May 13, 1930. W. B. MANGOLD 1,758,005

CUP DISPENSER SUPPORT

Original Filed Jan. 31, 1925 2 Sheets-Sheet 1

FIG 1

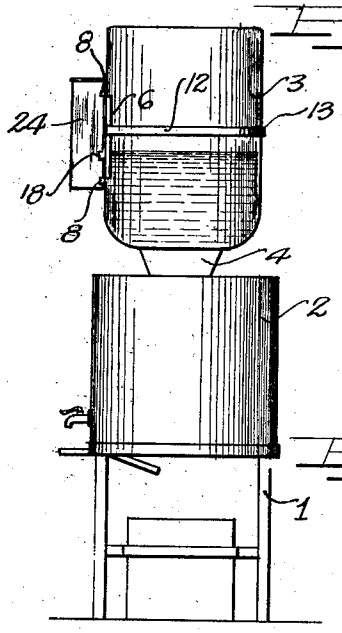


FIG 2

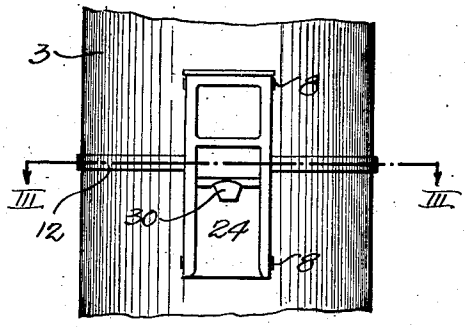


FIG 3

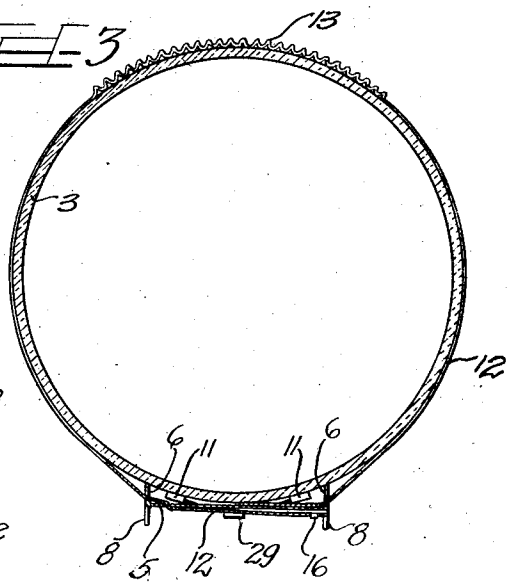


FIG 4

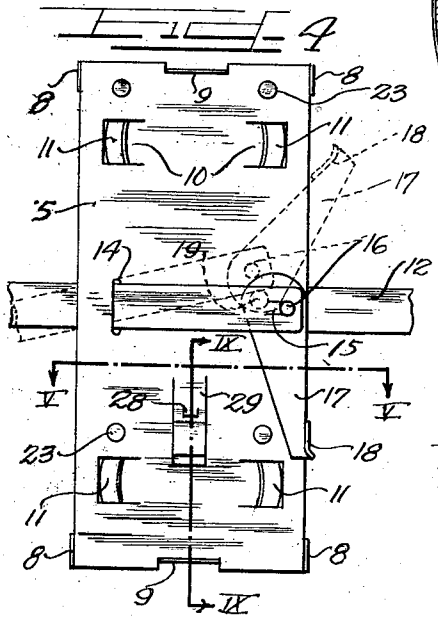


FIG 10

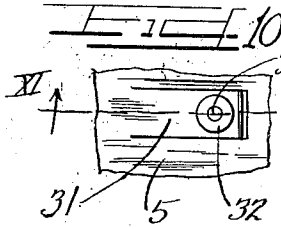
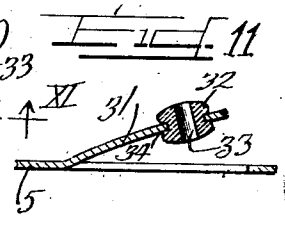


FIG 11



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CUP DISPENSER SUPPORT

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FIG. 5

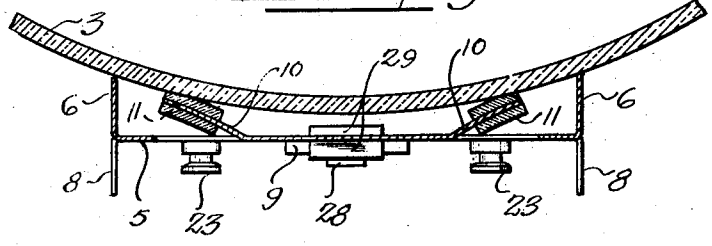


FIG. 7

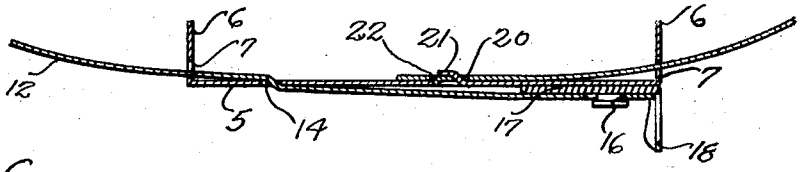


FIG. 6

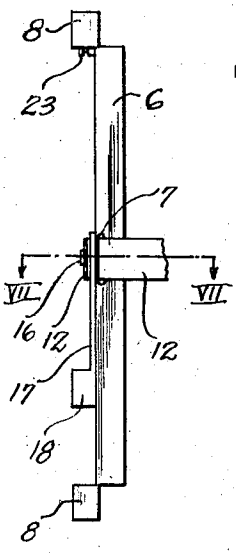


FIG. 8

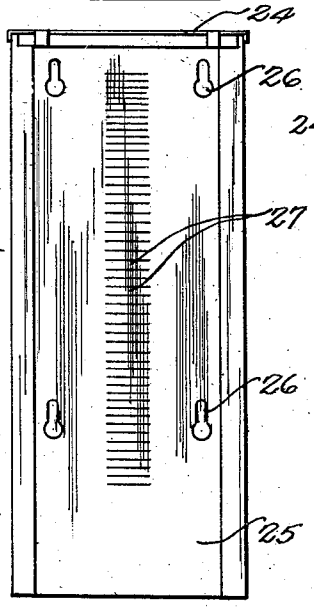
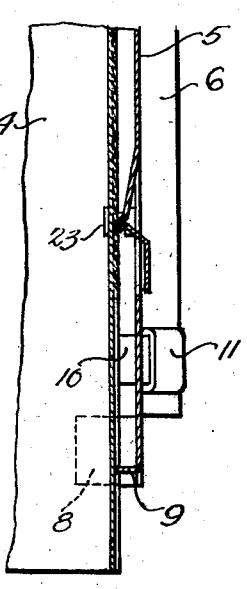


FIG. 9



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Patented May 13, 1930 1,758,005

UNITED STATES PATENT OFFICE

WILLIAM B. MANGOLD, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO VORTEX CUP COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

CUP-DISPENSER SUPPORT

Application filed January 31, 1925, Serial No. 5,912. Renewed April 19, 1927.

This invention relates more particularly to an improved type of demountable support adapted to removably carry a paper cup dispenser, and furthermore, adapted to be removably engaged on a bottle of drinking water when supported in position upon a cooler.

It is an object of this invention to provide a support for paper cup dispensers, said support adapted to be readily engaged on a drinking water cooler bottle.

It is also an object of this invention to provide a removable support which is adapted to be engaged circumferentially around a bottle of a drinking water cooler and further adapted to have a paper cup dispenser locked on said support against removal when the support is in position on the bottle.

It is a further object of this invention to provide a cup dispenser support adapted to removably carry a paper cup dispenser and having an eccentrically controlled strap associated therewith for the purpose of permitting the support and the dispenser to be removably engaged in a vertical position upon the side of an inverted bottle when supported by a cooler.

It is furthermore an object of this invention to provide a mounting plate for a paper cup dispenser, said mounting plate having locking means for holding the dispenser in place thereon and furthermore having a mounting strap or band provided with a tensioning mechanism whereby the band may be engaged around the bottle of drinking water or the like to hold the dispenser in a convenient position to permit cups to be withdrawn therefrom to be filled from the contents of the bottle.

Another object of the invention is to provide a paper cup dispenser support having a resilient band connected therewith and adapted to be operated by an eccentric to cause tensioning of the band to hold the same in position on a bottle of drinking water.

Still another object of the invention is the construction of a support adapted to be removably engaged on a container, said support having locking means thereon adapted to coact with a paper cup dispenser engaged on said support to hold the dispenser locked against removal from said support when the support is mounted in position on a container.

It is an important object of this invention to provide a paper cup dispenser for use with a drinking water cooler or the like, said dispenser adapted to be removably engaged on a supporting device having a locking mechanism associated therewith for engaging the dispenser and also having a supporting band adapted to be engaged around the cooler and operated by means of a lever controlled eccentric for tensioning the band.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

This invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a side elevation of a drinking water cooler of the bottle supporting type having mounted thereon a paper cup dispenser and support embodying the principles of this invention.

Figure 2 is a front elevation of the paper cup dispenser and its support engaged on a fragmentary portion of a water bottle or similar container.

Figure 3 is a transverse section taken on line III—III of Figure 2.

Figure 4 is a front elevation of the paper cup dispenser support with the paper cup dispenser removed and showing the operation of the supporting band in dotted lines.

Figure 5 is an enlarged detail section taken on line V—V of Figure 4 with parts in section.

Figure 6 is a side elevation of the dispenser support with parts broken away.

Figure 7 is an enlarged fragmentary detail section taken on line VII—VII of Figure 6 with parts omitted.

Figure 8 is a rear elevation of the paper cup dispenser.

Figure 9 is a fragmentary detail section taken on line IX—IX of Figure 4 showing a fragmentary portion of the paper cup dispenser in position.

Figure 10 is a fragmentary view of a mounting plate illustrating a modified form of contact pad.

Figure 11 is a section taken on line XI—XI of Fig. 10.

As shown on the drawings:

The reference numeral 1 indicates a stand supporting a cooler tank 2 adapted to carry ice for the purpose of cooling drinking water delivered thereto from a water bottle 3 which is supported on top of the tank 2 in an inverted position with the neck of the bottle projecting into a cooler 4 on said tank.

The improved dispenser support comprises a mounting plate 5 the side margins of which are bent rearwardly to afford two longitudinal side flanges 6 each of which is provided with a slot 7 intermediate the ends thereof. The side flanges 6 extend longitudinally of the plate 5 to within a short distance of the ends of said plate. Also integrally formed at each end of the plate adjacent the ends of the side flanges 7 are forwardly directed lugs or finger pieces 8. Struck from the middle portion of each end margin of the mounting plate 5 is a forwardly directed strip or flange 9 adapted to act as stops for the rear wall of a paper cup dispenser. Struck rearwardly from the mounting plate 5 are a plurality of lugs or tongues 10 which are disposed at an angle with respect to the mounting plate 5 as illustrated in Figure 5. Each of the tongues 10 has engaged thereon a shoe or pad 11 constructed of a continuous band of rubber or similar cushioning material. As illustrated in Figure 4 there are four pads 11 provided, positioned near the corners of the mounting plate. It will, of course, be understood that any desired number of cushioning pads may be provided either of the type described or of equivalent types. The pads 11 are preferably constructed of rubber and are adapted, when the support is in position on the bottle 3, to frictionally engage the bottle to hold the support against sliding on said bottle. The said flanges 6 of the supporting plate are also adapted to contact the bottle 3 and are resiliently held against said bottle due to the spring action of the tongues 10 and the resilient pads 11 supported thereon.

The mounting plate 5 is adapted to be supported in position on a bottle 3 by means of a metal band, girdle or strap 12 the middle portion of which is crimped or corrugated to afford a spring section 13 as clearly illustrated in Figure 3. One end of the retaining strap 12 projects into the slot 7 of one of the flanges 6 and then through a slot 14 (Figure 4). Said end of the strap 12 is provided with a latching tongue 15 and with an aperture in the outside of said tongue to permit said end of the strap to be removably engaged on an eccentric stud or pin 16. The eccentric pin is securely mounted on a lever or handle 17 having a thumb piece 18 integrally formed at an angle on one edge thereof. The lever 17 is pivotally supported on a pin 19 engaged on the mounting plate 5. The other end of the retaining strap 12 projects through the slot 7 of the opposite flange 6 of the mounting plate and remains at the rear of said mounting plate and has an aperture 20 (Figure 7) provided therein to permit said end of the strap 12 to engage over a retaining hook or lug 21 which is struck rearwardly from the supporting plate 5. A detent 22 is provided in the end of the strap 12 to permit the same to lockingly engage over one edge of the aperture in the plate 5 from which the latching hook 21 has been struck. It will thus be noted that one end of the retaining or supporting strap 12 is positioned by the plate and is engaged or latched by the hook 21 while the other end of said strap projects through one of the side flanges and outwardly through a slot in the mounting plate 5 to permit the second end of said strap to be positioned in front of said mounting plate and engaged on the eccentric pin 16 so that the lever 17 when operated about its pivot will permit the strap to be tensioned so that the same can be tightly clamped around the body of the water bottle 3 as illustrated in Figures 1 and 3.

Mounted on the plate 5 are a plurality of grooved supporting pins or posts 23 provided for the purpose of permitting a paper cup dispenser 24 to be removably supported on said plate 5. The paper cup dispenser 24 as illustrated in Figure 8 is provided with a rear wall or mounting plate 25 having a plurality of properly spaced key hole slots 26 therein with the enlarged portions of said slots at the lower end thereof to engage over the ends of the supporting posts 23 after which the dispenser may be pulled downwardly so that the narrowed upper ends of said slots 26 will slide in the grooves of said posts. The back wall 25 of the dispenser 24 is formed with a strip of teeth 27 with which a locking lug 28 is adapted to coact to hold the dispenser locked in position on the supporting plate 5. The locking lug 28 is struck from a resilient tongue or strip 29 which in turn is struck from the supporting plate 5 as clearly shown in Figure 4. The free end of the spring strip 29 is bent to project backwardly through the opening from which the strip 29 has been struck and affords a finger piece permitting the strip 29 to be pulled rearwardly through said opening thereby moving the latching lug 28 out of engagement with the teeth 27 formed on the back wall or back plate of the paper cup dispenser 24.

Figures 10 and 11 illustrate a modified form of mounting plate 5 having struck therefrom a plurality of tongues or lugs 31

each of which is provided with an aperture for receiving a rubber friction pad or button 32 removably engaged thereon. Each button 32 is provided with an axial passage 33 and a peripheral groove 34. The axial passage 33 is provided in each button to permit the button to be compressed sufficiently to allow one end thereof to be inserted in the tongue 31 after which the compressed button is permitted to expand into the position illustrated in Figure 11. The rubber pads or buttons 32 are adapted to frictionally and resiliently engage against the surface of a bottle 3 similar to the arrangement of the pads 11 as illustrated in Figure 5 of the drawings. The resilient pads 32 serve to hold the cup dispenser support against movement with respect to the water bottle on which the cup dispenser is engaged.

The operation is as follows:

A paper cup dispenser carrying a stack of nested paper cups 30 has the rear wall thereof provided with the key slots 26 and with the strip of teeth 27 to permit the dispenser to be removably engaged on the mounting plate 5 of the dispenser support. Before the support is engaged on a bottle 3 as illustrated in Figure 1 the dispenser 24 is positioned so that the back wall thereof is disposed adjacent the front surface of the plate 5. The enlarged ends of the key slots 26 are engaged over the supporting posts 23 and the dispenser is then pulled downwardly with respect to said plate 5 to permit the reduced ends of said slots to slidably engage in the grooves of the posts 23. The forwardly directed stop flanges on the plate 5 serves as stops for the purpose of holding the dispenser positioned with respect to the mounting plate 5. The end lugs or finger pieces 8 of the plate 5 are positioned to the outside of the rear margins of the side walls of the dispenser 24 thus holding the dispenser rigidly in position on the mounting plate 5. When the dispenser is engaged on the supporting posts 23 the latching lug 28 on the spring strap 29 comes into contact with the strip of teeth 27 formed on the back wall of the dispenser. As the dispenser is pulled downwardly over the supporting posts 23 into the narrow portions of the slots 26 the latching lug 28 moves over the teeth 27 to hold the dispenser locked against removal on the mounting plate 5 when it has been pulled downwardly.

In case it is desired to remove the dispenser from the mounting plate the resilient spring strip 29 must first be pulled outwardly by means of its projecting end to release the latching lug 28 from engagement with the teeth 27 of the dispenser back wall. When this is done the dispenser may be slidably moved upwardly with respect to the mounting plate 5 a distance sufficient to permit the heads of the posts to register with the enlarged lower portions of the slots 26. The dispenser may then be removed from the supporting plate.

After the dispenser has been mounted on the supporting plate and pulled downwardly to permit the latching lugs 28 to coact with the teeth on the back of the dispenser, the dispenser and its support is ready to be mounted in position on the water bottle 3 of the cooler. The lever 17 when in released position assumes the position illustrated in dotted lines in Figure 4 thereby releasing any tension on the retaining strap 12 to permit said strap to assume its greatest expansion so that the strap may be engaged over the end of the inverted bottle 3 and slid downwardly thereon to a convenient position similar to that illustrated in Figure 1. The side flanges 6 on the mounting plate 5 engage against the outer surface of the bottle 3 as illustrated in Figures 3 and 5. To hold the dispenser support in a set position on the bottle 3 the lever 17 is swung downwardly from the full line position of Figure 4 into the dotted line position until the finger piece 18 strikes the side of the casing. When the lever 17 is swung downwardly the eccentric pin 16 thereon causes a pull to be exerted on one end of the strap 12 so that the strap is tensioned or tightly pulled around the bottle, thus clamping the rubber pads 11 on the spring lugs 10 frictionally against the surface of the bottle to prevent the support from sliding on the bottle 3. When the strap 12 is tensioned by operation of the lever 17 the mounting plate 5 is, of course, drawn inwardly toward the bottle 3 so that the cushions or pads 13 are resiliently held in contact with the bottle. The waved or crimped spring portion of the strap 12 is provided to afford a resilient means in the strap to permit said strap to compensate for variations in the diameters of the water bottles used on the cooler 2.

Attention is called to the fact that when the dispenser is engaged on the mounting plate 5 and the mounting plate 5 is held in position against the side of a water bottle 3, access to the spring lug 29 is shut off so that said spring lug cannot be operated to cause the latching lug 28 to be moved out of locking engagement with the teeth on the back of the dispenser 24. The dispenser when engaged upon a bottle is therefore locked against removal from the mounting plate 5. To remove the dispenser from the mounting plate it is, of course, first necessary to swing the control lever 17 from the full line position of Figure 4 into the dotted line position thereby releasing the tension on the supporting strap 12 to permit the supporting plate 5 and said strap to be removed from the bottle. After this is done the resilient control strip 29 may be pulled through the aperture in the plate 5 to cause the latching lock 28 to be pulled out of latching engagement with the teeth 29. When this is done the dispenser may be slid-

ably moved with respect to the mounting plate 5 to permit the enlarged ends of the apertures 26 to be removed over the heads of the supporting posts 23.

While the dispenser support is shown associated with a water bottle 3 of a water cooler device, it will, of course, be understood that the mounting plate 5 and its supporting strap may be engaged on any desired type of bottle, tank or liquid container containing liquid adapted to be dispensed in cups carried by the dispenser or if preferred may be secured about any suitable and convenient object.

The device covers a convenient arrangement for supporting a paper cup dispenser on a bottle or tank so that paper cups may be conveniently withdrawn from the dispenser when it is desired to draw off a quantity of liquid from the bottle or cooler as the case may be.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. A cup dispenser support comprising a flanged mounting plate, supporting posts secured thereon, a plurality of resilient pads supported on said mounting plate, a latching means for holding a dispenser when engaged on said supports in locked position on said mounting plate, stop flanges on said mounting plate for the dispenser, a mounting strap having one end thereof removably engaged with said mounting plate, and an eccentric lever mounted on said mounting plate and connected with the other end of said strap to permit tensioning of said strap for the purpose of holding the mounting plate secured in a position on a suitable support.

2. The combination with a mounting plate, of a plurality of posts thereon, a dispenser having slots therein adapted to be removably engaged on said posts, a plurality of teeth formed on said dispenser, latching means on said plate adapted to removably engage said teeth to hold the dispenser locked in position on said mounting plate, a strap connected with said mounting plate for supporting the same in position on a container, and eccentric means for tensioning said strap to removably clamp the mounting plate and said dispenser on a suitable support.

3. The combination with a paper cup dispenser having a plurality of slots therein, of a strip of teeth formed on said dispenser, a mounting plate, a plurality of posts on said mounting plate for supporting the slotted dispenser in position thereon, a tongue struck from said mounting plate, and a latching lug struck from said tongue and positioned to lockingly engage with the teeth on said dispenser to hold the dispenser locked on said mounting plate.

4. A cup dispenser support comprising a flanged mounting plate, projections formed thereon adapted to be engaged by a dispenser, latching means on said plate adapted to coact with said dispenser to hold the same locked on said plate, a strap for mounting said plate, and a lever mechanism for tensioning said strap for the purpose of securing the plate in position on a support.

5. A paper cup dispenser support comprising a mounting plate, a spring strap for mounting the same in position on a support, a lever pivoted on said mounting plate, an eccentric pin on said lever engaged with said spring strap to tension the same to hold the plate in position, spring pads on said plate to hold the plate against sliding movement on the support, dispenser supporting projections on said plate, and dispenser latching means on said plate for lockingly holding the dispenser in position thereon.

6. In a device of the character described, a metal girdle having an elastic section, a dispenser supporting plate secured to said girdle, said plate having inwardly directed frictional pads, and a quick release eccentric connection associated with said girdle.

7. In a device of the class described, a one piece expansible and contractible metal girdle, means including a quick release connection for connecting the ends of said girdle, and a dispenser supporting member carried by said girdle having resiliently supported friction members thereon.

8. In a paper cup dispenser, a metal band having an integral corrugated elastic section, means including a quick release eccentric connection for tensioning said band, and a padded dispenser supporting member carried by said band.

In testimony whereof I have hereunto subscribed my name.

WILLIAM B. MANGOLD.