(No Model.)

A. WHELAN.

INDICATING FUNNEL.

No. 454,240. Patented June 16, 1891.

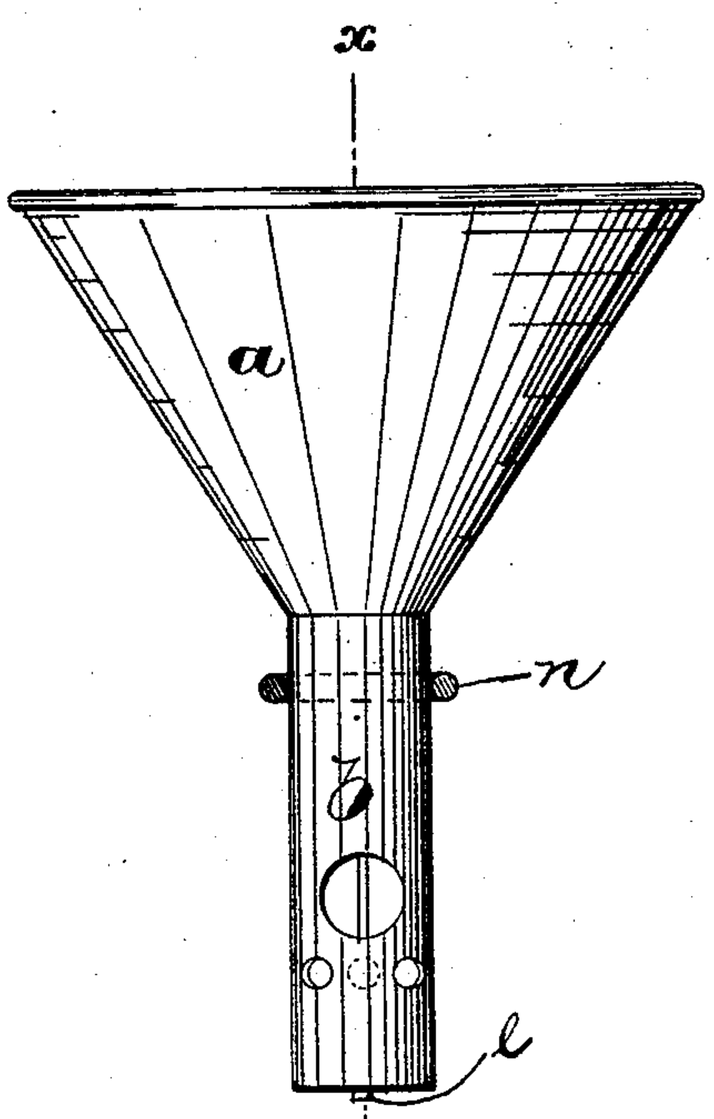

Fig. 1.

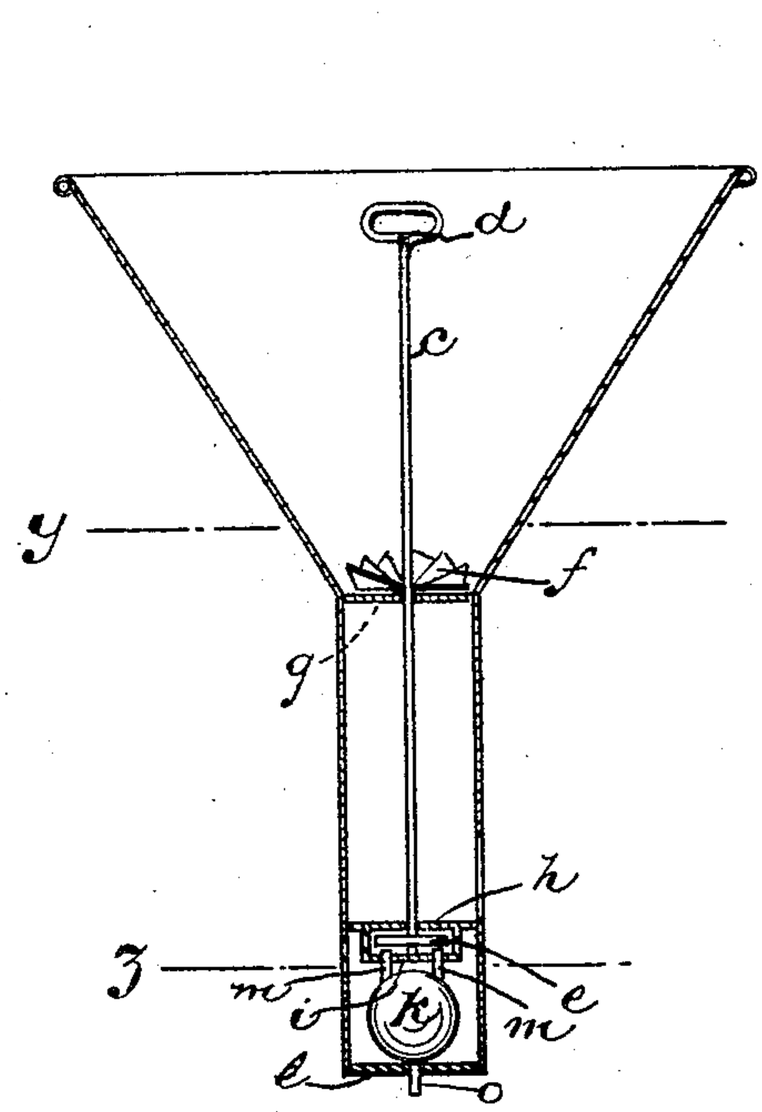

Fig. 2.

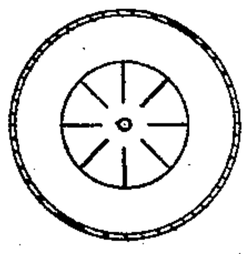

Fig. 3.

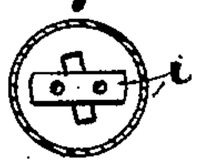

Fig. 4.

Witnesses

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By Drake & Co. Atty's.

UNITED STATES PATENT OFFICE.

ANDREW WHELAN, OF SOUTH ORANGE, NEW JERSEY.

INDICATING-FUNNEL.

SPECIFICATION forming part of Letters Patent No. 454,240, dated June 16, 1891.

Application filed December 6, 1890. Serial No. 373,765. (No model.)

To all whom it may concern:

Be it known that I, ANDREW WHELAN, a citizen of the United States, residing at South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Indicating-Funnels; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a funnel by means of which it can readily be determined when, in filling lamps or other vessels having opaque walls, the said vessels are full without removing the funnel for the purpose, and also to avoid the danger of said vessels overflowing.

The invention consists in the improved funnel and in the arrangement and combination of the several parts thereof, as herein set forth, and finally pointed out in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate corresponding parts in the several figures where they occur, Figure 1 represents a funnel embodying my invention, shown in elevation; and Fig. 2 is a vertical transverse section taken through line *x* of the same. Fig. 3 is a horizontal section taken through line *y* of Fig. 2, looking downward; and Fig. 4 is a horizontal section taken through line *z* of the same figure, looking upward.

In said drawings, *a* indicates the body of the funnel, and *b* the neck thereof.

c indicates a rod which passes vertically through the center of said funnel and neck and having a lateral projection or indicator *d* at its upper end, a cross-bar *e* at or near its lower end, and a species of fan or water-wheel *f* between said ends, as indicated in Fig. 2, said parts *d*, *e*, and *f* being rigidly secured to said rod. Said rod has its bearings, and is arranged to rotate in a cross-bar *g* and disk *h*, secured by solder or otherwise in the neck of said funnel, and rests at its lower end upon a cross-bar *i*, arranged a little below the disk *h*, and carried thereby, as indicated in said Fig. 2. The fan or water-wheel is located just above the cross-bar *g*, and the cross-bar *e* is located just below the disk *h*, so that both may rotate freely with the rod *c* without obstruction.

k indicates a float, composed of cork or other appropriate material, which rests loosely upon a cross-bar *l* or other support at the bottom of the neck of the funnel. Said float is provided with two pins *m*, which project upward through apertures formed in the cross-bar *i*, as indicated in said Fig. 2.

Upon the neck of the funnel is or may be arranged a movable collar or seat *n*, composed preferably of some flexible material, as rubber, and fitting said neck so snugly as that it will support said funnel at whichever point it may be moved, as will be understood on reference to Fig. 1.

The operation is as follows: The funnel being adjusted in the lamp or other vessel to the depth desired and the collar being adjusted to support it, the oil or other liquid may then be poured into said funnel and coming in contact with the water-wheel causes the rod *c* to rotate rapidly until the liquid in the lamp or other vessel rises high enough to raise the float and bring the pins *m* into engagement with the cross-bar *e* on the rod *c*, which immediately ceases to rotate, thereby indicating that the vessel is full, as will be understood. It is manifest, however, that the cross-bar *g* may be located higher than it is represented and above the water-wheel, or the latter may be located below where it is represented and in the neck of the funnel, or the float may be provided with an additional pin *o* to steady it by passing through an orifice in the cross-bar *l*, as indicated in Fig. 2, without departing from the spirit or intent of the invention.

Having thus described my improvement, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The improved funnel herein described, which consists in the body and neck *a b*, a rod arranged vertically and centrally therein and carrying a lateral projection or indicator at the top, a cross-bar near its bottom and a water-wheel between said parts, suitable bearings in which said rod is adapted to rotate when liquid is poured into the funnel, and a float supported at the lower end of the neck

of the funnel and provided with means adapted, when the float is raised by the liquid, to engage with the cross-bar at the lower end of the rod and stop its rotation, as and for the purposes set forth.

2. In a funnel, the combination of a rod vertically adjusted in suitable bearings therein and carrying a water-wheel adapted to be rotated by liquid poured into said funnel, and a float supported at the bottom of the neck of said funnel, and, when raised by the liquid, adapted to automatically stop the rotation of said shaft, as and for the purpose set forth.

3. In a funnel, the combination of a rotatable rod carrying a cross-bar near its lower end and an indicator at its upper end and between the two a water-wheel, suitable bearings for said rod, a float provided with pins adapted, when said float is raised, to engage said cross-bar and stop its rotation, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of November, 1890.

ANDREW WHELAN.

Witnesses:
OLIVER DRAKE,
OSCAR A. MICHEL.