

(No Model.)

E. NORTON.  
POURING NOZZLE FOR CANS.

No. 485,295.

Patented Nov. 1, 1892.

Fig. 1.

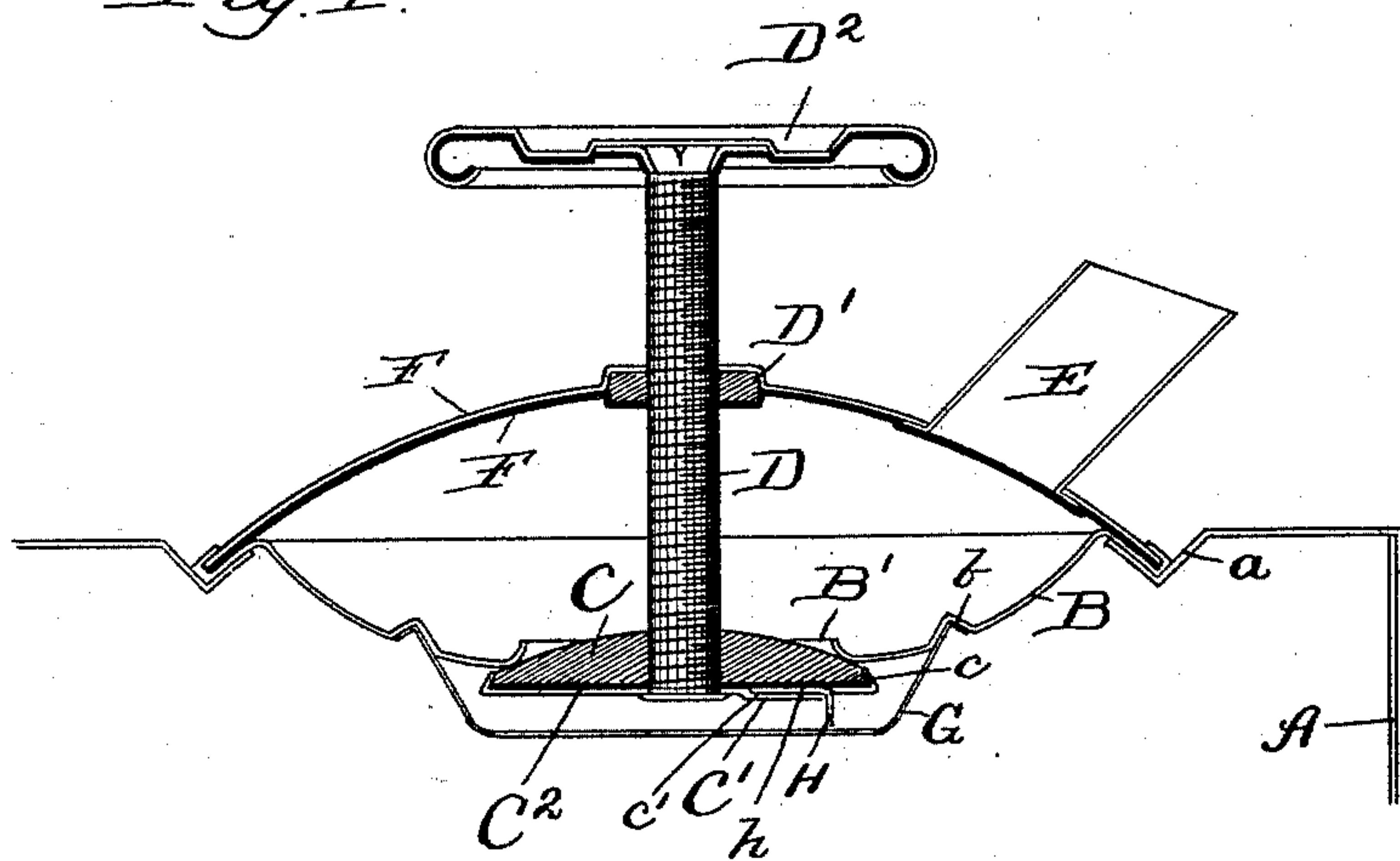


Fig. 2.

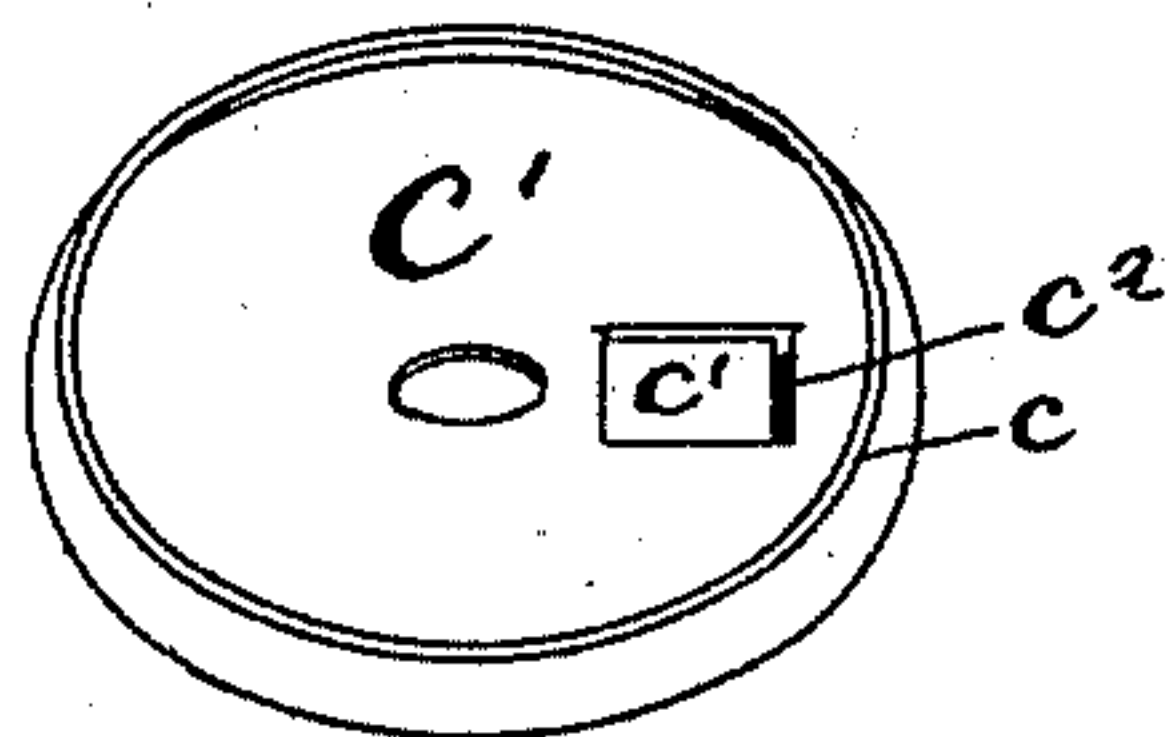
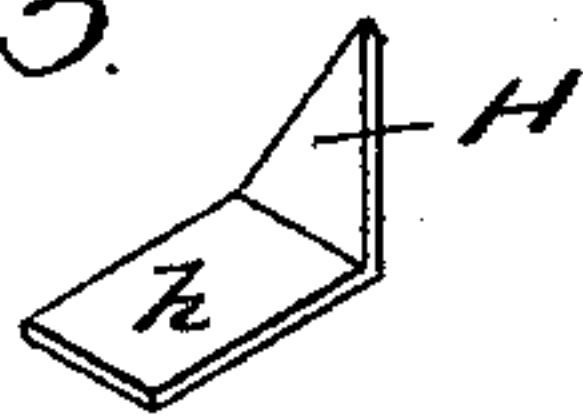


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## POURING-NOZZLE FOR CANS.

SPECIFICATION forming part of Letters Patent No. 485,295, dated November 1, 1892.

Application filed April 7, 1892. Serial No. 428,118. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN NORTON, a citizen of the United States, residing at Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pouring-Nozzles for Cans, of which the following is a specification.

My invention relates to pouring-nozzles for sheet-metal cans.

Heretofore considerable loss and annoyance has been experienced in shipping liquids, and especially petroleum, in cans furnished with pouring-nozzles on account of leakage at the valve, it being a matter of great difficulty to so construct the nozzles that their valves will always be perfectly tight, and also to preserve such nozzles in perfect condition.

The object of my invention is to overcome this difficulty and provide a valved pouring-nozzle that may be closed hermetically or perfectly air and liquid tight while the can is being shipped or stored and which may still be automatically opened by simply turning or opening the valve.

To this end my invention consists in providing a valved pouring-nozzle with a hermetical seal closing the valve-opening, said seal being cut or broken open by the valve when its threaded stem is turned to open the same. The hermetical seal closing the valve-opening preferably consists of a disk of extremely thin and easily cut or broken tin-plate or other sheet metal, the rim of which is soldered to the cap or nozzle disk, the same being preferably provided with an ordinary V-shaped cap-groove to receive the edges of the thin hermetically-sealing disk. The rim of the hermetically-sealing disk I preferably secure by ordinary solder to the cap or nozzle disk, though a soft or frangible solder may be employed for this purpose if it is desired to break the seal at its soldered joint. If the hermetically-sealing disk is secured to the cap-disk by means of soft or easily-frangible solder, the sealing-disk may, if preferred, be made of thicker or ordinary tin.

To facilitate the cutting or breaking open of the thin hermetically-sealing disk by the revolution of the screw-valve, I provide the valve on its under side with a cutting blade or point, the same consisting, preferably, of a

pointed strip of sheet-steel bent at an angle and secured to the bottom of the valve.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a vertical sectional view of a pouring-nozzle embodying my invention. Fig. 2 is a perspective view of the sheet-metal valve disk or plate. Fig. 3 is a detail perspective view of the knife or cutter turned upside down.

My invention may be applied to any well-known or suitable form of valved pouring-nozzle; but in practicing my invention I prefer to use the form of valve-pouring nozzle shown and described in my Letters Patent, No. 437,231, dated September 30, 1890, and for this reason in the drawings I have shown my present improvement as applied to the particular kind of pouring-nozzle shown and described in said patent.

In the drawings, A represents a can, to which the nozzle is applied; *a*, its cap-groove; B, the nozzle or cap disk, which closes the opening in the can and which is furnished with a central valve-opening B', closed by the valve C, and D is the screw-threaded valve-stem, which turns in a nut D', secured between the dome-disks F F'. E is the flanged spout, likewise secured between the dome-disks F F'.

D<sup>2</sup> is the handle or thumb-disk at the end of the screw D.

The cap or nozzle disk B is furnished with a cap-groove *b* to receive the rim or edge of the thin hermetically-sealing disk G.

H is the cutter blade or point projecting from the lower face of the valve-disk C'. The valve C is preferably made of cork or other suitable material and is secured to the disk C' by the flange *c* thereof. The cutter H is preferably furnished with a right-angle shank *h*, that fits in a recess or depression *c'* in the valve-disk C', while the point of the blade projects through a slot *c<sup>2</sup>*, formed in the disk C'. A supplemental disk C<sup>2</sup> is preferably interposed between the cork disk C and the sheet-metal disk C'. The knife or cutter H is preferably formed of a thin pointed strip of steel bent at an angle to form the shank *h* thereon. When the valve-screw is turned to



open the valve, the screw will project the point of the knife against the hermetically-sealing disk G and gradually increase in pressure as the knife revolves, and thus readily  
 5 and easily cut open the sealing-disk. If the valve were provided with no cutting or tearing point H, it would still operate to break or tear loose from the cap-disk B the sealing-disk G; but in this case the sealing-disk or  
 10 the solder by which it is united to the cap-disk B should be made of extremely-frangible material.

I claim—

1. In a pouring-nozzle, the combination,  
 15 with a valve C, of a nozzle or cap disk B, having a central valve-opening B' therein adapted to be closed by said valve C, and a thin hermetically-sealing disk G, adapted to be automatically cut or broken open by the move-  
 20 ment of the valve, said valve C fitting between said sealing-disk G and said nozzle or cap disk B, so that the movement of the valve to open the same will also cut or break open the sealing-disk G, thus enabling both the  
 25 valve and sealing-disk to be utilized in closing the can for shipment or storage, substantially as specified.

2. In a pouring-nozzle, the combination,

with valve-disk B, of a thin hermetically-sealing disk G and a screw-valve furnished with  
 30 a cutter, said valve having a metal disk C', furnished with a slot or opening c<sup>2</sup>, and through which the point of the cutter projects, substantially as specified.

3. In a pouring-nozzle, the combination,  
 35 with valve-disk B, of a thin hermetically-sealing disk G and a screw-valve furnished with a cutter, said valve having a metal disk C', furnished with a slot or opening c<sup>2</sup>, and through which the point of the cutter projects,  
 40 said valve-disk C' having a recess c', and the cutter having a shank h, fitting in said recess, substantially as specified.

4. In a pouring-nozzle, the combination,  
 45 with a valve-disk B, of a thin hermetically-sealing disk G and a screw-valve furnished with a cutter, said valve having two metal disks C' C<sup>2</sup>, and a cutter having bent shank h, fitting between said disks C' C<sup>2</sup>, the lower  
 50 disk being furnished with a slot through which the point of the cutter projects, substantially as specified.

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Witnesses:

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