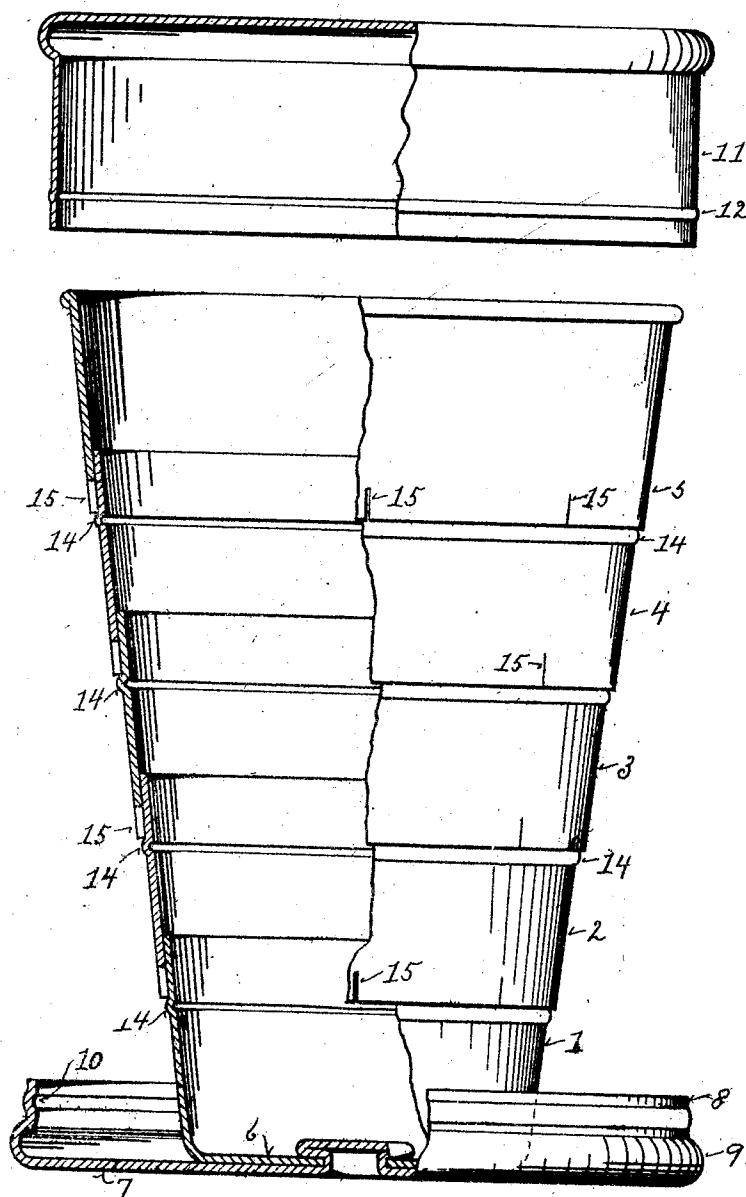


J. F. MITCHELL.
 COLLAPSIBLE DRINKING CUP.
 APPLICATION FILED APR. 14, 1913.

1,093,873.

Patented Apr. 21, 1914.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN F. MITCHELL, OF TOPEKA, KANSAS.

COLLAPSIBLE DRINKING-CUP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN F. MITCHELL, a citizen of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Collapsible Drinking-Cups, of which the following is a specification.

My invention is an improvement upon the very common type of collapsible drinking cup made up of a number of tapered sections or rings, the cup being held in extended position by the frictional engagement of the inner and outer walls respectively of contiguous sections. A trouble with the use of such cups as are now in common use is that they collapse accidentally,—as when held by their lower portion, or set upon their base.

It is the object of my invention to prevent accidental collapsing of the cup; also to provide means for preventing accidental collapsing of the cup and which at the same time permits easy intentional collapsing; also to provide such means in simple, economical, durable, and sanitary form; also to improve upon the case usually accompanying and forming part of such cups. I attain these objects by forming in one of each two contiguous rings or sections a rib over which the other of the two must pass when extending the cup, said rib being so located that when the sections are fully extended the latter of the two sections will bear against said rib which thus forms a stop to prevent the collapsing or telescoping of said two sections. I also so form the two contiguous sections or rings so as to give one of them sufficient expansibility to permit the passage over said rib. While said rib thus forms a stop sufficient to prevent accidental collapsing, yet the expansible element also permits the return passage, the collapsing or telescoping of the sections when more compressive force is applied, as by hand, than is apt to be applied in ordinary handling of the cup in extended position. I also provide a new and improved means for attaching a removable cap to a base for forming a casing for the collapsed cup.

My invention also comprises the parts, improvements; and combinations hereinafter set forth and claimed.

In the drawing accompanying and forming part of this specification, and in the description of the drawing, I have shown my invention in its preferred form, and have

shown and explained what I deem to be the best mode of applying the principles thereof; but it is to be understood that, within the scope of the appended claims, I contemplate changes in form, proportions, and materials, the transposition of parts, and the substitution of equivalent members, without departing from the spirit of my invention.

The drawing is an elevation of a cup made in accordance with the principles of my invention, the left-hand portion being a vertical central sectional elevation.

The several collapsible sections are indicated by the reference numerals 1, 2, 3, 4, and 5. The walls of the sections are tapered longitudinally both inside and outside. The outside circumference of the one end of each section is greater than the inside circumference of the contiguous end of the contiguous section, and the tapers correspond so that when the cup is extended, the sections frictionally engage each other and form a tight closure at each joint. Obviously either the large or the small end may be closed; I have shown the small end closed, as indicated by the numeral 6, to form the bottom of the cup.

So far as the foregoing description is concerned, it is not new, and only illustrates the general type of collapsible drinking cups to which my invention is applicable.

Secured to the bottom of the cup is a base 7 having an up-turned outer rim flange 8 and a knurled hand-hold 9. The flange is provided with an inside circumferential groove 10. 11 is a cap of such size and form as to form, in connection with the base, a case for the collapsed cup. It also is provided with a knurled hand-hold.

12 is a peripheral rib adapted to fit into the groove 10 when the cap is applied to the base of the collapsed cup. This rib is of very slight outward projection,—just so it can be squeezed through the flange into engagement with the groove 10.

In order to prevent accidental collapsing of the cup, I form in each section, except one of the end sections where it is unnecessary, a peripheral rib 14. Each rib is so located that when the two contiguous sections are extended with relation to each other, the rib will be immediately back of the end of the adjacent section. In order to permit the passage of the adjacent section over the rib, I utilize an expansible element, preferably by slitting the adjacent end, as

indicated at 15, 15. The ribs 14 need project only slightly; and the slits 15 need be only long enough to permit of the necessary expansion in passing over the rib; they should not be too long, but sufficient space must be left between their upper ends and the top of the contiguous section to form a perfect closure. By exercising care in manufacture, the ribs may be located so that when the cup is extended, the inward pressure of the lower edge of the upper one of two contiguous sections against the upper slanting side of the rib will exert an upward pressure upon said upper section, thereby tending to force a more perfect closure. While this means prevents accidental collapsing of the cup, it will be understood that the cup may be collapsed in the ordinary manner, only slightly more compression being required to force the adjacent lower edges over the contiguous ribs. It is not necessary that the rib 14 be continuous.

What I claim is:

1. In a collapsible drinking cup of the kind described, the combination of a series of tapered sections, one section of each two contiguous sections being formed with a circumferential rib and the other of said two contiguous sections having its end expandible, said end bearing against said rib when the sections are extended with relation to each other so as to prevent collapsing thereof, and said expandible end being adapted to pass over said rib when said sections are forced lengthwise of the cup.

2. In a collapsing drinking cup of the kind described, the combination of a series of tapered sections, one section of each two contiguous sections being formed with a rib engaging against the other of said two sections to prevent the accidental collapsing of said sections.

3. In a collapsible cup of the kind described, the combination of a series of tapered sections, one section of each two contiguous sections being formed with a circum-

ferential rib adapted to bear against the contiguous end of the other of said two sections to prevent accidental collapsing thereof, and said end being circumferentially expandible when said sections are forced relatively lengthwise of the cup so as to pass over said rib.

4. In a collapsible cup of the kind described, the combination of a series of tapered sections, the section at the smaller end being closed to form the bottom of the cup, each section being formed with a circumferential rib at the lower end of the adjacent sections respectively so that when the cup is extended, the lower end of each section bears against the rib formed in the adjacent section, and each of said lower ends having slits extending longitudinally of the cup for permitting said lower ends to expand circumferentially to pass over the respective ribs.

5. In a collapsible drinking cup of the kind described, the combination of two contiguous tapered sections, one of said sections being formed with a stop that prevents the sections collapsing when in extended position, said sections being also formed with means whereby they may be collapsed by forcing the other section over said stop.

6. In a collapsible drinking cup of the kind described, the combination of two contiguous tapered sections, one of said sections being formed with a slightly projecting stop which engages against the other section when the sections are extended to prevent the accidental collapsing thereof, and the said other section being circumferentially expandible adjacent to said stop to permit said other section to be forced past said stop.

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

JOHN F. MITCHELL.

Witnesses:

C. J. ROSEN,
J. M. STARK.