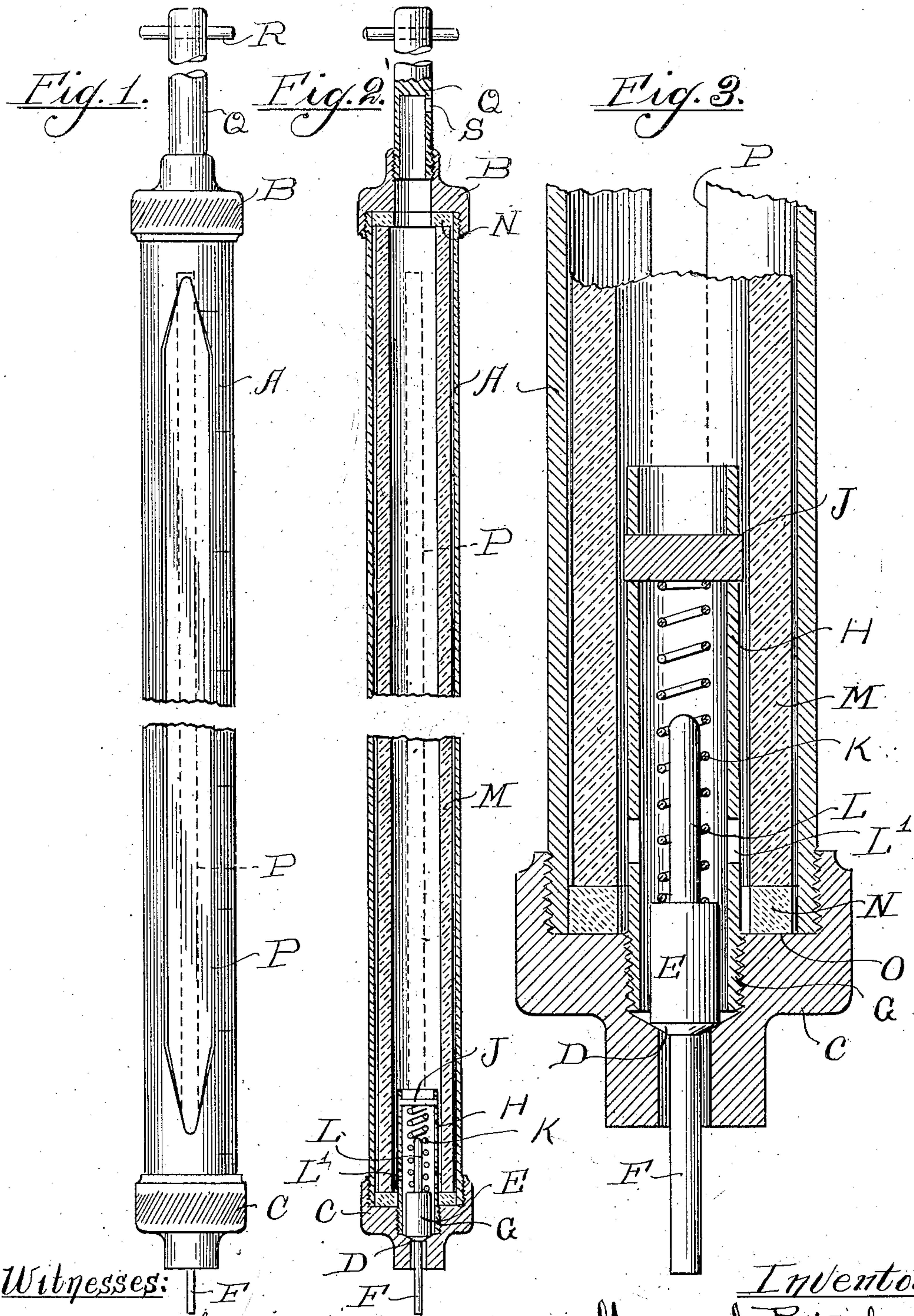


No. 832,164.

PATENTED OCT. 2, 1906.

M. A. RUTENBER.
CASK OR TANK GAGE.
APPLICATION FILED NOV. 28, 1904.



Witnesses:
O. F. Wilson
F. Schlotfeld

Inventor:
Menzo A. Rutember
By *Rudolph M. [Signature]*
Attorney

UNITED STATES PATENT OFFICE.

MENZO A. RUTENBER, OF CHICAGO, ILLINOIS.

CASK OR TANK GAGE.

No. 832,164.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed November 28, 1904. Serial No. 234,573.

To all whom it may concern:

Be it known that I, MENZO A. RUTENBER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cask or Tank Gages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel construction in a cask or tank gage, the object being to provide a device which may be inserted in the bung-hole of a cask or tank to ascertain accurately the level of liquid contained therein; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a gage constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a fragmentary central longitudinal section, on an enlarged scale, of the valved end of the gage.

My said device is intended to be used to determine the level of liquid of any kind contained in tanks, casks, and the like which are not provided with means for ascertaining such level, such as a water-glass on the exterior, and is furthermore designed particularly for use in connection with automobiles or for measuring the depth of volatile liquids—such as gasoline, benzene, alcohol, and the like—which evaporate so rapidly that by the insertion of a wooden rod, which is generally resorted to, the level is not accurately indicated, and, furthermore, serves as a sampling device to remove from the tank or cask a sample of the contained liquid.

To these and other ends my device comprises a metallic casing comprising a tube A, which is threaded at its ends to receive heads B and C, each of which is provided with a central opening, the opening in the upper head B serving as a passage for air and the opening in said head C serving as a passage for liquid, the latter being surrounded by a valve-seat D, on which a valve E seats, the latter being provided with a shank or stem F of smaller diameter than the central opening in said head C and serving as a means for actuating said valve in one direction and as a guide to control the movements thereof. Mounted in the threaded enlarged portion G

of said central opening in said head C is a small tube H, concentric with said tube A, in the upper end portion of which a cross-head J is mounted. Between said cross-head J and the upper end of said valve E a spiral compression-spring K is interposed, which surrounds the stem L of said valve and serves to normally hold the latter on its seat. The said stem L is relatively so disposed that the distance between the upper end of same and said cross-head J is less than the distance from the lower end of said head C to the outermost end of the shank or stem F, so that by pressing on the latter to raise said valve against the action of said spring the said stem L will strike said cross-head J, which serves as a stop to limit the movement of said valve before the lowermost end of said head C comes in contact with the bottom of the cask or tank or other means bearing on said shank F to raise said valve, thus preventing said inlet-opening for liquid from being sealed by contact with such bottom in an obvious manner. The said tube H is provided adjacent its lower end with openings L', through which and the upper open end of said tube liquid is adapted to pass into the glass tube M, disposed between said tube A and said tube H. The said tube M is sealed at its ends by means of gaskets N or any suitable elastic material disposed between the ends of said tube M and the annular shoulder O in said heads B and C, said gaskets being compressed against the ends of said tubes M by the act of mounting same in place on said tube A. The said tube A is provided on diametrically opposite sides with longitudinal slots P, through which the glass tube M is clearly visible and through which, furthermore, the level of liquid may be readily ascertained by holding the device to the light in an obvious manner. At one side of each of said slots P, I provide a scale to indicate the level of contained liquid, in inches or fractions thereof, in a well-known manner. The said central opening in said head B is threaded at its upper end to receive an extension-tube Q, having a cross-head or gasket R, mounted therein and having an opening S in one side thereof through which air may pass from said tube M, said extension-handle being obviously of any desired length to suit the purpose of the operator.

My said device is operated as follows: The valved head C of the gage is inserted through

the bung-hole of the cask or tank and lowered therein until the shank F strikes the bottom thereof. By pressing on said gage the valve E will obviously be raised relatively to said gage, thereby admitting liquid, which will obviously rise in said tube M until it attains the level in the cask or tank. By then releasing the pressure on the device the valve E will close and the liquid contained in said tube will be retained in the latter and removed therewith from the tank or cask, whereby the depth of liquid in the latter is readily determined. It will be obvious that when the lower end of the shank F strikes the bottom and the body of the device is depressed relatively thereto the liquid flowing into the same will attain a greater level therein relatively than the level in the tank or cask; but in the closing movement of the valve the body of said device will again be relatively raised, and during this movement the superfluous liquid flowing into said tube will again flow out of same, the level of liquid being calculated by the relative height thereof in the tube from the upper limit of movement of the lowermost end of the shank F.

The said device is very neat and compact, operates in a very simple manner, and by reason of the metallic outer tube A is thoroughly protected against breakage. It is also readily taken apart for purposes of repair.

I claim as my invention—

1. A gage comprising a tubular casing provided at its ends with heads each having a central opening, a valve controlling the opening in one of said heads and movable longitudinally in said casing, a transparent tube mounted in said casing and communicating at its ends with said openings in said heads, a tube concentric with said transparent tube disposed within the latter and secured to said valve-controlled head, a stop disposed within said tube, a stem on said valve adapted to engage said stop to limit the opening move-

ment of said valve, a spring disposed between said stop and said valve for holding the latter normally closed, and a projection on the other end of said valve protruding below said head and adapted to engage the bottom of the tank or cask to open said valve when said casing is depressed against the action of said spring, said casing being provided on diametrically opposite sides with longitudinal slots through which the liquid contained in said transparent tube is rendered visible.

2. A gage comprising a tubular casing provided at its ends with heads each having a central opening, a valve controlling the opening in one of said heads and movable longitudinally in said casing, a transparent tube mounted in said casing and communicating at its ends with said openings in said heads, a tube concentric with said transparent tube disposed within the latter and secured to said valve-controlled head, a stop disposed within said tube, a stem on said valve adapted to engage said stop to limit the opening movement of said valve, a spring disposed between said stop and said valve for holding the latter normally closed, and a projection on the other end of said valve protruding below said head and adapted to engage the bottom of the tank or cask to open said valve when said casing is depressed against the action of said spring, said casing being provided on diametrically opposite sides with longitudinal slots through which the liquid contained in said transparent tube is rendered visible, said central opening in said other head being threaded to receive an extension tubular handle.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

MENZO A. RUTENBER.

Witnesses:

RUDOLPH WM. LOTZ,
F. SCHLOTTFELD.