Nov. 18, 1924. 1,516,439

F. I. JADEN

COMBINED CLEANING AND PAINTING DEVICE

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Fig. 1.

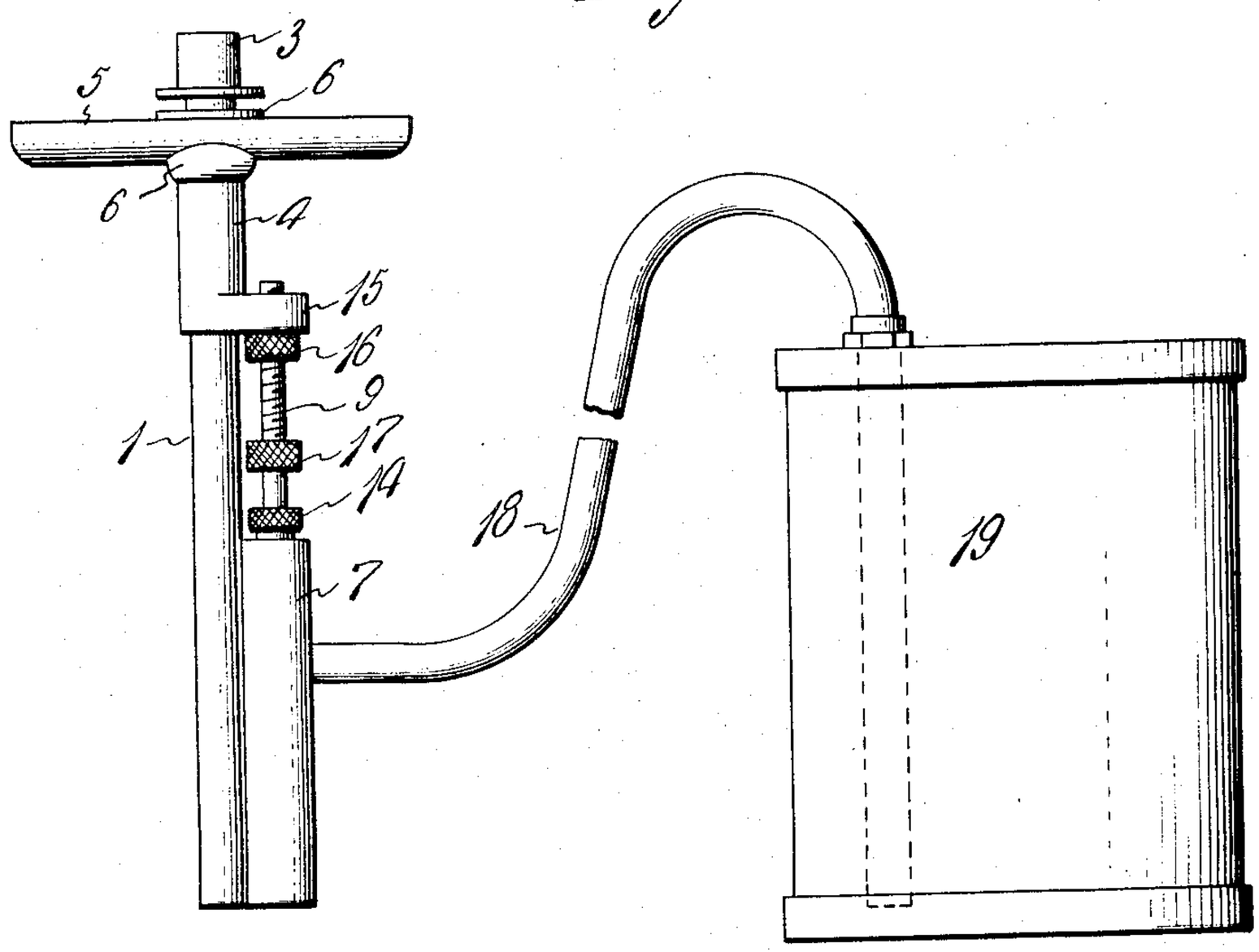


Fig. 3.

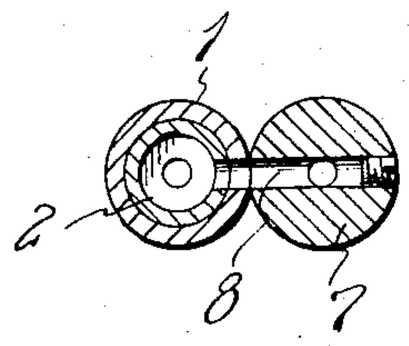


Fig. 4.

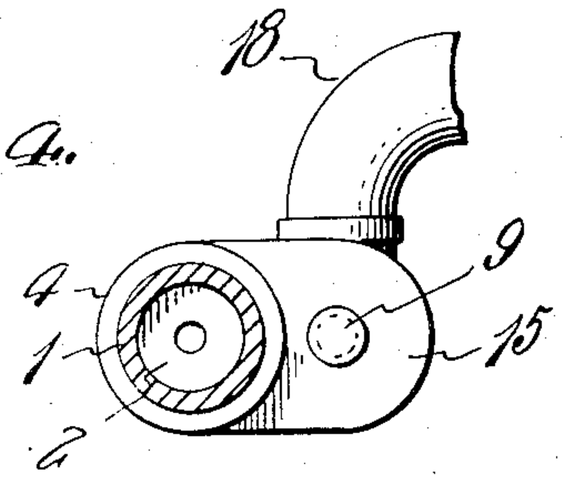
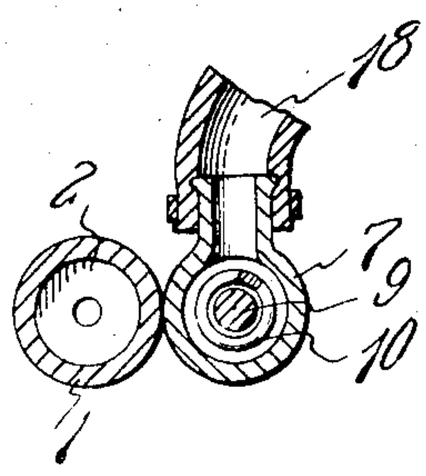


Fig. 10.



Witnesses:
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INVENTOR
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ATTORNEY

Nov. 18, 1924. 1,516,439

F. I. JADEN

COMBINED CLEANING AND PAINTING DEVICE

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Fig. 2.

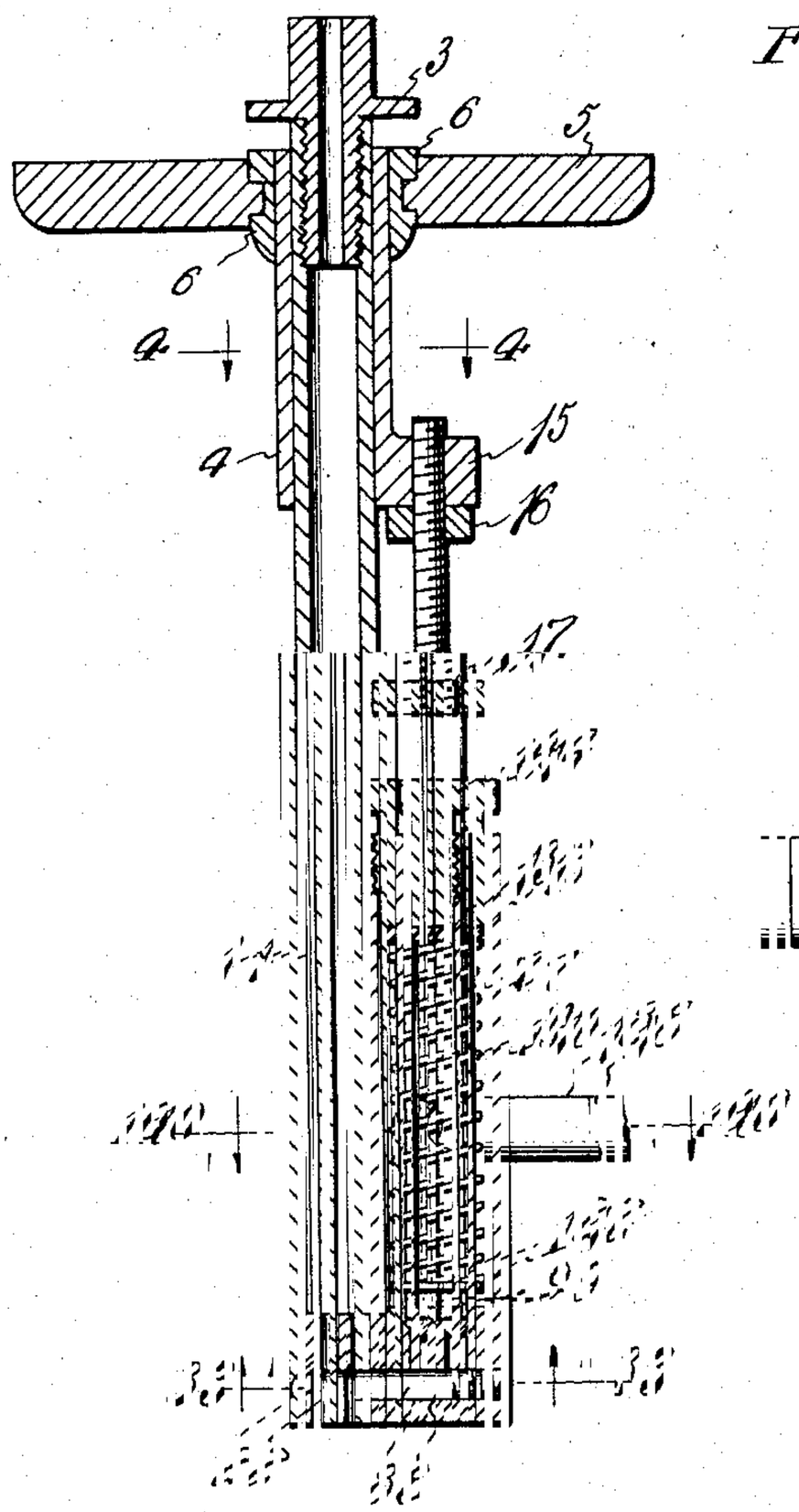
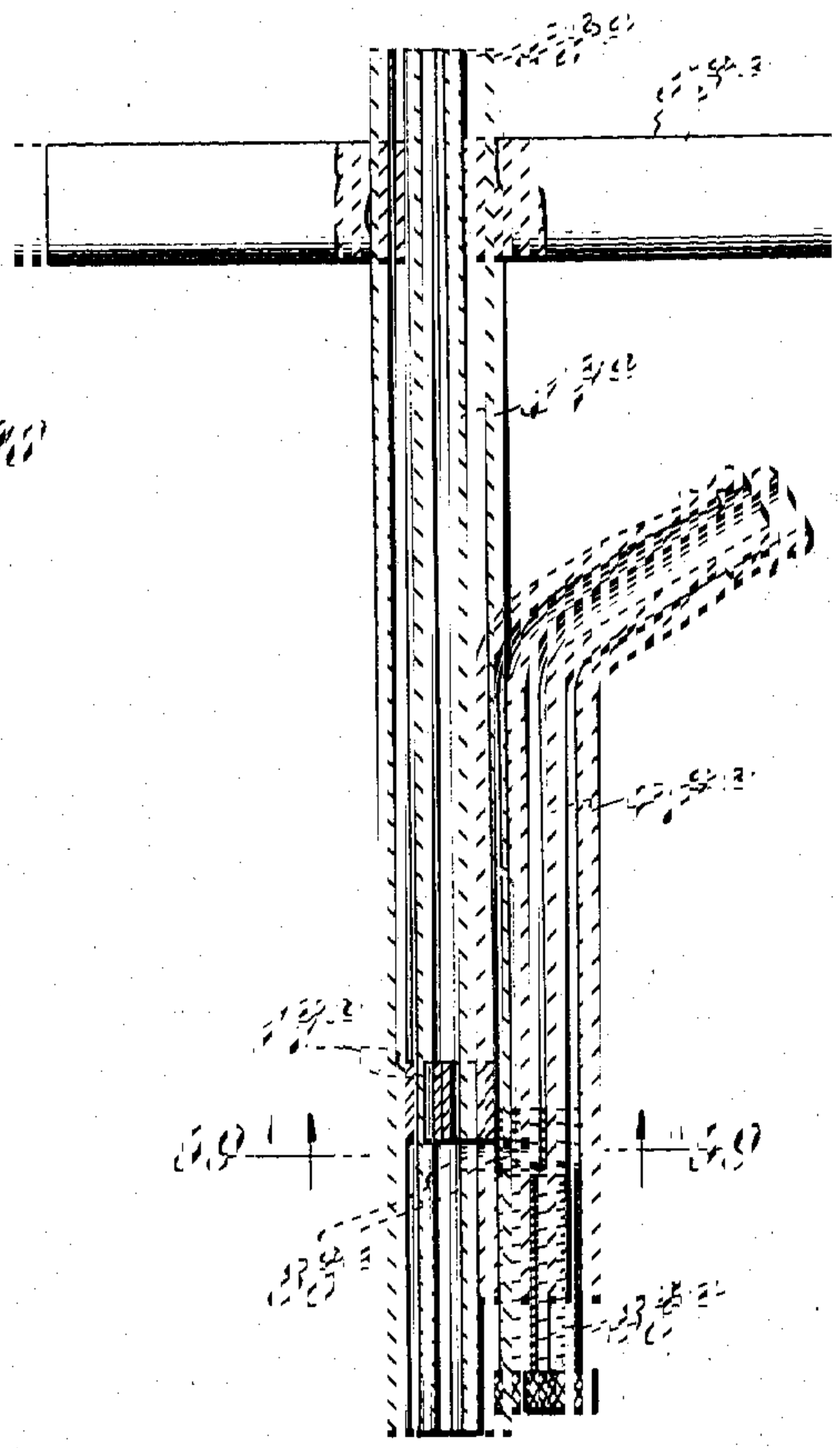
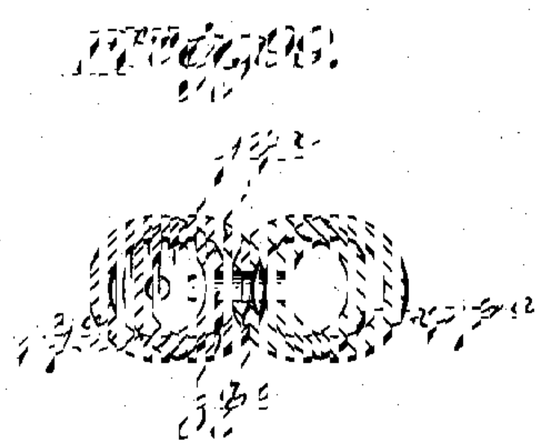


Fig. 8.





WITNESSES:

INVENTOR

ATTORNEY

Nov. 18, 1924. 1,516,439

F. I. JADEN

COMBINED CLEANING AND PAINTING DEVICE

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Fig. 5.

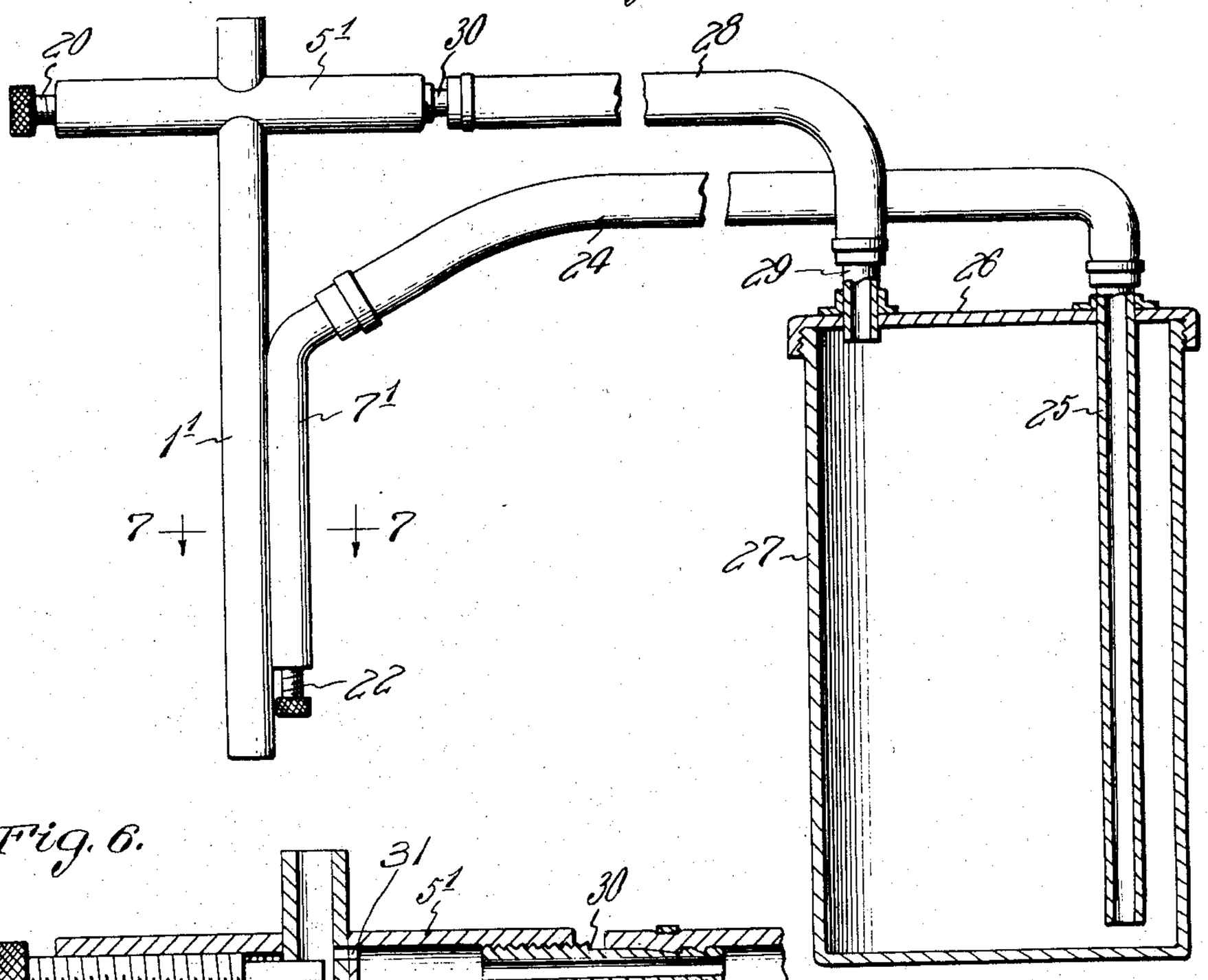


Fig. 6.

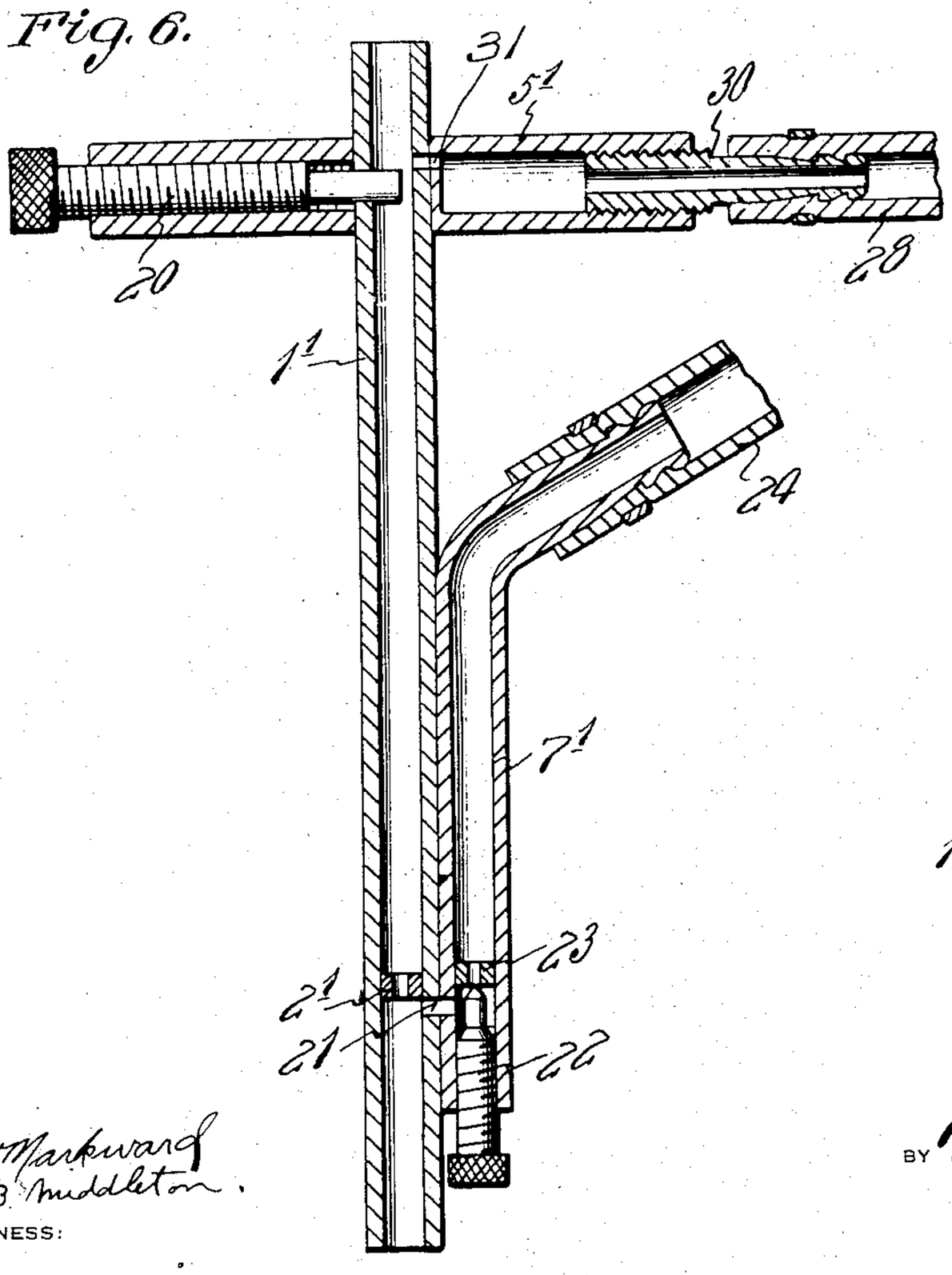
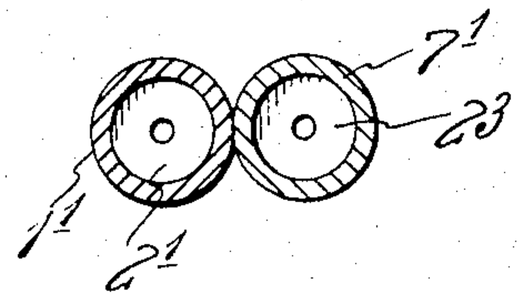


Fig. 7.



F. I. Jaden

INVENTOR

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ATTORNEY

Witness:
L. B. Middleton.

Patented Nov. 18, 1924. 1,516,439

UNITED STATES PATENT OFFICE.

FRED I. JADEN, OF HASTINGS, NEBRASKA.

COMBINED CLEANING AND PAINTING DEVICE.

Application filed November 7, 1923. Serial No. 673,346.

To all whom it may concern:

Be it known that I, FRED I. JADEN, a citizen of the United States, residing at Hastings, in the county of Adams and State of Nebraska, have invented new and useful Improvements in Combined Cleaning and Painting Devices, of which the following is a specification.

This invention relates to a cleaning and painting device, the general object of the invention being to provide means whereby the device can be used with a compressed air outfit such as is used for inflating pneumatic tires and the like.

With this device, kerosene or other liquid is mixed with compressed air for cleaning grease and dirt from motors, gears and the like.

In another form of the invention the device can be used for applying paint and the like to surfaces and objects to be painted or otherwise treated.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings where like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view of a modification used for cleaning purposes.

Figure 2 is a longitudinal sectional view through this device.

Figure 3 is a section on line 3—3 of Figure 2.

Figure 4 is a section on line 4—4 of Figure 2.

Figure 5 is a view of a modification used for painting purposes.

Figure 6 is a longitudinal sectional view through the form shown in Figure 5.

Figure 7 is a section on line 7—7 of Figure 5.

Figure 8 is a view of a further modification.

Figure 9 is a section on line 9—9 of Figure 2.

Figure 10 is a section on line 10—10 of Figure 2.

Referring to the first form of the invention, 1 indicates a tube which has a reducing nozzle 2 in one end and a nipple 3 is threaded in its other end, this nipple being formed to engage the usual air chuck, which controls the flow of air from a compressed air outfit such as are used for inflating tires and the like. A sleeve 4 is slidably mounted on the tube and a handle 5 is attached to the sleeve by the collars 6. A short tube 7 is formed with or connected to the tube 1, and the outer ends of these tubes are connected together by the passage 8, the outer end of the passage communicating with the interior of the nozzle 2 in the tube 1. The inner end of the passage 8 is controlled by a needle valve 9 which is arranged in the tube 7 and said valve is normally pressed upon its seat by the spring 10 which is arranged on the valve 9 between a collar 12 thereon and the gasket 13 which rests against the nut 14 which is threaded to the tube 7 and through which the needle valve passes. A projection 15 is arranged on the sleeve 4 and has a threaded opening through which the threaded end of the needle valve passes. A lock nut 16 holds the needle valve in adjusted position in the projection and said valve can be turned by means of the member 17 thereon which is adapted to be engaged by a wrench or the like. A tube 18 connects the interior of the tube 7 with a container 19 which contains kerosene or other cleansing fluid.

From the above it will be seen that by placing the member 1 against an air chuck and by holding the chuck in the palm of the hand and pressing upon the handle 5 with the fingers of said hand, the valve in the chuck will be opened so that air will flow through the tube 1 and escape at the nozzle 2. This will produce a vacuum in the passage 18 so that the kerosene or other liquid will be drawn through the passage 18 and mixed with the air. As will be seen when the handle 5 is moved the needle valve will be opened through its connection with the sleeve 4 which is attached to the handle so that a supply of compressed air and kerosene will pass through the device and be violently discharged against the object to be cleaned or treated. By means of the screw threaded end of the needle valve and the nut 16 and member 17, the valve can be adjusted in relation to the sleeve 4 so as to control the amount of its opening and thus control the amount of kerosene being mixed with the air. When the handle is released

the spring will close the needle valve and due to the short length of passage 8 there is very little liquid left between the valve and the nozzle to be wasted. This spring can be made of great strength as four fingers can be used to operate the handle 5. This spring also acts to compress the gasket 13 to prevent leakage at the top of the tube 7. The parts can be easily and quickly taken apart and put together and the adjustments can be quickly made. The device can be used for painting purposes by making the port larger and attaching the tube 18 to a supply of paint, though it is mainly designed for cleaning purposes. The handle 5 is free to turn on the sleeve, thus reducing side strain on the needle valve.

In the modification shown in Figures 5, 6 and 7, the handle 5′ is made hollow and one portion receives the screw plug 20 which is provided with the knurled head so that it can be easily adjusted. This plug extends into the bore of the tube 1′ so as to control the passage of air therethrough. The nozzle or reducing plug 2′ is arranged quite a distance from the end of the tube and is directly above the passage 21 which connects the interior of the tube 1′ with the tube 7′. The lower end of this tube 7′ is closed by a threaded plug 22 which has a reduced upper end which acts to control the flow of material through the reduced plug 23 in said tube 7′. This tube 7′ is connected by a flexible tubing 24 with a pipe 25 which extends through the cap 26 of a receptacle 27 for holding the supply of paint or the like. The end of the pipe 25 is located a slight distance above the bottom of the container 27. A flexible tube 28 has one end connected with a short pipe 29 carried by the cap 26 of the container and its other end is connected with a plug 30 which is threaded in the handle 5′, this portion of the handle being in communication with the interior of the tube 1′ by means of a port 31 so that some of the air passing through the tube 1′ will pass through the port, the plug 30 and tube 28 into the container and thus place the contents of the container under pressure. This will force some of the contents through the pipe 25 and tube 24 into the tube 7′ where it will pass through the passage 21 and be mixed with the air passing through the tube 1′. The contents of the container is discharged therefrom by the combined action of the compressed air in the container and the suction created by the passage of the air through the tube 1′. The upper end of the tube 1′ is fitted to engage an air chuck the same as the first form of the device and the valve in the chuck is opened by holding the chuck in one hand and pressing the handle with the fingers toward the chuck. It will be seen that as soon as the air valve in the chuck is closed the air pressure is relieved from the contents of the container as any compressed air therein will pass through the port 3 into the tube 1′ and thus escape to atmosphere. The plug 20 acts to control the flow of air through the tube 1′ and the plug 22 acts to adjust the flow of material from the tube 7′ into the tube 1′.

In the modification shown in Figure 8, which shows the simplest form of the invention, the handle 5^a is fastened to the tube 1^a so that the nozzle 2^a can be pressed against the air chuck. The tube 7^a is suitably fastened to the tube 1^a and the two tubes are in communication with each other through the passage 8^a. The tube 7^a is closed by the screw plug 8^x so that if the passage should become clogged the plug can be removed to permit the passage to be cleaned. The reducing sleeve 1^x is placed in the tube 1^a adjacent the end of the passage 8^a which acts as a nozzle for drawing the liquid through the passage from the tube 7^a when air flows through the tube 1^a. The tube 7^a is adapted to be connected by a flexible hose with a source of supply. The plug 8^x also acts to control the amount of liquid flowing through the passage 8^a and by screwing this plug in or out the amount of liquid passing through the passage can be adjusted.

When the part 2^a is pressed against an air chuck by the handle, air will flow through the tube 1^a and as it passes through the sleeve 1^x it will act to draw liquid from the tube 7^a and this liquid will mix with the air and this mixture will be ejected from the end of the tube 1^a.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A device of the class described comprising a pair of tubes having parallel portions connected with each other with ports in said parallel portions placing one tube in communication with the other, a handle on the first tube, a part on the tube for opening the air valve of a chuck of an air supply device when the handle is drawn towards the chuck, a nozzle in the first tube adjacent the port therein, means for connecting the second tube with a source of supply and adjustable means for controlling the flow of material from the second tube into the first tube.

2. A device of the class described comprising a pair of tubes having ports placing one tube in communication with the other, a nozzle in the first tube arranged adjacent the communicating port, a handle slidably mounted on the first tube and arranged to

force a part thereof against the valve of a chuck of an air supply device when the handle is pressed upon, means for connecting the second tube with a source of supply, a valve for controlling the flow of material from the second tube to the first tube and means for actuating the valve by the movement of the handle.

3. A device of the class described comprising a pair of tubes having a port placing one tube in communication with the other, a hollow handle on the first tube, said first tube having a port therein for placing the hollow handle in communication with its interior, a container, a tube connecting the hollow handle with the top of the container and placing the contents under compression, means for connecting the bottom of the container with the second tube and means for controlling the flow of material through both tubes.

In testimony whereof I affix my signature.

FRED I. JADEN.