Dec. 2, 1947. H. R. HILSTROM 2,431,752

SPRING CLAMP RECEPTACLE FOR TUMBLERS

Filed May 22, 1946

Fig. 1.

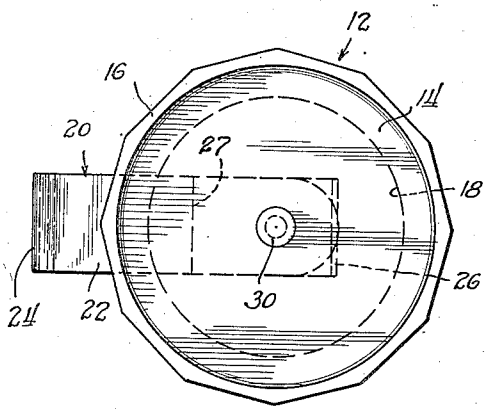


Fig. 3.

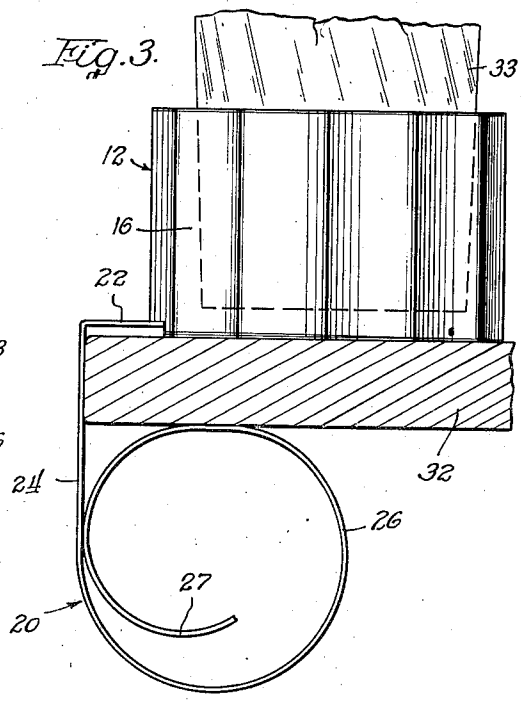


Fig. 2.

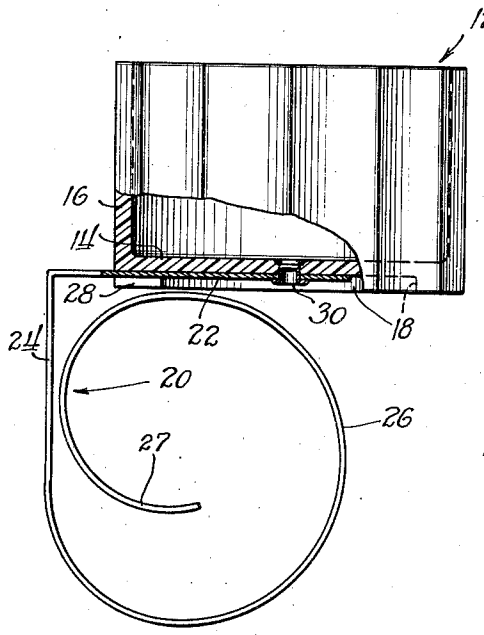
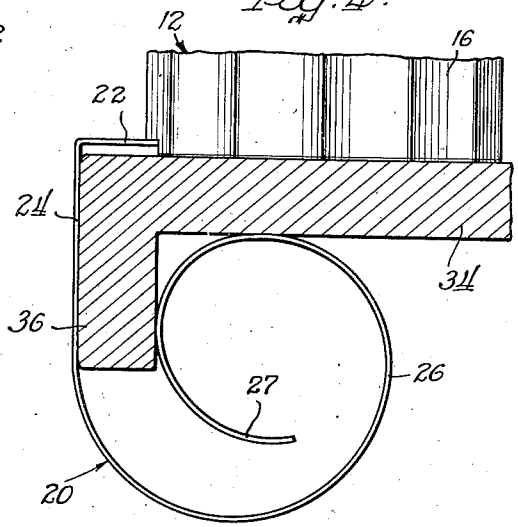


Fig. 4.



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SPRING CLAMP RECEPTACLE FOR TUMBLERS

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4 Claims. (Cl. 248—310)

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This invention relates to spring clamp receptacles for tumblers, which can be secured to a table top or arm of a chair.

It is well known how easily a tumbler set on a card table falls over, or is knocked over. An object therefore, of the invention is to provide means for securing the tumbler on the table so that the user does not have to be overly careful not to knock it over.

Another instance where such a device is convenient is when a person is sitting in a chair and does not have a convenient place to set his tumbler down. The receptacle of the present invention is adapted to be secured to the arm of a chair, and the occupant can conveniently set his tumbler in the receptacle.

The device of the present invention consists of a cup-shaped receptacle having a low peripheral wall, or side wall. The receptacle is fitted with a spring clamp so shaped that when the receptacle is placed on a table top, the spring clamp will extend under the table top and bear thereagainst, and thereby secure the receptacle in place.

The spring clamp mentioned above is adapted to fit various sizes and shapes of tables, and arms of chairs, so that the receptacle will always rest solidly on the supporting surface.

Another object of the invention is that the device can be clamped on a supporting surface easily and quickly, and there are adjustments to be made for securing it in place.

The device of the present invention is exceedingly simple, consisting only of the receptacle which may be molded or stamped, the spring clamp which is a simple leaf spring, although very carefully shaped, and a rivet for securing the spring clamp onto the receptacle.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various elements of the receptacle whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, wherein:

Fig. 1 is a plan view of the receptacle;

Fig. 2 is a side view of the device with a portion thereof shown in section; and

Figs. 3 and 4 show the device applied to different shaped supporting surfaces.

Referring in detail to the drawings, the device consists of a receptacle 12 having a flat bottom 14 and a surrounding side wall 16. A peripheral flange 18 is formed integrally with the receptacle and extends radially thereof a short distance as indicated in Fig. 2. The flange

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18 is in effect a continuation or projection of the side wall 16, although it has a greater radial thickness than the side wall.

The receptacle 12 is preferably of plastic which is molded in shape as a unitary article, although it can as well be made of other material, such as a metal stamping.

The height of the side wall 16 is sufficient so that when a glass or tumbler is placed therein, it retains the glass in position without wobbling, but it is low enough to easily grasp the glass therefrom.

The spring clamp is indicated in its entirety at 20, and comprises a flat segment 22, a second segment 24 formed at right angles to the first segment, and a coiled segment 26 formed at the end of the segment 24. The flat segment 22 is secured flat against the underside of the flat bottom 14 of the receptacle, passing through a cut-out portion 28 formed in the peripheral flange 18. A rivet 30 extends through the flat segment 22, and the flat bottom 14 of the receptacle for securing the spring clamp thereto. The rivet 30 is preferably flush with the top surface of the bottom 14 so that when a glass is set in the receptacle, it will rest flat on the bottom of the cup. The peripheral flange 18 spaces the bottom of the cup from the supporting surface, and accordingly, the segment 22 of the spring clamp is spaced upwardly from the supporting surface, whereby the receptacle will rest flat thereon.

The segment 22 of the spring clamp extends radially beyond the periphery of the receptacle. The segment 24, instead of being formed at right angles to the segment 22, may be curved and form a continuous curve between the segment 22 and the coiled segment 26. The free end 27 of the coiled segment is free to flex in any direction, whereby the intermediate section of the coiled segment between the free end and the segment 24 is normally in contact with the bottom 14 of the receptacle.

Fig. 3 shows the device secured on a flat supporting surface 32 such as a thin card table, or desk leaf, with a tumbler 33 therein. By reason of the fact that the segment 22 extends radially beyond the periphery of the receptacle, the receptacle is positioned inwardly of the edge of the table a short distance, and the segment 24 rests against the edge of the table surface 32. Accordingly, this gives the device a certain amount of stability of position. The coiled segment of 26, it will be noted in Fig. 3, adjusts itself to conform to the surface to which the

device is affixed, and bears against the underside thereof to hold the receptacle in proper position.

Fig. 4 shows a different shape supporting surface 34 which has a downwardly extending marginal edge 36. The device is attached to the table surface 34 in a manner similarly to that in connection with Fig. 3, and the segment 24 fits solidily against the outer edge of the marginal extension 36. The coiled segment 26 then adjusts itself and conforms to the under surface of the table and bears against both the horizontal surface 34 and the vertical surface 36, adding a degree of stability. The coiled segment 26 readily conforms itself accurately to all similarly shaped surfaces. The same will be true in the case of arms of chairs, where the flexing of the coiled segment 26 will also there adjust itself to the peculiar supporting surface.

The shape of the coiled segment 26 forms an important aspect of my invention. The free end 27 of the coil being entirely flexible, the intermediate section of the coil readily and accurately conforms to practically any shape of surface.

While I have herein shown and described a preferred embodiment of my invention, manifestly it is capable of modification and rearrangement of elements without departing from the spirit and scope thereof. I do not, therefore, wish to be understood as limiting this invention to the precise form herein disclosed, except as I may be so limited by the appended claims.

I claim as my invention:

1. A tumbler receptacle, comprising a cup-shaped element having a bottom and a surrounding side wall, and a leaf spring, said leaf spring having a segment secured to said cup-shaped element adjacent said bottom thereof and extending radially beyond the margin of said bottom, said leaf spring having a second segment extending from the first segment in a direction generally opposite said surrounding side wall, said leaf spring having a coiled segment extending from said second segment radially of the cup-shaped element so as to be positioned substantially axially of the cup-shaped element, said coiled segment having substantially a complete turn and being of a diameter substantially equal to the length of said second segment so as to be normally in contact with said bottom and said second segment, and said coiled segment being flexible away from said bottom and engageable with a table surface interposed therebetween.

2. A tumbler receptacle, comprising, a cup-shaped element having a flat bottom and a surrounding side wall, and a leaf spring, said leaf spring having a segment in contact with said flat bottom and secured thereto and extending radially beyond the margin of said flat bottom, said leaf spring having a second segment extending from the first segment in a direction generally opposite said surrounding side wall, said leaf spring having a coiled segment extending from said second segment in the same direction as said

first segment so as to be positioned substantially axially of the cup-shaped element, said coiled segment having substantially a complete turn and being of a diameter substantially equal to the length of said second segment so as to be normally in contact with said flat bottom and said second segment, said coiled segment being flexible away from said flat bottom and engageable with a table surface interposed therebetween and said coiled segment being flexible in a direction away from said second segment and engageable with a vertical extension of a table surface interposed therebetween.

3. A device of the class described comprising, a cup having a flat bottom and a surrounding side wall, a peripheral flange of short axial dimension formed on the receptacle on the side of the bottom opposite said side wall and forming a projection thereof, a spring clamp secured to the bottom of said receptacle, said peripheral flange having an opening formed therein, said spring clamp having a segment extending through the opening in said flange and extending radially beyond the receptacle, said spring clamp having a coiled segment extending from the first segment and being disposed axially of the cup and adjacent said flat bottom, said coiled segment having a curved portion reaching from said second segment to said flat bottom.

4. A tumbler receptacle, comprising a cup-shaped element having a flat bottom and a surrounding side wall, and a leaf spring, said leaf spring having a straight segment in contact with said flat bottom and secured thereto and extending radially beyond the margin of said flat bottom, said leaf spring having a second straight segment at right angles to the first straight segment and extending therefrom in a direction generally opposite said surrounding side wall, said leaf spring having a coiled segment extending from said second straight segment in the same direction as said first straight segment so as to be positioned substantially axially of the cup-shaped element, said coiled segment having substantially a complete turn and being of a diameter substantially equal to the length of said second segment so as to be normally in contact with said flat bottom and said second straight segment, said coiled segment being flexible away from said flat bottom and engageable with a table surface interposed therebetween and said coiled segment being flexible in a direction away from said second straight segment and engageable with a vertical extension of a table surface interposed therebetween

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