(No Model.)

J. J. RAY.

Apparatus for Watering Stock.

No. 235,701. Patented Dec. 21, 1880.

Fig. 1.

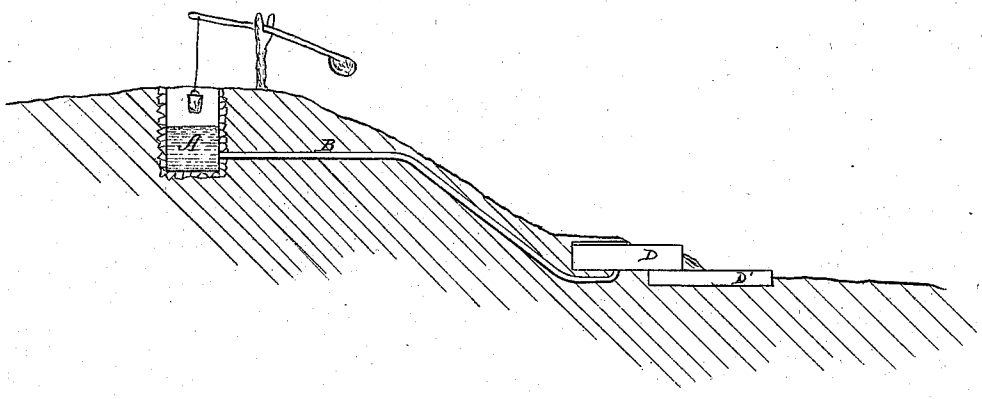
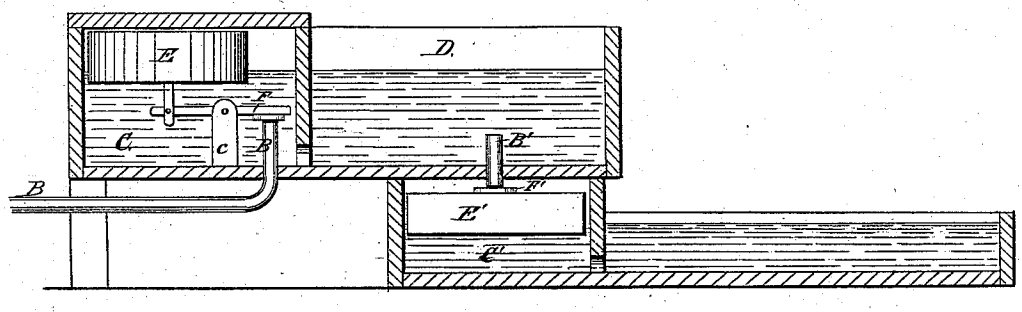


Fig. 2.



WITNESSES:

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JAMES J. RAY, OF HUNTSVILLE, MISSOURI.

APPARATUS FOR WATERING STOCK.

SPECIFICATION forming part of Letters Patent No. 235,701, dated December 21, 1880.

Application filed September 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES JASPER RAY, of Huntsville, in the county of Randolph and State of Missouri, have invented a new and Improved Apparatus for Watering Stock; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improved apparatus for supplying a water trough or receiver with a certain quantity of water, ready for use at certain intervals, from a reservoir, either natural or artificial, that has but a limited supply of water.

The object of my invention is to provide automatic means whereby the trough or receiver can be filled but will not overflow, so that all of the water that comes from the reservoir may be used and not wasted; and the improvement consists in connecting a well, reservoir, or natural fountain, by closed pipes, with a series of receivers arranged at a lower level, into which the water will flow from the pipes and from one to the other, and in arranging within a closed valve-compartment of each receiver a float-valve that will operate to shut off the water when the receiver shall have filled to a certain level, and thereby prevent its overflow, the water of the first receiver then passing through a valve-compartment into a receiver arranged at a lower level than the first receiver, and protected from overflow by a similar float-valve, as will be hereinafter more fully described.

The accompanying drawing represents two longitudinal vertical sectional views through my improved apparatus.

The reservoir A may be an artificial cistern or tank, into which the water will flow from any natural source by gravitation; or it may be a well or fountain, from which a limited flow may be obtained by connecting a pipe, B, with it that leads to a lower level. The other end of the pipe is connected with the valve-chamber C, forming a part of a receiver, D, arranged at any desired point below the elevation of the reservoir.

A float, E, is hinged to a post, *c*, in the chamber C, and is secured to a valve-plate, F, arranged horizontally immediately above the end of the pipe B, and faced with suitable material to completely close the end of the pipe when the float is raised. Free communication is always provided between the valve-chamber and the receiver, and the float is so arranged that when the receiver is filled to a suitable height the float will rise and close the valve, and thereby prevent the overflow of the receiver.

A pipe, B′, connects the bottom of the receiver with the valve-chamber C′ of a receiver, D′, arranged at a lower level than the receiver D, and a float, E′, fits snugly in the valve-chamber C′, and is provided with a valve, F′, upon its upper face, that closes the lower end of the pipe B′ when the float is raised to the top of the chamber or receiver by the pressure of the water when it shall have reached the desired level in receiver D′. By this means the water will flow by gravitation first from the reservoir A, through the pipe B, valve-chamber C, receiver D, pipe B′, and valve-chamber C′ to the receiver D′, and will continue to flow until the receiver D′ is filled to the required level. The float E will then be lifted, so that the valve F′ will cover the lower end of the pipe B′ and prevent the further flow of the water into the receiver D′. The water will then continue to flow into the receiver D until it is filled to the proper height, and when the float E will be raised and the valve F closed upon the supply-pipe to prevent the further flow of water from the reservoir. As the water is taken from the receivers the valves will open until they are again filled to their proper levels, and so continue as long as there is water in the reservoir.

The receivers D will form a drinking-trough for horses, cows, and larger animals, and the lower receiver, D′, will form a similar trough for small stock, such as hogs, sheep, &c. It is desirable to have separate troughs for the large and small stock, as hogs and such animals muddy and dirty the water so that the larger animals will not drink it.

The pipes, cistern, receivers, and valve-chambers may be embedded in manure to keep them from freezing.

When it is desired to tap a natural spring or fountain to connect it with my apparatus a pipe or series of pipes, connected together and provided with a pointed wooden plug in its end that may be driven into the bank until it

connects with the open chamber of the spring or fountain, may be used. A packed piston or plug may be inserted in the other end of the pipe, and driven with such force as to compress the air until it drives the wooden plug from the other end of the pipe, and the said plug will then rise to the surface.

What I claim as new is—

In an apparatus for watering stock, the combination of the reservoir A, pipes B, valve-chamber C, reservoir D, and valve-float E, with a reservoir, D′, valve-chamber C′, and float-valve E′, arranged at a lower level than the reservoir D, so that separate troughs, automatically supplied, may be provided for different kinds of stock, substantially as described.

J. J. RAY.

Witnesses:

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