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SAFETY CONTAINER

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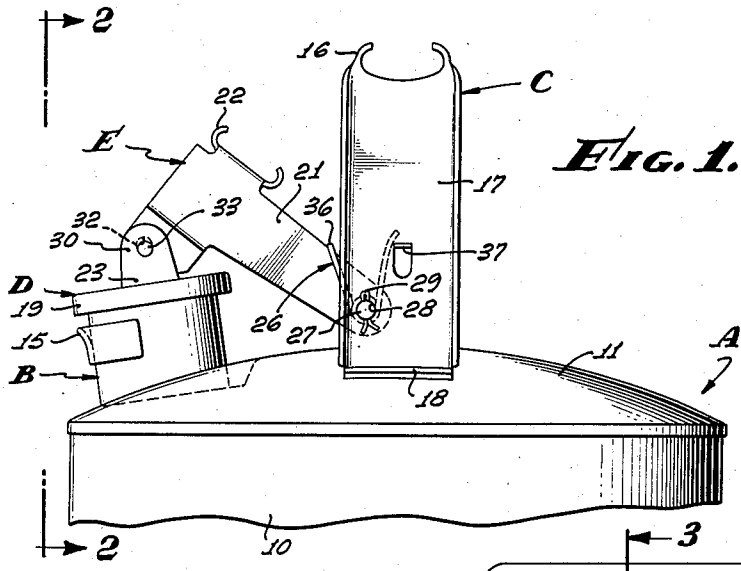


FIG. 1.

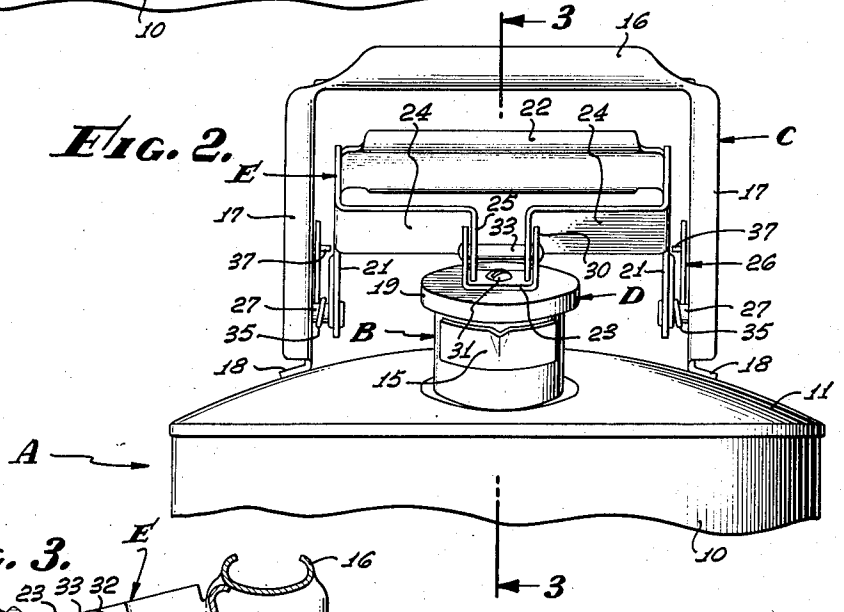


FIG. 2.

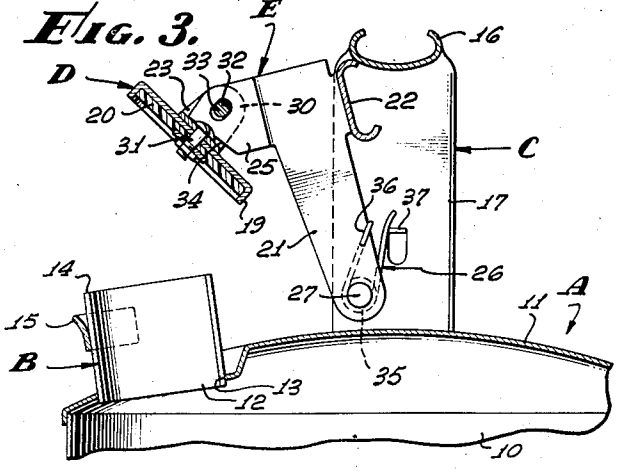


FIG. 3.

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SAFETY CONTAINER

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This invention has to do with a safety container adapted to handle gasoline or the like and it is a general object of the invention to provide an improved safety container having a supporting handle, a pouring spout and a spring actuated closure mechanism related to the handle and adapted to normally yieldingly engage and close the spout.

Another object of the present invention is to provide a safety container of the character referred to, with a spring actuated closure construction for the pouring spout on the container and having an actuating bar which is related to the supporting handle on the container so that the bar and the handle can be conveniently, simultaneously engaged by a person's hand.

Another object of the present invention is to provide a structure of the character referred to wherein the bar and handle are related to each other so that when the said bar is engaged and the container is tipped for pouring, the weight of the container is sufficient to actuate the closure mechanism to an open position, where the bar engages and stops against the handle, and so that the closure mechanism does not have to be independently actuated after the can is tipped for pouring.

A further object of the present invention is to provide a safety can having a closure mechanism of the character referred to that is simple, easy and economical of manufacture, and which is extremely easy and convenient to operate.

The various objects and features of my invention will be fully understood from the following detailed description of a typical preferred form and application of my invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a side elevational view of a portion of the safety container provided by the present invention. Fig. 2 is a front elevational view of the structure shown in Fig. 1 and taken as indicated by line 2—2 on Fig. 1. Fig. 3 is a transverse sectional view of my safety container, it being a view taken substantially as indicated by line 3—3 on Fig. 2 and showing the closure mechanism in an actuated position.

The safety container provided by the present invention is shown as including, a liquid handling vessel A, a pouring spout B on the vessel, a carrying and supporting handle C, a cap D adapted to normally engage and close the spout, and actuating means E pivotally carried by the handle and carrying the cap and adapted to shift the cap into and out of engagement with the spout.

The liquid handling vessel A shown throughout the drawings is a simple or conventional type of can or vessel, such as is commonly employed to carry gasoline or the like, and is characterized by an elongate vertically disposed cylindrical body 10, a substantially flat horizontally disposed bottom wall (not shown) fixed to and closing the bottom end of the body, and a substantially horizontally disposed top wall 11 fixed to and closing the upper or top end of the body. In the particular case illustrated, the vessel is formed of sheet metal and the top wall 11

thereof is crowned slightly, in accordance with accepted design for vessels or containers of the character here concerned with.

The pouring spout B is a simple, straight substantially vertically disposed tubular part, open at both ends. The pouring spout has its lower end portion 12 engaged in an aperture 13 in the top wall 11 of the vessel A so that it projects upwardly therefrom. The upper terminal end of the spout B is cut off straight and smooth and establishes an annular seat 14 adapted to be engaged by and seal with the cap D.

In the particular case illustrated, the aperture 13 in the vessel A is axially offset from the central vertical axis of the vessel to occur adjacent the upper peripheral edge thereof. The spout B is engaged in the aperture so that it projects upwardly and radially outwardly therefrom. The support B is shown as being fixed in the aperture 13 in the vessel by means of soldering or the like.

A suitable pouring lip 15 is shown fixed to the pouring spout B at its outer side and is adapted to stop or prevent liquid from running down the spout and onto the vessel when the container is tipped and liquid is being poured therefrom.

The handle C is a substantially U-shaped part, formed of sheet metal, and is characterized by an elongate horizontally disposed hand grip 16, and an elongate vertically disposed leg 17 depending from each end of the hand grip. Each leg 17 at the ends of the hand grip 16 is provided with an outwardly projecting tab-like part 18 at its lower terminal end and adapted to be fixed to the top wall 11 of the vessel A as by means of spotwelding or the like.

The handle C is fixed to the top 11 of the vessel A so that the hand grip 16 is spaced above the top 11 thereof and so that it intersects the vertical axis of the vessel. The hand grip 16 is shown as extending in a plane across the top vessel which is at right angles to the radial plane of the vessel along which the pouring spout B is located.

The cap D adapted to engage and close the pouring spout B is shown as being in the form of a flat disc-shaped member, slightly larger in diameter than the spout B, and is adapted to be shifted into and out of engagement with the annular seat 14 established by the upper terminal end of the spout B.

In the particular case illustrated, the cap D is provided with a downwardly projecting annular flange 19 about its outer periphery, adapted to occur around the upper end portion of the spout B, when the cap is engaged thereon, to prevent excessive radial shifting of the cap relative to the spout. The cap D is shown as being further provided with a suitable sealing disc 20, formed of rubber or the like, fixed to the underside of the cap to occur within the confines of the flange 19. The sealing disc 20 is adapted to occur between the spout and the cap to engage and establish a fluid tight seal with the set 14 of the spout.

The actuating means E supported by the handle C and adapted to pivotally carry and shift the cap D into and out of sealing engagement with the spout B, includes generally, a pair of elongate laterally spaced parallel arms 21, having inner and outer ends, means pivotally connecting the inner ends of the arms to the legs 17 of the handle C, a finger engaging bar 2 fixed to and extending between the outer ends of the arms, a clevis plate 23 fixed to the top of the cap D, and a pair of like, elongate oppositely disposed fingers 24 fixed to the outer ends of the arms 21 to project laterally therefrom and having opposed end portions 25 engaged with and pivotally connected to the clevis plate 23.

In the particular form of the invention illustrated, the arms 21, gripping bar 22 and fingers 24, are formed of sheet metal and are integrally joined together to establish a unitary frame-like structure.

The actuating means E further includes suitable spring means **26** between the arms **21** and the legs **17** of the handle C, to normally yieldingly urge the actuating means forwardly so that the cap D engages and closes the spout A.

In the form of the invention illustrated, the actuating means E is related to the handle C, so that the inner ends of the arms **21** occur between the inner opposed sides of the legs **17** of the handle C.

The arms **21** of the actuating means E are simple, flat, elongate plate-like parts and have their inner ends pivotally secured to the lower ends of the legs **17** of the handle C, by means of suitable pivot pins **27**, which pins are fixed to the inner ends of the arms to project laterally therefrom and through suitable bearing openings **28** in the legs **17**. A cotter pin **29** is engaged through each pivot pin **27**, to engage the outer side of the legs **17**, to maintain the arms engaged therewith. The arms are related to the container A so that they are forwardly and upwardly inclined relative thereto.

It is to be understood that an elongate rod, extending between the legs **17**, could be employed in place of the pivot pins **27** described above, without effecting the operation of the device.

The gripping bar **22** is a simple, straight elongate member, and is fixed to and extends between the outer ends of the arms **21** so that it is parallel with the hand grip **16** of the handle C. The gripping bar **22** normally occurs forward of the hand grip **16** of the handle C and overlies the spout B, as illustrated in Fig. 1 of the drawings. When the means E is actuated, and the bar **22** is shifted towards the handle C, the bar engages and stops against the hand grip **16**, in the manner clearly illustrated in Fig. 3 of the drawings.

The clevis plate **23** on the cap D is a simple U-shaped part formed of sheet metal and is shown as having a base portion fixed to the top of the cap D and a pair of laterally spaced upwardly projecting tabs **30**. The base of the clevis plate **23** is shown as being secured to the cap D by suitable screw means **31**, which means projects through the said base and cap through the sealing disc **20** in the cap, and serves to maintain the cap, sealing disc and clevis plate in tight fixed assembly.

The fingers **24** of the actuating means E are elongate strap-like parts projecting laterally inwardly towards each other from the outer ends of the arms **21**, to overlie the cap D, and have their free end portions **25** turned forwardly to project between the tabs **30** of the clevis plate **23**. The end portions **25** of the fingers **24** are provided with aligned elongated apertures **32**, adapted to freely receive a suitable pivot pin **33** which is fixed to and extends between the tabs **30** of the clevis plate.

With the above relationship of parts, it will be seen that the closure D is pivotally and shiftably carried by the actuating means E and that should the said actuating means E or the pouring spout B become misaligned or shifted relative to each other, the cap will, when engaged with the spout B, shift into sealing engagement therewith.

In the particular case illustrated, the terminal end **34**, of each finger **25**, which opposes the top of the closure D, is formed to establish a suitable stop adapted to engage the top of the cap to limit excessive pivotal movement of the cap and thereby assure proper alignment of the cap with the spout, when the structure is closed.

The spring means **26** which serves to yieldingly maintain the actuating means E and cap D in a closed position, includes, a coil spring **35** engaged around each pivot pin **27**, to occur between the legs **17** of the handle C and the arms **21** of the actuating means E. Each spring is shown as having radially disposed arms at each end thereof. One of the arms of each spring **35** is provided with a hook **36** at its outer end, adapted to engage the adjacent arm **21** of the actuating means E, while the other arm of the spring engages and is held by a suitable

inwardly projecting lug **37** formed in the adjacent leg **17** of the handle C.

It is to be noted, that the gripping bar **22** of the actuating means E joins the rearmost edge of the arms **21**, while the fingers **24** join the foremost edges of the arms **21**. With this relationship of parts, it will be seen that the gripping bar **22** and the fingers **24** are spaced apart and that the gripping bar can be advantageously engaged by the fingers of a person using my safety container without interference from the fingers **24** thereof. It will also be apparent that by arranging the gripping bar **22** at the rearmost edge of the arms **21** in the manner illustrated throughout the drawings, the bar is positioned so that a person can advantageously support the container A by the handle C with one hand, and at the same time, with the fingers of the same hand, engage and shift the gripping bar **22** of the actuating means E.

It is also to be noted that when the actuating means E is shifted to the open position, the gripping bar **22** thereof engages and stops against the hand grip **16** of the handle C, so that the said bar and grip are, in effect, joined together to form a single support member for the container.

Still further, it is to be noted that when the actuating means E is engaged and the container is tipped forwardly, so that the spout B is moved downwardly, the weight of the can and the liquid therein, is sufficient to shift the actuating means E to the open position, where the cap leaves the spout, and where the bar **22** is stopped against the hand grip **16**, with the result that the person supporting the container from the hand grip **16** and the bar **22** need not perform any special, awkward or tiring operations with his fingers to hold and maintain the actuating means in an open position.

It will be apparent that the ability of my construction to function in the manner set forth in the preceding paragraph is governed or controlled by the pressure exerted by the springs **35**, and that if it is desired that the device should not open in the manner referred to, stronger or stiffer springs can be employed.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the following claims.

Having described my invention, I claim:

1. A safety container including, a closed vessel having a top wall and adapted to carry liquids, an elongate tubular pouring spout with an open outer end fixed to and projecting upwardly from the top wall of the vessel, a handle with an elongate horizontally disposed hand grip spaced above the top wall of the container and laterally offset from the spout, elongate legs depending from the ends of the hand grip and connected with the top wall of the vessel, a closure cap, actuating means carrying the cap and adapted to shift the cap into and out of engagement with the spout including, a unity frame member with laterally spaced elongate parallel arms having inner and outer ends, pivot pins connecting the inner ends of the arms with lower ends of the legs, a gripping bar extending between the outer ends of the arms to extend parallel with the hand grip and shiftable into and out of engagement with the hand grip, a clevis plate fixed to the cap, laterally inwardly projecting fingers on the outer ends of the arms and pivotally connected to the clevis plate, and spring means between the legs and the arms and adapted to normally yieldingly urge the frame away from the handle and the cap into tight sealing engagement on the spout.

2. A safety container including, an elongate vertically disposed liquid handling vessel with a substantially horizontally disposed top wall, a substantially vertically disposed elongate tubular pouring spout fixed to and projecting upwardly from the said top wall adjacent one side of the vessel and defining an annular seat at its outer

end, a U-shaped handle arranged centrally of the vessel and having an elongate horizontally disposed hand grip spaced above the top wall of the vessel and laterally offset from the spout, and elongate vertically disposed legs depending from the ends of the grip and fixed to the wall, a pair of laterally spaced like parallel arms with inner and outer ends, a pivot pin connecting the inner end of each arm to the lower end of each leg, an elongate horizontally disposed gripping bar integrally joined to and extending between the outer ends of the arms to occur between the spout and the grip and in parallel relationship with the grip, a finger on the outer end of each arm and projecting laterally therefrom to occur in spaced parallel relationship with the bar, opposed laterally outwardly projecting end portions on the fingers and normally overlying the spout, a clevis plate pivotally connected with the said end portions of the fingers, a disc-

shaped closure cap carried by the clevis plate and adapted to engage the annular seat on the spout, and spring means adapted to normally yieldingly urge the bar away from the grip and the cap into tight sealing engagement with the spout including, a rattrap spring carried by each pivot pin to occur between the related arm and the leg and having one end engaging the arm and the other end engaging the leg.

References Cited in the file of this patent

UNITED STATES PATENTS

1,725,386	Anschicks	Aug. 20, 1929
1,819,037	Raster	Aug. 18, 1931
2,335,195	Packer	Nov. 23, 1943
2,490,194	Barclay	Dec. 6, 1949
2,574,876	Lebus	Nov. 13, 1951