

No. 739,058.

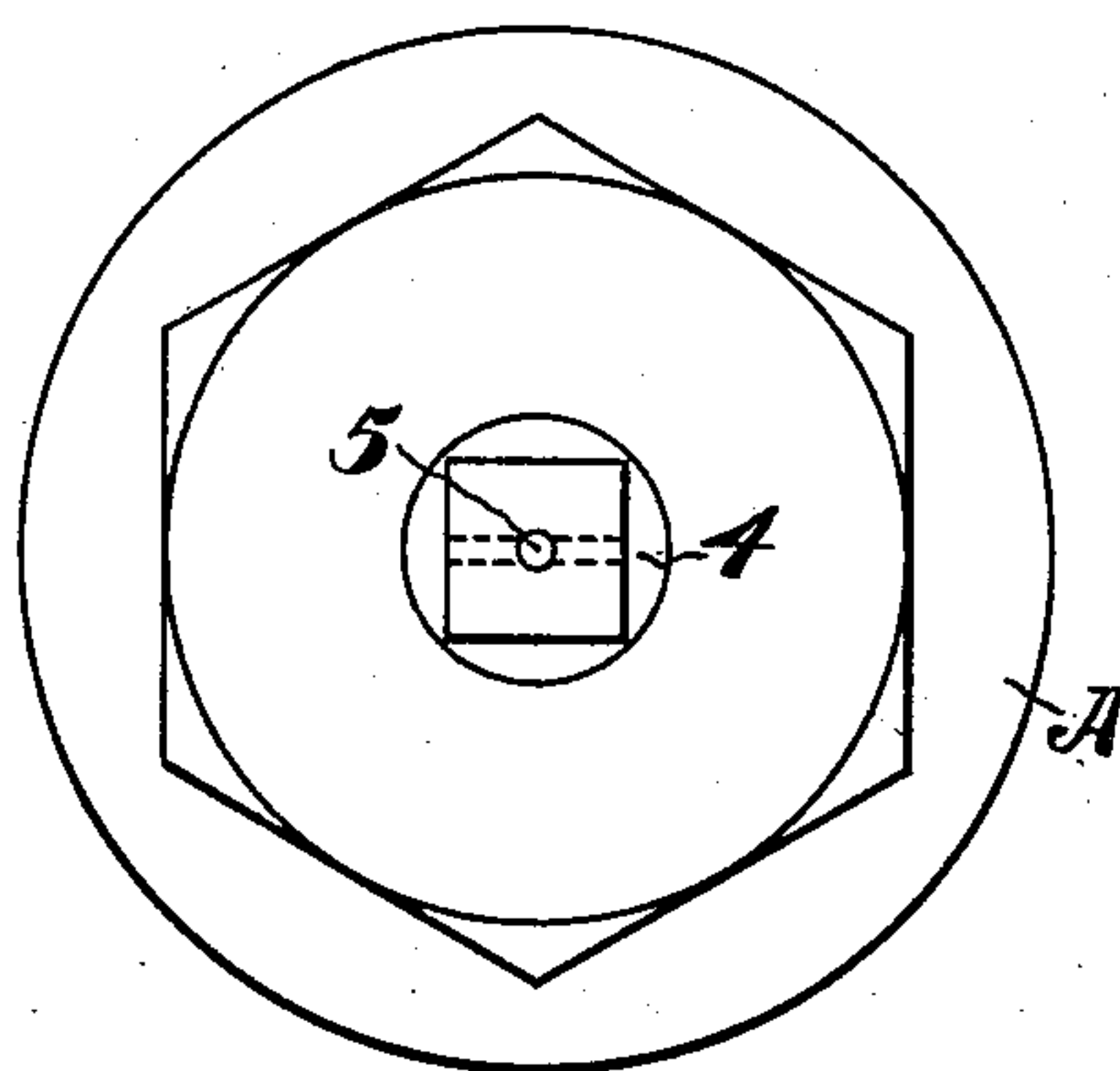
PATENTED SEPT. 15, 1903.

E. R. CHARLES.  
AIR VENT CONTROLLER FOR BARRELS.

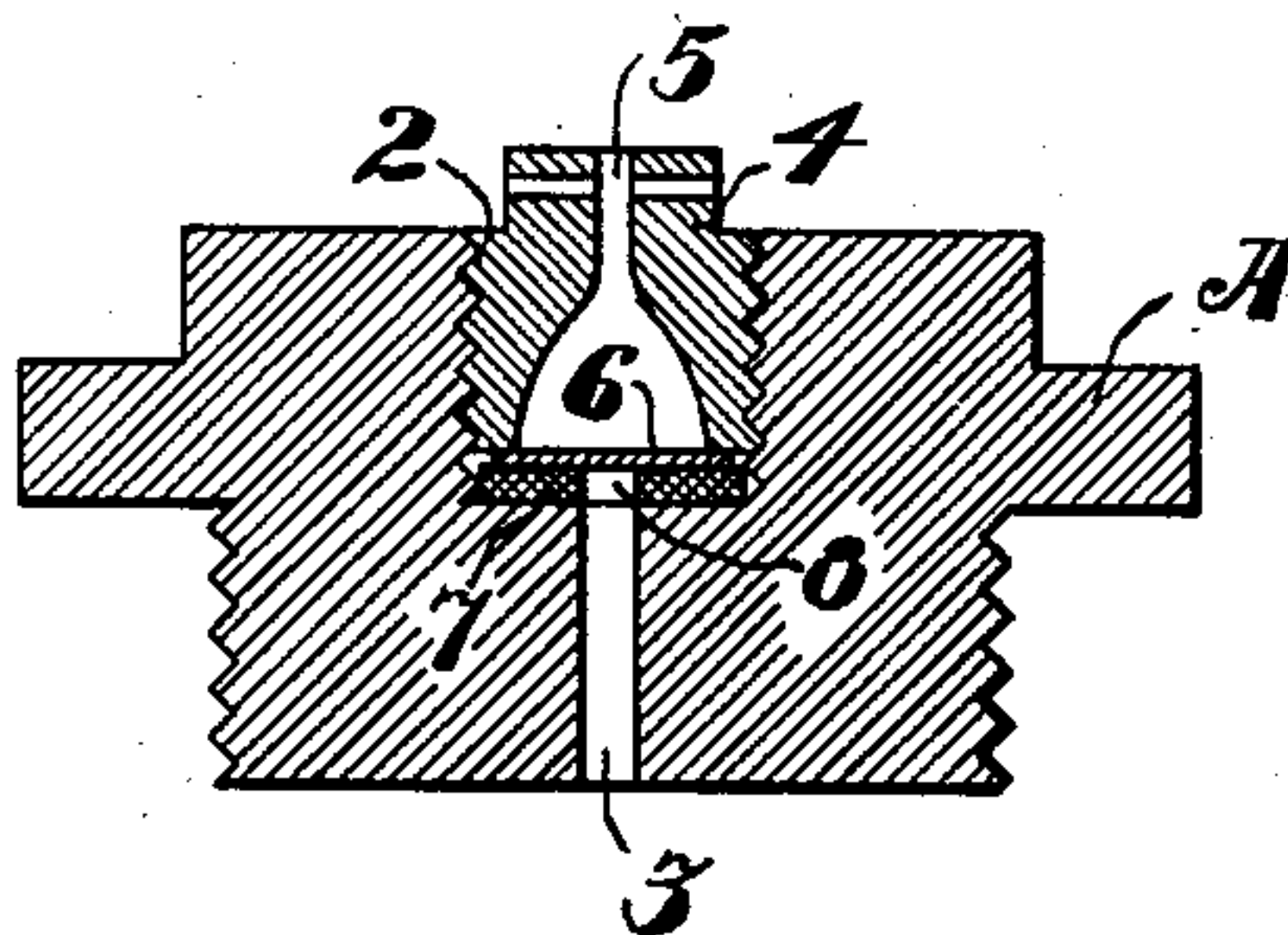
APPLICATION FILED MAR. 26, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



Witnesses,

*J. A. Morse*  
*Dudley, Mass.*

Inventor,

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*att.*

# UNITED STATES PATENT OFFICE.

ELBERT R. CHARLES, OF PETALUMA, CALIFORNIA.

## AIR-VENT CONTROLLER FOR BARRELS.

SPECIFICATION forming part of Letters Patent No. 739,058, dated September 15, 1903.

Application filed March 26, 1903. Serial No. 149,766. (No model)

*To all whom it may concern:*

Be it known that I, ELBERT R. CHARLES, a citizen of the United States, residing at Petaluma, county of Sonoma, State of California, have invented an Improvement in Air-Vent Controllers for Barrels; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for controlling the ingress of air into barrels and like containers, so as to allow the liquid contents of such containers to escape freely.

The invention consists of the parts and the construction and combination of parts which I will hereinafter describe and claim.

Referring to the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a vertical cross-section of same.

Large quantities of metal barrels are employed by oil and other companies for the transportation of their products, and these are fitted with faucets or some means for drawing off the contents. This cannot be done without making an opening of some kind to allow the air to enter the barrel, and such openings are often made by forcing a hole in some part of the barrel, which must be repaired before the barrel can be again used.

It is the object of my invention to provide a convenient means for admitting air to such barrels and at the same time to enable the opening to be hermetically sealed for transportation and when not in use.

As shown in the drawings, A is a bung or stopper of suitable construction, usually screw-threaded and adapted to fit corresponding threads in an opening made in some suitable part of the barrel, which will be at the top while the contents are being withdrawn through a faucet or opening in the lower part. This bung or stopper has a chamber made in its upper part, as shown at 2, and from the bottom of this chamber a small passage 3 extends through the inner end of the bung.

7 is a leather washer fitting the bottom of the chamber 2 of the bung. This washer has a hole made through it, as at 8, coincident with the hole 3, which extends into the inner part of the bung.

6 is a thin metal disk of smaller diameter, adapted to rest upon a leather washer 7.

4 is a screw-threaded plug, which fits the

threads of the chamber 2 of the outer part of the bung and may be screwed down so as to press the edge portion of the disk 6 firmly upon the washer 7, and by thus compressing the washer between the disk and the bottom of the chamber to hermetically seal the opening 3 and prevent any escape of the contents of the barrel. From the upper part of the chamber a passage 5 extends through the outer end of the plug into the open air. This passage is shown as having its upper portion provided with parallel walls, which may serve as a guide for directing a nail or other puncturing instrument to the center of the metal disk directly over the hole 8 in the center of the underlying flexible washer.

It will be understood that the bung and plug may be so seated in the barrel or other container as to be approximately flush with the outer surface and protected from injury from the outside.

In operation, the bung A being seated in place, the leather washer 7 in the bottom of the chamber 2 of the bung, and the metal disk 6 lying upon the washer, it is only necessary to screw the plug 4 down tight upon the disk to form a joint between the disk and the washer and between the washer and the bottom of the chamber, thus sealing the cask or container against leakage during transportation. When set up for the purpose of drawing off the liquid by a suitable faucet, it is only necessary to puncture the disk 6 with a nail or suitable sharp instrument, when air will be admitted as the contents of the cask are withdrawn. This enables the packer to fill the cask and screw the plugs in as tight as necessary. The users are often without any tools by which to loosen such plugs and will damage the metal cask by punching a hole in it to admit air when the faucet is opened. By this construction I provide an inclosed and protected destructible diaphragm which may be perforated without opening the plugs or injuring the cask.

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

A plug or closure having a chamber in the outer end and an opening connecting the bottom of the chamber with the inner end of the plug; a flexible washer fitting the bottom of



the chamber and having a hole through it; a  
thin metallic disk seating directly upon the  
washer and of less diameter than the latter;  
and a screw-threaded plug screwing into the  
5 chamber of the first-named plug and having  
its under side to directly engage the metal  
disk and in turn press the latter tightly upon  
the flexible washer to hermetically seal the  
opening through the latter; said screw-plug

having a small opening through it the walls 10  
of which form a guide for the insertion of a  
puncturing instrument.

In witness whereof I have hereunto set my  
hand.

ELBERT R. CHARLES.

Witnesses:

THOS. C. DENNY,

WM. B. HASKELL.