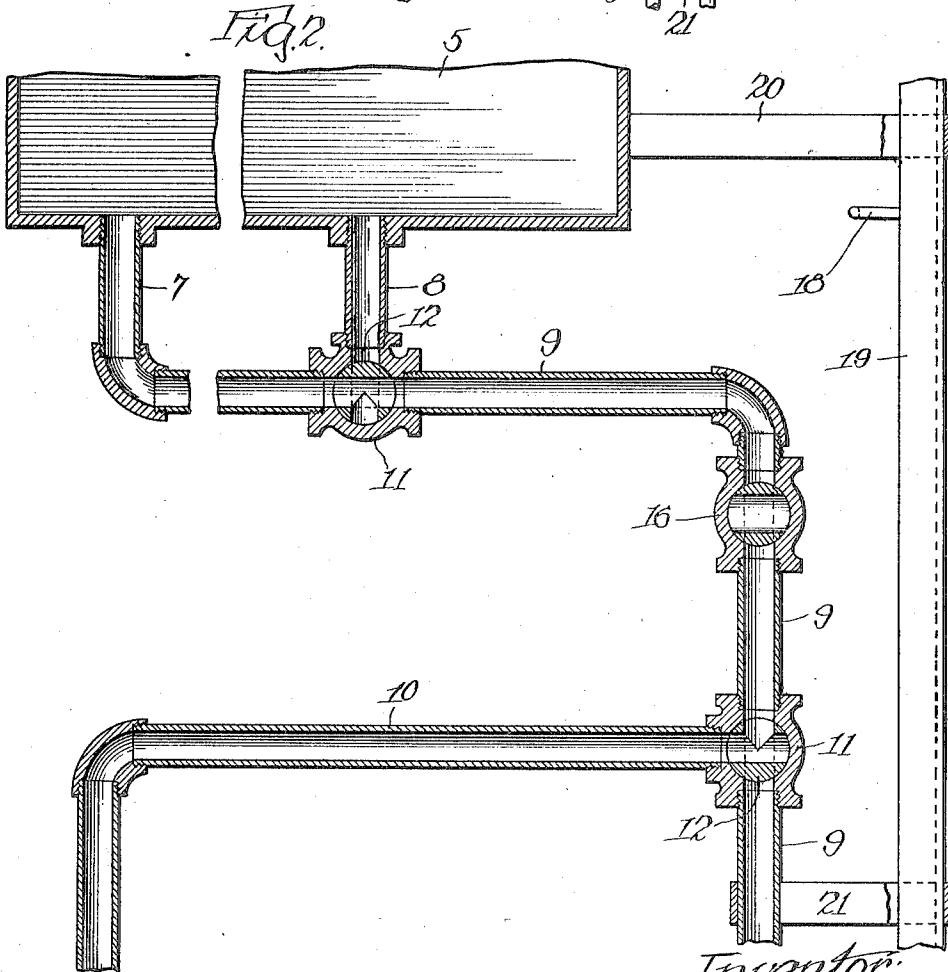
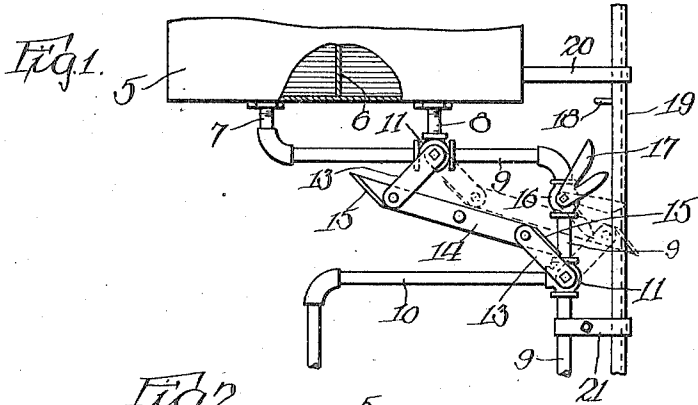


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 VALVE CONTROLLING MECHANISM FOR FLUIDS.
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VALVE-CONTROLLING MECHANISM FOR FLUIDS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY W. LAUN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Valve-Controlling Mechanism for Fluids, of which the following is a specification.

This invention relates to improvements in means for controlling the flow of fluids, such as air, gas or water, but particularly the latter, from a suitable source, container or containers through a plurality of pipes leading therefrom, to be discharged in separate volumes and alternately, and when desired, into separate receiving receptacles therefor, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide valve controlling means for fluid supply, of the above described general character, which shall be simple and inexpensive in construction, strong, durable and efficient in operation, with its parts so made and arranged that the controlling valves will be arranged in pairs and so connected that when one of said valves is opened to permit fluid to pass through the pipe in which it is located the other valve of said pair will be automatically closed to shut off the flow of fluid through the pipe in which it is located, or vice versa. Another object is to provide means for controlling the flow of fluid through the mechanism in such a way that it may be automatically shut off or turned on. Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In the accompanying drawing which serves to illustrate an embodiment of the invention—

Figure 1 is an elevation of the improved three-way valve controlling mechanism for fluid supply.

Fig. 2 is an enlarged central section of the same parallel to the plane of Fig. 1.

Like numerals of reference refer to corresponding parts throughout the different views of the drawing.

The reference numeral 5 designates a supply tank or receptacle, which may be mounted in any suitable manner and by preference is divided into two compartments by means

of a partition 6 which is vertically and centrally located within said receptacle. Leading from the bottom of the receptacle are a pair of branch pipes 7 and 8 which are suitably connected at their lower ends to another pipe 9 which has connected thereto a branch or discharge pipe 10, which like the pipe 9 may lead to any suitable point or receptacle where it may be desired to discharge or deliver the fluid, such as water, air or gas from the supply tank or vessel 5 or other suitable source to which the pipes 7 and 8 are communicatively connected. The pipes 8 and 9 are provided at their juncture with each other with a valve casing 11 in which is located a three-way valve 12, which valve has on its stem a laterally projected arm 13 as is clearly shown in Fig. 1 of the drawing. At the juncture of the pipe 10 with the pipe 9 another valve casing 11 and a three-way valve 12 is employed and said valve stem also has a laterally projected arm 13 which has pivotally connected thereto one end of a bar 14 the other end of which bar is pivotally connected to the arm 13 on the first mentioned valve. By reference to Fig. 1 of the drawing, it will be seen that the ends of the bar 14 are angular and inclined in the same direction or in parallelism with one another. It will also be observed in said figure, that each end of the bar 14 is provided on its surface adjacent to the arms 13 with a flange 15, which flanges will alternately rest against the arms 13 and thus provide means for preventing the valves 12 being turned too far. Located in the pipe 9 between the valve casings 11 is a shut off valve 16 which has on its stem a forked arm 17 extended into the path of a trip pin or projection 18 on a bar or rod 19 which is slidably mounted on brackets or guide pieces 20 and 21, one of which may be secured to the vessel 5 and the other to the pipe 9 as shown in the drawing. The bar or rod 19 may be attached to a movable part so that in the movement of said part, said rod will be slid upwardly or downwardly, in which operation it is evident that the pin 18 will engage the forked arm 17 of the valve 16, so that in the downward movement of the bar 19 the valve will be opened, or so that in the upward movement of the bar 19 said valve will be closed.

The operation of the mechanism is simple and as follows:

Assuming that the tank or vessel 5 is sup-

plied with water and that it is desired to discharge water from the same through the pipes 9 and 10, the arm 17 of the shut off valve 16 should be turned to the position indicated by dotted lines in Fig. 1 of the drawing, and the pair of valves 12 should be located as shown in continuous lines in Figs. 1 and 2 of the drawing, when it is obvious that water will flow through the pipe 7 from the tank 5, or from that compartment thereof, with which the pipe 7 communicates and will pass through the valve 12 into the pipe 9 and from thence through the valve 12 at the juncture of the pipes 9 and 10 and into the pipe 10 from which it may be discharged into a suitable receptacle (not shown) or at a suitable point. If it is desired to discharge water or fluid from the receptacle 5 through the pipes 8 and 9, it is only necessary to shift the position of the valves 12 and their arms 13 from that shown by continuous lines to that shown by dotted lines in Fig. 1 of the drawing, when it is evident that the valve 12 at the juncture of the pipes 8 and 9 will be turned so as to open said valve to the pipe 8 and close it against fluid from pipe 7, while the valve 12 at the juncture of the pipes 9 and 10 will be turned so as to close the pipe 10 but allow free passage of the fluid through the pipe 9 to a suitable receptacle (not shown) or to a suitable point of discharge. It will be understood that in the above operations the shut off valve 16 is opened but if it should be desired to shut off the flow of fluid through the pipes 9 and 10 the shut off valve 16 can be turned to the position shown in Figs. 1 and 2 of the drawing.

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

1. In a three-way valve controlling mechanism for fluid supply, the combination with a reservoir, of a pair of pipes leading therefrom, another pipe communicating with the first named pipes and having a branch pipe, a three-way valve located at the juncture of one of the first named pipes with the second named pipe, a three-way

valve located at the juncture of said pipe with the branch pipe, and a connection between said three-way valves whereby one valve is opened as the other is closed.

2. In a three-way valve controlling mechanism for fluid supply, the combination with a reservoir, of a pair of pipes leading therefrom, another pipe communicating with the first named pipes and having a branch pipe, a three-way valve located at the juncture of one of the first named pipes with the second named pipe, a three-way valve located at the juncture of said pipe with the branch pipe, a connection between said three-way valves whereby one valve is opened as the other is closed, and a shut off valve located in the second named pipe between the three-way valves.

3. In a three-way valve controlling mechanism for fluid supply, the combination with a vessel divided into two compartments, a pipe extending from each of said compartments, another pipe communicating with the first named pipes and having a branch pipe, a three-way valve located at the juncture of one of the first named pipes with the second named pipe, a three-way valve located at the juncture of said pipe with the branch pipe, and a connection between said three-way valves whereby one valve is opened as the other is closed.

4. A three-way valve controlled mechanism for fluid supply, consisting of a system of pipes having communication with a source of fluid and leading therefrom to suitable points, a pair of three-way valves located in said pipes, each of said valves having an arm on its stem, a bar pivotally connected to the ends of said arms and having at each of its ends a flange projected from its surface adjacent to said arms, the said flanges being located in parallelism with one another so as to engage the arms alternately to restrict their movements in one direction.

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