(No Model.)

H. R. ALLEN.

SYRINGE ATTACHMENT.

No. 330,083. Patented Nov. 10, 1885.

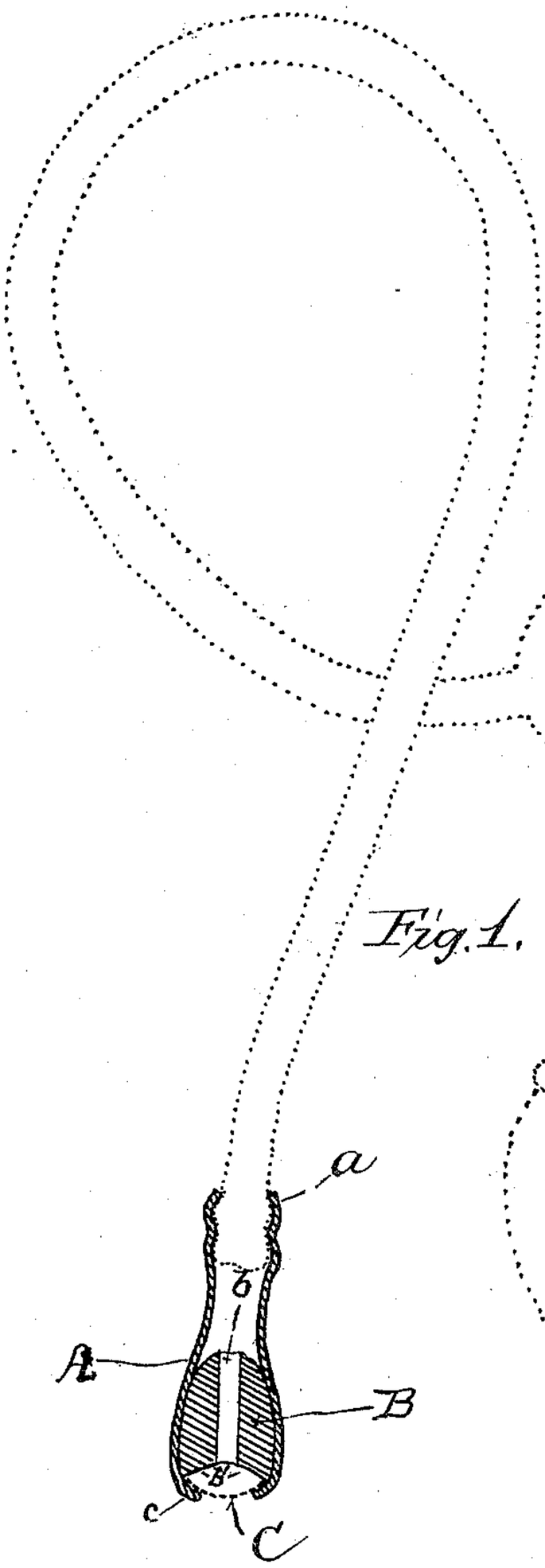

Fig. 1.

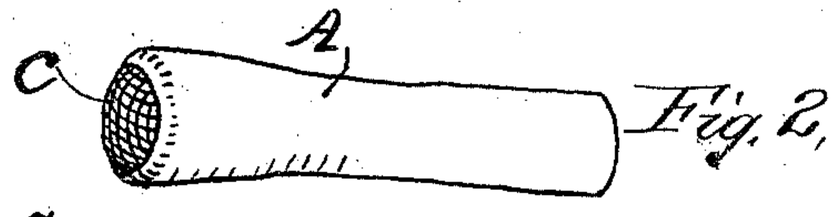

Fig. 2.

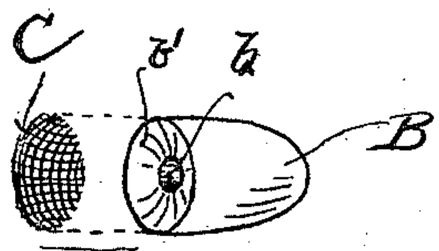

Fig. 3.

Witnesses:
Henry Johnston
N. P. Kingsbury.

Inventor
Horace R. Allen,
By Joseph A. Minturn
His attorney.

UNITED STATES PATENT OFFICE.

HORACE R. ALLEN, OF INDIANAPOLIS, INDIANA.

SYRINGE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 330,083, dated November 10, 1885.

Application filed July 11, 1885. Serial No. 171,208. (No model.)

To all whom it may concern:

Be it known that I HORACE R. ALLEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Syringe Attachment, of which the following is a specification.

The invention in this case relates to syringe attachments.

The objects are, first, to deaden the sound and prevent the unpleasant noise caused by the striking of the lower end of the induction-tube, of metal or other hard substance, against the vessel; second, to prevent lint or other foreign substance from passing into and obstructing the valves of the syringe; third, to supply a weight which shall be constantly in proper situation to hold the end of the induction-pipe below the surface of the liquid, and thus prevent entrance of air into the syringe.

The invention consists, first, in a tube of rubber or other suitable soft material adapted to fit upon the induction end of an appropriate syringe.

The invention consists, further, in the combination, with a tube of rubber or other suitable soft material, of a strainer.

The invention consists, finally, of the combination, with a tube adapted to fit on the induction end of an appropriate syringe, of a strainer applied at the outer portion of such tube and a weight placed within the tube.

In the accompanying drawings, forming a part of this specification, similar letters represent corresponding parts.

Figure 1 is a vertical sectional view of a syringe attachment embodying all the features of my invention, and showing the attachment applied to a syringe, the syringe being represented by dotted lines. Fig. 2 is a perspective view of the attachment embodying all the features of my invention, and shown by itself ready for attachment to a syringe end or other suitable pipe. Fig. 3 is a perspective view of the weight and strainer separate from each other, and with the covering of rubber or other soft material removed.

A is a short tube, of soft rubber or other suitable material, adapted to be passed over the induction end of an appropriate syringe.

B is a weight, of lead or other heavy substance, which is made conical or slightly tapering to facilitate its insertion into the tube, and, as shown, is provided with a central perforation, *b*. The tube and weight may be employed alone upon a suitable syringe, and the weight may encircle the tube.

C is a strainer, preferably of wire-cloth, which fits into the lower end of the tube A, and may be used with the tube alone. The lower end of the weight is preferably concave, as at *b'*, and in the construction of the entire device it is well to solder the lower end of the weight at its rim upon the rim of the strainer, this strainer being preferably convex exteriorly and concave toward the weight.

The normal diameter of the tube is slightly less than that of either the weight or strainer, and so upon either one of these, or both of them, being pushed into the tube, the tube serves as a retaining-device without additional fastening.

By passing the tube alone over the metallic induction end of the ordinary syringe the usual unpleasant sound that results from the striking of this end against the vessel, and which is so hard to avoid, is obviated, since the covering of the metallic end deadens the sound; but I prefer to use the tube in connection with the weight and this with the strainer. The complete device then is readily attached to the common syringe by simply slipping the end of the syringe-tube into the end *a* of the tube A.

In practical operation, when the entire attachment is applied to a syringe, the weight B will drop to the bottom of the liquid to be injected, and will remain under the liquid, preventing the admission of air. In syringes heretofore the rubber pipe was liable to push its end above the surface of the fluid, admitting the air and annoying the user very much as the air would be injected into the body. Great annoyance was also occasioned by sediment, lint, &c., being drawn into the syringe and preventing the working of the valves. The wire-cloth C is designed to act as a strainer and prevent foreign matter from entering the syringe.

I find by practical use that my attachment above described prevents any or all these defects in a simple and inexpensive way.

Having thus fully described my invention, what I claim is—

1. A tube of rubber or other suitable soft material, in combination with and adapted to fit upon and inclose the metallic or other hard induction end of an appropriate syringe, whereby the noise incident to the striking of the induction end of the syringe against the vessel is obviated, as set forth.

2. The combination of a supplemental tube adapted to be fitted upon the usual induction end of the ordinary syringe and a strainer carried by such tube, as and for the purpose set forth.

3. The combination, with a tube of rubber or other suitable soft material to be fitted upon the induction-tube of a syringe, of a strainer held by such tube and a weight carried by it to keep the end of the tube below the surface of the liquid, substantially as described.

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

HORACE R. ALLEN.

Witnesses:
GEORGE ATKINS,
SAML. A. MINTURN.