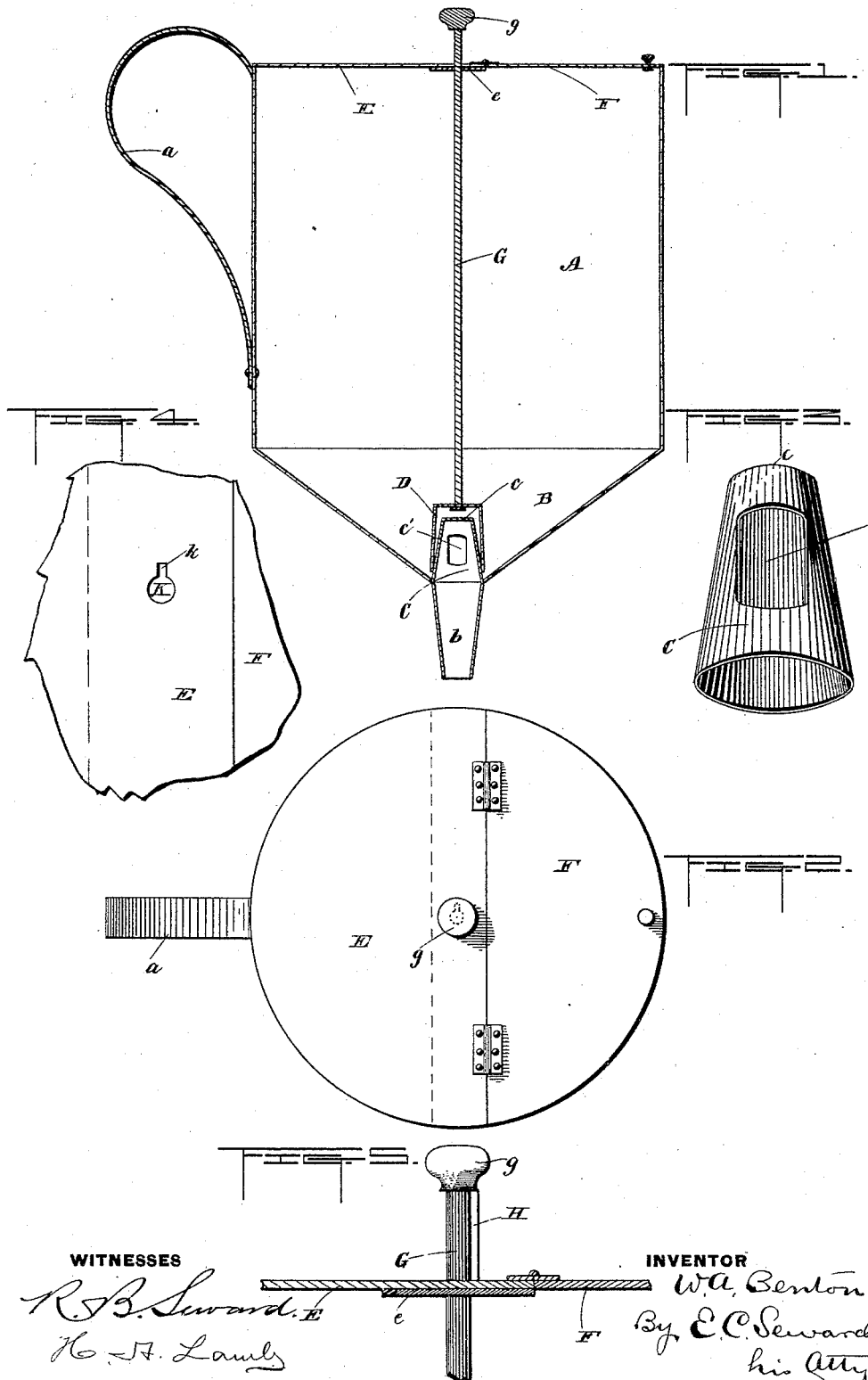


W. A. BENTON.
MEASURING FUNNEL.

Patented Mar. 4, 1890.



UNITED STATES PATENT OFFICE.

WEBSTER A. BENTON, OF MADELIA, MINNESOTA.

MEASURING-FUNNEL.

SPECIFICATION forming part of Letters Patent No. 422,700, dated March 4, 1890.

Application filed November 26, 1889. Serial No. 331,626. (No model.)

To all whom it may concern:

Be it known that I, WEBSTER A. BENTON, of Madelia, in the county of Watonwan and State of Minnesota, have invented certain new and useful Improvements in a Combined Measure and Funnel; 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 an improvement in combined measures and funnels.

The object is to provide an article of the above character which may be left, after being filled, to discharge its contents into a jug or narrow-mouthed vessel without any liability of collecting flies and dirt therein, which shall have an effective cut-off device capable of being operated from the top of the closed vessel, and which will discharge its contents rapidly.

A further object is to provide a simple, durable, and convenient measure and funnel adapted to general use in retailing liquids.

In the accompanying drawings, Figure 1 is a view of the measure in vertical central section. Fig. 2 is a top plan view. Fig. 3 is an enlarged view of a portion of the discharging device. Fig. 4 is an enlarged partial top plan view showing the form of perforation in the lid for locking the cut-off in elevated adjustment, and Fig. 5 is an enlarged partial sectional view showing the cut-off rod in engagement with the lid.

A represents the body portion of the measure, which is preferably of cylindrical form and is provided with a handle *a*, as is usual.

The bottom B of the measure is of funnel shape and is provided at its apex with a tapered nozzle *b*, adapted to enter the mouths of jugs or other narrow-mouthed vessels. Forming a continuation of the nozzle *b* and extending upwardly within the vessel is an upwardly-tapered discharge-guide C, having its top *c* closed and an opening *c'* in its side, through which the liquid from the vessel must pass to escape through the nozzle *b*. The capacity of the opening *c'* is intended to be equal to or slightly greater than the mouth of the nozzle *b*. The discharge-guide and the nozzle

are united liquid-tight to the bottom of the measure, and the two parts, which form practically a continuous nozzle, may be, if preferred, formed integral and united at their enlarged portions with the bottom of the measure.

The cut-off consists of a cup D of slightly less diameter at its open end than the tapered discharge-guide C at its largest diameter and conforming thereto in lateral contour, so that when the cup is dropped over the discharge-guide C its lower edge will engage the periphery of the guide C below the lowermost portion of the opening *c'*, and thereby effectually cut off the entrance of the liquid from the measure to the opening.

The cut-off D is here shown as slightly tapered; but it is evident that a cup of cylindrical form would serve the purpose of a cut-off to some extent.

The object of the slight taper of the cup—a taper less than that of the guide C—is to effect a more extended practical engagement of the cup with the periphery of the guide and to further cause the downward movement of the cup to clear for some considerable distance the periphery of the guide from molasses, oil, or other adhesive liquid which has a tendency to harden upon surfaces exposed alternately to the liquid and to air. The seating of the cup always at the same point on its seat is an important advantage over the variable positions which an ordinary stopper is liable to assume when dropped into position, (the accumulation of the adhesive material on the seat causing such variation,) as it renders the measurements uniform. The cup form of the cut-off also tends to float the cut-off when once raised, as there will be a tendency to inclose therein a certain amount of air when the liquid flows under its edge around the guide C to the opening *c'*. While it is not essential to the practical working of the measure that there should be one opening *c'* only, yet the single opening has a tendency to prevent the cross-currents, which, when an opening is exposed in the bottom of a vessel, materially interfere with the flow of the liquid from the vessel. In the present construction such currents as flow around from the

sides of the guide are carried by the main current into the enlarged portion of the guide and nozzle and thence fall freely in a direct line out of the mouth of the nozzle.

5 The top of the measure is closed by a fixed partial cover E, along beneath the straight edge of which a stiffening-strip *e* is secured. The strip *e* serves to re-enforce the edge of the partial cover to which the movable cover-
10 section F is hinged, and also stiffens the top of the measure and causes it to retain its shape and stand wear and tear. The strip *e* is located about centrally across the top of the measure, and through it at the central
15 portion of the top extends the cut-off-operating rod G. The rod G is secured at its lower end to the cut-off D, and at its upper end is provided with a knob or handle *g*.

If it be found desirable to lock the cut-off
20 raised from its seat, the rod G may be provided with a feather or tongue H, extending a short distance along its surface, and the opening K for the rod through the cover may be provided with a recess *k* to receive the
25 tongue, so that when the rod is raised enough to bring the lower end of the tongue above the opening K the rod may be slightly rotated, and thereby locked against dropping until again turned to cause the tongue to
30 register with the recess.

In use the cover-section F is swung open, the measure filled, its nozzle set in the mouth of a receiving-vessel, its cover closed, the cut-off raised, and the measure allowed to discharge its contents while the clerk attends
35 to other business.

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

40 1. In a combined measure and funnel, the combination, with a measure having a funnel-shaped bottom, a nozzle projecting from its bottom, and a discharge-guide projecting upwardly from the nozzle within the measure,
45 of a cut-off device surrounding the discharge-guide and means for operating the cut-off

from the top of the measure, substantially as set forth.

2. In a combined measure and funnel, the combination, with the measure, a nozzle projecting from its bottom, and a tapered discharge-guide projecting from the nozzle within the measure and provided with a discharge-opening in its side, of a cup-shaped cut-off adapted to embrace the discharge-guide and
55 means for operating the cut-off from the top of the measure, substantially as set forth.

3. In a combined measure and funnel, the combination, with the measure provided with a funnel-shaped bottom, a nozzle projecting
60 from the bottom, and a tapered discharge-guide projecting from the nozzle within the measure and provided with an opening in its side, of a tapered cup-shaped cut-off adapted to embrace the discharge-guide below the
65 opening therein and means for operating the cut-off from the top of the measure, substantially as set forth.

4. The combination, with the body of the measure, the fixed cover-section, the movable
70 cover-section hinged thereto, and a cut-off-operating rod extending through the cover, of a strengthening and re-enforcing strip extending across the top of the measure along the edge of the fixed cover-section, substan-
75 tially as set forth.

5. The combination, with the cover provided with an opening therethrough for the passage of the cut-off-operating rod, of the cut-off-operating rod, the opening and the
80 rod being provided the one with a recess and the other with a tongue to enter the recess, the same serving as a lock to hold the cut-off rod suspended, substantially as set forth.

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

WEBSTER A. BENTON.

Witnesses:

JOHN LUNDBERG,
CHARLES COOLEY.