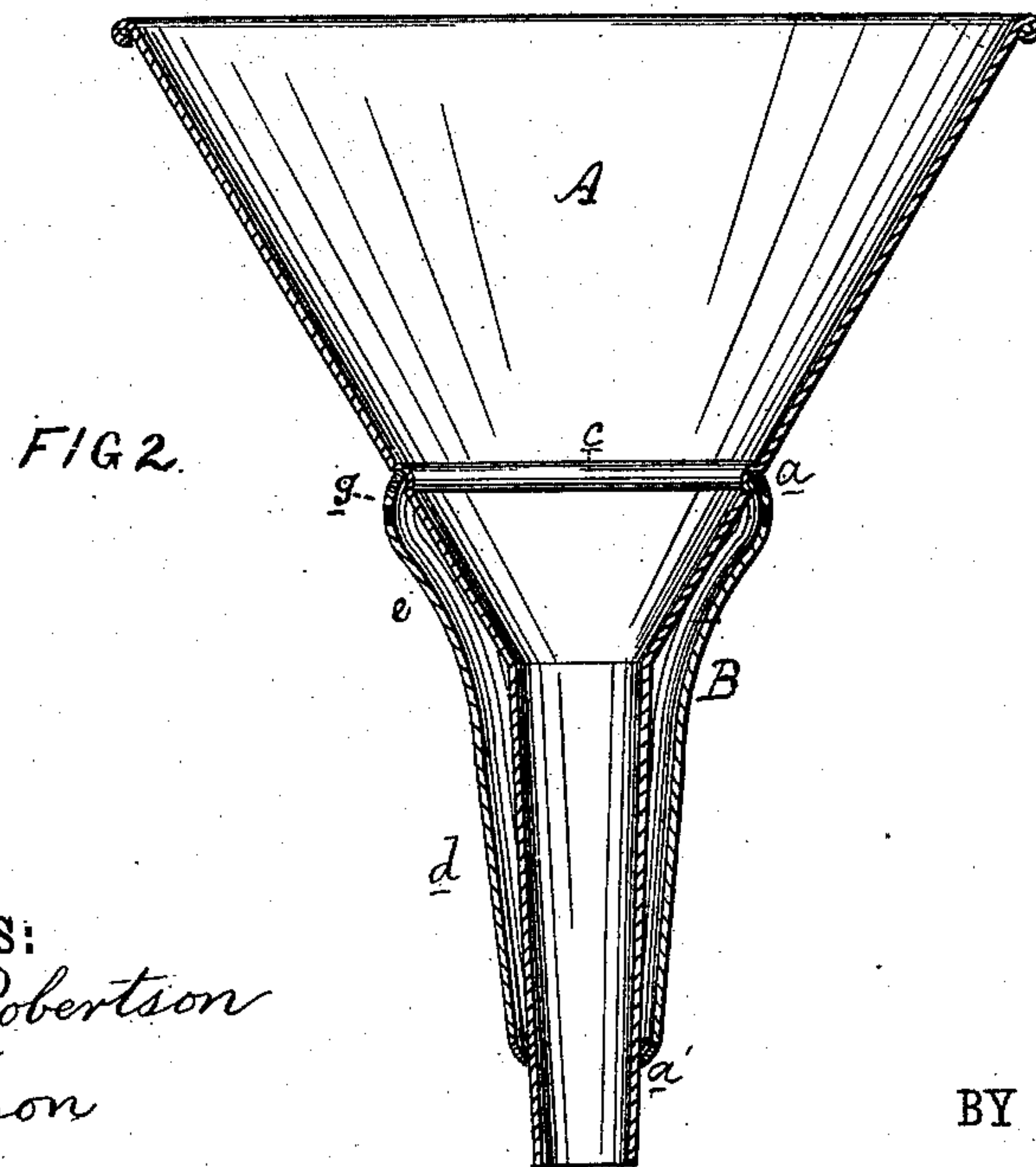
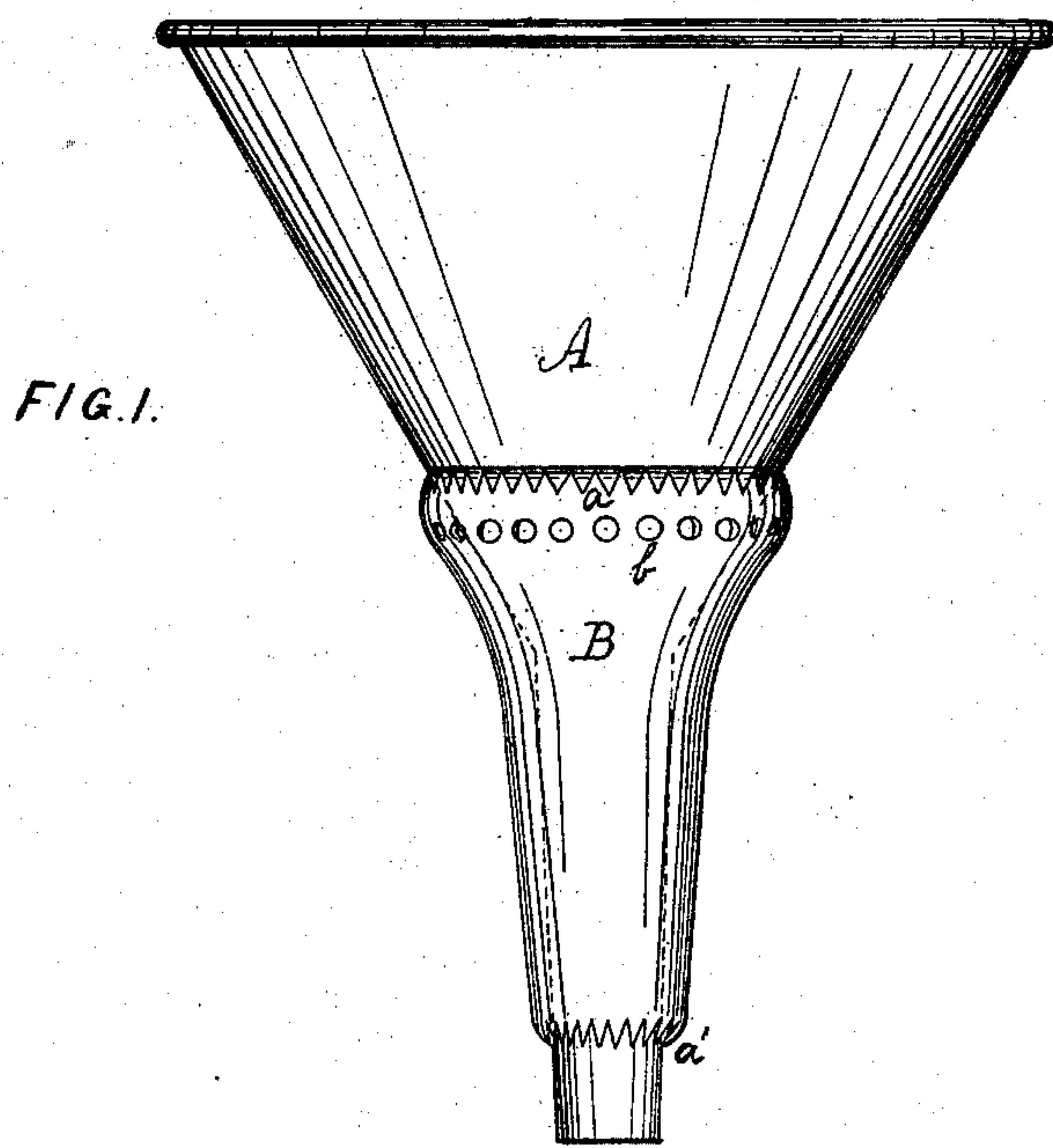


(No Model.)

G. M. WICKLIFFE.  
Ventilating Attachment for Funnels.

No. 235,718.

Patented Dec. 21, 1880.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE M. WICKLIFFE, OF BROOK NEAL, VIRGINIA.

## VENTILATING ATTACHMENT FOR FUNNELS.

SPECIFICATION forming part of Letters Patent No. 235,718, dated December 21, 1880.

Application filed October 16, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. WICKLIFFE, a citizen of the United States, residing at Brook Neal, in the county of Campbell and State of Virginia, have invented certain new and useful Improvements in Ventilating Attachments to 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 or figures of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a vertical section.

This invention relates to that class of funnels provided with ventilating devices to allow of the air passing out without interfering with the inflow of the liquid; and it consists in the peculiar construction and arrangement of parts as hereinafter more fully described, and then pointed out in the claims.

In carrying out my invention I take an ordinary funnel, A, and surround the lower part of it with a tube, B, having the shape shown in the drawings, so as to embrace the lower portion of the cone as well as the spout. The top and bottom of this tube may be made plain; but I prefer to make both top and bottom with a series of points, *a a'*, which, when closed in, will serve to keep the tube at a regular distance from the funnel all round. Around the upper part of the tube I prefer to form a series of holes, *b*, for the free passage of the air; but these are not absolutely necessary, as the air will escape between the points *a*, if such are made.

The tube B has a tapering lower end, *d*, secured to the spout at its lower end, and is curved outwardly, as shown at *e*, and thence inwardly, as shown at *g*, and secured at its upper end to the cone of the funnel, some distance above its lower end, by which construction the bottom part of the cone of the funnel is entirely protected from the wear caused by its striking against the top of the neck of the bottle, which renders it leaky; whereas in my construction all the wear from this cause comes on the flaring part *e* of the tube B, and if this part is entirely worn through the funnel is

still serviceable; but if the cone of a funnel is worn out it is of no further use.

I prefer to make the funnel with a groove at *c*, so that by bending the points inward into said groove the tube will hold without soldering, or if no points are made the edge may be turned into said groove; but this groove may be dispensed with and the tube attached by soldering. If the points *a* are also dispensed with, the upper part of the tube, being left plain, will tightly embrace the cone of the funnel, and solder applied at the junction of the funnel and tube will hold the two fast together. This method of constructing and applying the ventilating device will be found to be very advantageous, as it can be readily added to any funnel now in use at a trifling expense, and can be very readily applied to new funnels in the course of manufacture.

For the convenience of those who have the old styles of funnel on hand, I intend to supply the market with tubes of various sizes, so that they can be readily attached to old funnels when required.

The tube may be of any suitable metal and made in one piece, with the upper part swaged into form, or it may be made in two pieces, as funnels are now made; but the former would be preferable, as when the tube is attached to the funnel and soldered at top and bottom it would act as a brace and strengthen the attachment of the spout to the funnel.

What I claim as new is—

1. The combination, with a funnel, A, of the tube B, having a tapering lower part, *d*, provided at its upper end with an upwardly-flaring portion, *e*, curved inwardly at its upper end at *g* and secured to the funnel some distance above the lower end of the cone, whereby said lower end of the cone is protected from wear and the tube acts as a stay to the funnel, substantially as described.

2. The combination, with the funnel A, provided with the groove *c*, of the tube B, having its upper edge turned into said groove, substantially as and for the purpose described.

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

GEORGE M. WICKLIFFE.

Witnesses:

T. J. W. ROBERTSON,  
GEO. F. GRAHAM.