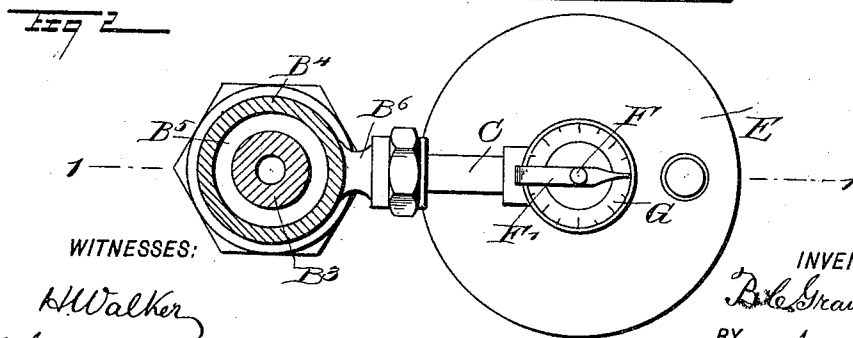
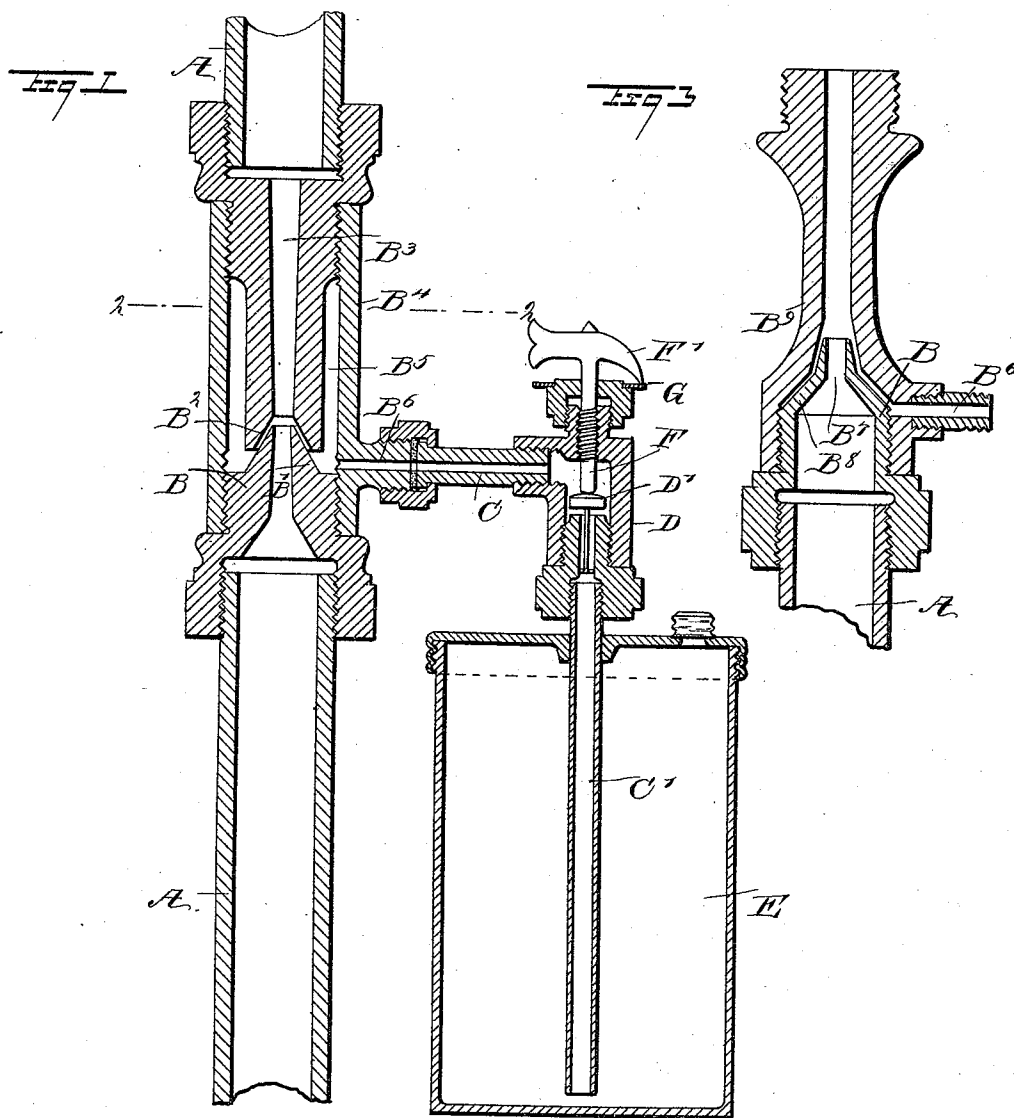


(No Model.)

B. C. GRAVES.
DISINFECTING APPARATUS.

No. 515,210.

Patented Feb. 20, 1894.



WITNESSES:

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BENJAMIN C. GRAVES, OF MOUNT VERNON, NEW YORK.

DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 515,210, dated February 20, 1894.

Application filed October 11, 1893. Serial No. 487,861. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN C. GRAVES, of Mount Vernon, in the county of Westchester and State of New York, have invented a new and Improved Mixing Apparatus, of which the following is a full, clear, and exact description.

The invention relates to apparatus for mixing disinfectants, insecticides and other substances, with a liquid, and its object is to provide a new and improved mixing apparatus, which is simple and durable in construction, very effective in operation, and more especially designed for automatically mixing a substance with a stream of water flowing through a pipe, hose, hydrant, &c., under pressure.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement on the line 1—1 of Fig. 2. Fig. 2 is a sectional plan view of the same on the line 2—2 of Fig. 1; and Fig. 3 is a sectional side elevation of a modified form of ejector.

The improved mixing apparatus is arranged on a pipe A, hose, hydrant or other similar article, through which flows the liquid under pressure. In this pipe A is arranged an ejector B preferably provided with a tapering nozzle, as shown, and connected with a pipe C carrying a regulating valve D and having the pipe C' extending into a receptacle E containing the substance to be mixed with the liquid flowing through the pipe A and ejector B.

The valve D' of the regulating valve D has a limiting stop F under the control of the operator, to permit the said valve to open more or less to allow larger or smaller quantities of the substance contained in the receptacle E to flow through the pipe C into the ejector B to be mixed with the liquid passing through the same. This limiting stop F preferably screws in the valve body of the valve D, and is provided at its outer end with a pointer F'

indicating on a suitable dial G attached to the valve casing, (see Figs. 1 and 2.)

The ejector B is preferably of the construction shown in Fig. 1 and is for this purpose provided with the cone-shaped nozzle B' fitting into the similarly shaped mouth B² of the pipe B³ connected by a shell B⁴ with the nozzle B'. The pipe B³ forms with the shell B⁴ a space B⁵ into which opens the mouth B², and the perforated offset B⁶ to which the pipe C is coupled. Thus, when the water or other liquid flows under pressure through the pipe A it passes in and through the nozzle B' into the pipe B³, thereby creating a suction in the mouth B² so as to draw in substances from the receptacle E through the pipe C. The amount of the substance passing from the receptacle E to the ejector is regulated by the adjustable stop F for the valve D'. The substance is drawn through the mouth B² into the liquid, as it passes from the nozzle B' into the pipe B³, and is thus mixed with the liquid and discharged with the same at the end of the pipe A. As illustrated in Fig. 3, the shell B⁴ is dispensed with and the nozzle B' is formed with a second cone B⁸ forming with the pipe B³ a mouth for connecting with the offset B⁶, so that the substance is drawn directly into the said pipe B³ around the double nozzle B'.

This device is very simple and durable in construction and automatically draws the disinfectant, insecticide or other substance in measured quantities into the liquid flowing through the pipe, hose, hydrant or other device, to be mixed with the same.

The receptacle E is provided with a filling orifice to charge the receptacle with the desired substances whenever necessary. The cap of the receptacle E may be loosely applied, or perforated, or some other suitable leakage-way may be provided to allow the air and the contents of the receptacle to be drawn therefrom by suction.

Having thus fully described my invention, I claim as new, and desire to secure by Letters Patent—

An apparatus for mixing disinfectants and other substances with a liquid, comprising a pipe to supply liquid under pressure, an ejector connected with the said pipe, another pipe

arranged to surround the nozzle of the ejector, a receptacle adapted to contain the substance to be admixed to the liquid, a pipe connecting the said receptacle with the space intervening
5 between the ejector nozzle and its surrounding pipe, a valve held to slide longitudinally in the connecting pipe, an adjustable stop screwing into the said pipe and projecting adjacent to the valve to limit the movement
10 thereof and regulate the amount of substance

passing from the receptacle to the liquid flowing through the ejector, a pointer connected with the said stop, and a dial on which said pointer indicates, substantially as and for the purpose set forth.

BENJAMIN C. GRAVES.

Witnesses:

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