

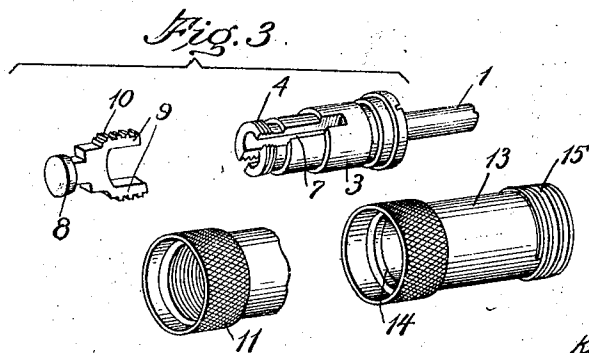
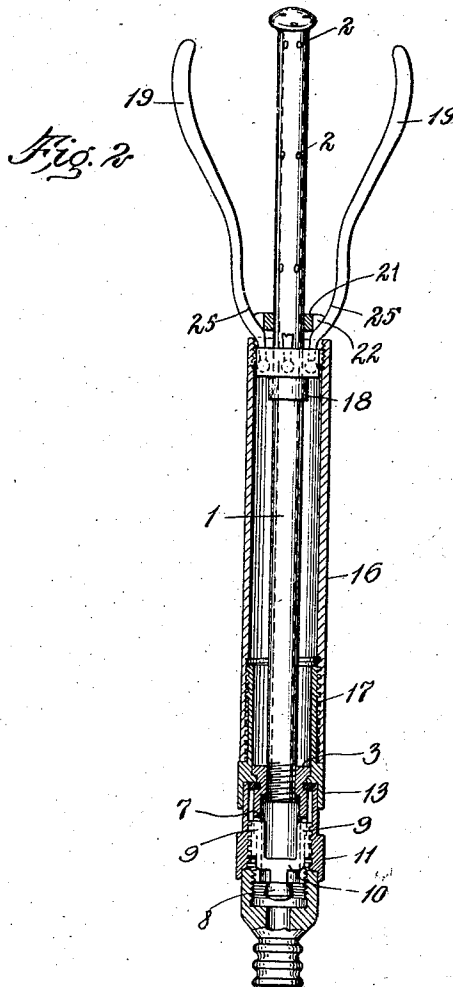
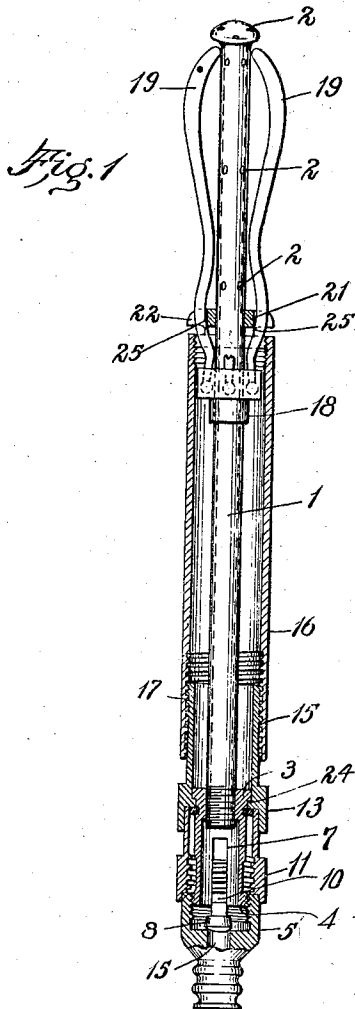
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A. F. ANDREWS ET AL

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SPRAYING DEVICE

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UNITED STATES PATENT OFFICE.

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SPRAYING DEVICE.

Application filed May 5, 1925. Serial No. 28,079.

Our invention relates to an improvement in spraying devices and has particular reference to improvements in spraying devices adapted for medical purposes and which in practice are attached to a hose or other flexible conduit.

One of the objects of our invention is the provision of a device of the character above indicated, provided with a central spray tube through which water or other liquids may be conducted to the end of the device, this tube being equipped with pivoted arms surrounding the same and adapted to be actuated so as to cause the arms to be moved laterally with respect to the sprayer or spraying tube about their pivots, this movement of the arms being accomplished by manipulation of a simple device arranged adjacent one end of the sprayer.

A further object of our invention is the provision of improved valve controlling mechanism capable of use in controlling the flow of any liquid or fluid, such as gas, water, oils, etc., and which in the present embodiment is built into our improved device and forms a part thereof. This valve mechanism may be easily manipulated so as to regulate the flow of water or other fluid through the spraying tube.

In the accompanying drawings, wherein we have illustrated an embodiment of our invention,

Fig. 1 is a view of the same in sectional elevation;

Fig. 2 is a view of the same in sectional elevation with the upper ends of the arms thereof actuated to their outward limit of travel away from the central spray tube; while

Fig. 3 is a view in perspective of the mechanism by which movement of the arms is effected and the flow of water through the device controlled.

Referring to the drawings in detail, 1 designates a spray which may be composed of any suitable material, but here shown in the form of a metal tube, provided along its periphery adjacent the upper end thereof, as viewed in the drawings, with openings 2 for the escape of fluid therefrom. The lower or opposite end of this tube 1 is received by and threaded into a valve-carrying block designated 3, the lower end of this block, as viewed in Fig. 1 and in Fig. 2, being provided with external screw threads, as indicated at 4, for the attachment of a block 5,

to which the hose or other conduit through which the fluid to be sprayed is supplied to the device.

The valve-carrying member or block 3 is slotted lengthwise adjacent its lower end, as indicated at 7, and receives a valve 8 of novel construction, this valve being provided with arms 9 received by the slot 7. These arms are screw-threaded, as indicated at 10, for co-operation with a threaded ring 11, by which the member 3 is received. The ring 11 is provided with a shoulder 12 resting on the upper edge of the member 5, as indicated in Fig. 1, while the upper end of this ring is received by and is rotatable within a member 13 engaging an internal shoulder 14, with which this member is provided. The member 13 is screw-threaded, this being a left-hand screw, externally as indicated at 15, and enters the lower end of a sleeve 16, threaded left-hand, as indicated at 17. Adjacent the top of the sleeve 16, which it is to be understood surrounds the tube 1, the tube is provided with a ring 18, which is permanently attached to the tube, this ring carrying spreading arms 19 pivoted therein by a ball and socket pivot 20, it being understood that each arm is individually pivoted. Above the ring 17 and lying between the spreading arms 19 and tube 1, is a collar 21, slidable vertically of the tube 1 and provided with peripheral grooves 22, each of which receives an arm 19. This collar is threaded into the upper end of the sleeve 13.

In operation the arms 19 may be adjusted as desired by merely rotating the sleeve 13, which will cause the sleeve 16 to move lengthwise of the tube 1, the engagement of the upper face of the shoulder 14 with a shoulder 24 on the valve-carrying member 3, which is screwed to the tube 1, preventing upward movement of the tube. The collar 21 will, of course, at the same time be drawn downwardly and will force the arms 19 outwardly, due to the cam faces 25 thereon, from the position shown in Fig. 1, for example, to the position shown in Fig. 2, it being understood, of course, that the degree of movement of the arms 18 is optional with the user of the device. Likewise, the flow of fluid through the tube 1 may be readily controlled by the controlling ring 11, rotation of which will cause the valve 8 through the medium of the valve arms 9 to raise or lower the valve as desired.

It will be seen from the foregoing that we

have provided a device of the character above indicated which is extremely simple in its construction and operation and which may be readily taken apart and assembled, and while we have shown the various parts thereof of metal, it is to be understood that any other suitable material desired may be employed.

It will be seen also that the valve mechanism of this device and the control therefor is extremely simple and effective both in construction and operation, and, as pointed out above, may be employed for controlling the flow of any fluid or of any liquid, such as water, gas, air, etc., not only in the present device but in connection with other devices as well.

What we claim is:

1. In a device of the class described, the combination of a spray tube, pivoted arms attached thereto, a collar lying between said arms and the tube and engaging said arms, a sleeve surrounding said tube and attached to said collar, a valve-carrying block fixed to said tube, an adjusting ring receiving said block and threaded to said sleeve, and a shoulder on said block co-operating with said ring, whereby rotation of said ring will effect movement of said collar to expand and contract said arms.

2. In a device of the character described, the combination of a spray tube, a slotted

block fixed relatively to said tube and carried thereby, a valve having arms entering the slot in said block and a ring rotatable with respect to said tube and co-operating with said valve to open and close the same.

3. In a device of the character described, the combination of a spray conduit, a slotted block carried at one end thereof in fixed relation thereto, a valve, arms on said valve and riding in the slot in said block, said arms being threaded externally, and a ring surrounding said block and internally threaded, the threaded portion of said ring engaging the threads of said block, whereby as the ring is rotated movement of the valve is effected.

4. In valve mechanism, the combination of a valve, a slotted block carrying the same, arms on said valve externally threaded and riding in the slot in said block, the periphery of said arms extending beyond the periphery of the block, and a ring internally threaded surrounding said block and said valve arms, said ring being held against longitudinal movement relatively to the block and its threads engaging the threads of said arms, whereby rotation of the ring will impart bodily movement to said valve.

This specification signed this 1st day of May, 1925.

ALEXIS F. ANDREWS.