

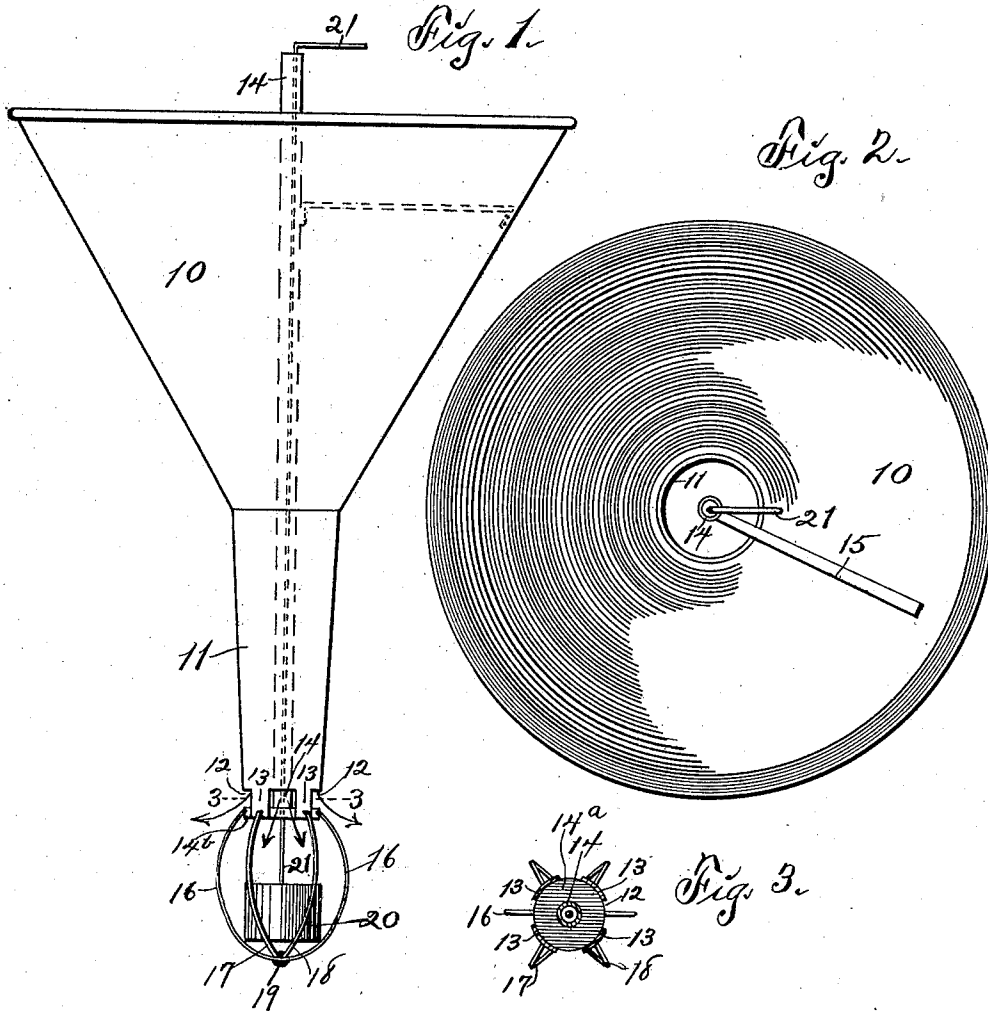
No. 686,304.

Patented Nov. 12, 1901.

H. KATZ.
FUNNEL.

(Application filed July 30, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

HARRY KATZ, OF DES MOINES, IOWA.

FUNNEL.

SPECIFICATION forming part of Letters Patent No. 686,304, dated November 12, 1901.

Application filed July 30, 1901. Serial No. 70,275. (No model.)

To all whom it may concern:

Be it known that I, HARRY KATZ, a citizen of the United States of America, and a resident of Des Moines, Polk county, Iowa, have invented a new and useful Funnel, of which the following is a specification.

The object of this invention is to provide improved means for indicating the level of water, oil, or other fluid in a containing vessel, such as a jug, the bowl of a lamp, and the like.

My invention consists in the construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of the complete device. Fig. 2 is a plan of the device. Fig. 3 is a cross-section of the device on the indicated line 3 3 of Fig. 1.

In the construction of the device as shown the numeral 10 designates the cup, and 11 the tube, of a funnel of ordinary construction. Notches 12 are formed in the lower portion or extremity of the tube 11, thus forming points 13. A center tube 14 is mounted axially of the tube 11 and cup 10 and extends above the upper end of said cup, to which it is attached by a brace 15. The lower end of the central tube 14 is expanded laterally to form a flange 14^a, and a further flange 14^b is turned downwardly on the margin of the first flange concentric with said tube. The points 13 on the lower end of the tube 11 overlap the flange 14^b. A cage is formed of wires 16 17 18, crossed at their centers below the lower end of the central tube 14, and the ends of said wires are bent and extended through coinciding apertures in the points 13 and flange 14^b and secured therein by riveting or soldering. The crossing centers of the wires 16 17 18 are secured together by solder 19, thus forming a cage or basket. The wires 16 17 18 are curved outwardly, thus providing a cage of a diameter greater than the diameter of the tube 11, and the wires are elastic or resilient. A float 20, of cork or similar buoyant material, is mounted in the cage formed by the wires 16 17 18, and an indicating-rod 21 is fixed at one end in the central portion of the float and extends upwardly therefrom through the central tube 14 and out of the top

thereof. The indicating-rod 21 is bent laterally above and outside of the upper end of the central tube 14 and above the cup 10 of the funnel.

Normally the float 20 rests in the bottom of the cage and the upper edge thereof is spaced apart a material distance from the lower end of the tube 14 and the flanges thereon. The funnel may be mounted for use by forcing the cage through the orifice of a lamp-bowl or other containing vessel, the wires of the cage yielding inwardly, and fluid may be poured into the cup 10 and will flow through the tube 11 and holes formed by the notches 12 between the flange 14^a and the upper edges of said notches into the vessel. When the level of the fluid within the containing vessel rises within the cage, the float 20 is lifted and in turn lifts the indicating-rod 21, showing to the user, by the elevation of the upper end of said rod, the approximate level of the fluid in the vessel. By attaching the central tube by flanges to the points formed on the lower end of the funnel-tube 11 and by the brace 15 to the cup 10 a stable and firm location of the tube is assured.

I claim as my invention—

1. A funnel, comprising the cup, the tube on said cup formed with notches in its outer end, the central tube mounted axially of the first tube and the cup, the flange formed on the lower end of said central tube and embraced by the extremity of the funnel-tube, the wire cage mounted on said flange and depending from the extremity of the funnel-tube, the float mounted in said cage and the indicating-rod extended through the central tube.

2. The funnel comprising the cup and funnel-tube, the central tube having one end expanded to form a flange, a further flange formed on the margin of the first flange and connected to the extremity of the funnel-tube, egress-ports formed in the extremity of the funnel-tube above the flange, spring-wires crossed at their central portions, curved outwardly and having their end portions bent inwardly and extended through the extremity of the funnel-tube and the flange embraced thereby, the crossing portions of the spring-wires being connected by solder, a float mounted loosely between the wires and a rod rising

from said float through the central tube and bent laterally at its upper end outside the upper end of said central tube, said rod rising and falling with the rise and fall of the float
5 between the wires.

3. The combination of a funnel, a wire cage on the extremity of the tube of the funnel, a float in said wire cage and a rod connected with said float and traversing the central por-

tion of the funnel and out of the upper end thereof.

Signed by me at Des Moines, Iowa, this 10th day of July, 1901.

HARRY KATZ.

Witnesses:

S. C. SWEET,
NIMAN KATZ.