

(No Model.)

B. L. SCOTT.
FUNNEL.

No. 584,900.

Patented June 22, 1897.

FIG. 2.

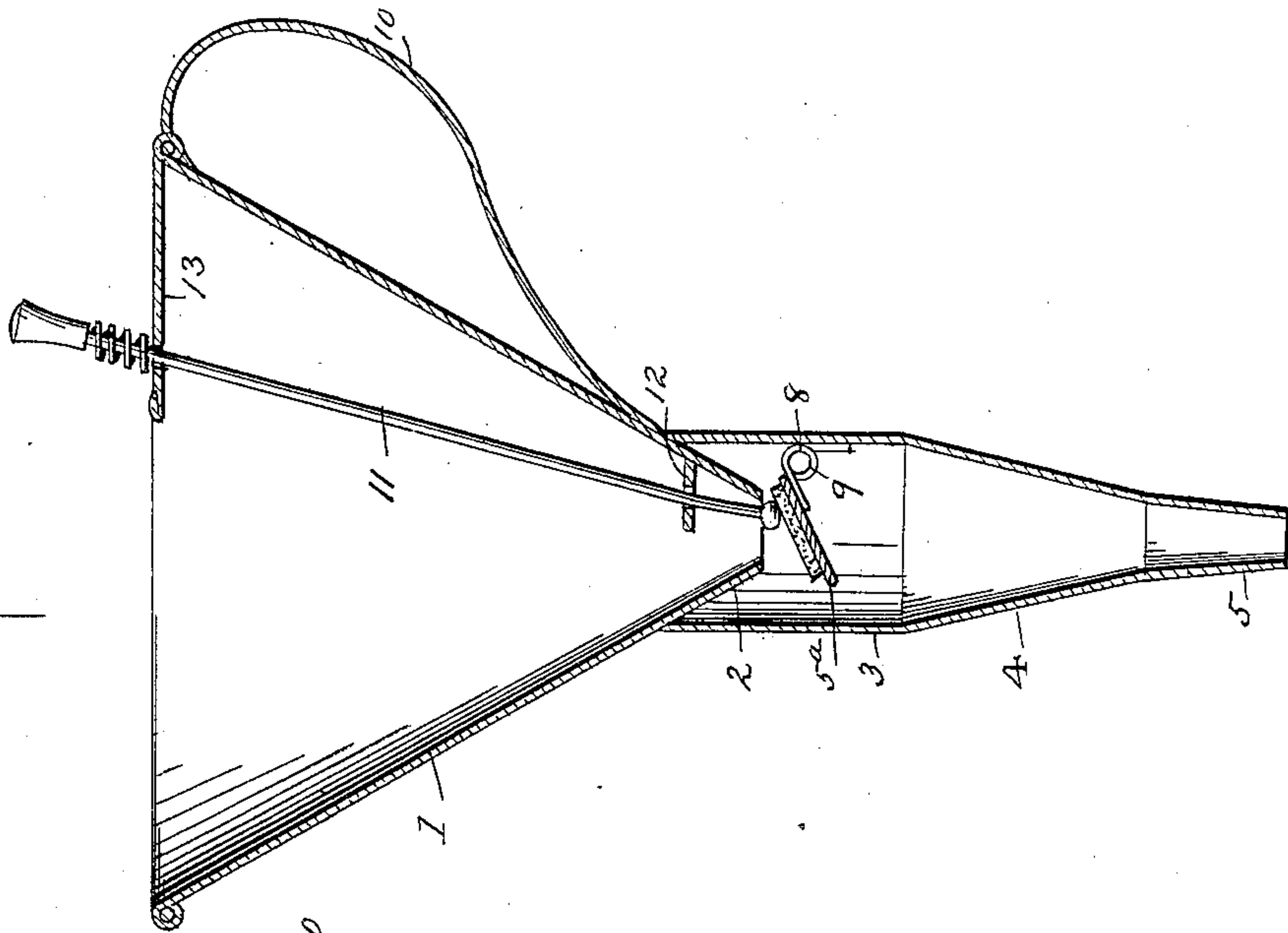
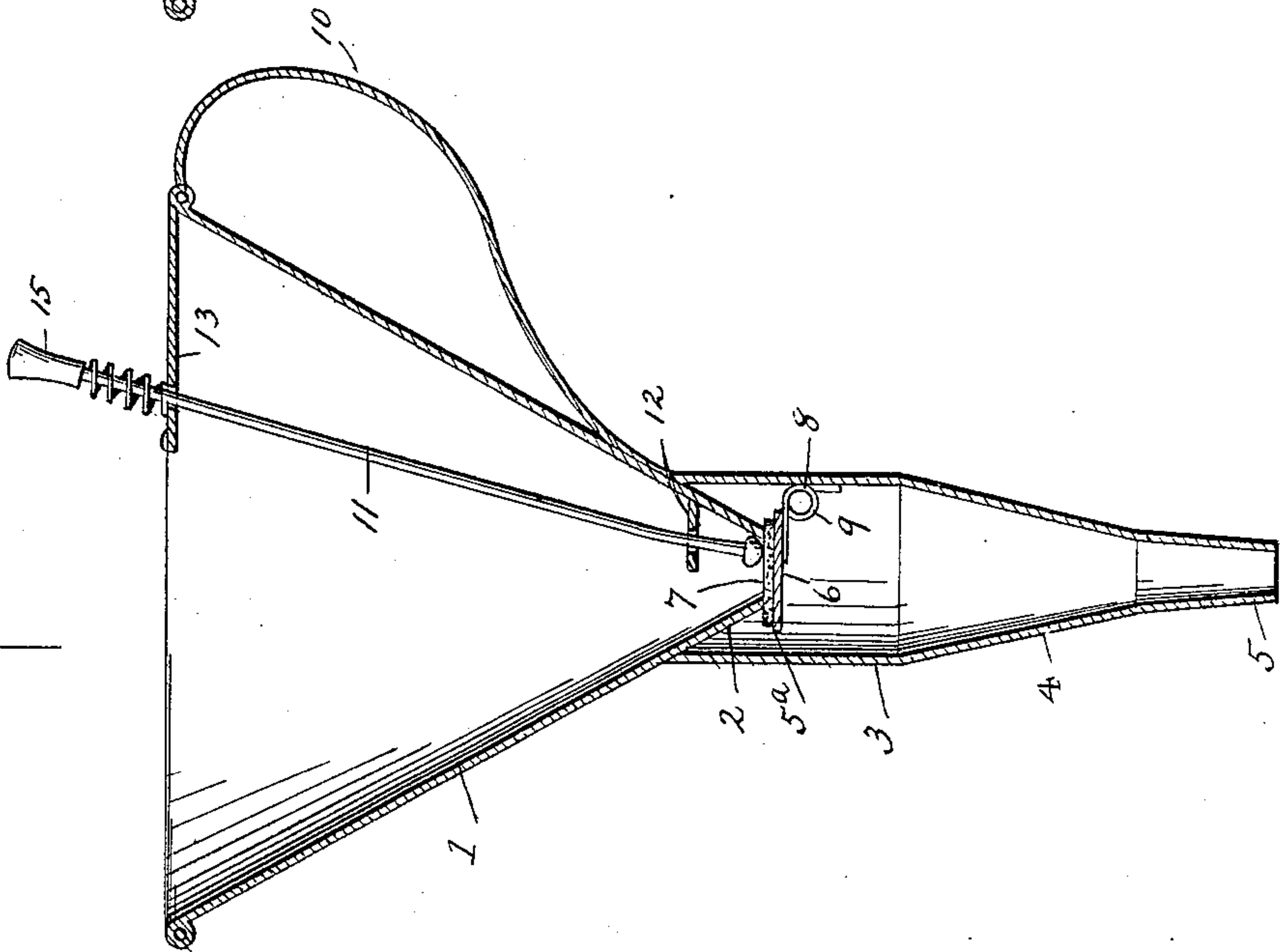


FIG. 1.



WITNESSES

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FUNNEL.

SPECIFICATION forming part of Letters Patent No. 584,900, dated June 22, 1897.

Application filed February 25, 1897. Serial No. 624,911. (No model.)

To all whom it may concern:

Be it known that I, BRAXTON L. SCOTT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in 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.

My invention relates to certain new and useful improvements in funnels of that type wherein a spring-pressed or spring-seated valve is employed to regulate the passage of fluid therethrough, in order to prevent overflowing of the vessel being filled, and a plunger-rod is provided for opening the valve against the tension of the said spring.

The object of my invention is to provide a novel construction and arrangement of parts and manner of mounting the controlling-valve, in order to shield the spring which normally presses it to its seat and prevent acids or other fluids passing through the funnel from coming into contact therewith and injuring the same, and thereby rendering the funnel unfit for further use.

In the accompanying drawings, Figure 1 is a vertical sectional view of a funnel constructed in accordance with my invention, the valve being shown in closed position. Fig. 2 is a similar view, but shows the valve open to permit fluid to flow through the funnel.

Like numerals designate like parts throughout both views.

Referring to the drawings, the numeral 1 designates a funnel-body of ordinary form, having a contracted spout or nozzle 2. A tube or sleeve 3 is rigidly connected with the funnel and surrounds or incloses the said contracted nozzle thereof. This tube or sleeve is provided with a tapered extremity 4, having a nozzle end 5, which is adapted to be inserted within the mouth of the vessel to be filled.

A flap-valve 6 is adapted to seat upon the lower end of the funnel-nozzle 2 and regulate the passage of fluid therethrough to the tube or sleeve 3. This flap-valve has a base 6, of metal, having a sheathing or covering 7, of leather or rubber, which serves to effect a

liquid-tight closure when seated against the lower end of the funnel-nozzle 2 to regulate the passage of fluid therethrough. The valve is supported in position and normally pressed against the said funnel end by a spring 8. This consists of a piece of spring-wire having one end rigidly secured by solder or otherwise to the funnel-body 1 and the opposite end thereof rigidly secured to the said flap-valve, and said wire formed with a spring-coil 9 adjacent its point of attachment to said valve, said spring-coil being located on a line a little to one side of the funnel-nozzle 2.

The funnel is provided with a handle 10, whereby it may be conveniently handled.

A depressible plunger-rod is provided for the purpose of pressing open the valve against the tension of its spring whenever it is desired to permit fluid to flow through the funnel. This comprises a plunger-rod 11, projecting through and moving in guide-openings in segmental plates 12 13, the former having position at the lower end of the funnel adjacent the nozzle thereof and the latter projecting across the open end or mouth of the funnel adjoining the handle 10. The handle is bent, as shown at 14, near its lower end, in order that the upper end thereof may incline toward the said segment-plate 13 in convenient position, where it may be readily depressed from the handle. The upper end of the plunger projects above the said segmental guide-plates 13 and is provided with a knob 15, whereby it may be depressed. A spiral spring incloses the rod between the top segmental plate and the knob and serves to normally retract or press the rod upward, so as to bring the lower end thereof out of contact with the flap-valve 5.

In Fig. 1 the valve is shown in its normally-closed position, and Fig. 2 represents the position it takes when open to permit flow of fluid through the funnel. It will be seen that when the valve is forced downward or unseated by depressing the plunger-rod 11 it moves upon its fulcrum the coil 9 of the spring 8 and is canted or assumes an inclined position, with its free edge 5^a, or that edge farthest from the said spring-coil, lowermost. By this construction and arrangement of parts the fluid passing through the nozzle 2 of the funnel flows down the inclined valve

and over the edge 5^a thereof, but does not flow toward the other edge nearest the spring-coil 9 of the spring 8, and hence the said spring is thereby shielded and prevented from coming in contact with the fluid. This is important for the reason that if acids and other fluids passing through the funnel should come in contact with the spring said spring is liable to become corroded or be subjected to other deleterious effects in such manner that it is liable to break off within the funnel and thereby render the funnel useless as a valve-controlled funnel, because access cannot be had to the tube 19 to apply a new spring and valve therein.

I am aware that a funnel provided with a spring-actuated valve and a plunger-rod for opening the same is not new, but, so far as I am aware, the specific construction and arrangement of the valve and spring shown and described herein for protecting the spring from the injurious effects by fluids coming in contact therewith is novel and most important in a valve-controlled funnel.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a funnel of the type described, the combination of a funnel-body having a contracted nozzle at the lower end thereof, a tube connected with the funnel and surrounding the said nozzle and provided with a tapered extremity having a spout, a flap-valve controlling the passage of fluid through the said nozzle, and a spring having one end rigidly connected with the funnel and the opposite

end rigidly connected with the under side of the said valve and formed with a coil constituting a fulcrum on which the valve moves to an inclined position, to allow the fluid to flow off the edge of the valve opposite the said spring, substantially as described.

2. In a funnel, the combination of a funnel-body provided with a contracted nozzle at the lower end thereof, a tube connected with the funnel and surrounding the said nozzle and provided with a tapered extremity having a spout, a flap-valve controlling the flow of fluid through the funnel, a spring having one end rigidly connected with the valve and the opposite end connected with the funnel-body and formed with a coil adjacent said valve, a segmental plate in the funnel adjacent the nozzle thereof and provided with a guide-opening, a second segmental plate extending across the mouth of the funnel at one side thereof, a handle secured to the side of the funnel adjoining the said segmental plate, a plunger-rod extending through the said guide-openings in said segmental plates and provided with a knob in convenient position to the handle to be pressed, and a spring for holding said plunger out of contact with the controlling-valve, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

BRAXTON L. SCOTT.

Witnesses:

F. W. SMITH,
H. P. GATLEY.