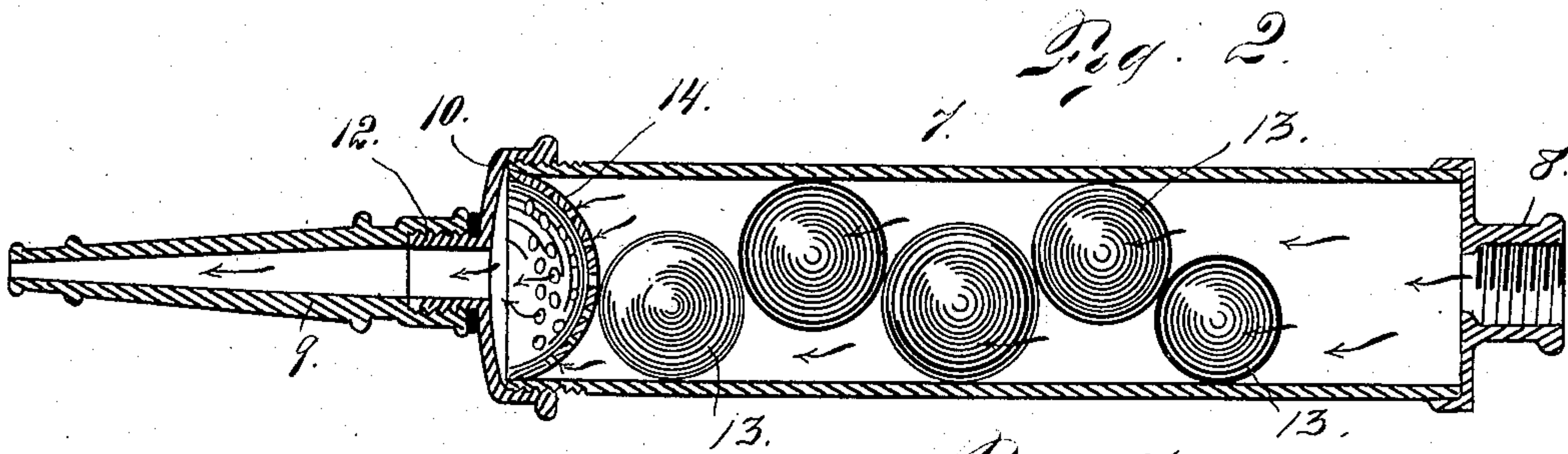
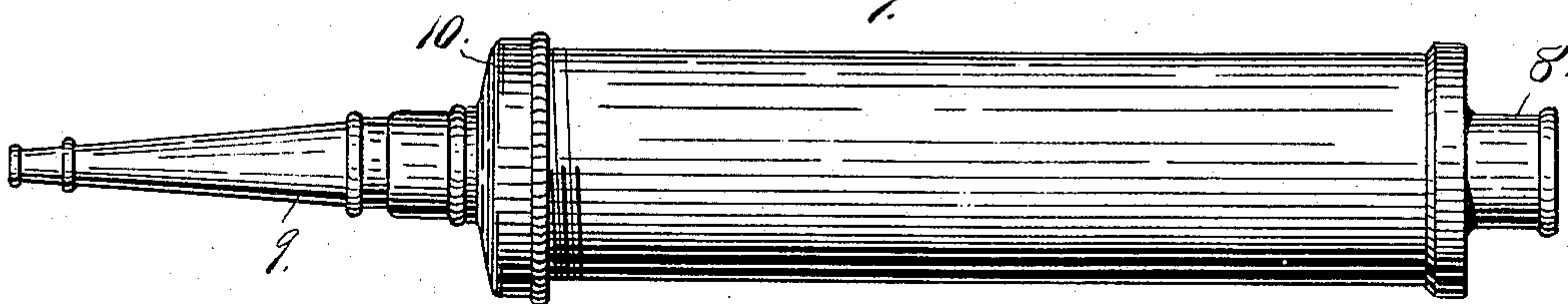
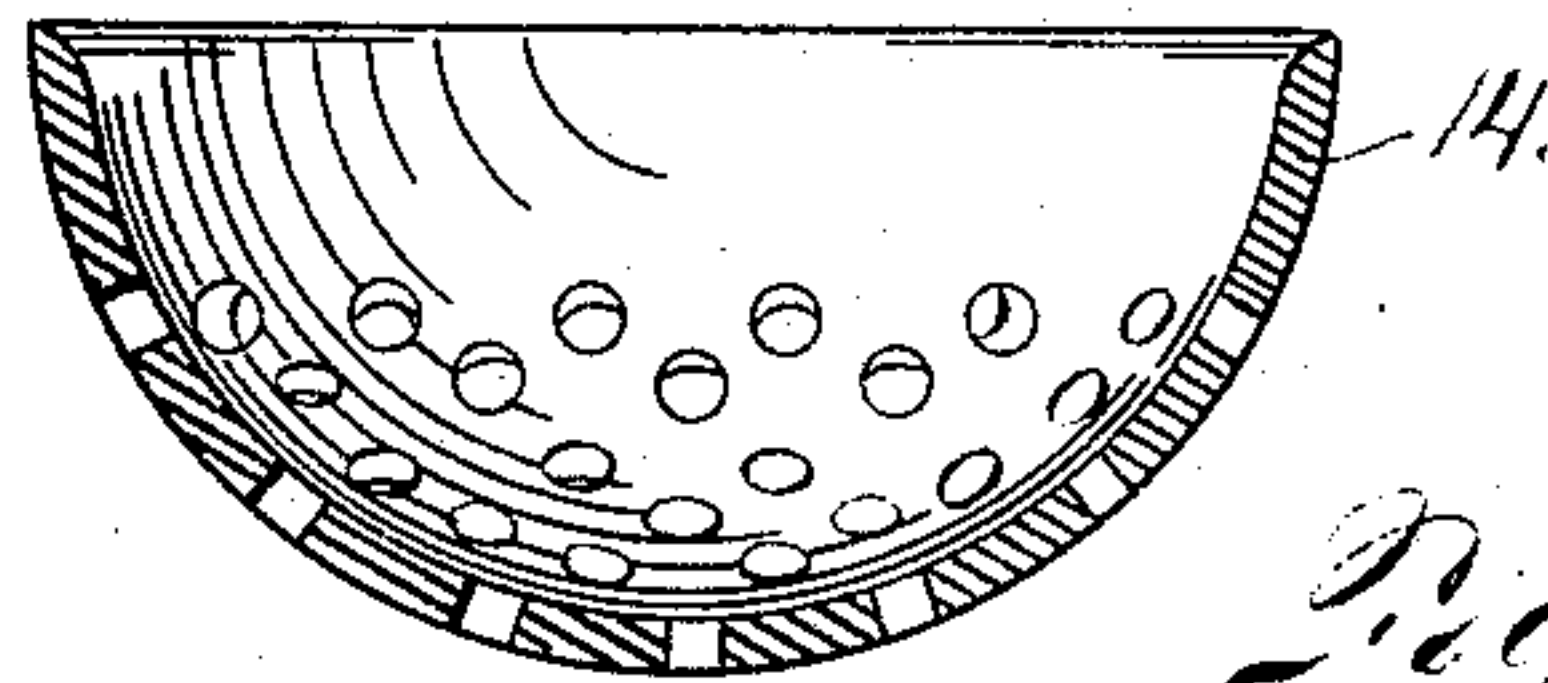
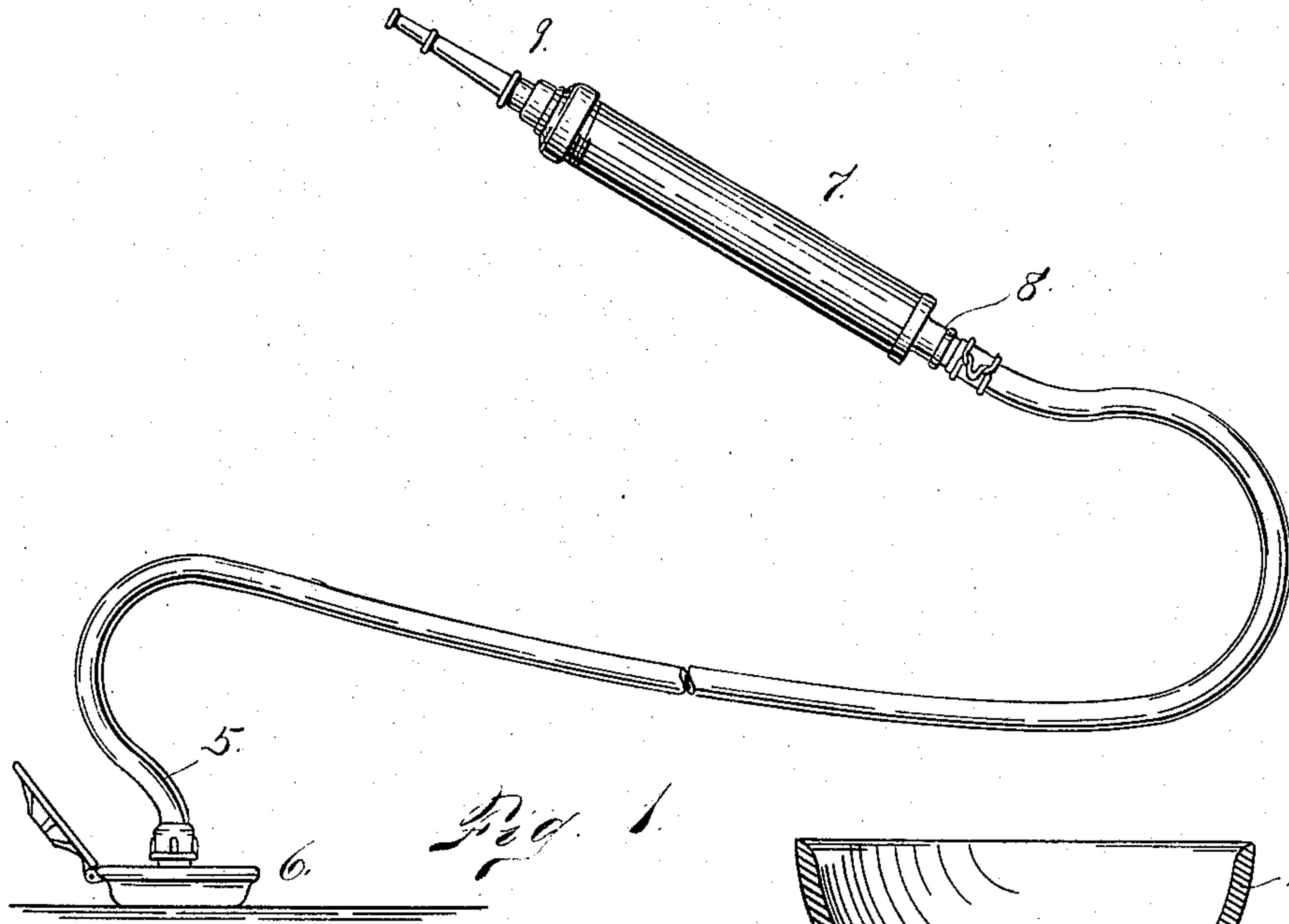


No. 885,902.

PATENTED APR. 28, 1908.

B. F. WOODING.
CHEMICAL MIXING ATTACHMENT FOR HOSE.
APPLICATION FILED JAN. 23, 1905.



Witnesses

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CHEMICAL-MIXING ATTACHMENT FOR HOSE.

No. 885,902.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed January 23, 1905. Serial No. 242,261.

To all whom it may concern:

Be it known that I, BENJAMIN F. WOODING, a citizen of the United States, residing at the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Chemical-Mixing Attachments for Hose; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to chemical mixing attachments for either fire or garden hose or any other conduit where it is desired to mix chemicals with the liquid as water passing through the same.

My improvement consists of a receptacle placed between the nozzle and the body of the hose or at any point intermediate the extremities of the line of hose, the said receptacle being of greater cross sectional area than the conduit, whereby it becomes practicable to place within the said receptacle, soluble material adapted to medicate the water or liquid passing through the hose, either for the purpose of spraying trees to destroy the insects or vermin thereon, for the purpose of extinguishing fires or for other purposes.

The invention further consists of a special construction of receptacle regardless of its comparative cross sectional area, within which pieces preferably balls of soluble material may be placed, whereby the water passing through the receptacle from any suitable source as a hydrant, may be medicated to any extent desired.

Having briefly outlined my improvement, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 shows my improved device attached to a garden hose and located between the body of the hose and the nozzle, the outer extremity of the hose being connected with one extremity of the device and the nozzle with the other extremity. Fig. 2 is a detail view of the chemical mixing device shown on a larger scale than in Fig. 1. Fig. 3 is a section taken through the construction shown in Fig. 2.

Fig. 4 is a section of the concavo convex perforated disk located in the chemical mixer at the nozzle extremity thereof, shown in detail and on a larger scale.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a hose or conduit of any suitable construction or length. As shown in the drawing this conduit is connected with a hydrant 6 at one extremity, while to its opposite extremity is attached my improved chemical mixer 7, the latter having a threaded nipple 8 adapted to be threaded upon a suitable coupling with which the hose extremity is provided. To the opposite extremity of the mixer 7 is applied the nozzle 9 which may be of any suitable or desired construction. As shown in the drawing the nozzle extremity of the chemical mixer is provided with a cap 10 having interior threads adapted to engage exterior threads formed on the extremity of the mixer. This cap is provided with an exteriorly threaded nipple 12 upon which the nozzle 9 is screwed. In the nozzle extremity of the chemical mixer is located and secured in any suitable manner, a perforated concavo-convex disk 14 whose convex surface projects inwardly, leaving a semi-spherical chamber between the disk and the inner extremity of the nipple 12, to facilitate the thorough mixing of the chemicals before they pass through the nozzle 9. The body of the mixer 7 is preferably of greater cross sectional area than the conduit with which it is connected, in order that the mixer may contain a considerable quantity of soluble material, and at the same time allow the full capacity of the hose or conduit to pass therethrough.

Within the body of the chemical mixer which is preferably cylindrical in shape, are located soluble pieces 13 composed of any desired chemical or chemicals or of any desired substance, which it is desired to mix with the water before passing the same through the nozzle 9. These pieces of material 13 are preferably globular, in order to prevent the packing of the same within the cylindrical chamber, whereby the passage of the water through the chamber is greatly facilitated, and undue resistance prevented.

From the foregoing description the use and operation of my improved device will be readily understood. Before applying the same to a hose or conduit as illustrated in Fig. 1, the cap at the nozzle extremity of the

mixer 7, is first removed and any desired quantity of soluble material placed within the chamber, the pieces of material being of such shape, preferably globular, as to prevent the packing of the same within the mixer, and to prevent the said pieces from assuming such shape or position, as to have a tendency to clog or obstruct the passage through the mixer 7. After the soluble chemical or other substance is placed within the chamber of the mixer 7, the cap is again put in position, and the nozzle applied. The device is then ready to be applied to the hose. It is evident, however, that the device may be applied to the hose before the chemical substance is placed within the chamber of the mixer if desired. In other words as soon as the soluble substance within the chamber of the mixer has become exhausted, the cap may be removed and the chamber again supplied. This may be quickly accomplished whereby little time is lost.

It is evident that this device will be very valuable as an attachment for garden hose, for the purpose of spraying trees, shrubbery and vegetables, in order to destroy the insects or vermin which infest them at certain seasons of the year. It is also evident that soluble fire extinguishing substances may be placed within the chamber of the mixer and the same automatically mingled with the water passing therethrough, so that as it issues from the nozzle it will be a fire extinguishing fluid. The facility with which

this work may be accomplished will be readily understood from the drawing taken in connection with the description heretofore given. The device may also be used for applying fertilizing material in liquid form to trees, shrubbery, vegetables and lawns or wherever a fertilizer may be needed

Having thus described my invention, what I claim is:

A device for mixing soluble material with fluid, consisting of a chamber provided with an unobstructed interior surface and having an inlet opening at one extremity, an exit opening at the opposite extremity, and a nozzle connected with the exit extremity thereof and extending beyond the chamber in alinement with the latter, the inlet extremity being surrounded by a nipple adapted to be connected with a conduit, the forward extremity of the chamber or that adjacent the nozzle being provided with a concavo convex disk projecting interiorly or in the direction opposite the discharge from the nozzle, the chamber being provided with a soluble substance consisting of pieces of globular shape whereby clogging of the mixing chamber is prevented.

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

BENJAMIN F. WOODING.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.