

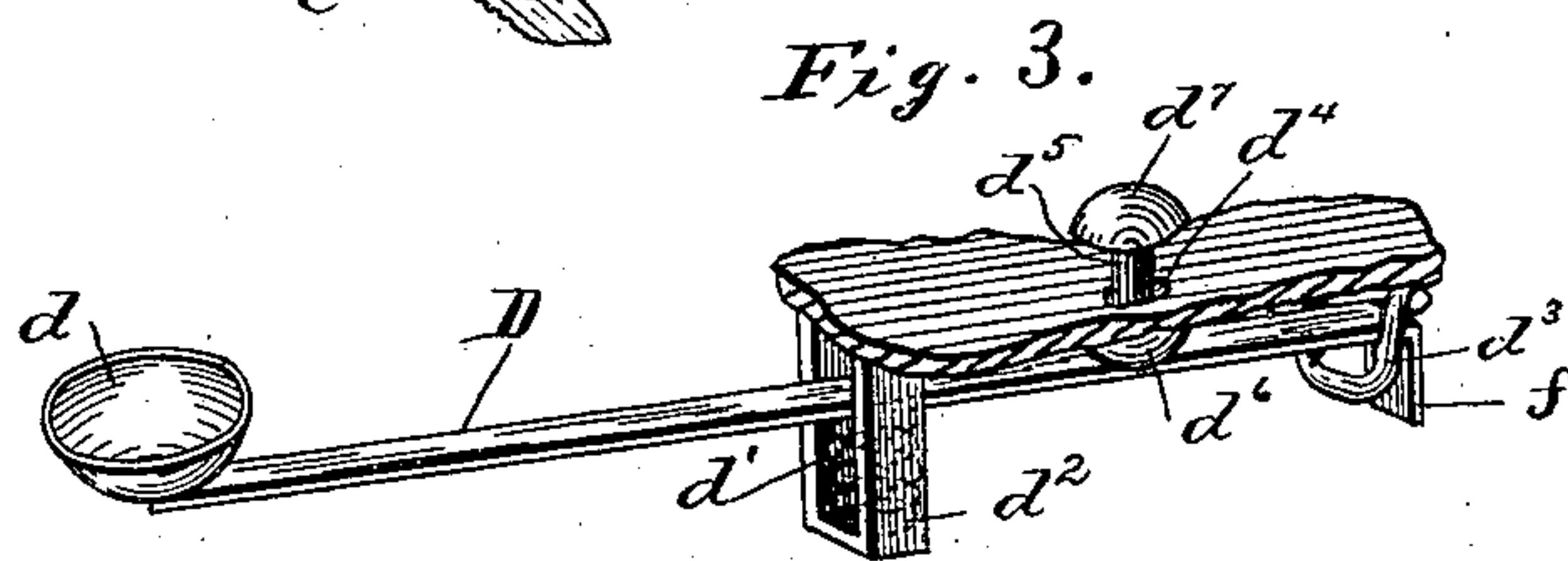
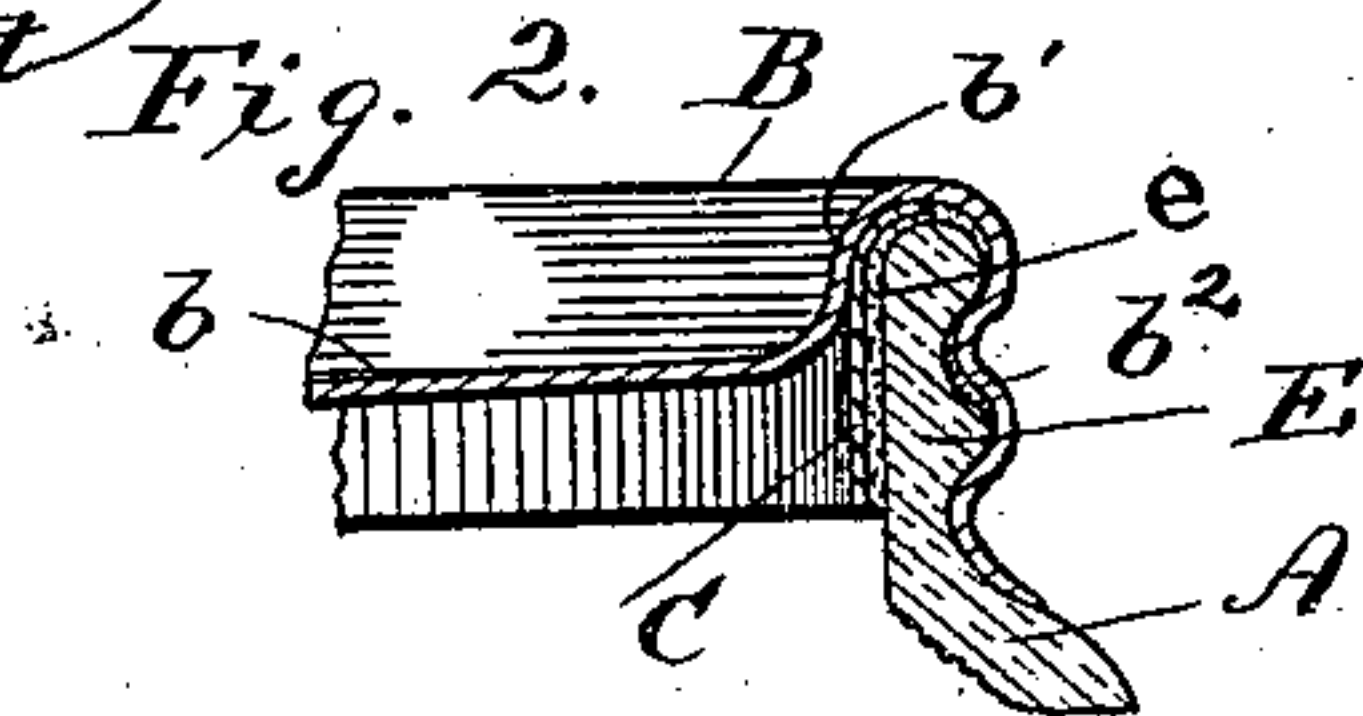
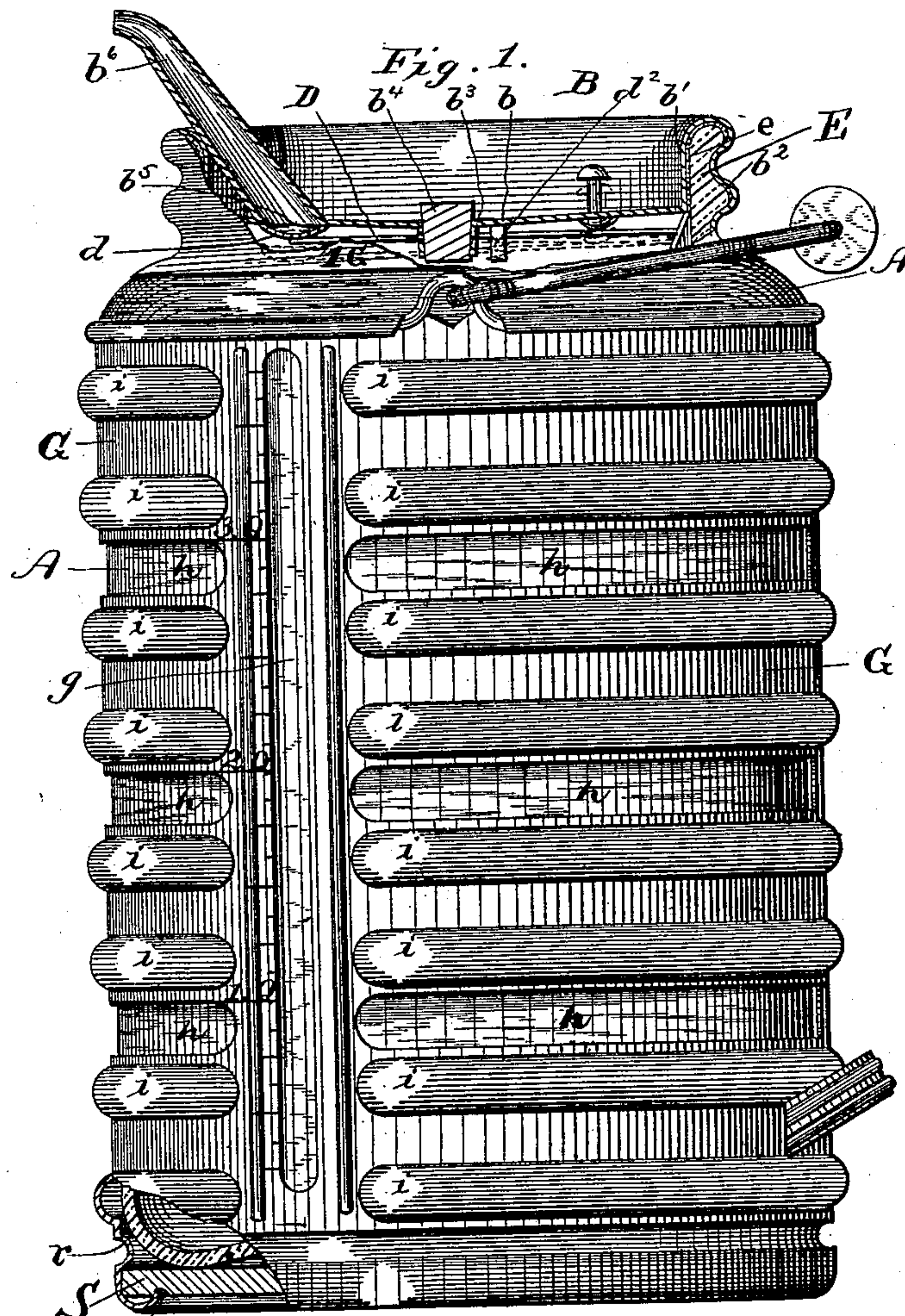
(No Model.)

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VESSEL FOR CONTAINING AND TRANSPORTING LIQUIDS.

No. 297,532.

Patented Apr. 22, 1884.



WITNESSES

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VESSEL FOR CONTAINING AND TRANSPORTING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 297,532, dated April 22, 1884.

Application filed February 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. NORRIS, of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful
5 Improvements in Vessels for Containing and Transporting Liquids, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming
10 a part of this specification, and to the figures and letters of reference marked thereon.

My invention has for its object the production of vessels for containing and transporting oils and other liquids, &c., which shall be
15 neat, substantial, and cheap; and to this end it consists, first, of the top constructed of a single piece of sheet metal, formed in such shape as to make the cover for the mouth of the body of the vessel and the internal and
20 external annular flanges forming the annular groove into which the upper portion of the body of the vessel is placed in attaching the top to the body of the vessel, and provided with a filling-orifice and a pouring-spout; second, of the funnel-shaped top having a filling-
25 orifice and a pouring-spout; third, in the novel construction and operation of the devices for simultaneously opening and closing the vent and pouring-tube of the top; and, fourth, in the novel construction of the case, as will be hereinafter more fully described, and particularly pointed out in the claims at the close of this specification.

In the accompanying drawings, Figure 1
35 represents a side elevation, partly in section, of an incased glass vessel embodying my improvements. Fig. 2 is a sectional view showing a modification of the means for securing the cap to the glass vessel. Fig. 3 is a perspective view of the means for effecting the
40 opening and closing of the pouring-orifice and vent.

Similar letters of reference in the several figures indicate the same parts.

45 The letter A represents a glass vessel having its upper portion or neck, E, preferably externally screw-threaded, as shown, and provided with a sheet-metal top, B. This top is formed of a single piece of sheet metal, and
50 consists of a concaved or dish-shaped central portion, b , and two annular flanges, b' b^2 , the

former of which, b' , is preferably plain, and is adapted to extend along the inside of the neck of the glass vessel, while the latter, b^2 , is preferably longer and is adapted to extend down
55 the outside of the glass neck, and is preferably provided with screw-threads, for the purpose of effecting a firm connection with the exterior screw-threads of the neck.

At or near the middle or lowest point of the
60 concave central portion of the cap is formed a filling-orifice, b^3 , which may be closed by a cork or stopper, b^4 , or other suitable means, and at a higher point on said concave portion is provided a pouring-orifice, b^5 , from which
65 extends a projecting spout, b^6 , as shown clearly in Fig. 1. The central portion of the top is made concave, for the purpose of causing it to direct any liquid poured upon it down to and into the depressed filling-orifice b^3 , and thus
70 dispense with the necessity of using a funnel in filling, and for the further purpose of collecting and saving any drip that might run down the pouring-spout after pouring. The concaving of the top also gives it greater
75 strength, and permits it better to accommodate itself to the contraction and expansion caused by the changes in temperature.

The mode of attaching the top to the glass vessel is preferably as follows: The contiguous
80 surfaces of the flanges b' b^2 and both surfaces of the glass neck are coated with plaster-of-paris or any other proper cementing material, and then, with all the parts inverted, the neck of the glass is inserted in the annular groove
85 or space between the said flanges b' b^2 , and the parts screwed tightly together, and left undisturbed till the cement sets. By this mode of connection not only is the union between the top and the glass vessel made strong but ab-
90 solutely liquid-tight.

In some instances I may employ, in connection with the top constructed as just described, a supplemental flanged ring, C, applied around
95 the inner side and top of the glass neck, as shown in Fig. 2. When this is done, the connection is effected by inverting the cap, placing the supplemental flanged ring in position within the groove formed by the flanges b' b^2 , applying the coating of cement to the proximate
100 mate faces of the ring and the outside screw-threaded flange, and also to both surfaces of

the neck of the glass vessel, and then completing the union by screwing the parts together, as before; or the top may be formed without the internal flange, b' , in which case the supplemental flange C should be placed within the external flange, b^2 , and the parts attached, as before stated. This modified form of joint has, perhaps, the advantage of permitting a greater expansion and contraction of the metal top, but is a trifle more expensive, and on that account not so desirable.

In pouring from a vessel provided with a top constructed as described, the cork or stopper which closes the filling-opening may be removed to give a proper vent; but inasmuch as it is desirable to provide some means for preventing a wastage of the contained liquid through the pouring-spout, either from evaporation or the accidental tipping over of the vessel, I have, in providing means of this character, devised an automatic venting device, which renders the removal of the main stopper for venting unnecessary.

Beneath the metal top, and within the vessel, I provide a lever or bar, D, carrying at its outer end a pad or stopper, d , adapted to fit against and close the discharge-orifice b , leading to the pouring-spout. This lever is supported at any suitable point between its ends, but preferably nearer its inner end, by a suitable spring, d' , sustained in any convenient way, but preferably by means of a loop, d^2 , depending from the metal top, as shown in Fig. 3. The inner end of the lever passes through another loop, d^3 , and is bent down, as shown at f , Figs. 1 and 3, so as to prevent its longitudinal displacement. A vent-orifice, d^4 , is provided in the metal top over the lever, and in this orifice plays a plunger, d^5 , having a valve, d^6 , on its lower end adapted to cover the vent, and having at its upper end a head or thumb-piece, d^7 , by which to depress it. Normally the upward pressure of the spring d' serves to keep the lever raised, and causes the pad or stopper d to be tightly seated over the discharge-orifice b on the one hand, and the valve d^6 of the plunger to be seated over the vent-orifice d^4 on the other hand, thus effectually closing all the openings in the top, and preventing leakage or escape of liquid, even though the vessel be tipped over.

When it is desired to pour out the contents of the vessel, or any portion of it, the head of the plunger is depressed, thus opening the vent, and through the lever immediately thereafter the pouring-orifice. The operation of the plunger on the lever is to first depress its inner end until it comes in contact with the inner loop or bearing, d^3 , and then to cause the lever to turn upon the said inner loop as a fulcrum, and withdraw the pad on its outer end from the discharge-opening. The guiding-loops d^2 d^3 prevent the lever from lateral displacement, while its turned-down inner end enables it to keep its proper position longitudinally.

The casing which surrounds the body of the glass vessel consists, preferably, of a single piece of sheet metal divided into two, three, or more, but preferably three, panels, G, by elongated vertical slots g , each panel being provided with a series of elongated horizontal slots, h , and outwardly-projecting corrugations i , as shown. The upper edges of the horizontal slots indicate the principal units of measure—such as one quart, two quarts, &c.—and serve to apprise an observer of the vessel, when standing at any point, of the height of the liquid in the vessel and the quantity thereof. For instance, in a gallon vessel the top line of each slot indicates one or more quarts, according as the slot is the first, second, or other number from the bottom. This feature of enabling the contents of the vessel to be ascertained from any point of view, instead of being required to turn to one vertical slot in the side of the casing, as in some incased vessels in the market, is of obvious utility.

The vertical slots in my construction are graduated along their edges with the units of measure indicating the liquid contents of the vessel; but while they serve to indicate the principal units of measure, like the edges of the horizontal slots, they are chiefly serviceable in showing the minor units of measure which the horizontal slots do not show.

In the lower portion of the sheet-metal casing is inserted a wooden bottom, s , having an annular groove or depression, t , in its under side, as shown. The upper edge of this bottom rests beneath an internally-projecting corrugation or rib, r , provided in the casing, and the lower edge of the casing is turned inward and upward and terminates in the groove t of the bottom, as shown.

The glass vessel rests upon the wooden bottom, and is supported thereby, while the latter in turn is supported by the turned-up edge of the casing.

The groove in the bottom might be dispensed with; but I prefer to employ it, as it protects the turned-up edge and prevents it from catching anything in handling.

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

1. As a new article of manufacture, an incased vessel having a glass body and a top composed of a single piece of sheet metal shaped to form the cover for the mouth of the body, and also the internal and external annular flanges, between which the upper portion of the body is placed in attaching the top to the body, and provided with a filling-orifice and a pouring-spout, and secured to the body by a cemented screw-connection, substantially as described.

2. In combination with the glass body, the top composed of a single piece of sheet metal, forming a cover for the mouth of the body, the internal and external annular flanges having the groove between them, and provided

with a filling-orifice and a pouring-spout, substantially as described.

3. The top composed of a single piece of sheet metal, forming the cover for the mouth
5 of the body, and also the internal and external annular flanges, in combination with the supplemental internal annular flange and the glass body, substantially as described.

4. The top composed of a single piece of
10 sheet metal forming the cover for the mouth of the body and the external annular flange, in combination with the supplemental internal annular flange having its upper edge turned outward, and the glass body, substan-
15 tially as described.

5. A sheet-metal top provided with an internal annular flange and an external annular screw-threaded flange, in combination with the body of a glass vessel having a screw-
20 threaded upper portion, substantially as described.

6. The funnel-shaped sheet-metal top provided with a filling-orifice and a pouring-spout, substantially as described.

25 7. A can having a funnel-shaped sheet-metal top, which is provided with a filling-orifice at its lowest portion and a pouring-spout near its upper portion, substantially as described.

30 8. A can having a funnel-shaped sheet-metal top, which is provided with a filling-orifice and with a pouring-spout, substantially as described.

9. The combination, with a vessel having a pouring-orifice, of a spring-supported bar or
35 lever carrying a pad or stopper at its outer end for closing the pouring-orifice, and means for first pressing the inner end of the lever to a fulcrum or bearing, and then causing it to turn on said bearing and release the pad from
40 the pouring-orifice, substantially as described.

10. The combination, with a vessel having a pouring-orifice and a vent, of a spring-sup-
45 ported bar or lever carrying a pad or stopper at its outer end for closing the pouring-orifice, and a valved plunger adapted, when

pressed, to open the vent, force the inner end of the lever to its fulcrum or bearing, and then cause the lever to turn on said bearing and release the pad from the pouring-orifice, substantially as described.

11. The combination, with a pouring-orifice, of the spring-supported lever having the pad or stopper at its outer end, of the loop constituting the fulcrum or bearing for the inner end of the lever, and of the plunger for
55 operating the lever, substantially as described.

12. The combination, with the pouring-orifice, of the lever having the pad or stopper, the guide-loop and its spring, the inner loop or fulcrum, and the plunger, substantially as
60 described.

13. The combination, with the pouring-orifice and the vent, of the lever and its pad, the guide-loop and spring, the inner loop forming the fulcrum of the lever, and the valved
65 plunger working in the vent-opening, substantially as described.

14. A sheet-metal can-top provided with a pouring-orifice and a vent, and having the spring-seated lever provided with the pad, the fulcrum for the inner end of the lever, and
70 the valved plunger for operating the lever, substantially as described.

15. A glass vessel, in combination with a sheet-metal inclosing-case having one or more
75 elongated longitudinal openings showing one or more of the principal units of measure, and one or more elongated vertical openings provided with a scale showing the minor units of measure, substantially as described.

16. A sheet-metal case having one or more elongated horizontal openings showing one or more of the principal units of measure, and one or more elongated vertical openings provided with a scale showing the minor units of
85 measure, substantially as described.

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Witnesses:

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