference to a collapsible mug having a cover and intended for shaving purposes, although I do not wish to be limited in this respect.

In the accompanying drawings: Figure 1 is a vertical section through this holder with a stack of mugs therein. Fig. 2 is a horizontal section of the follower, and Fig. 3 is a vertical section on the line 3—3 of Fig. 2. Fig. 4 is a section of one mug distended.

While I will describe and prefer to use this holder in connection with collapsible mugs used for shaving purposes in barber shops and the like, it will be obvious that it could be employed in connection with other cup-shaped receptacles of a diameter to fit within the hopper and having a beaded upper edge; but the mug which I preferably employ is shown in Fig. 4. Therein it is illustrated as made up of four tapering sections 1, 2, 3 and 4, the uppermost having a bead 5 around its top and the lowermost having a closed bottom 6 with a recessed flange 7 on which rests the lower end of each section when the mug is collapsed and into whose recess fits the lower end of the upper section 1. A handle 8 is pivoted at 9 within the bead 5 and is of such configuration that it may fold into the upper section and inside within all sections when the mug is collapsed. When turned on its pivot its lower end rests on the flange 7 as seen in Fig. 4 and holds the mug distended. At other times it will be folded into the dotted position. When the mug is collapsed a cover 10 is slipped over its upper section and its skirt incloses the bead 5. If there were no cover, the legs described below would have to reach into the mug or other article and bear on its bottom, but it is essential that the bead be employed to support the stack of receptacles as seen in Fig. 1. The handle is not a necessity, but is quite a desirable feature.

The holder for the mug described or for any receptacle which will operate successfully, is best seen in Fig. 1. An upright tubular hopper 11 rises removably from a base 12 which latter has a chute 13 leading to an outlet 14 at the front, and the upper end of the hopper is closed by a removable cover 15 having a skirt 16 which slips over the hopper and has an internal leg 17 depending from its center for a purpose yet to appear. Within the hopper near its upper end are retaining springs 18 for preventing the removal upward of anything that has once passed down beyond them, and within the hopper near its lower end are supporting springs 19 for holding the stack of receptacles when their tips engage the bead 5 of the lowermost receptacle or mug as shown.

A follower, whose details are shown in Figs. 2 and 3, is employed for use in this device. Like all other parts it is preferably made of metal so treated as to be rust proof and sanitary, and it has a top plate 20, a surrounding shell 21 depending therefrom and provided with slots 22 in its opposite sides, and a bottom plate 23 provided with slots 24 as best seen in Fig. 2. Within the casing thus produced is located a pair of T-shaped bolts 25 whose outer ends or heads 26 project through the slots 22 and whose bodies are movably mounted in guides 27 such as pins rising from the bottom plate. The bodies of these bolts are connected with a spring 28 which stands between the top and bottom plates and is preferably oval or elliptical as seen in Fig. 2; and by preference the inner ends of the bolts are turned down into finger pieces 29 which project through the slots 24 as seen in Fig. 1. Legs 30 of suitable shape are secured to and extend downward from the follower for a purpose yet to appear. The body of the hopper is given a crimp to form a groove 31 at a point just beneath the supporting spring 19.

With this construction, a stack of per-

haps 25 mugs may be housed in the holder in their collapsed condition. The first one is inserted and permitted to come to rest on the supporting springs 19, and the others rest upon this lowermost mug. Obviously if there were no covers 10 to the receptacles they would "nest" into each other to a certain extent, but the bead 5 of the lowermost would be supported by the springs 19, and this receptacle would support all others. Finally a follower is inserted on the top of the stack, by pressing the heads 26 of its bolts inward so that they will pass into the open upper end of the hopper 11; and then the cover 15 is applied, and its leg 17 pushes the follower downward, the legs 30 of the follower meanwhile pushing downward onto the cover of the uppermost mug or into the uppermost mug if it have no cover. When now the user desires a clean mug, he has but to remove the cover 15 and push down on the follower. The result is that the stack of mugs descends, and the bead 5 of the lowermost is forced past the tips of the springs 19 so that this mug falls into the chute 13 and runs out the outlet 14, the bead of the next mug dropping onto the springs 19. The mug thus delivered is then opened up as seen in Fig. 4 and used, and after it has been used and may be called "soiled", it is put back on top of the follower in the stack. The next time the device is used the uppermost (soiled) mug is pressed upon as before, and if the proportion of parts is correct the insertion of another soiled mug and replacement of the cover 15 will deliver a clean mug at the bottom of the stack. In this manner successive mugs are delivered until the supply of clean mugs is exhausted and the follower reaches the lower end of the hopper, when its bolts spring outward and their heads enter the groove 31. Thereafter no mug can be delivered, and this is desirable because all of them are soiled. The hopper is now lifted out of the base and may be replaced by another containing a stack of clean mugs, while those in the removed hopper are cleansed. It may be possible to accomplish such cleansing by totally immersing the hopper and its stack of soiled mugs in boiling water and circulating the latter throughout its length, and later drying the stack by circulating super-heated steam or hot air through it. However, the manner of cleaning the soiled mugs forms no part of the present invention, and the user may prefer to remove them from the hopper. He cannot take them out of its upper end because of the presence of the springs 18, nor out of its lower end because of the presence of the follower. If the bolts have the depending finger pieces 29 as seen in Fig. 1, he may draw these pieces toward each other so as to retract the bolts 25 and disengage their heads from the groove 31, and thereafter the follower can be taken out of the hopper for subsequent use in the manner already described. This releases the stack of soiled mugs which may then be cleansed singly or collectively in any suitable manner, after which it will be replaced in the hopper (which has also been cleansed) with the follower on top as already described. The obvious purpose of this follower is to prevent the accidental discharge of a soiled mug, in case the stack should be used up more rapidly than the operator appreciates.

What I claim is:

1. In a holder for mugs and the like, the combination with an upright tubular hopper, a base having an outlet at its lower end, and yielding mug supports within the hopper just above said outlet; of a follower movably mounted within the hopper and engaging the stack of mugs therein, and means for checking the descent of the follower when the mug immediately beneath it engages said supports.

2. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a body movably mounted within the hopper, bolts within the body, and yielding means for forcing them outward, for the purpose set forth.

3. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a body, radially movable bolts mounted thereon, means for pressing them outward with yielding force, and legs depending from said body.

4. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a hollow body having slots at opposite points in its shell, a pair of bolts within said body and having heads mounted in said slots, and an oval spring within the body and forcing the bolts normally outward, for the purpose set forth.

5. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial

use on the top of the stack, the same comprising a hollow body consisting of a top plate, a shell having slots in opposite sides, and a bottom plate having slots opposite those in the shell, a pair of T-shaped bolts mounted within said body and with their heads standing within the slots in the shell and their inner ends deflected and projecting through the other slots, guides for the bolts, and yielding means pressing them normally outward, for the purpose set forth.

6. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a body, radially movable bolts mounted thereon, means for pressing them outward with yielding force, and legs depending from said body; retaining springs within the upper end of the body, and a removable cover therefor provided with a depending leg, for the purpose set forth.

In testimony whereof I affix my signature.

LUKE W. DOYLE.