D. B. LESTER.
Funnel.

No. 202,734. Patented April 23, 1878.

Fig. 1.

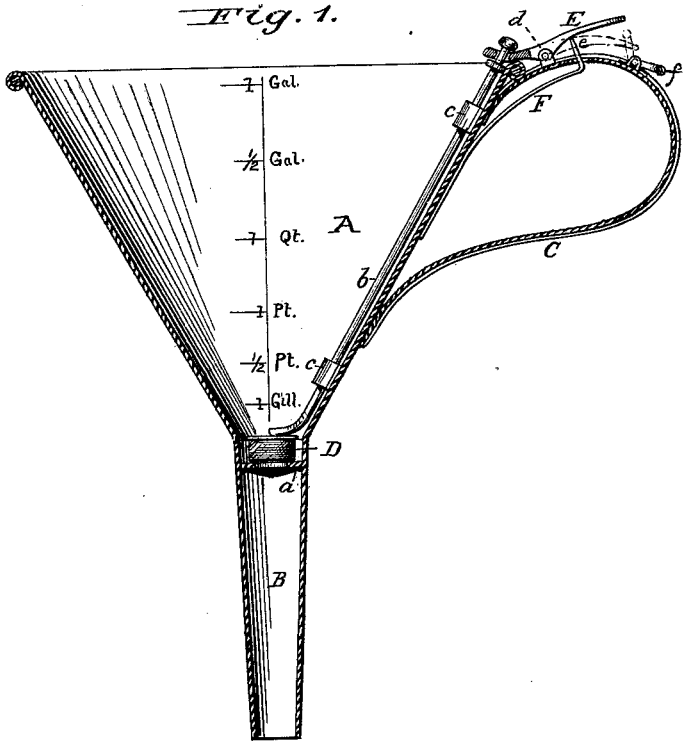
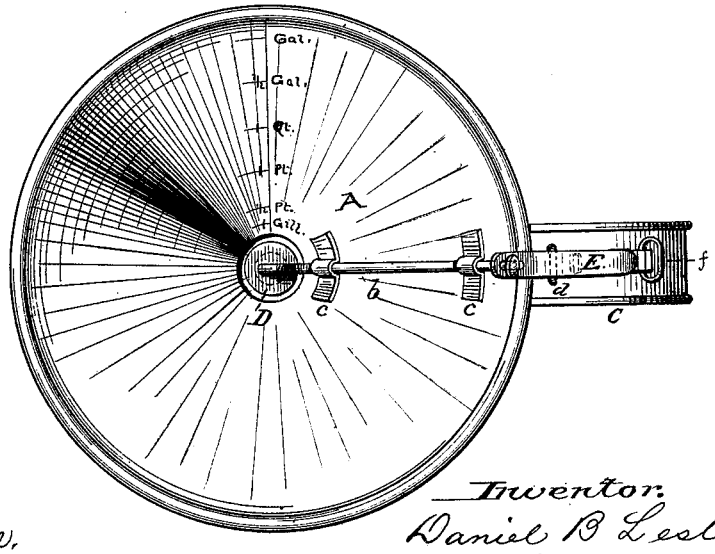


Fig. 2.



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UNITED STATES PATENT OFFICE.

DANIEL B. LESTER, OF SAVANNAH, GEORGIA.

IMPROVEMENT IN FUNNELS.

Specification forming part of Letters Patent No. **202,734**, dated April 23, 1878; application filed April 3, 1878.

To all whom it may concern:

Be it known that I, DANIEL B. LESTER, of Savannah, in the county of Chatham, in the State of Georgia, have invented certain new and useful Improvements in Funnels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, illustrating the same, in which—

Figure 1 is a central vertical section, showing the valve and its operating mechanism partly in side elevation, and Fig. 2 is a top-plan view thereof.

Similar letters of reference indicate corresponding parts in the two figures.

Before my invention funnels had been made having a valve arranged in the outlet or nozzle end, and operated by a spring lever or rod, whereby the funnel could be supplied with a desired quantity of liquid, and, when that quantity was obtained, the valve being opened, the liquid could escape. This construction of funnels is very advantageous in filling bottles, &c., for the funnel may be capable of holding enough to fill many vessels, and, when one has been filled, by closing the valve the funnel with its contents can be transferred to another vessel; it filled, the valve again closed, and the funnel removed to another bottle or vessel, and it filled, and so on while the funnel contains any liquid. Such funnels have been graduated in various ways, as by an engraved scale, indicating gills, pints, quarts, &c., or by transverse rods of wire, or by ridges or beads impressed upon the funnel in the process of manufacture, for the purpose of combining a measuring implement and a funnel—a combination the great utility and economy of which will be apparent when it is considered that there is a saving of one set of implements or instruments in dealing out liquids.

My invention relates to this class of articles; and it consists in a funnel, the bowl of which may or may not be graduated to indicate gills, pints, &c., having a nozzle and a handle, and provided with a valve seated within the nozzle so as not to encroach upon the capacity of the bowl, and combined with a rod working in bearings upon the face of the bowl, and operated by a thumb-lever, pressed by a flat spring arranged upon the outside of the bowl, within the handle, so as to be out of the way and protected from injury and displacement, and serving to retain the valve upon its seat.

Further, the invention consists in combining with such spring-pressed valve and its thumb-lever a ring upon the handle, adapted to engage with said thumb-lever when it is depressed to raise, open, or unseat the valve, so as to retain said valve in this position, and thereby relieve the operator of the necessity of using the hands upon the lever until the liquid shall have run out.

Referring to the drawings, A designates the bowl of the funnel, which, as before stated, may or may not be graduated to measure gills, pints, &c. B is the nozzle, and C the handle. Within the nozzle B, and below the bottom of the bowl, or the juncture thereof with the nozzle, is fixed an annular piece of metal, *a*, upon which rests, as upon a valve-seat, a valve, D. The valve D will not, when seated upon the annulus *a*, project into or encroach upon the capacity of the bowl A; and, further, the valve having its seat practically within the nozzle, it is guided thereby in closing, and will fit tighter, so as to most effectually prevent leakage. The valve D is attached to a rod or stem, *b*, which, in order to leave the bowl as free and unobstructed as possible, is extended up the face of the bowl and secured thereto by bearing-strips *c c*, in which it is free to work up and down without lateral play. E is a thumb-lever, pivoted at *d* to the handles C. F is a spring, of flat metal, secured against the outside of the bowl, within the handle C, so as to be protected from injury and displacement, and having its free end *e* projecting through an opening in the handle, so as to bear against the thumb-lever E to press its long end upward. The short end of this thumb-lever is connected to the upper end of the valve-rod *b*, and the operation of the spring F upon said lever is to cause said rod *b* to close the valve D and retain it upon its seat. *f* is a ring upon the handle C, which, as shown in dotted lines, Fig. 1, is adapted to be placed over the end of the thumb-lever when it is depressed to open the valve, so as to hold said valve open, and thus relieve the operator of the necessity of holding said lever down with the hands. The utility of this ring will be appreciated when the funnel is used in

transferring molasses or other thick, slow-running liquid.

It is obvious from the foregoing that the spring, the thumb-lever, and the valve-rod form a comparatively rigid connected operating mechanism for the valve, whereby it is normally held tight to its seat or closed, and that the valve is raised or the funnel opened to allow the escape of the liquid contents by depressing the thumb-lever.

The operating mechanism is arranged upon the handle, so as not to obstruct the funnel, and so as to be in convenient reach of the operator.

Having thus described my invention, what I claim is—

1. The flat spring F, secured exteriorly of the funnel and within the handle, in combination with the thumb-lever E and the valve-rod *b*, secured to the side of the funnel by bearing-strips *c*, whereby displacement and derangement of the said rod and spring are prevented, substantially as described.

2. The flat spring F, secured exteriorly of the funnel and within its handle, and combined with the valve-actuating mechanism, substantially as described.

3. In a funnel, a spring-valve mechanism having an actuating-lever, in combination with a ring, *f*, attached to the handle and adapted to engage the end of the said lever, substantially as and for the purpose described.

Signed and witnessed this 1st day of April, A. D. 1878.

D. B. LESTER.

Witnesses:
WM. H. PATTERSON,
T. C. FARR.