

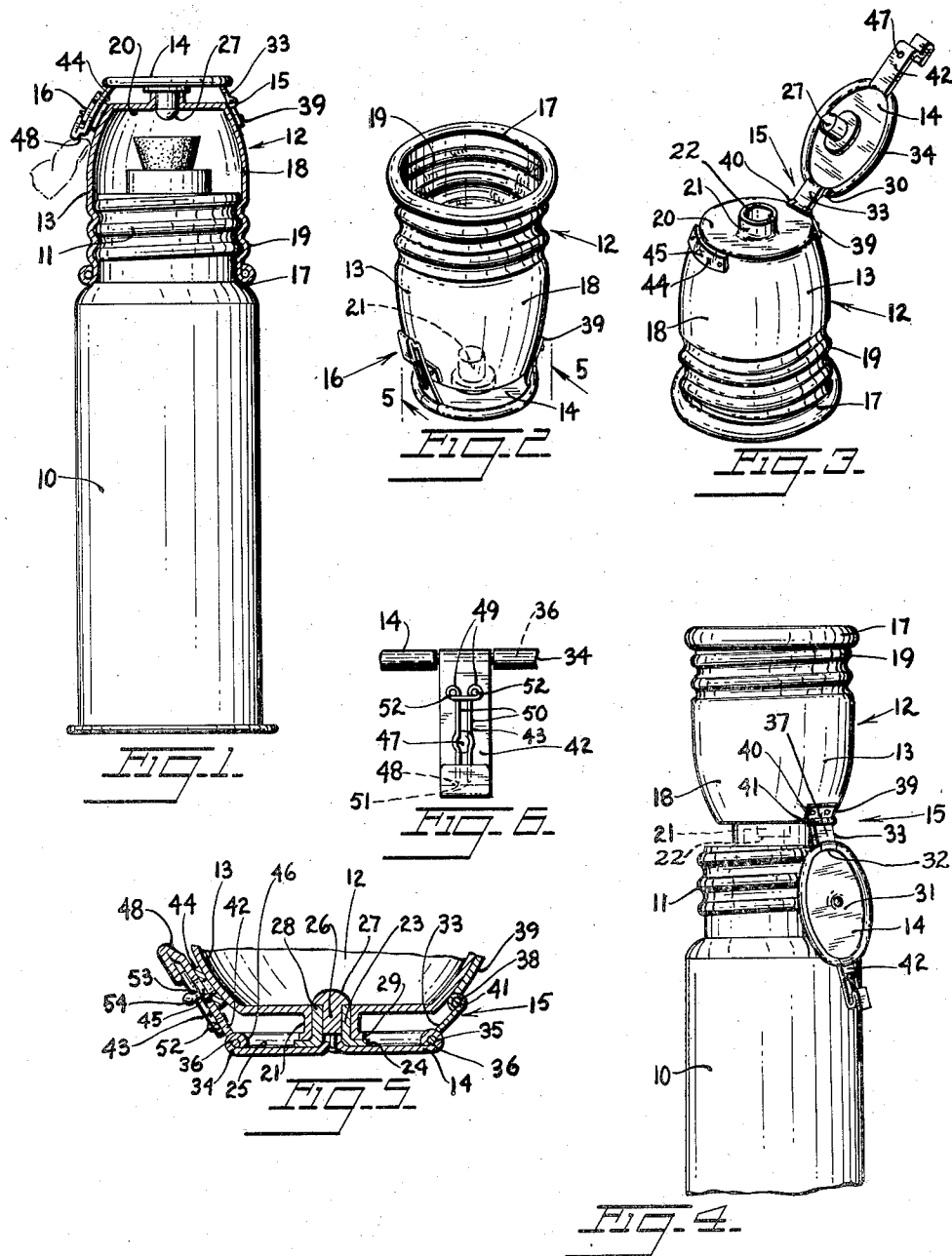
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CAP FOR FLASKS OR THE LIKE

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CAP FOR FLASKS OR THE LIKE

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This invention relates to flasks or bottles such as Thermos bottles or the like, and more particularly to new and useful improvements in a cap therefor which can be used as a drinking cup or as a funnel.

An object of the invention is to provide a cap of the character specified with a novel stoppered lid and new hinge connecting and fastening means therefor.

This and other objects are accomplished in part and briefly by providing a flask and a cap therefor comprised of a body portion, a lid, a double hinge and fastening means. The body portion has side walls, a bottom and a nozzle extending downwardly from the bottom capable of being inserted into the mouth of the flask. The lid has a centrally disposed rubber stopper secured thereto by a pin which has an enlarged head resting on and covering the stopper end. When rotated into position by means of the double hinge, the stopper and pin head enter and close the open end of the nozzle. The lid can be releasably locked in this position by the fastening means.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is an elevation, partly in section, of a flask provided with an improved cap that can be used as a drinking cup or a funnel, with a thumb, shown in phantom, in position to release the catch.

Fig. 2 is a perspective view of the cap in closed position ready for use as a drinking cup.

Fig. 3 is a perspective view of the cap in open position, the cap being inverted to reveal construction details.

Fig. 4 is an elevation of the cap and upper portion of the flask, the cap being mounted in open position ready for use as a funnel.

Fig. 5 is a fragmentary sectional view through the line 5-5 of Fig. 2.

Fig. 6 is an enlarged elevation of a spring catch device of the cap.

In the drawings and in the specification, in which like reference numbers designate similar elements, a flask or bottle 10 having an externally threaded neck 11 is provided with a cap 12 which embodies the invention herein.

The cap 12, which can be made of metal, plastic

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or other suitable material, is comprised of a body portion 13, a lid 14, a double hinge 15 rotatably joined at one end to the lid and at the other end to the body portion, and catch means 16.

The body portion 13 is substantially cylindrical in shape and has a lipped open end 17 suitable for drinking, side walls 18 having female threads 19 adjacent the lipped end and adapted to engage the threaded neck 11 of the flask, and a bottom 20 with a substantially cylindrical nozzle 21 extending outwardly therefrom, the body portion 13 and nozzle 21 being coaxial. The nozzle has a vent 22 and is capable of fitting in the flask mouth, thus permitting the cap to serve as a funnel.

The lid 14 is substantially circular and has an outwardly extending flanged stopper 23 concentrically disposed thereon with its flange 24 resting on an underside 25 of the lid. A rivet or pin 26 extends through the stopper and lid securing them together, the rivet having an enlarged head 27 which rests on and covers stopper end 28 removed from the flange 24. The stopper and rivet are shaped to permit the rivet head and an adjacent portion of the stopper to pass through the nozzle vent 22 and to fit slidably in the nozzle with the rivet head acting as a guide. In fully closed position edge 29 of the nozzle about the vent is cushioned on the stopper flange 24. Thus positioned, the cap bottom 20 and its nozzle are fully sealed so that the cap can be used as a drinking cup with the lid 14 substantially parallel with and spaced from the bottom 20.

The cap can be rotated into closed position by means of the double hinge 15 which is joined thereto as follows:

Two spaced ears 30 extend outwardly from outer face 31 of the lid near its periphery, and an end 32 of a rectangular connecting plate 33 of the double hinge fits between the ears 30. The circular edge of the lid between the ears and the end 32 are bent over to form tracks 34 and 35 respectively, and an endless wire 36 is disposed within said tracks, connecting the lid and plate rotatably.

The connecting plate 33 of the double hinge 15 has its other end 37, opposite the end 32, bent over to form a channel or way 38.

A longitudinally arcuate reinforcing strip 39 of the hinge 15 is secured to and extends around a portion of the side walls 18 of the cap adjacent its bottom 20, said strip 39 having spaced projecting ears 40 between which the channel 38 is disposed. A pin 41 extending through the

channel 38 and ears 40 joins them together rotatably. Thus, when the cap 12 is in position on the flask for use as a funnel (shown in Fig. 4), the lid 14 is out of the way and rests adjacent the flask neck 11, and when it is desired to use the cap as a drinking cup (as in Fig. 2) or as a cap to a flask (as in Fig. 1), the top can be rotated by means of the double hinge until the stopper and rivet close the nozzle with the plate parallel to the cap bottom.

The catch or fastening means 16 is adapted to releasably fasten the lid in the latter closed position and comprises a hasp 42, a spring 43, and a reinforcing piece 44 with a stud 45. The hasp 42 has a bent over end 46 which is hooked over the track 34 opposite the double hinge 15. The wire 36, which extends through said track, passes through the bent over end 46 rotatably joining the hasp and lid. The hasp is further provided with a centrally disposed hole 47 and a bend 48 on the end opposite the end 46. The spring 43 has twin loops 49 and two legs 50 which straddle the hole 47 resiliently obstructing it. Ends 51 of the spring legs rest in the overlapping bend 48 and rivets 52 extend through the twin loops and the hasp, securing them together.

The reinforcing piece 44 is a longitudinally arcuate strip which extends around and is secured to a portion of the side walls 18 of the cap adjacent its bottom 20 and opposite the strip 39.

The stud 45 extends outwardly from the piece 44 and has a neck 53 and a reduced end 54. Thus shaped and constructed, the catch means is operated as follows:

With the lid in closed position, the hasp 42 is rotated until the stud end 54 passes through the hasp hole 47 and past the obstructing spring legs 50 which settle about the stud neck 53, gripping the hasp firmly. The catch can be easily released since the bend 48 is shaped to allow a thumb to pry the hasp from the stud (as is graphically shown in Fig. 1).

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A combination funnel and cup comprising a body portion, a lid, and a double hinge, the body portion having side walls, a bottom, an open ended nozzle extending downwardly from the bottom, the lid having a centrally disposed stopper projecting therefrom and a pin extending through the stopper and lid securing them together, the pin having an enlarged head resting on and covering the end of the stopper removed from the lid, the stopper and pin head being capable of fitting slidably in the nozzle, the double hinge comprising a connecting member rotatably joined at one end to the body portion and at the other end to the lid, the lid being adapted to be rotated into position with its stopper and pin head in the nozzle, closing its open end.

2. A combination funnel and cup comprising a body portion, a lid, and a double hinge, the body portion being approximately cylindrical in shape with side walls, a bottom, an open ended nozzle extending downwardly from the bottom,

the lids being substantially circular in shape and having two spaced ears projecting outwardly at its periphery and a portion of its edge bent over to form a track, said lid being further provided with a concentrically disposed stopper and a pin extending through the stopper and lid securing them together, the pin having an enlarged head resting on the end of the stopper removed from the lid, said stopper and pin head being capable of fitting slidably in the nozzle, the double hinge comprising a connecting member and a wire, the connecting member being rotatably joined at one end to the body portion and having its opposite end bent over to form a way, the last mentioned bent over end being disposed between the spaced ears of the lid, the wire extending through the track of the lid and the way of the connecting member joining them rotatably, the lid being adapted to be rotated into position with its stopper and pin head in the nozzle, closing its open end.

3. In combination with a flask having a threaded neck, a cap therefor adapted for use interchangeably as a drinking cup and a funnel, said cap comprising a body portion, a lid, and a double hinge, the body portion having side walls, a bottom, a nozzle extending downwardly from the bottom and capable of being inserted into the neck of the flask, the side walls having a threaded top portion adapted to engage the threaded neck of the flask, the lid being substantially circular in shape and having two spaced ears projecting outwardly at its periphery and a portion of its edge bent over to form a track, said lid being further provided with a concentrically disposed stopper and a pin extending through the stopper and lid securing them together, the pin having an enlarged head resting on the end of the stopper removed from the lid, said stopper and pin head being capable of fitting slidably in the nozzle, the double hinge comprising a connecting member and a wire, the connecting member being rotatably joined at one end to the body portion and having its opposite end bent over to form a way, the last mentioned bent over end being disposed between the spaced ears of the lid, the wire extending through the track of the lid and the way of the connecting member joining them rotatably, the lid being adapted to be rotated into position with its stopper and pin head in the nozzle, closing its open end.

4. A combination funnel and cup comprising a body portion, a lid rotatably joined thereto, and fastening means, the body having side walls, a bottom, an open ended nozzle extending downwardly from the bottom, the lid having a centrally disposed stopper projecting therefrom capable of fitting slidably in the nozzle, said lid being adapted to be rotated into position with its stopper in the nozzle closing its open end, the fastening means having a hasp and a stud, the hasp being rotatably secured to the lid and having a hole therethrough and a spring, the spring having two legs straddling the hole and obstructing it somewhat, and the stud extending outwardly from the side walls of the body portion and being adapted to enter the hasp hole and engage spring legs to releasably retain the lid in closed position.

5. In a combination funnel and cup having a body portion and a lid rotatably joined thereto, fastening means comprising a stud projecting from one of the above mentioned parts and a hasp rotatably joined to the other of the above mentioned parts, the stud having a head and an

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adjacent necked portion, the hasp having a hole therethrough capable of admitting the stud head and neck, and a spring with legs straddling the hole and resiliently obstructing it, said hasp being adapted to rotate into position with the stud head and neck extending through the hole and the spring legs releasably gripping the stud neck.

6. In a combination funnel and cup having a body portion and a lid rotatably joined thereto, fastening means comprising a stud projecting from one of the above mentioned parts and a hasp rotatably joined to the other of the above mentioned parts, the stud having a head and an adjacent necked portion, the hasp having a bent over edge, a centrally disposed hole capable of admitting the stud head and neck, and a spring with legs straddling the hole and resiliently obstructing it, the ends of the legs resting within the bent over edge, said hasp being adapted to rotate into position with the stud head and neck extending through the hole and the spring legs releasably gripping the stud neck.

7. In a combination funnel and cup having a body portion with an open ended nozzle, a lid, a double hinge and fastening means, the lid having a stopper projecting therefrom and a pin extending through the stopper and lid securing them together, the pin having an enlarged head resting on the end of the stopper removed from the lid, said stopper and pin head being capable of fitting slidably in the nozzle, the lid being further provided with a wire, two spaced ears projecting outwardly at the lid periphery and a track along its edge, the wire extending endlessly in the track and between the ears, the double hinge consisting of a connecting member rotatably joined at one end to the body portion, having its opposite end disposed between the lid ears and bent over to form a way about the wire rotatably joining the lid to the connecting member, the lid being adapted to rotate into position with its stopper and pin head in the nozzle closing its open end, the fastening means comprising a stud and a hasp, the stud projecting outwardly from the body portion and having a head and an adjacent necked portion, the hasp having one end bent over to form a way disposed about the above mentioned endless wire extending about the lid, thereby rotatably joining the hasp and lid, said hasp being further provided with a flanged end opposite the bent over end, a centrally disposed hole capable of admitting the stud head and neck, a spring with legs straddling the hole and resiliently blocking it, the ends of the spring legs resting within the flanged end, said hasp being adapted to being rotated with the lid in closed position

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so that the stud head and neck extend through the hole with the spring legs releasably gripping the stud.

8. In combination with a flask having a threaded neck, a cap therefor adapted for use interchangeably as a drinking cup and a funnel, said cap comprising a body portion, a lid, a double hinge and fastening means, the body portion having side walls, a bottom, a nozzle extending downwardly from the bottom and capable of being inserted into the flask neck, the side walls having a threaded top portion adapted to engage the threaded neck of the flask, the lid having a stopper projecting therefrom and a pin extending through the stopper and lid securing them together, the pin having an enlarged head resting on the end of the stopper removed from the lid, said stopper and pin head being capable of fitting slidably in the nozzle, the lid being further provided with a wire, two spaced ears projecting outwardly at the lid periphery and a track along its edge, the wire extending endlessly in the track and between the ears, the double hinge consisting of a connecting member rotatably joined at one end to the body portion, having its opposite end disposed between the lid ears and bent over to form a way about the wire rotatably joining the lid to the connecting member, the lid being adapted to rotate into position with its stopper and pin head in the nozzle closing its open end, the fastening means comprising a stud and a hasp, the stud projecting outwardly from the body portion and having a head and an adjacent necked portion, the hasp having one end bent over to form a way disposed about the above mentioned endless wire extending about the lid, thereby rotatably joining the hasp and lid, said hasp being further provided with a flanged end opposite the bent over end, a centrally disposed hole capable of admitting the stud head and neck, a spring with legs straddling the hole and resiliently blocking it, the ends of the spring legs resting within the flanged end, said hasp being adapted to being rotated with the lid in closed position so that the stud head and neck extend through the hole with the spring legs releasably gripping the stud.

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The following references are of record in the file of this patent:

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