

No. 797,882.

PATENTED AUG. 22, 1905.

H. B. ANDERSON.
MIXING FUNNEL.
APPLICATION FILED SEPT. 19, 1903.

Fig. 1.

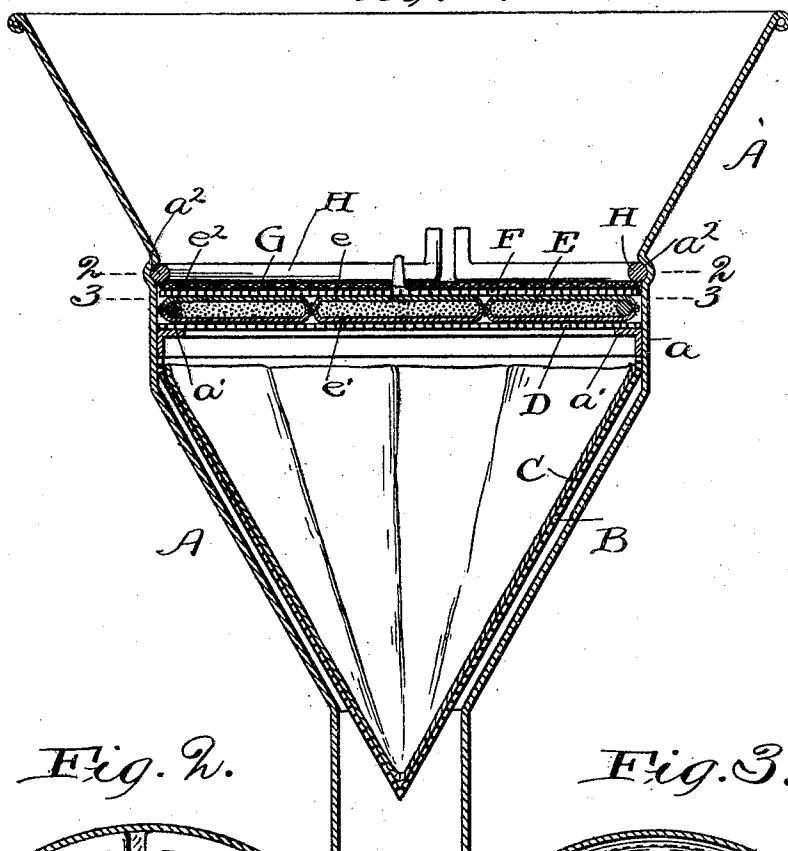


Fig. 2.

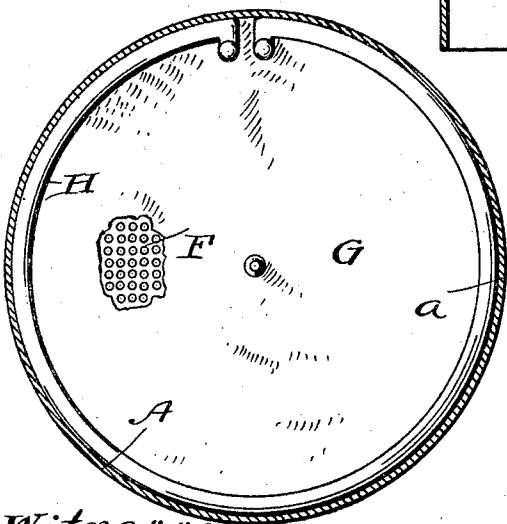
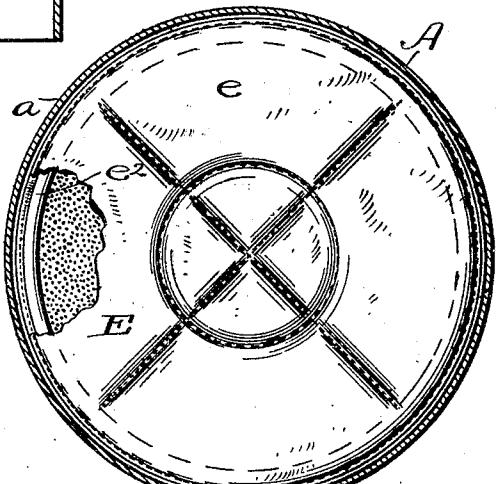


Fig. 3.



Witnesses:

E. B. Gilchrist

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Inventor:

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By his attorney

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UNITED STATES PATENT OFFICE.

HAROLD B. ANDERSON, OF CLEVELAND, OHIO.

MIXING-FUNNEL.

No. 797,882.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed September 19, 1903. Serial No. 173,773.

To all whom it may concern:

Be it known that I, HAROLD B. ANDERSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Mixing - Funnels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of the invention is to rapidly produce filtered solutions. It is especially adapted for use if the solvent liquid will volatilize to any great extent if the solute substance is stirred into it.

The invention may be said to consist in the construction and combinations of parts hereinafter described, and pointed out definitely in the claims.

In the drawings, Figure 1 is a central vertical section of the device. Fig. 2 is a plan view thereof, and Fig. 3 is a plan view of the bag which contains the solvent.

Referring to the parts by letters, A represents a funnel having, preferably, a cylindrical portion *a* between its ends.

B represents an inverted hollow cone, whose upper end is secured to the cylindrical part of the funnel, wherefore the body of the cone does not contact with the part of the funnel below it. This cone is made of perforated metal or of some equivalent material, as wire-gauze. Its function is to receive and support a cone C, of filter-paper, which is fitted thereto, and to permit the free flow into the funnel of so much of the solution as will pass through said filter-paper. Above this cone, but in the cylindrical part of the funnel, there is an inwardly-projecting flange or shelf *a'*. Upon this flange rests a disk D made of perforated metal or wire-gauze. Upon this disk is a disk-like bag E for holding the solvent. This bag includes two cloth disks *e e'*, which are sewed around a ring *e''*. The solvent is placed in this bag, and when evenly distributed therein the two disks are stitched together in various places, thus spreading the solute substance and preventing it from running to one side of the bag when the funnel is tipped.

Over this bag and resting thereon is a cover-disk F, of perforated metal or wire-gauze, and upon this perforated disk is placed a straining-disk G, of chamois-skin or some analogous material. By the use of chamois-skin all the water will be separated from the solvent as it is treated in passing through the

funnel. The described parts are held in the assembled position by means of a spring locking-ring H, which engages under an internal annular shoulder *a'* in the cylindrical part of the funnel above said cup.

The parts being assembled as stated, the solvent is then poured into the funnel. It flows in through the disks F and G onto the powdered solute substance in the bag, dissolving a considerable part of the same. The solution is then strained by passing through the lower permeable cloth disk, forming part of the bag, and then it trickles in a multitude of small streams through the perforated disk D into the filter-paper cone, by which it is filtered, the entire surface of said filter-paper cone being serviceable for filtering purposes because it is backed and supported by the perforated cone C.

Solutions may be quickly made and thoroughly filtered by the described apparatus, and if the solvent is volatile it will suffer very little loss during the process—no greater loss, in fact, than it would suffer if poured through a funnel from a can to a receiving-tank.

While I have described in detail the specific embodiment of the invention which the drawings show, it will be understood that it is not intended that the claims shall be limited to such details to any greater extent than is clearly set forth therein.

Having described my invention, I claim—

1. The combination of a funnel, an inwardly-projecting flange, a perforated cone below said flange, a removable perforated disk resting upon said flange, and a bag adapted to contain a solute substance and be supported by said disk.

2. The combination of a funnel having an inwardly-projecting flange, a perforated cone below said flange, a removable perforated disk resting upon said flange, a bag adapted to contain the solute substance and resting upon said perforated disk, a ring between them, a perforated metal disk over said bag, a filter-membrane over said perforated disk and a locking device for holding the parts in the assembled position.

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

HAROLD B. ANDERSON.

Witnesses:

J. B. HULL,
B. W. BROCKETT.