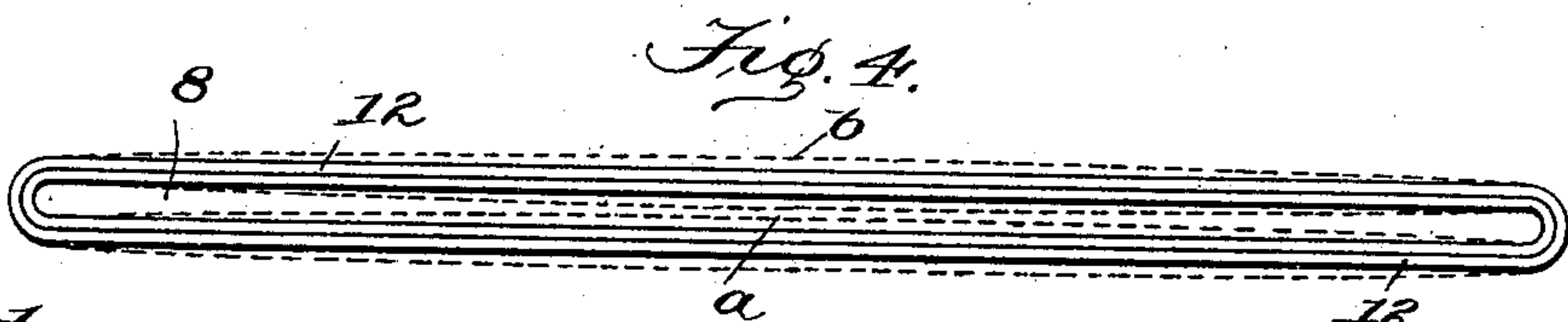
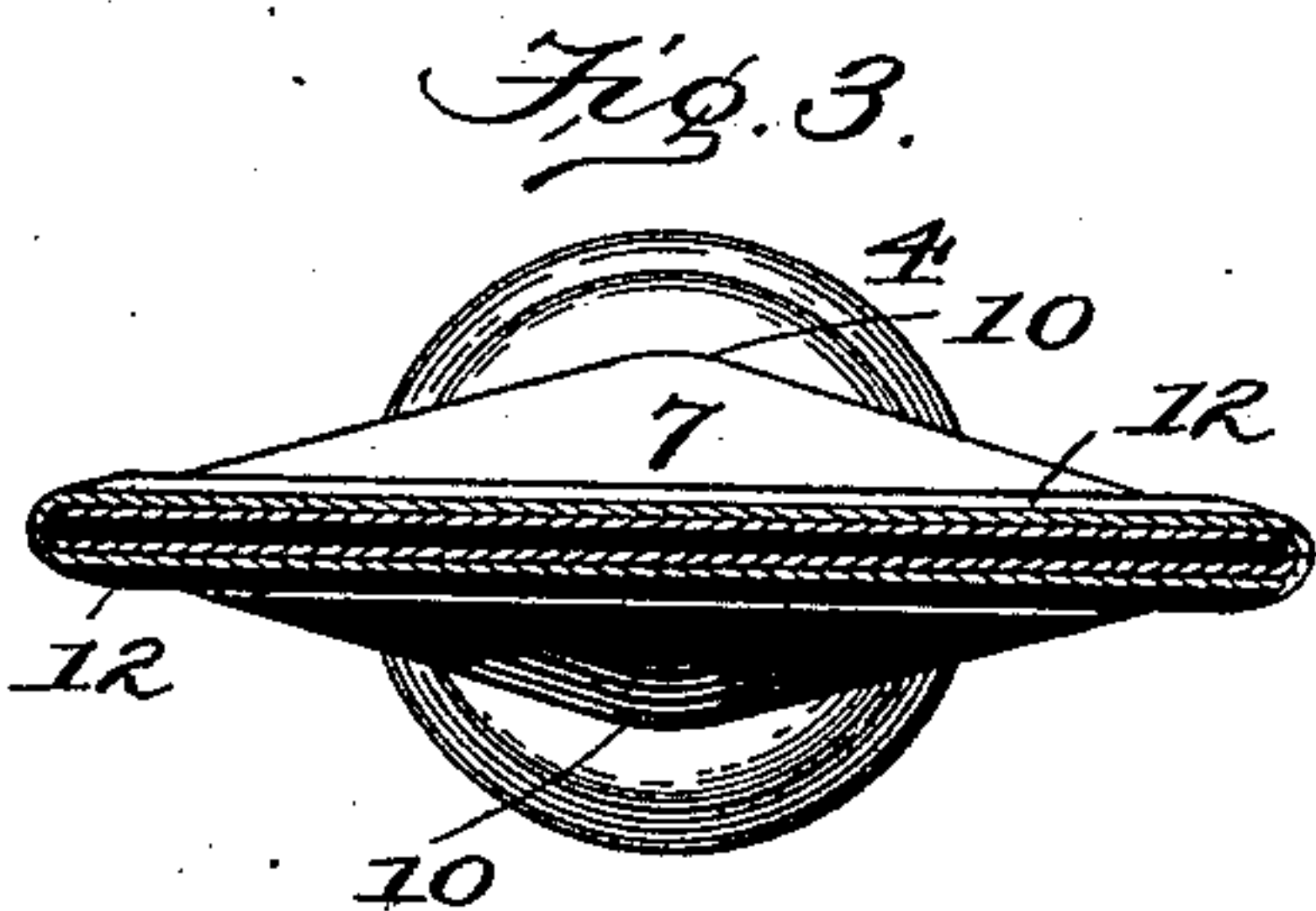
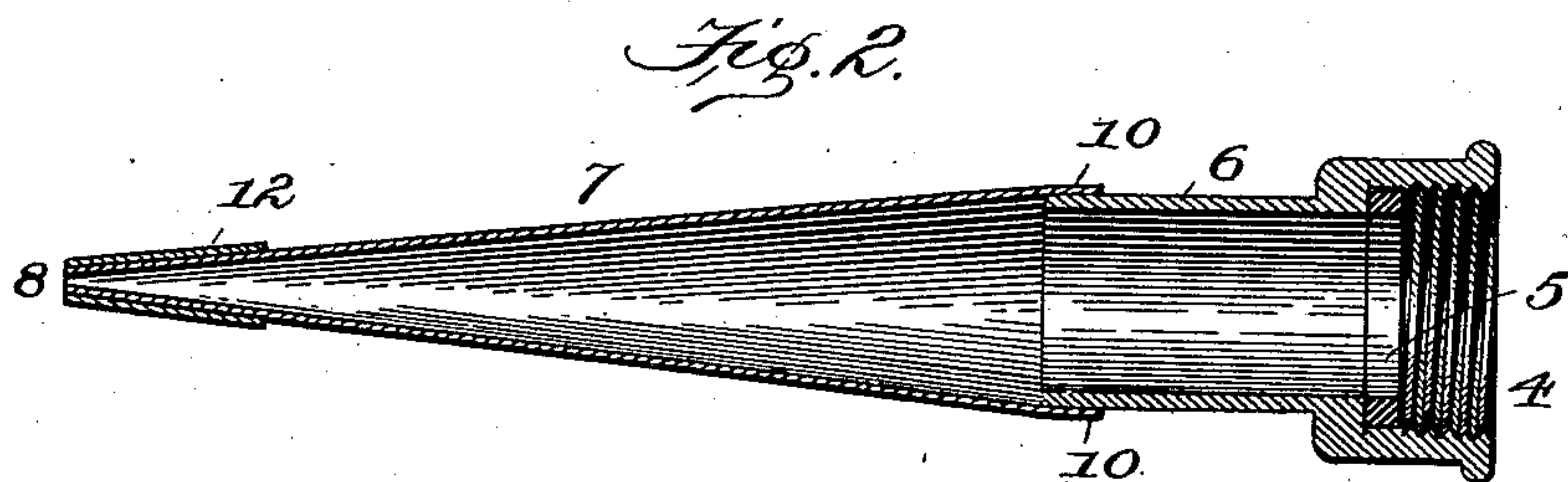
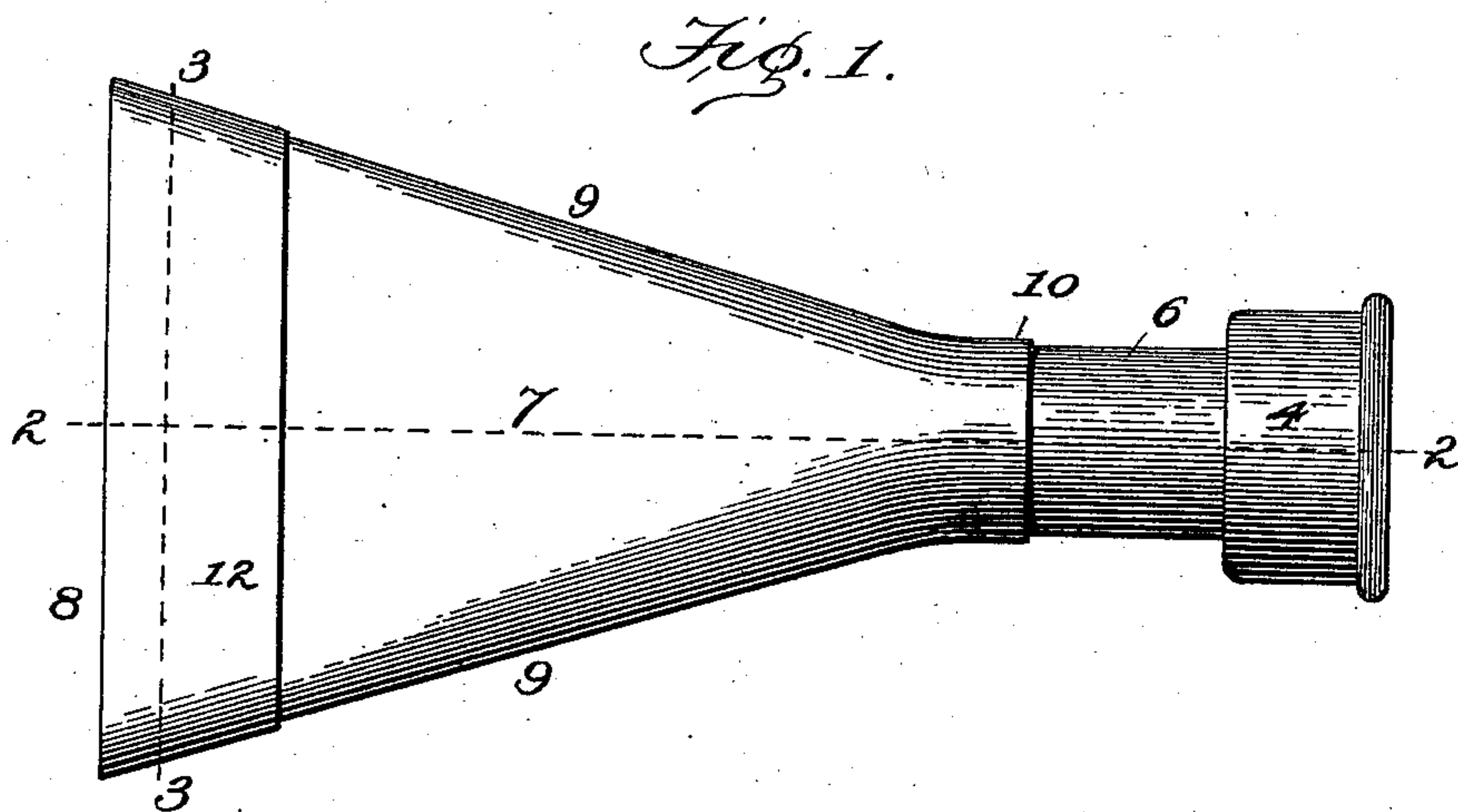


(No Model.)

S. ETTLINGER.
HOSE NOZZLE.

No. 577,362.

Patented Feb. 16, 1897.



Witnesses

Edwin L. Bradford
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UNITED STATES PATENT OFFICE.

SEBASTIAN ETTLINGER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO MOSES SAMSTAG, OF SAME PLACE.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 577,362, dated February 16, 1897.

Application filed October 31, 1896. Serial No. 610,770. (No model.)

To all whom it may concern:

Be it known that I, SEBASTIAN ETTLINGER, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented new and useful Improvements in Hose-Nozzles, of which the following is a specification.

This invention relates to that class of hose-nozzles which are susceptible of delivering the liquid or water in a thin flat fan-shaped sheet or stream; and it has for its object to provide a spray-nozzle for garden and other hose, which possesses a ductile or soft-metal body, which can be conveniently and economically manufactured, while it is strong and durable, and which is provided with a narrow rectilinear delivery-mouth protected and reinforced and non-resilient, but susceptible of contraction and expansion to vary the thickness of the sheet or stream of liquid or water issuing therefrom as may be desired when sprinkling or watering grass, delicate flowers, plants, and the like.

To accomplish this object, my invention consists, essentially, in a hose-nozzle composed of a screw-socket having a cylindrical throat merging into a hollow flat flaring body, with side edges diverging from the throat and provided in the outer end with a rectilinear narrow delivery-mouth the edges of which are non-resilient, but are susceptible of being pressed toward or from each other to vary the thickness of the sheet of water delivered therefrom, as will be more fully hereinafter explained, and pointed out in the claims, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of a hose-nozzle constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view taken on the line 2 2, Fig. 1. Fig. 3 is a transverse sectional view taken on the line 3 3, Fig. 1. Fig. 4 is a view on an enlarged scale, looking at the delivery-mouth and indicating by dotted lines how its capacity can be enlarged or diminished.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, in which—

The numeral 4 indicates an internally-screw-threaded socket containing a packing 5 and

adapted to be applied to hose designed for watering grass or other purposes. The screw-threaded socket is formed integral with a cylindrical throat 6, from which merges a flaring ductile or soft-metal body 7, the sides and edges of which diverge from the neck and form a rectilinear narrow delivery-mouth 8, which can be expanded or contracted to vary the thickness of the issuing stream, as will be hereinafter explained. The edges 9 of the hollow body diverge in right lines to the outer end of the body, and the same remarks apply to the upper and lower sides of the latter. The screw-threaded socket 4 and cylindrical throat 6 are preferably cast integral of brass or any other metal suitable for the purpose, but the flaring hollow body is made of ductile or comparatively soft sheet metal, which can be readily fashioned into the form shown and described and which will not break like cast-iron. The inner end of the hollow body is circular and is soldered, brazed, or otherwise attached or secured to one end of the throat 6. The sheet-metal hollow body can be conveniently and economically manufactured and applied to the cast-metal throat, and by this means a comparatively inexpensive spray-nozzle is produced, which can be applied to any hose and will spread the liquid or water in a thin fan-shaped sheet, which will not damage, injure, or tear grass, flowers, or plants.

A hose-nozzle of the character described is frequently carelessly thrown to the ground or otherwise roughly used, and where the flaring body is of cast metal the contracted or narrow delivery-mouth portion of the nozzle is very liable to be broken by a blow or by coming in forcible contact with the ground or with a hard substance.

Inasmuch as the body portion is preferably of comparatively thin metal I reinforce and strengthen the delivery-mouth portion of the body through the medium of a reinforcing or strengthening band 12, of thin brass, copper, or other suitable metal, which will, however, permit the delivery-mouth to be expanded or contracted for the purpose of varying the thickness of the sheet or stream issuing therefrom. The band 12 imparts a certain rigidity to the sheet-metal body,

around the end portion thereof, so that while the metal composing the delivery-mouth is non-resilient or inelastic it can be bent for the purpose of contracting or expanding the mouth to increase or diminish the size of the sheet of water delivered therefrom. The opposite non-resilient metal edges of the mouth can be pressed toward each other with the fingers to contract the delivery-mouth, or they can be forced away from each other to expand the mouth by introducing a knife-blade or other thin instrument into the mouth and pressing the edges or walls thereof apart or away from each other. Obviously the mouth can in this manner be expanded or contracted, as will be understood by reference to Fig. 4, in which the full lines show the normal position of the walls of the mouth and the dotted lines *a* indicate the walls pressed toward each other to contract the mouth, while the dotted lines *b* indicate the walls spread apart to widen the mouth. This is very desirable where hothouse-plants and delicate flowers are to be watered, as the thickness or size of the sheet or stream is readily regulated to suit the conditions required.

The non-resilient nature of the metal causes the mouth to maintain the form into which it is contracted or expanded, in which respect my invention differs very widely from a delivery-mouth composed of elastic rubber, which can be compressed with the fingers to deliver a flattened stream of water. In such construction the elastic rubber mouth requires to be constantly held by the fingers during the time that the flattened sheet of water is desired.

While I prefer to construct the hollow flaring body 7 of copper and the reinforcing or strengthening band 12 of brass, I do not wish to be understood as confining myself to these

particular metals, as the hollow body may be made of any comparatively soft or ductile sheet metal and the reinforcing-band of some similar metal which, however, will reinforce and strengthen the mouth.

My invention provides a novel, simple, and efficient spray-nozzle for garden and other hose which is strong and durable and can be very economically placed upon the market.

Having thus described my invention, what I claim is—

1. A metallic hose-nozzle, consisting of a screw-threaded socket having a cylindrical throat merging into a soft-metal, flaring, hollow body, with its sides and edges diverging from the throat and provided at the outer end with a narrow bendable non-resilient delivery-mouth, susceptible of bending to expand or contract the same and thus vary the thickness of the flat sheet or stream issuing therefrom, said mouth retaining the form imparted thereto when bent to expand or contract the same, substantially as described.

2. A hose-nozzle, consisting of a screw-threaded socket having a cylindrical throat merging into a soft-metal, flaring, hollow body, with its sides and edges diverging from the throat, and provided in the outer end with a narrow non-resilient, contractible and expandible delivery-mouth reinforced by a strengthening non-resilient bendable metal band applied to the exterior of the flat body around the delivery-mouth thereof, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SEBASTIAN ETTLINGER.

Witnesses:

ALBERT H. NORRIS,
THOS. A. GREEN.