

(No Model.)

C. N. TYLER.
SCREW TOP FOR CANS.

No. 480,793.

Patented Aug. 16, 1892.

Fig. 1.

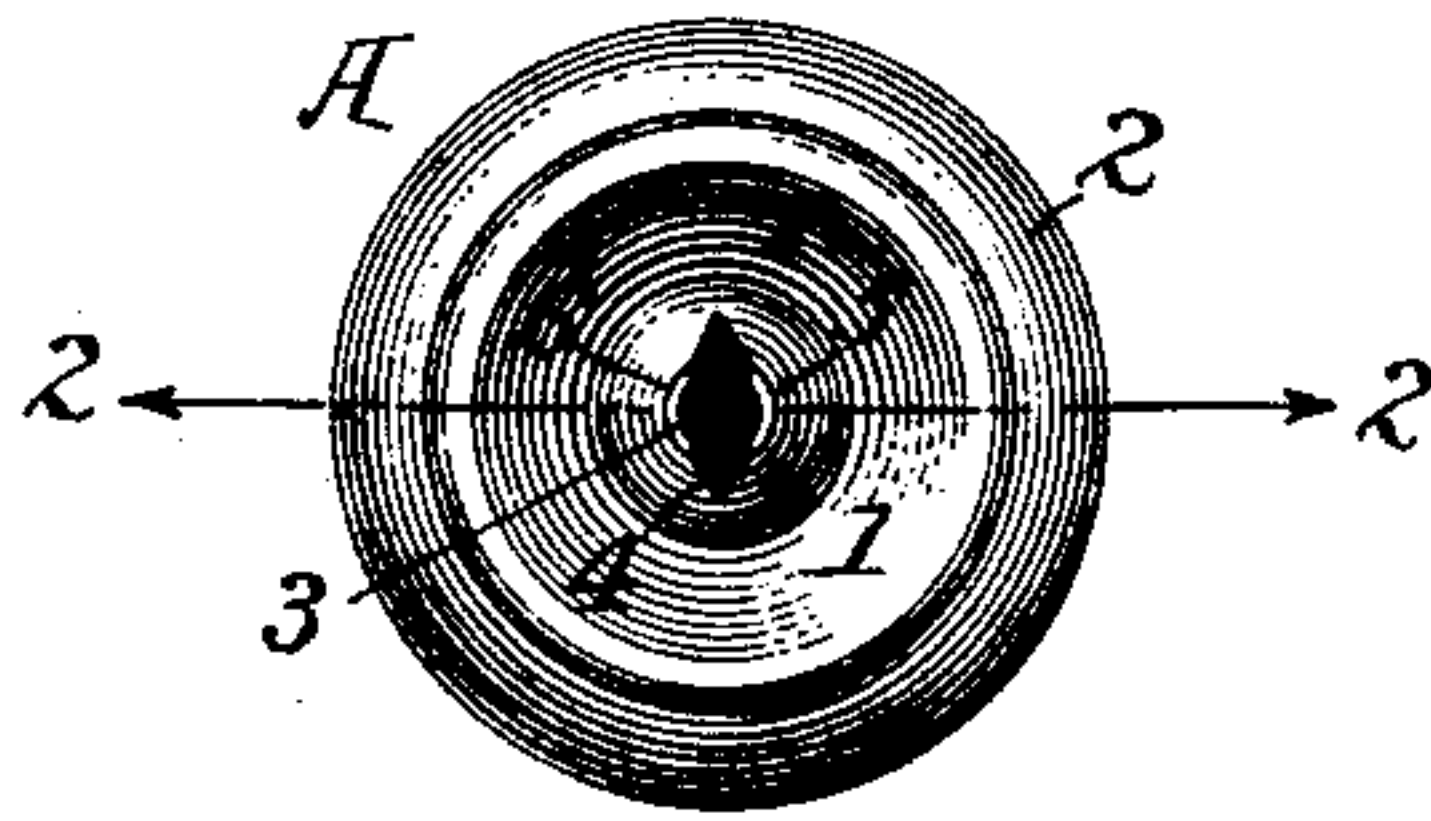


Fig. 2.

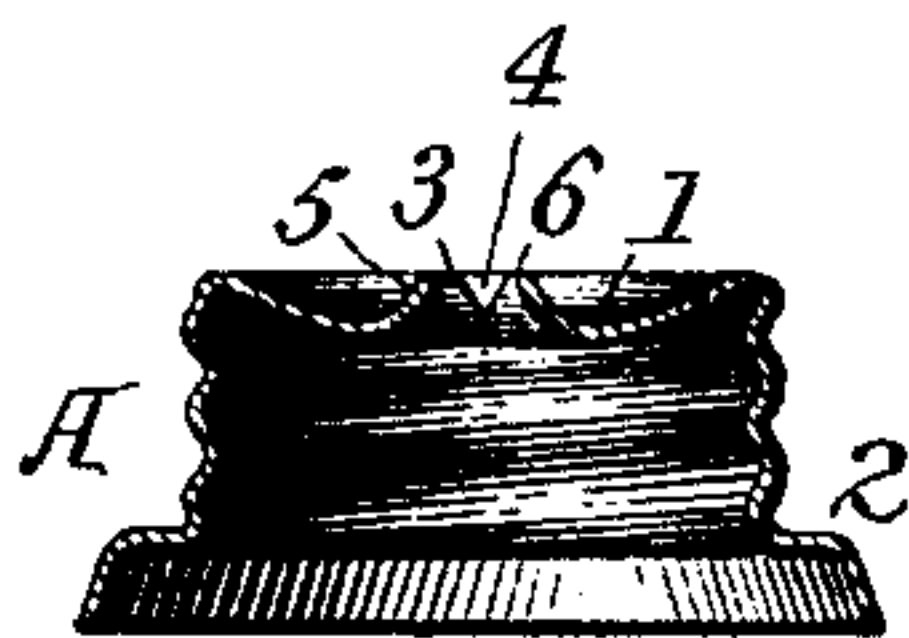


Fig. 3.

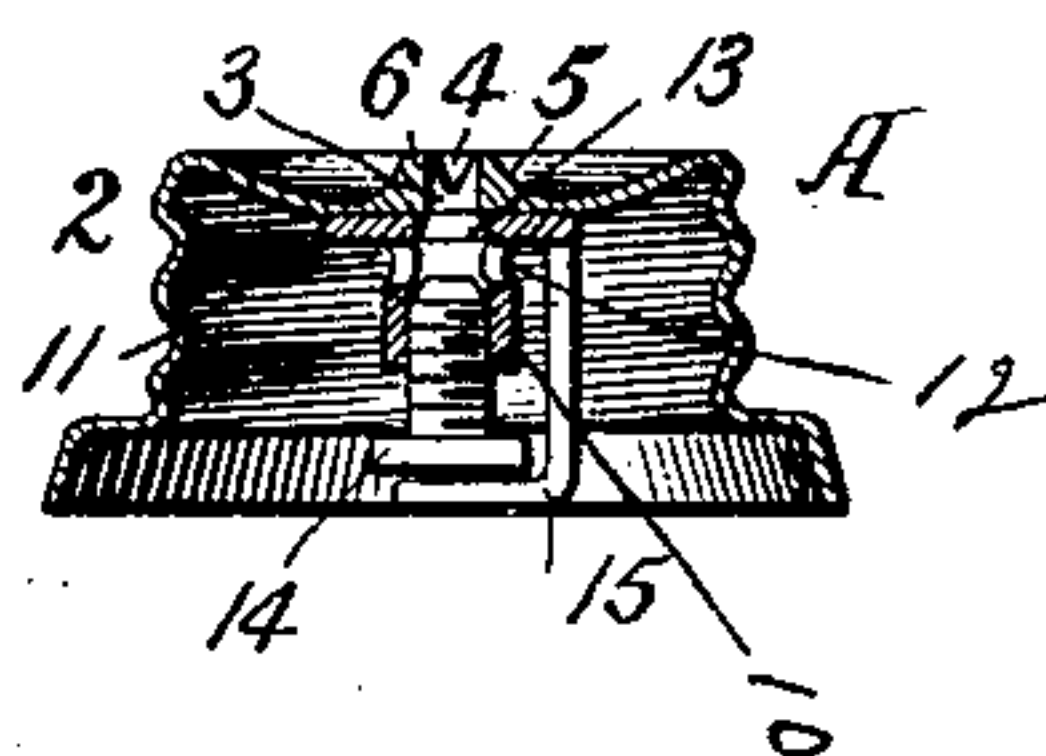
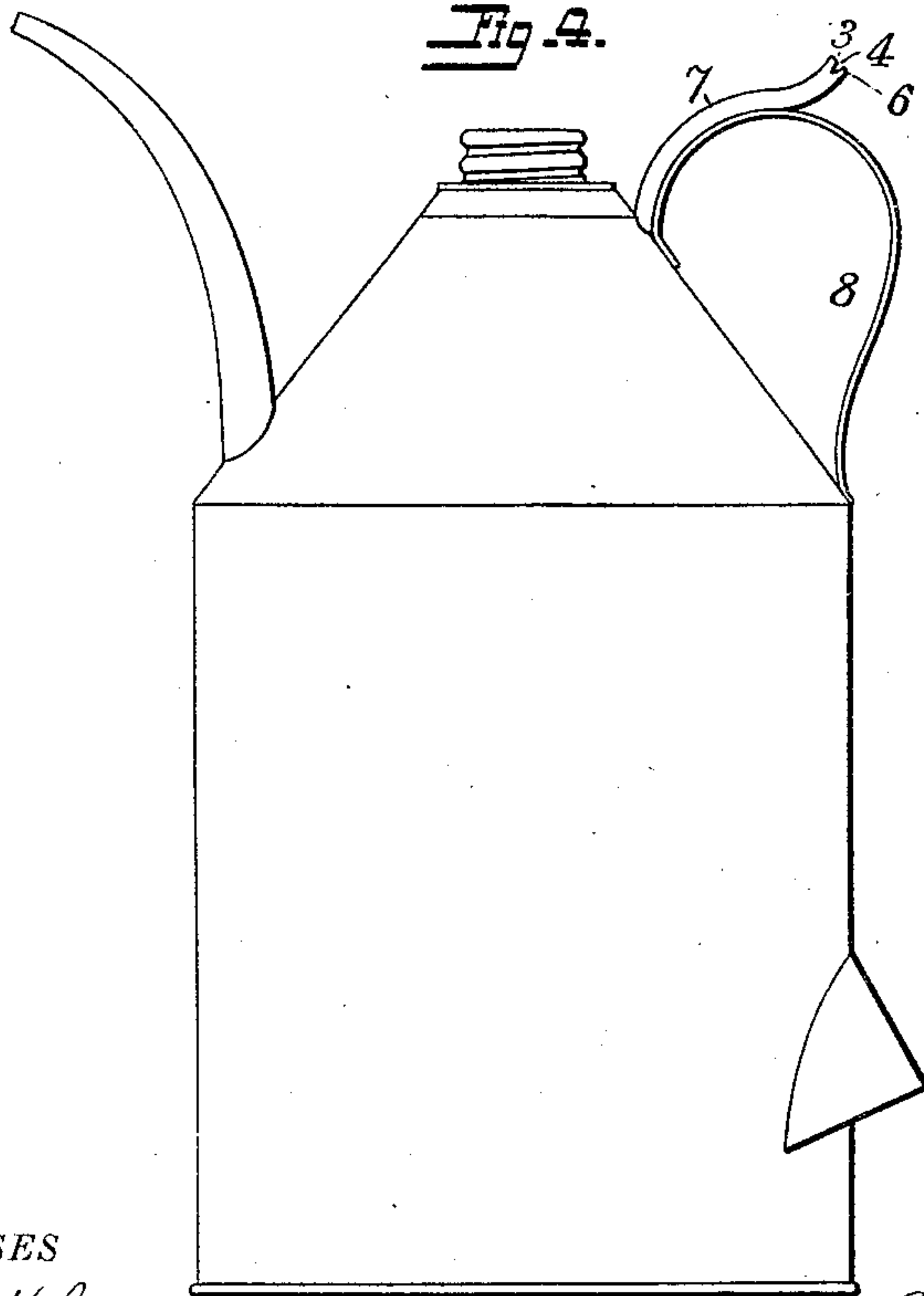


Fig. 4.



WITNESSES

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SCREW-TOP FOR CANS.

SPECIFICATION forming part of Letters Patent No. 480,793, dated August 16, 1892.

Application filed June 24, 1891. Serial No. 397,333. (No model.)

To all whom it may concern:

Be it known that I, CHARLES N. TYLER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Screw-Tops for Cans, of which the following is a specification.

My invention has for its object to provide a nut for oil-cans or similar vessels by means of which the flow from the vessel may be better regulated and rendered constant and regular, whether it be great or small.

It consists in a vent-opening of novel form surrounded, in part at least, by a valve-seat and of such construction that an elastic valve being seated upon such valve-seat closes in part only the vent-opening, but closes it to a greater or less degree as the valve is pressed more or less hardly upon its seat.

It further consists of a permanently-arranged valve, by which the amount of air normally passing through the vent-opening may be regulated, in combination with a vent-opening of the character described; and it further consists of a removable cap or cover for a can or similar vessel of novel construction, and in certain other novel features of construction to be hereinafter set forth.

In the drawings, Figure 1 is a top view of a screw-threaded removable can-cap embodying certain features of my invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a similar section of a can-cap having other features of my invention applied thereto. Fig. 4 is an elevation of a can, showing a different form of the invention from that shown in the other figures applied thereto.

A simple form of the invention is illustrated in Figs. 1 and 2, in which A represents a screw-cap in general featured similar to those commonly employed to close the filling-opening to the can, it having the top 1 and the screw-threaded skirt 2. In the top of the cap is formed a vent-hole 3, which is of irregular shape, having one or more lateral branches 4, formed by notches in the wall extending away from its central portion. I prefer that this vent-hole should extend through a raised portion 5 of the top of the cap, the branches 4 of the opening extending down the sides of the raised part 5, as best shown in Fig. 2. The edge 6 of the raised

portion of the cap surrounding the central portion of the vent-hole forms a valve-seat; but it will be seen that when a valve is closed down upon this seat it will not close the whole opening 3, as the branches 4 thereof, being situated in a different plane from that of the seat 6, are left uncovered.

I have not shown the valve for partially closing the opening 3, as the finger of the person using the can will ordinarily be used as an elastic valve for this purpose; but it will be understood that any other form of elastic valve which might be closed down upon the seat 6 could be employed.

It will be evident that an operator can very accurately regulate the flow from a can by placing his finger over the vent-hole 3 and pressing more or less hardly upon the seat 6 at the top of the raised portion of the cap, thus closing the central portion and to a greater or less extent the laterally-extending branches 4 of the vent.

While I have thus far described the vent-opening as being in the removable screw-cap A, it is evident that the placing it on this particular portion of the can is a matter of convenience, and that a portion of the can-body itself might be struck up to form the valve-seat through which the opening could be formed, or, as shown in Fig. 4, the vent-opening 3 might be placed at the end of a tube 7, situated adjacent to the can-handle 8, the end of the tube constituting the valve-seat 6, and the lateral V-shaped notch 4 extending a short distance along the sides of the tubes from such end.

In Fig. 3 I have shown a regulating device for the opening 3, which is adapted to be situated upon the inside of the cap A. This cap may be identical with the ones shown in Figs. 1 and 2, the parts which I am now to describe being added thereto.

Situated immediately below the opening 3 through the top of the cap and carried by a plate 11, which is secured thereto, is a screw-threaded socket 10, in which is mounted the screw-threaded valve-stem 14. The end of this valve-stem is adapted to close the opening 3 through the plate 11, which opening communicates on the one side with the vent-opening 3, and on the other with the holes 12, leading into the interior of the can.

15 is an L-shaped stop, which limits the outward movement of the screw-stem 14 and prevents its becoming lost. By adjusting the valve-stem 14 to the proper position the maximum amount of air which may pass through the vent-opening may be regulated, and the normal flow from the can thereby controlled, and this flow may be diminished to a greater or less extent by placing the finger or some other supplemental valve over the vent 3 on the outside.

A can provided with a vent-opening of the kind described may safely be provided with a filling-spout twice the size of those now commonly used on cans, thus diminishing the time required for filling a given vessel, while the danger of overrunning such vessel, and thereby wasting oil and soiling it and other articles, is removed, as when the vessel becomes nearly filled the flow from the can can be gradually checked until it is almost entirely cut off.

Another advantage incident to the use of my invention is that the checking of the supply of air does not cause a backflow of air through the spout, thereby causing an intermittent and irregular discharge of liquid therefrom; but the flow, whether large or small, is regular and continuous, owing to there being a constant, though variable, flow of air through the vent, even though a valve be upon the seat 6.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A can or similar vessel having a projecting portion forming a valve-seat, said projection having an end opening and one or more side openings, which together constitute a vent, substantially as and for the purpose set forth.

2. A can or similar vessel having a portion struck up to form a projection 5 and having an end opening 3, formed through such projection, the end of the projection around the

opening constituting a valve-seat and said opening 3 having branches 4, extending down the sides of the projection, substantially as and for the purpose set forth.

3. A can or similar vessel having a vent-opening adapted to be controlled by an elastic valve, in combination with another valve arranged to regulate the normal flow through such opening, substantially as and for the purpose set forth.

4. A can or similar vessel having a projection provided with a vent-opening partially in the end and partially in the side thereof and adapted to be closed more or less by the finger of the user, and also having a regulating-valve situated inside the can and arranged to regulate the normal flow through the vent, substantially as and for the purpose set forth.

5. A can or similar vessel having a removable cap or cover with a raised portion 5, through which is formed a vent-opening 3, having lateral branches 4, a screw-threaded socket situated on the inside of the cover opposite the said opening, and a screw valve-stem working in such socket and arranged to regulate the amount of normal flow through the said vent-opening, substantially as and for the purpose set forth.

6. As a new article of manufacture, a screw-cap for a can or similar vessel, having its top formed with a raised portion 5 and having formed through this portion 5 an opening 3, with lateral branches 4, extending down the sides of the raised portion, and having a valve-seat 6 around the central portion of the opening 5, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES N. TYLER.

Witnesses:

JAMES SANGSTER,
A. C. TYLER.