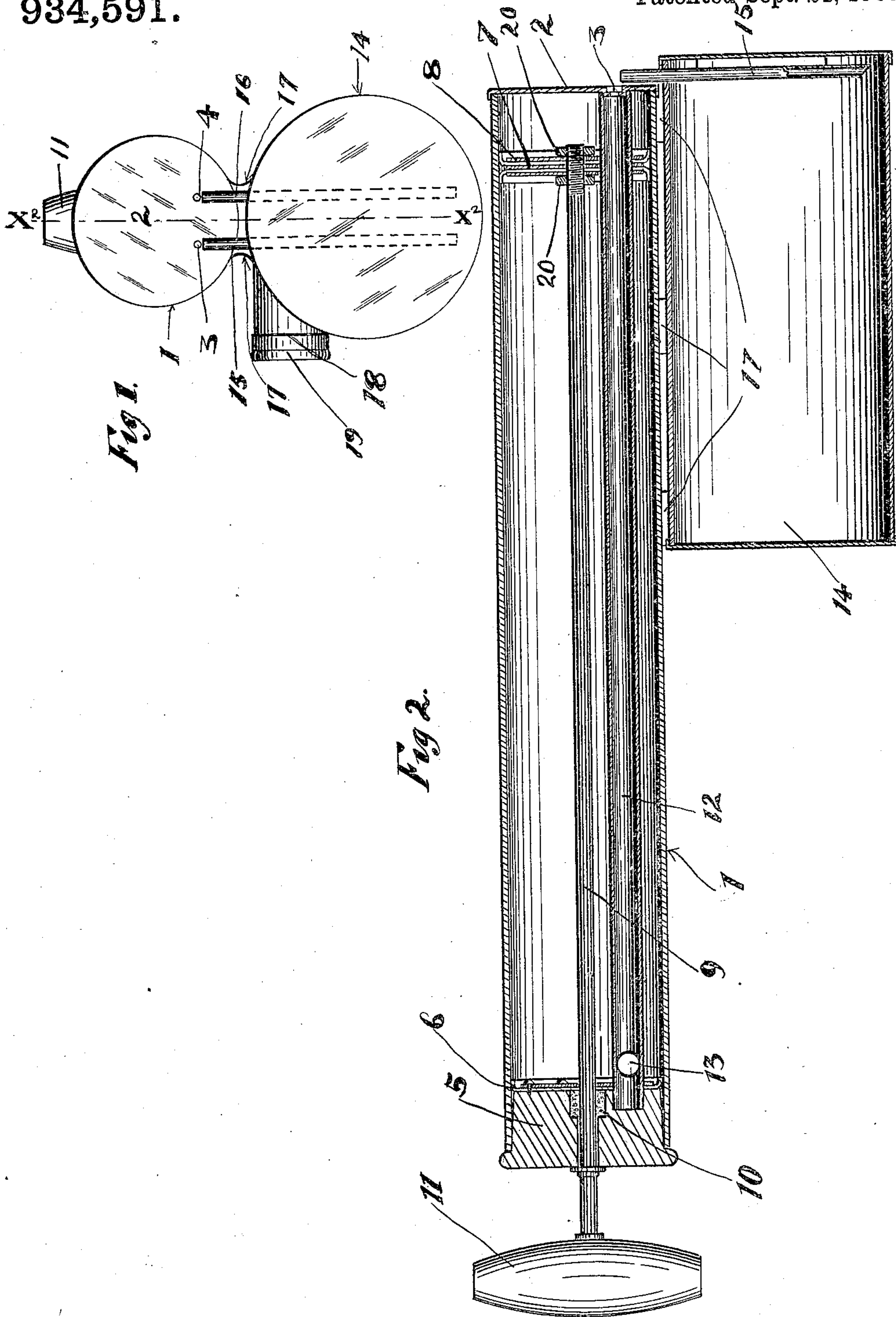


H. E. BRANDT.
POISON DISTRIBUTER.
APPLICATION FILED OCT. 21, 1908.

934,591.

Patented Sept. 21, 1909.



WITNESSES:
R. P. Hicks
Harry Opsahl.

INVENTOR
Henry E. Brandt
BY HIS ATTORNEYS.
William M. Merchant

UNITED STATES PATENT OFFICE.

HENRY E. BRANDT, OF CHISAGO CITY, MINNESOTA, ASSIGNOR OF ONE-HALF TO HERBERT D. HUDSON AND ONE-HALF TO MILES S. THURBER, BOTH OF MINNEAPOLIS, MINNESOTA.

POISON-DISTRIBUTER.

934,591.

Specification of Letters Patent. Patented Sept. 21, 1909.

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To all whom it may concern:

Be it known that I, HENRY E. BRANDT, a citizen of the United States, residing at Chisago City, in the county of Chisago and State of Minnesota have invented certain new and useful Improvements in Poison-Distributers; 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 has for its object to provide a poison distributor, adapted to spray poison liquid for the purpose of destroying destructive bugs and insects.

To the above ends, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a front end elevation of the improved distributor or spraying device; and Fig. 2 is a vertical longitudinal section taken through the device on the line $x^2 x^2$ of Fig. 1.

The numeral 1 indicates the cylindrical barrel of an air pump, the same having at its delivery end a fixed head 2, formed with small air discharge passages 3 and 4, located quite close together. The other end of the barrel 1 is closed by a plug 5, that is provided with a self seating joint plate or strip 6 of leather, rubber or other pliable material. A piston head 7 works within the barrel 1 and is provided with reversely bent self seating packing plates or strips 8, one of which forms a tight joint between said piston head and barrel under one direction of movement, and the other of which forms a tight joint between said piston head and barrel under the other direction of movement of the said piston head. A long piston stem or rod 9 is connected to the piston head 7 and works through a packed axial passage 10 in the plug 5. Outside of the barrel, the piston rod 9 is provided with a hand piece 11. Within the barrel 1 is a long air tube 12, which at its receiving end, is seated in the plug 5 and has an air inlet port 13 close to said plug, and at its delivery end, is secured to the head 2 and communicates with the discharge passage or port 3 thereof.

This air tube 12 is passed through a perforation in the piston head 7, and a close joint between the same in the said piston head, is afforded by the pliable joint plates or strips 8.

Secured to the under portion of the delivery end of the barrel 1, is a liquid containing tank 14 shown as of cylindrical form. Two small tubes 15 and 16 extend from points near the bottom of the tank 14, upward through the top of said tank and terminate respectively, in vertical line with, and very slightly below, the air discharge passages 3 and 4. These tubes 15 and 16 are soldered or otherwise rigidly secured to the tank 14, and as shown, the said tank is connected to the barrel 1 by flanges 17. At one side, the tank 14 is provided with a filling neck 18 that is normally tightly closed by a detachable cap nut 19.

The poisonous liquid, not shown, is, of course, placed within the tank 14. When the piston head 7 is moved from its most forward position, shown in Fig. 2, toward the rear, air will be forced from the barrel or cylinder 1, through the port 13 into the air tube 12, and from thence it will be discharged outward through the passage 3. The air thus forced from the passage 3 directly over the upper end of the tube 15, will draw the poison liquid upward through the said tube, and will discharge the same in a fine spray.

When the piston head 7 is forced from its rearmost position toward the forward end of the barrel or cylinder 1, air contained in the said barrel ahead of the said piston will be forced directly outward through the passage 4, and will draw the poison liquid upward through the tube 16 and discharge the same in a fine spray. Thus it will be seen, that under both directions of movement of the pump piston, air will be discharged from the pump barrel, and a continuous spray of the poisonous liquid will be produced. This, it will also be noted, can be accomplished without the use of valves.

When air is being discharged through the passage 3, air will be drawn into the barrel through the passage 4, and conversely, when air is being discharged through the passage 4, air will be drawn into the barrel through the passage 3.

The entire device is of very simple construction.

struction, may be constructed at small cost, and furthermore, in practice has been found highly efficient for the purposes had in view.

The spraying device may be made in any desired size, but is primarily designed for use as a small spraying device adapted to be carried in the hand, and to be manually operated. It will be found especially serviceable for spraying plants, vegetables and small fruit trees and bushes.

It will, of course, be understood that this device herein designated as a poison distributor, and primarily designed for that purpose, is capable of use for spraying any kind of a liquid.

What I claim is:

1. In a spraying device, the combination with a pump barrel and piston working therein, the former having two combined air discharge and inlet passages at one end communicating with the respective ends of said barrel and constituting the only air discharge and inlet passages therefor, a liquid containing tank connected to said pump barrel, and a pair of liquid supply tubes extending from the lower portion of said tank upward and terminating in the vicinity of the

respective combined air discharge and inlet passages.

2. In a spraying device, the combination with a pump barrel and a piston working therein, said barrel having at one end two combined air discharge and inlet passages constituting the only air discharge and inlet passages to said barrel, the one being in direct communication with the adjacent end of said barrel, an air conduit connecting the other air discharge and inlet passage to the opposite end of said barrel and having a cross section, the area of which is materially greater than that of the combined air discharge and inlet passage to which it is connected, a water tank connected to said pump barrel, and a pair of water delivery tubes extended from the lower portion of said tank upward and terminating in the vicinity of the respective air discharge passages.

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

HENRY E. BRANDT.

Witnesses:

H. D. KILGORE,
F. D. MERCHANT.