J. N. BERG.

MEASURING-FUNNEL.

No. 194,887. Patented Sept. 4, 1877.

Fig. I.

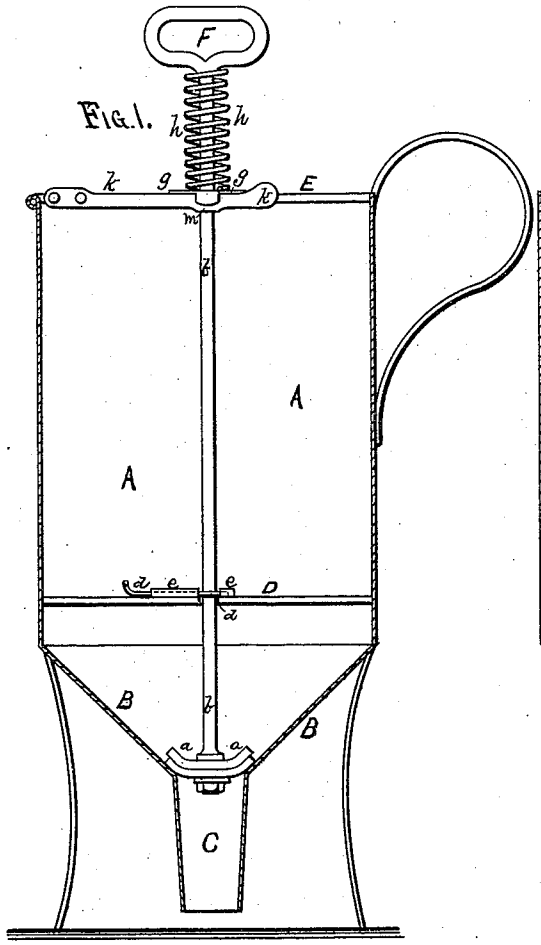


Fig. II.

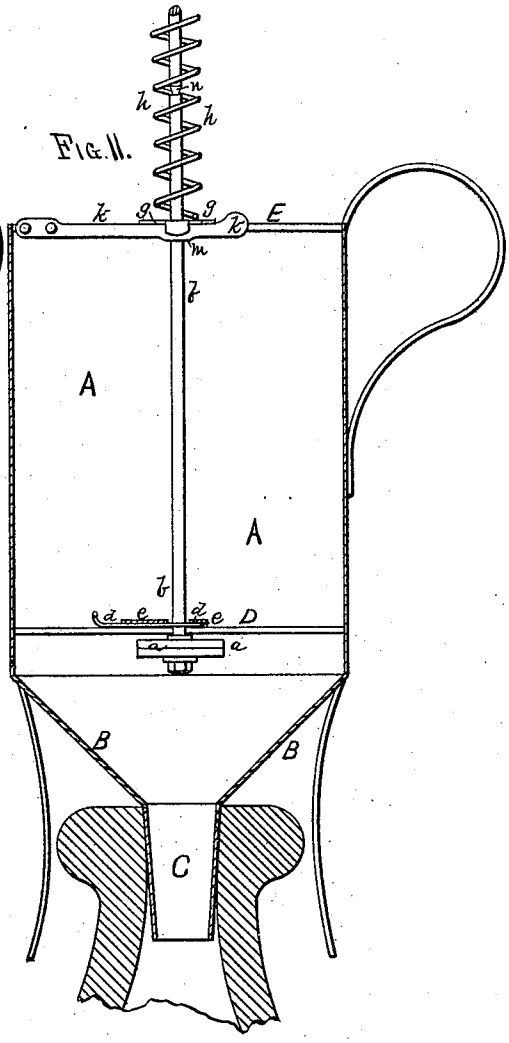


Fig. III.

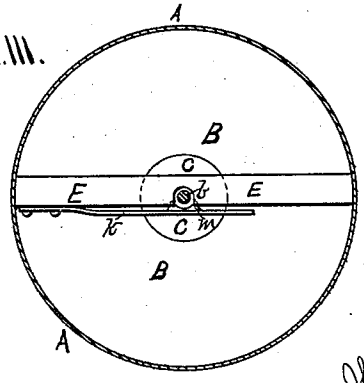


Fig. V.

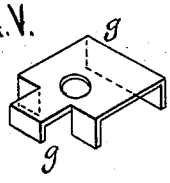
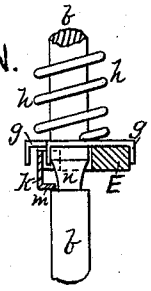


Fig. IV.



Witnesses.

C. N. Woodward

John T. Halsted

John Nelson Berg

Inventor. By

Louis Ferrer, Bles.

attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN N. BERG, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN MEASURING-FUNNELS.

Specification forming part of Letters Patent No. **194,887**, dated September 4, 1877; application filed July 17, 1877.

To all whom it may concern:

Be it known that I, JOHN NELSON BERG, of Minneapolis, in the county of Hennepin and State of Minnesota, have made certain new and useful Improvements in Measuring-Funnels, which invention is fully set forth in the following specification and accompanying drawing, in which—

Figure I is a sectional elevation, showing the valve closed. Fig. II is a similar view, showing the valve open; Figs. IV and V, enlarged detail views of the spring-catch, &c.; Fig. III, a plan view.

This invention relates to that class of measuring-funnels in which a valve operated by a vertical rod is used; and consists in a spring-catch and coiled or other spring, for holding the valve against its seat and raising it when the contents are to be discharged, as hereinafter set forth.

A is the measuring-can, having the usual hopper or funnel-shaped bottom B and nozzle C. *a* is the valve, and *b* the valve-rod, the latter being held in place by two cross-pieces, D E. This valve consists of one or more pieces of rubber or leather, cut in a circular form, and secured to the lower end of the rod *b*. They are made larger than the nozzle C, so that when pressed down the lower edge of the funnel B will form a seat for them.

The cross-piece D has a slot cut in its center, in which the rod *b* is held by a pin, *d*, working in ferrules *e*, to enable it to be removed for cleaning, &c. The upper cross-piece E also has a slot in its center similar to the one in D, through which the upper end of the rod *b* passes.

g is a metal plate, having its edges bent down over the cross-piece E, and provided with a hole in its center above the slot, in which the rod *b* fits.

h is a coiled spring upon the rod *b*, above the plate *g* and cross-piece E, which, acting between the handle F and plate *g*, raises and holds the valve suspended. It also holds the plate *g* down upon the cross-piece E.

k is a spring-catch riveted to the front edge of the cross-piece E, and having a lug, *m*, upon its inner lower edge, (where it crosses the rod *b*,) which catches upon a groove or collar, *n*, on the rod, and holds it down, and thus closes the valve.

When the measure is to be used the rod *b* is forced down until the spring-catch *k* engages the groove *n* and holds the valve closed. The liquid is then run in, and the nozzle C placed in the neck of the jug or can to receive it, and the spring-catch disengaged, when the spring *h* will raise the valve and allow the liquid to escape.

The patent of Cohic and Shartzer, June 3, 1873, No. 139,496, shows a rubber spring arranged upon their valve-rod above the cross-piece E; but this is intended to assist the valve in closing and in holding it closed, while mine is to assist the valve in opening and in holding it open.

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

The combination and arrangement of the valve-rod *b*, spring *h*, spring-catch *k*, bent metal plate *g*, and groove or collar *n*, arranged and operating substantially as hereinbefore described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN NELSON BERG.

Witnesses:

C. N. WOODWARD,

LOUIS WEESER.