J. B. WINFIELD & C. F. ACKERMAN.

FIRE HOSE NOZZLE.

APPLICATION FILED OCT. 22, 1908.

924,867. **Patented June 15, 1909.**

2 SHEETS—SHEET 1.

Fig. 1.

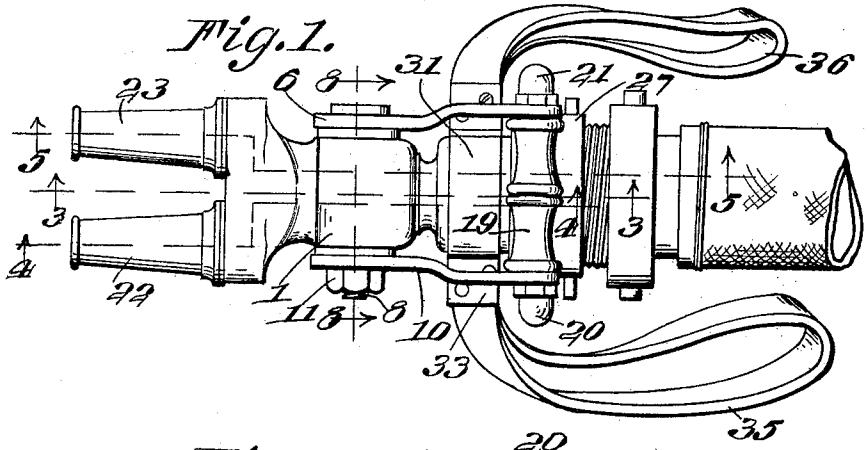


Fig. 2.

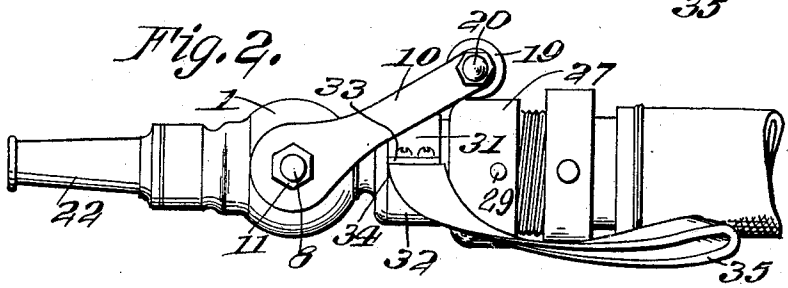


Fig. 3.

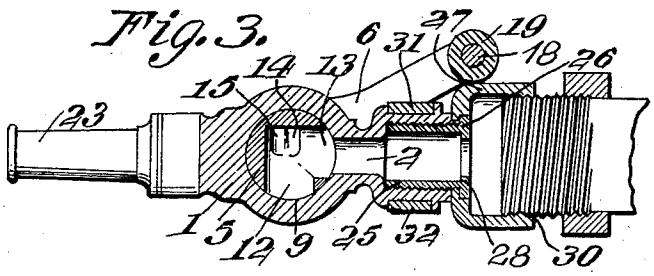


Fig. 4.

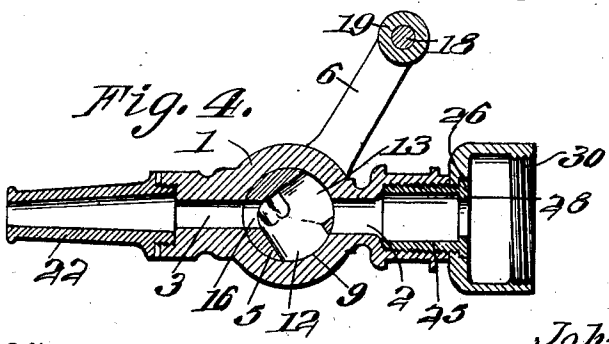
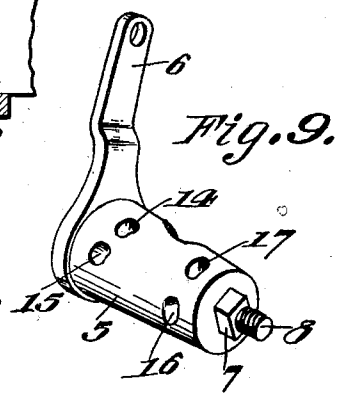


Fig. 9.



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2 SHEETS—SHEET 2.

Fig. 5.

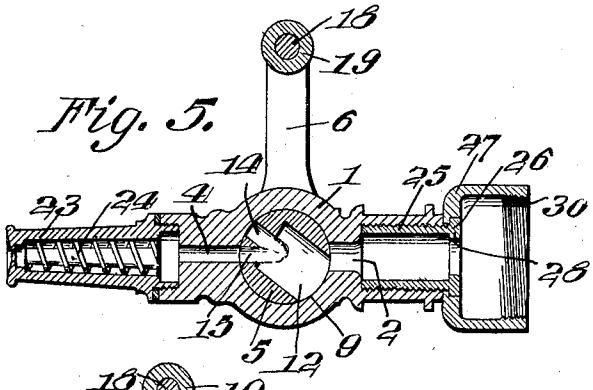


Fig. 8.

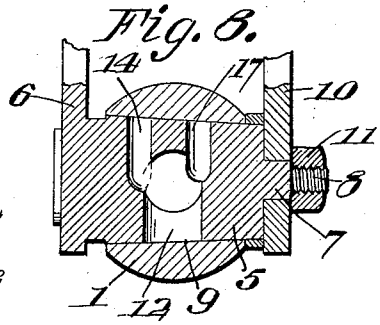


Fig. 6.

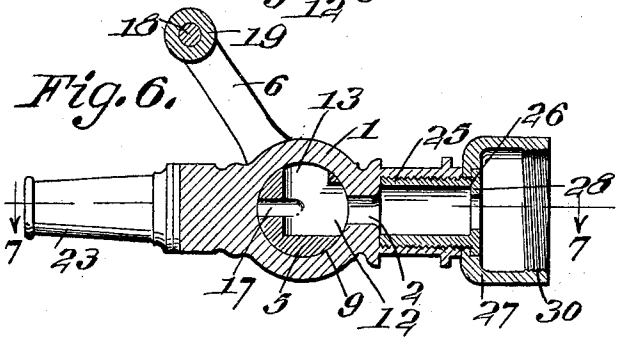


Fig. 10.

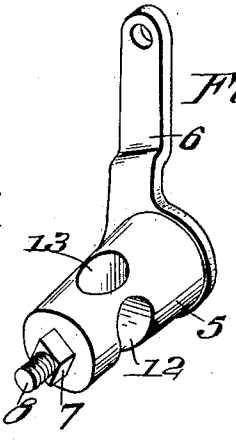
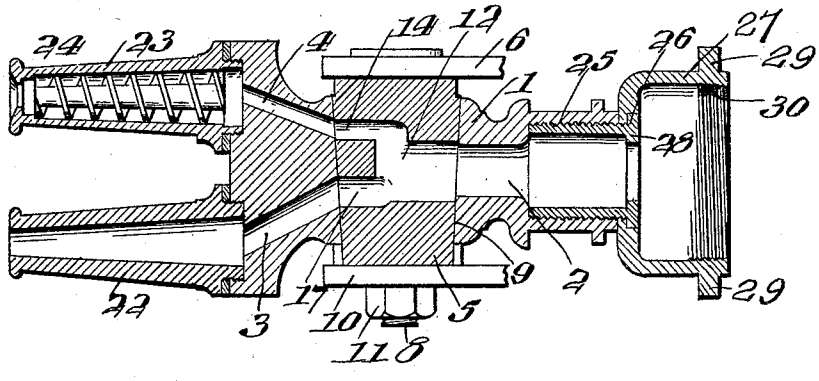


Fig. 7.



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UNITED STATES PATENT OFFICE.

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FIRE-HOSE NOZZLE.

No. 924,867. Specification of Letters Patent. Patented June 15, 1909.

Application filed October 22, 1908. Serial No. 458,993.

To all whom it may concern:

Be it known that we, JOHN B. WINFIELD and CHARLES F. ACKERMAN, citizens of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Fire-Hose Nozzles; and we 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.

This invention relates to improvements in fire hose nozzles, and comprises means for manually controlling a fire hose nozzle, and means for spraying water in front of the firemen.

One of the objects of the invention is the production of a fire hose nozzle provided with manually-operated means for spraying a stream of water so that a fireman may be able to clear the atmosphere of a building from smoke so that he may penetrate to the heart of a fire, and, at the same time, protect himself from the intense heat of a fire when working at close quarters with said fire.

Another object of the invention is the production of a fire hose nozzle comprising a main discharge port and an auxiliary spray port, and means for separably and jointly opening and closing said ports.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be described and particularly pointed out in the appended claim, and in the drawings, in which—

Figure 1 is a plan view of our improved fire nozzle; Fig. 2 is a side elevation; Fig. 3 is a central longitudinal sectional view taken in the line 3—3 of Fig. 1, showing the operating valve in a closed position; Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 1, showing the main discharge nozzle opened by the operating valve; Fig. 5 is a longitudinal sectional view taken on the line 5—5 of Fig. 1, showing the spray port opened by the operating valve; Fig. 6 is a longitudinal sectional view showing the main discharge port and the spray port opened by the operating valve; Fig. 7 is a horizontal sectional view taken on the line 7—7 of Fig. 6 on an enlarged scale; Fig. 8 is a detail vertical sectional view taken on the line 8—8 of Fig. 1; Fig. 9 is a detail perspective view of the operating plug or valve; and Fig. 10 is a similar view of the opposite side of plug or valve.

In the accompanying drawings we have illustrated the preferred embodiment of our improved fire hose nozzle, which drawings are prepared simply for illustrative purposes and therefore are not drawn to scale.

1 denotes a casing formed with a water-receiving port, 2, a main discharge port, 3, and a spray port, 4. The main discharge port, 3, and the spray port, 4, are positioned on opposite sides of the casing, 1, and said spray port is of considerably less area than the main discharge port. The casing 1 is provided with an operating valve or plug, 5, which plug is provided with a lever, 6, which is preferably formed integral with said plug. The plug, 5, tapers inwardly from the lever 6 and is provided with a squared portion, 7, and a threaded portion, 8. The plug 5 is disposed in a lateral opening, 9, formed in the casing, 1, and is secured in place by a second lever 10, which is mounted on the squared portion 7 of the plug, 5, and held thereon by a clamping nut, 11. The plug, 5, is provided with a plurality of large openings, 12, 13, which communicate with smaller openings, 14, 15, 16 and 17. The openings, 12 and 13, are arranged in the plug to allow water to pass from the connecting hose to the main and auxiliary spray ports, and the smaller openings are arranged to jointly connect the main and auxiliary spray ports and to independently connect the main and the auxiliary spray ports with the supply stream passing through the openings, 12 and 13. The levers, 6 and 10, are connected by means of a handle rod, 18, which is provided with a hollow rubber or wood handle, 19, said rod 18 being connected at its ends by means of nuts, 20 and 21, to the levers, 6 and 10.

When the main discharge port and the auxiliary spray port are closed, the operating valve or plug occupies the position indicated in Fig. 6, and in this position the opening, 12, in said plug will be in alinement with the water-receiving port, 2. When it is desired to open the auxiliary spray port, the levers 6 and 10 are moved to the position shown in Fig. 5, and when in this position water will flow through the opening, 12, of said plug to opening, 15, and be discharged through the spray port, 4. Connection between the spray port and the port 2 may be closed by turning the levers, 6 and 10, to the position

shown in Fig. 6, when connection will be established between the opening 12 and the opening, 17. By turning the operating levers to the position shown in Fig. 7, the main discharge port, 3, and the auxiliary discharge port, 4, will be opened simultaneously.

The main discharge port, 3, connects with a removable nozzle, 22, and the auxiliary spray port, 4, connects with a removable spray nozzle, 23, which is provided with a removable spirally-formed core, 24. The water passing through the spray port, 4, will be given a spiral motion by the spiral core, 24, and spirally move through the air after leaving the said nozzle.

A tail-piece, 25, is threaded to the hose receiving section of the casing, 1, and is provided with an enlarged portion, 26, which is adapted to hold a swivel, 27, against the end of the casing, 1. The tail-piece, 25, is preferably formed with integral lugs, 28, and the swivel, 27, is provided with external lugs, 29. The swivel, 27, is formed with internal screw threads, 30, which are adapted to receive the threaded end of a hose section.

A swivel member comprising semi-circular sections, 31 and 32, is secured around the casing, 1. Each of said sections is formed with lateral projections, 33 and 34, which are adapted to receive the ends of hand straps, 35 and 36.

By means of our improved fire hose nozzle a fireman or firemen are enabled to project an auxiliary spray a considerable distance ahead of them, the distance depending, of course, on the thickness of the stream and its pressure, and are enabled to instantly open and close said auxiliary spray, to immediately open and close the main discharge stream, and to instantly open and close the main discharge stream and the auxiliary spray stream. By means of the spiral core, 24, the spray water is made to cover a wide area.

From the foregoing description, taken in connection with the accompanying drawing, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

Having thus described our invention, what we claim as new and desire to secure by Letters-Patent, is:

A device of the class described, comprising a pair of laterally spaced parallel nozzles, a body removably secured to said nozzles and having a pair of diverging outlet ports leading from an inlet port, and a valve plug arranged between the outlet and inlet ports adapted to alternatively or simultaneously connect the outlet port with the inlet port, and a solid core spiral secured slidably and removably in one of said nozzles so as to give the water passing therethrough a rotary or spraying motion.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JOHN B. WINFIELD.
CHAS. F. ACKERMAN.

Witnesses:
EDWARD S. NAGLE,
GURLEY MARKS BURNS.