

No. 666,292.

Patented Jan. 22, 1901.

T. L. WASSON.
VENT PLUG FOR CASKS OR BARRELS.

(Application filed June 9, 1900.)

(No Model.)

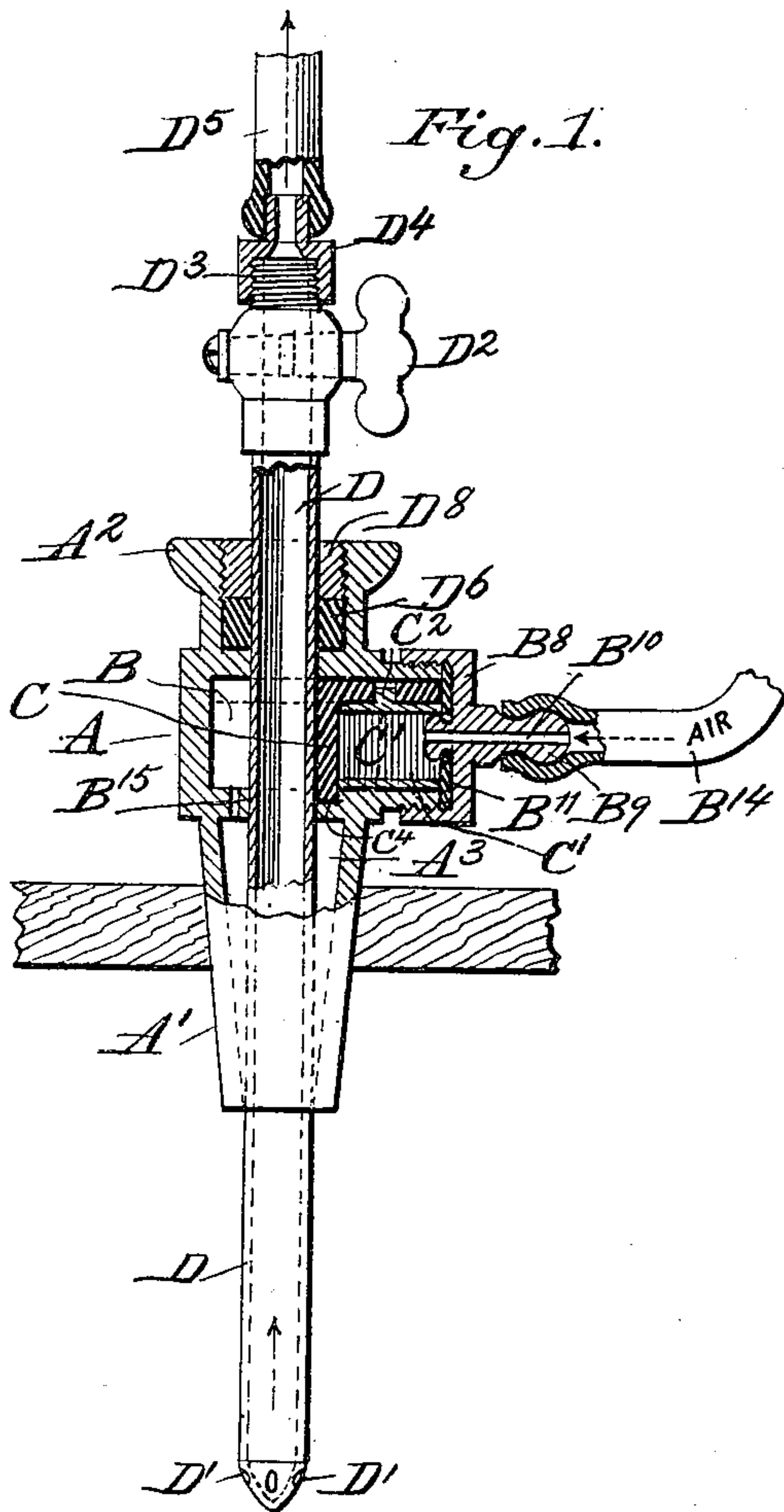


Fig. 7.

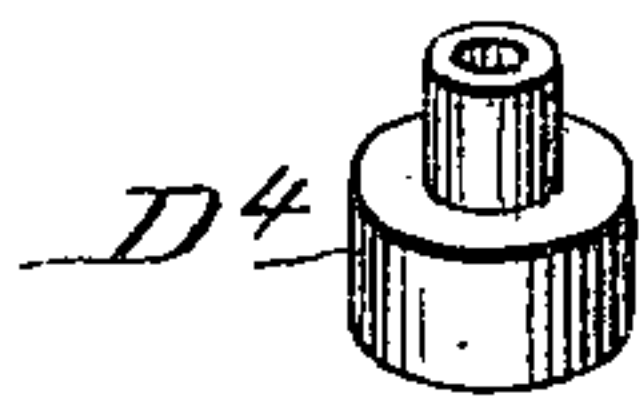


Fig. 8.

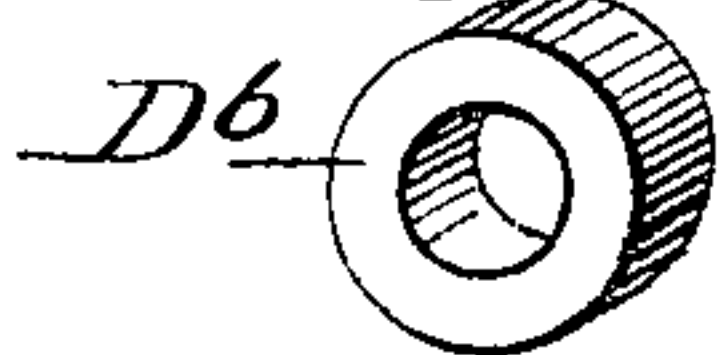


Fig. 9.

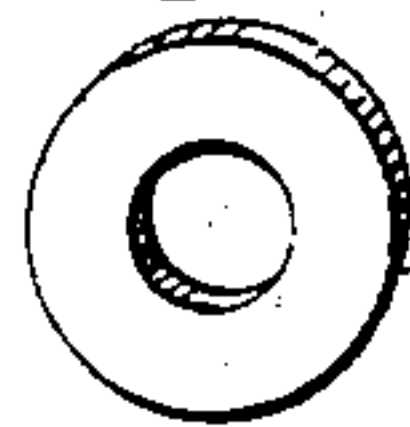


Fig. 3.



Fig. 2.

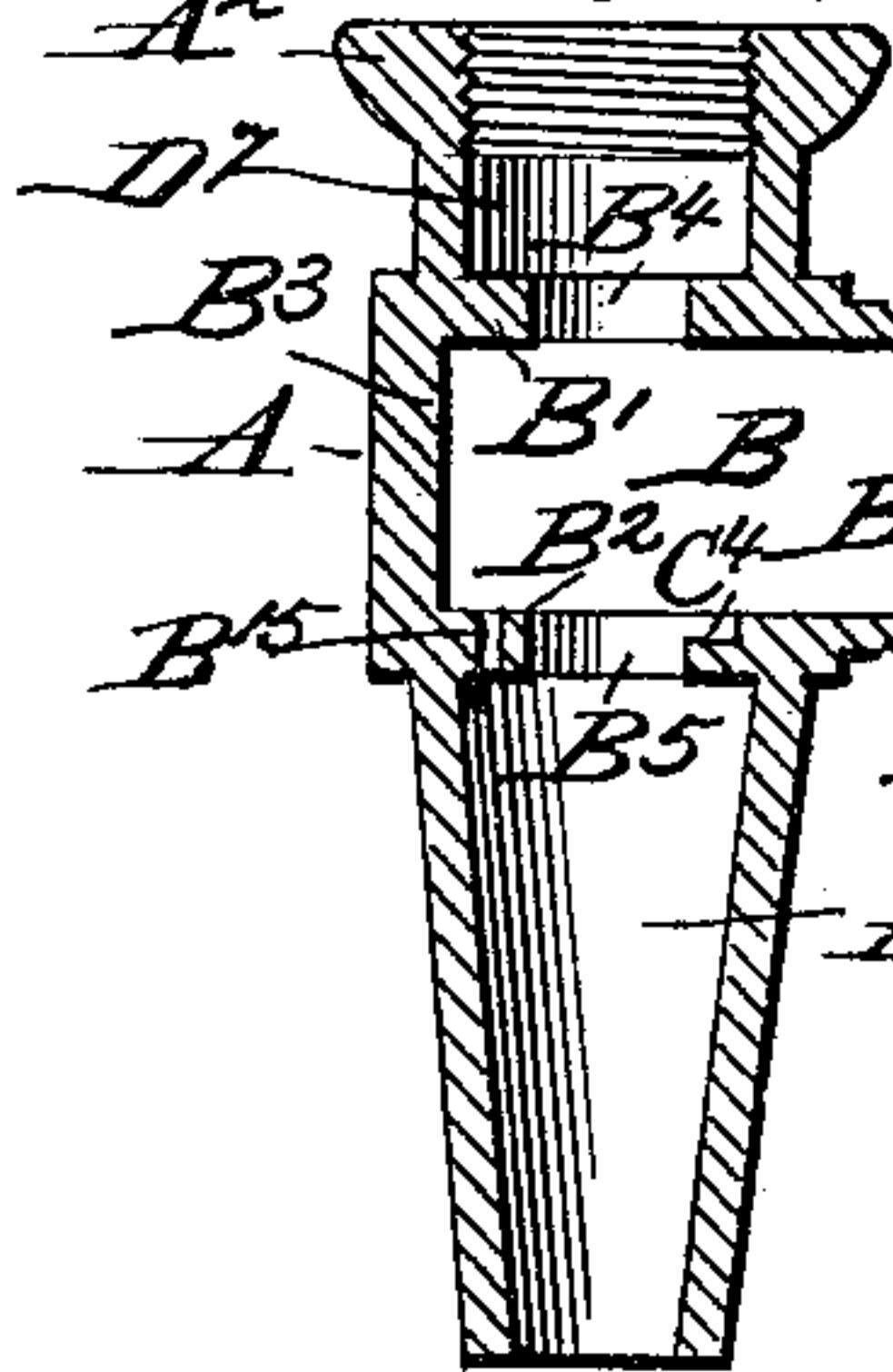


Fig. 4.

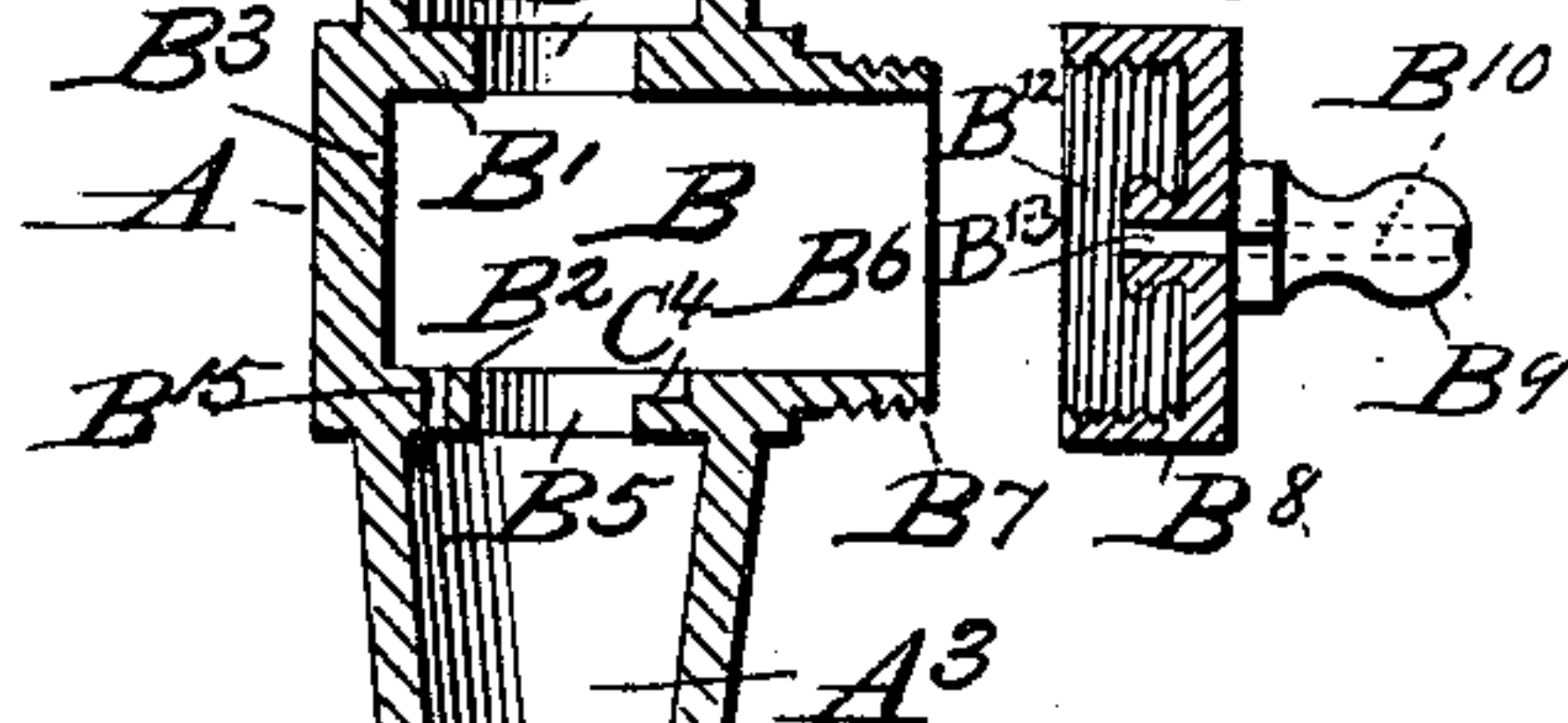


Fig. 5.

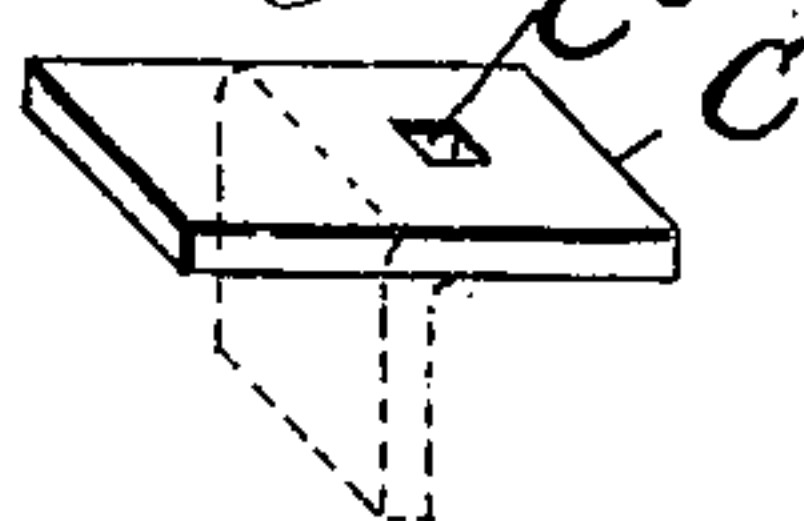
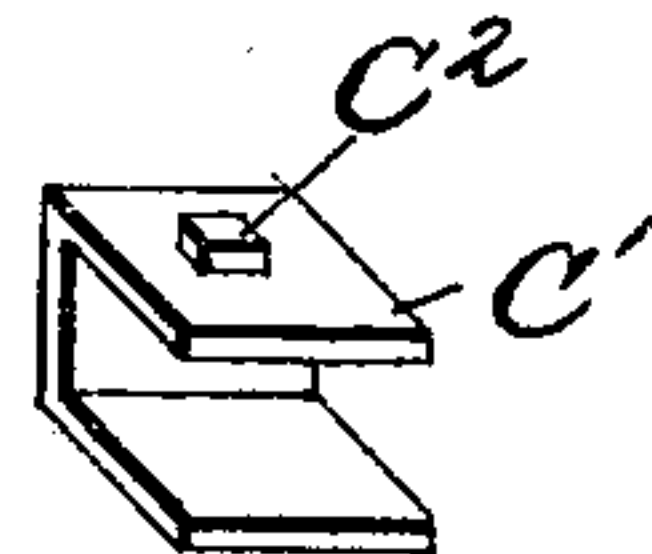


Fig. 6.



Witnesses

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VENT-PLUG FOR CASKS OR BARRELS.

SPECIFICATION forming part of Letters Patent No. 666,292, dated January 22, 1901.

Application filed June 9, 1900. Serial No. 19,721. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LITTLE WASSON, a citizen of the United States, and a resident of Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Vent-Plugs for Casks or Barrels, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The invention relates to improvements in vent-plugs of that class consisting, essentially, of a spile having a passage controlled by a valve and of an eduction-tube adapted to be passed through the spile to open the valve and to conduct the fluid from the interior of a cask to its exterior. In many of the devices of this kind in ordinary use the valve has a particular shape or form, so that when it becomes worn and needs replacing the services of a skilled workman are required to make the repairs or a duplicate of the valve has to be secured from the manufacturer of the particular device to be mended.

One of the objects of the invention in the present instance is to provide a device in which the valve can be repaired or replaced by the ordinary layman and without sending to the manufacturer of the device for a new valve.

The invention also has for its object the provision of a device that is of durable and simple construction and at the same time efficient in its purpose.

The invention consists in the novel construction, combination, and arrangement of parts, such as will be hereinafter fully described, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the accompanying drawings, in which similar reference characters designate corresponding parts, Figure 1 is a view, partly in section and partly in elevation, of a device embodying the invention. Fig. 2 is a longitudinal sectional view of the casing of the spile. Fig. 3 is a detail view showing the annular nut for compressing the packing around

the eduction-tube. Fig. 4 is a detail sectional view showing the cap for closing the air-supply chamber. Fig. 5 is a detail perspective view showing the valve that controls the passage through the spile. Fig. 6 is a similar view showing the spring for holding the valve in place. Fig. 7 is a detail view showing the coupling-piece for the eduction-tube and the tubing leading from it. Fig. 8 is a similar view showing the packing for the eduction-tube when the latter is inserted in the spile. Fig. 9 is a similar view showing the packing between the cap and the walls of the air-chamber.

The spile A has a shape to a considerable extent like spiles in ordinary use. It tapers toward one end, as at A', so that it may be driven into the bung-hole of the cask to be tapped and also that it may fit bung-holes of different diameters. Its opposite end A² is adapted to receive the blows of the implement ordinarily used in driving such devices into place. A longitudinal passage A³ extends through the length of the spile. A transverse chamber B, located in the spile near its outer end or head, intercepts the longitudinal passage A³. It is formed by the transverse interior walls B' and B² and the outer longitudinal wall B³. In the walls B' and B², respectively, are the openings B⁴ and B⁵, coincident with the longitudinal passage A³ of the spile. The chamber connects with the exterior of the spile by the passage B⁶ in the offset B⁷, which has its periphery screw-threaded to receive the cap B⁸. The latter has a bulbed lug B⁹, and leading through the same to the interior of the cap is the passage B¹⁰. Interposed between the end of the offset and the cap is the washer B¹¹ to make the connection air-tight. To prevent the accidental closing of the passage B¹⁰, there is a lug B¹² projecting from the inner side of the cap through the washer, and it has a passage B¹³, coincident with the passage B¹⁰. A flexible tubing B¹⁴ leads from a source of compressed air and is attached to the bulbed lug B⁹. To permit the passage of the compressed air introduced into the chamber B to the interior of the inner end of the spile, a by-pass B¹⁵ is formed in the wall B².

A valve mechanism is provided for controlling the longitudinal passage A³ through the spile. In the chamber B is a rectangular-shaped piece of rubber C, held at one end against the wall B' by the U-shaped spring C', which is compressed between the rubber and the wall B². The member of the spring pressing against the rubber is provided with a lug C², that engages with the recess C³ in the rubber, and thereby holds the latter more firmly in place. This rubber forms a flap-valve, and normally, owing to its elasticity and the pressure of the air within the chamber B, is seated over the opening B⁴, as shown by dotted lines in Fig. 1, and closes the longitudinal passage against egress through the same of the fluid contained in the cask. As the valve is secured only at one end by the spring C', its free end can be readily turned down over the edge of the spring, as shown in full lines in Fig. 1, to open the passage. A seat C⁴ is formed in the wall B² to receive the free end of the valve when the latter is turned back. The dimensions of the free end of the valve are such that when it is turned back the compressed air from the tubing B¹⁴ can pass its edges into that part of the chamber B farthest from the side to which the said tubing is attached.

An eduction-tube D is provided for drawing off the contents of the cask through the spile. Its diameter is such that it can be readily passed through the openings B⁴ and B⁵ in the transverse walls B' and B², respectively. Its entering end is bluntly tapered and has openings D' therein, through which liquid can readily pass. Its outer end is provided with a stop-cock D², and the shell of the latter is externally screw-threaded, as at D³, and has turned thereon the coupling-piece D⁴. Tubing D⁵ is attached to the coupling-piece and leads to the place where the liquid is to be used. When the eduction-tube is in the spile, the escape of the liquid or compressed air is prevented by the packing D⁶, placed in the chamber D⁷ in the outer end of the spile. Into the outer end of this chamber, which is screw-threaded for the purpose, is turned the annular nut D⁸, by means of which the packing can be compressed in the chamber and around the eduction-tube.

The operation of the device is as follows: The spile is driven into the bung-hole of the cask in the usual manner. The egress of the liquid in the cask through the spile will be prevented by the valve C, which normally closes the opening B⁴ in the wall B'. When it is desired to draw off the contents of the cask, the eduction-tube is forced through the spile to the interior of the cask. In its passage through the spile the entering end of the tube forces the valve C aside. While the tube is being inserted and before it is connected

with the tubing for carrying off the liquid, the passage through the same can be closed by the stop-cock D². After the eduction-tube has been adjusted it is secured in place by turning the nut D⁸ into the chamber D⁷, and thereby compressing the packing D⁶.

Air under pressure is introduced into the cask by means of the flexible tubing B¹⁴ and the intervening mechanism for forcing the liquid through the eduction-tube and also for replacing the liquid that has been withdrawn. It is to be observed that the diameter of the eduction-tube is less than the interior diameter of the inner end of the spile, so that the air can enter the cask freely after it has passed through the by-pass B¹⁵. It is obvious that instead of the by-pass B¹⁵ the opening B⁵ in the wall B² can be made larger than the eduction-tube, so that the compressed air can pass through said opening around the tube into the inner end of the spile.

When the valve C becomes worn, by removing the cap B⁸ it can be readily removed, and as the form of the valve is very simple a new one can be easily shaped from an ordinary piece of sheet-rubber and used to replace the worn-out valve.

While the hereinbefore-described embodiment of the invention is the preferred one, yet it can be departed from to a considerable extent without departing from the spirit of the invention.

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

1. In a vent, a spile having a longitudinal passage through the same, a transverse wall provided with an opening coincident with said passage, a removable valve of elastic material controlling said opening, a removable spring for pressing one end of said valve against said wall to hold the same in place, and an eduction-tube adapted to be inserted in said spile to open said valve.

2. In a vent, a spile having a longitudinal passage through the same, a transverse air-chamber, having an exterior opening, intercepting said passage with its walls provided with openings coincident with said passage, means for closing the exterior opening of said chamber, means for introducing air under pressure into said chamber, a removable valve of elastic material located in said chamber and controlling said passage, a removable spring for pressing one end of said valve against a wall of said chamber to hold the same in place, and an eduction-tube adapted to be inserted in said longitudinal passage to open said valve.

3. In a vent, a spile having a passage through the same, a wall intercepting said passage and provided with an opening coincident with said passage, a removable valve of flexible material controlling said opening, a U-shaped

spring for holding said valve in place, and an
education-tube adapted to be inserted in said
spile to open said valve.

5 4. In a vent, a spile having a passage through
the same, a wall intercepting said passage and
provided with an opening coincident with said
passage, a removable valve of flexible mate-
rial controlling said opening, a U-shaped
spring having a lug to engage with said valve

and for holding the latter in place, and an 10
education-tube adapted to be inserted in said
spile to open said valve.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

THOMAS LITTLE WASSON.

Witnesses:

ANDREW WASSON,
JOSEPH F. EGAN.