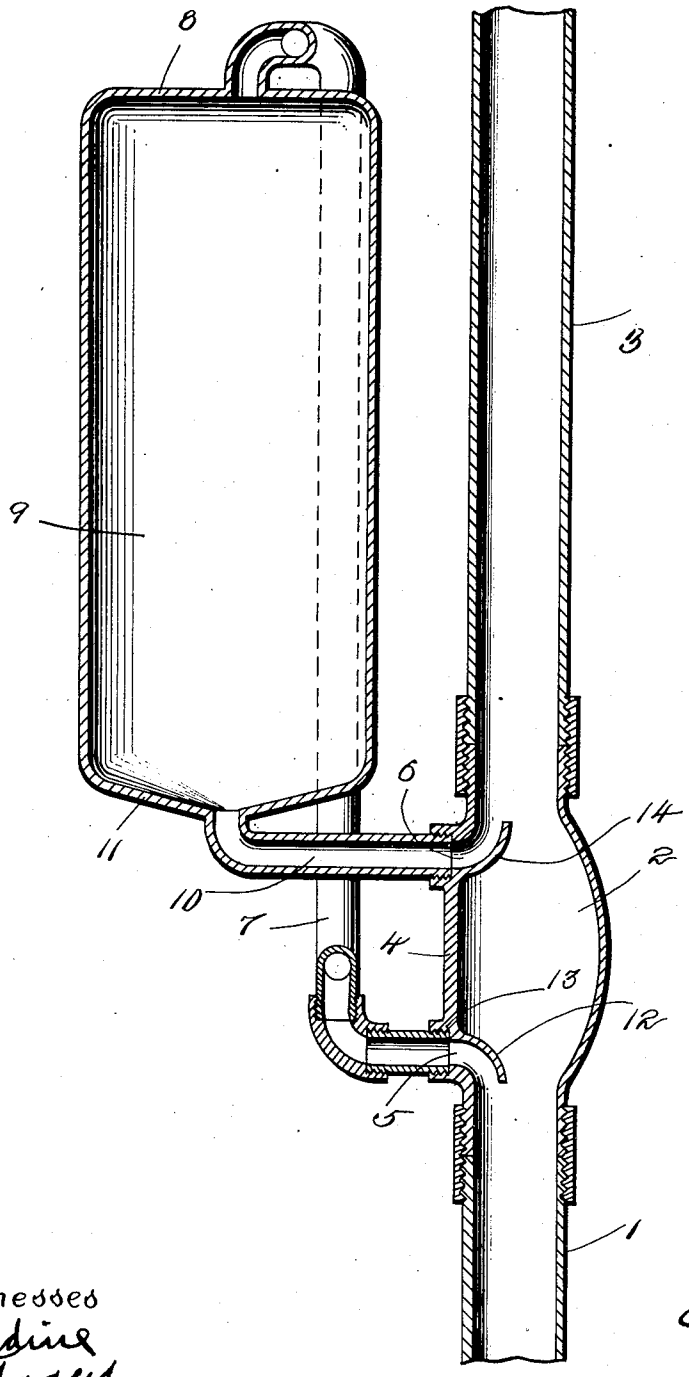
E. A. CARLSON.

CHEMICAL INJECTOR.

APPLICATION FILED AUG. 9, 1915.

1,205,513. Patented Nov. 21, 1916.



Witnesses
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UNITED STATES PATENT OFFICE.

ERIC A. CARLSON, OF QUINCY, MASSACHUSETTS.

CHEMICAL-INJECTOR.

1,205,513. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed August 9, 1915. Serial No. 44,615.

To all whom it may concern:

Be it known that I, ERIC A. CARLSON, a citizen of the United States, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Chemical-Injectors, of which the following is a specification.

This invention relates to a chemical injector for fire hose or water pipe lines and has for its object to provide means for injecting a fire extinguishing chemical into the water to be played upon a fire.

Another object of the invention is to provide a water supply line having a chemical tank connected therewith and means whereby a portion of the water will be forced to the top of said tank creating a top pressure whereby the chemical is supplied to the water in the feed line.

With the above and other objects in view which will more fully appear farther on in the specification, I have invented the device illustrated in the accompanying drawings in which the figure is a sectional view of a water supply pipe embracing my invention.

Like reference characters indicate like parts throughout the specification and in the several views in the drawings in which—

1 is a main supply pipe, having one end of a deflector member 2 connected therewith. To the other end of the deflector member a hose or feed pipe 3 is connected. The upper wall 4 of the deflector member is provided with an outlet 5 and an inlet 6. A pipe 7 connects the outlet with the top end of the chemical containing tank 9 and the pipe 10 connects the lower end 11 of said tank 9 to the inlet 6. A deflecting plate 12 projects downwardly and rearwardly from the side 13 of the outlet 5 so as to deflect a portion of the water passing through the member 2 into the pipe 7 whereby it will be forced into upper end of the tank 9 which is filled with a powdered or granulated chemical of a nature to extinguish a flame, such as bi-carbonate of soda, the water pressure in the upper part of the tank gradually presses the chemical through the pipe 10 and the inlet 6 and from thence with the water passing into the hose or pipe 3.

The action of the water passing through the member 2 and into the member 3 will have a tendency to suck in the chemical from the pipe 10 thus assisting the action of the water pressure in the end of the tank. A baffle plate 14 similar in construction to the plate 12 projects from the wall 4 adjacent the inlet 6 whereby chemical from the pipe 10 is directed into the water passing through the pipe 3. The member 2 may be connected with any hydrant, water main, sprinkler system or engine pump so that the water used from any of said connections will be supplied with a certain amount of a suitable chemical whereby a fire may be extinguished in much less time than when just pure water is used.

Having now described my invention that which I claim to be new and desire to procure by Letters Patent is:—

The combination with a communicating main supply and a feed pipe, of a chemical injector, including a coupling mounted between said pipes and having two ports in the same side thereof, a deflector adjacent the offside of the port nearer the supply pipe, a deflector for the other port projected toward the feed pipe, a tank for the chemical having ports in the bottom and top thereof, a pipe leading from the top port of the tank to the port near the supply pipe, and a pipe leading from the bottom port of the tank to the remaining port of the coupling, whereby a portion of the water in the supply pipe is deflected and directed to the top of the tank to force the chemical out of the bottom port of the tank into the coupling beyond the second deflector, the flow of water through the coupling and beyond the deflector producing a suction action in the last pipe to accelerate the drawing of the chemical from the tank.

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

ERIC A. CARLSON.

Witnesses:
CARL J. SATTERLUND,
THEODOR HOIBY.