2 Sheets—Sheet 1.

J. S. CAMPBELL.

Device for Watering Stock.

No. 221,031. Patented Oct. 28, 1879.

Fig. 1.

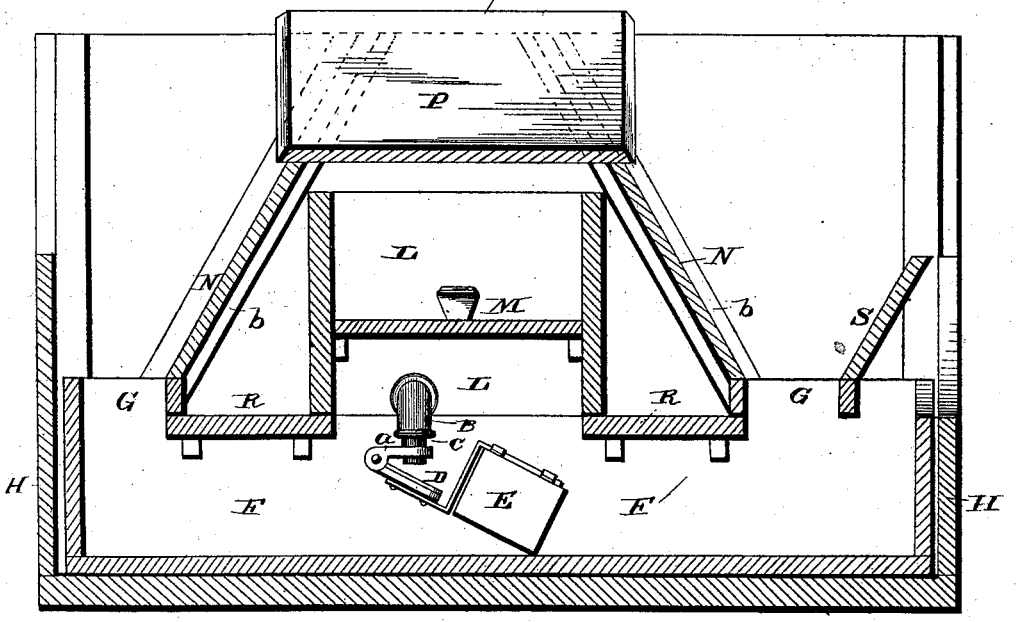
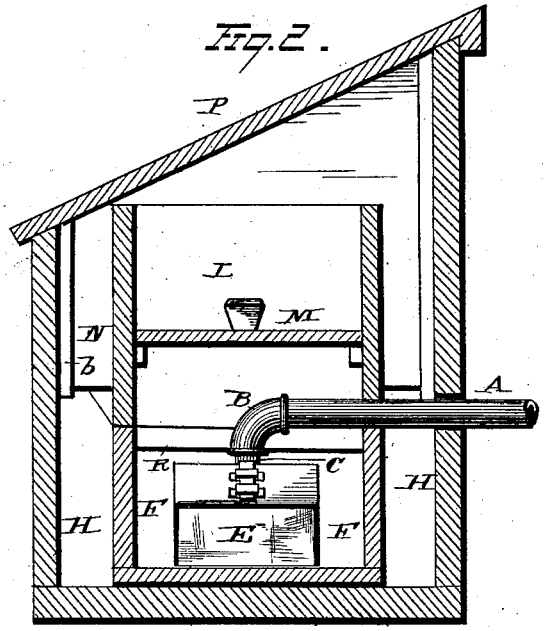


Fig. 2.



WITNESSES

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2 Sheets—Sheet 2.

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Fig. 3

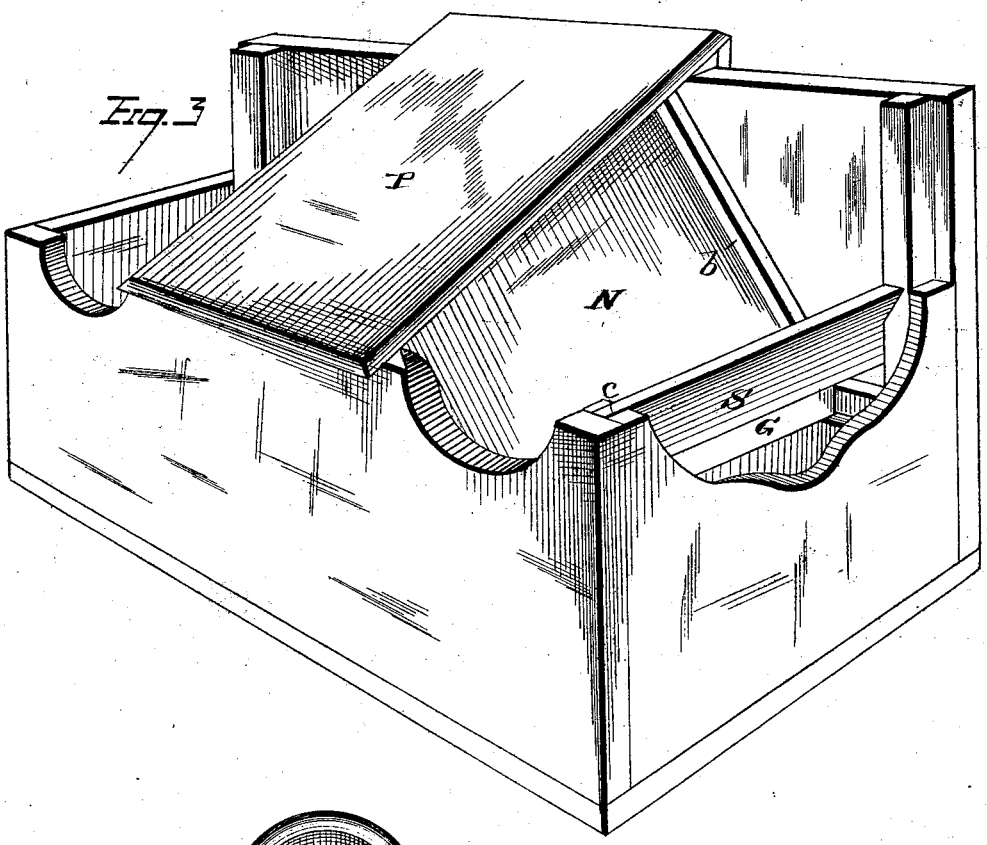
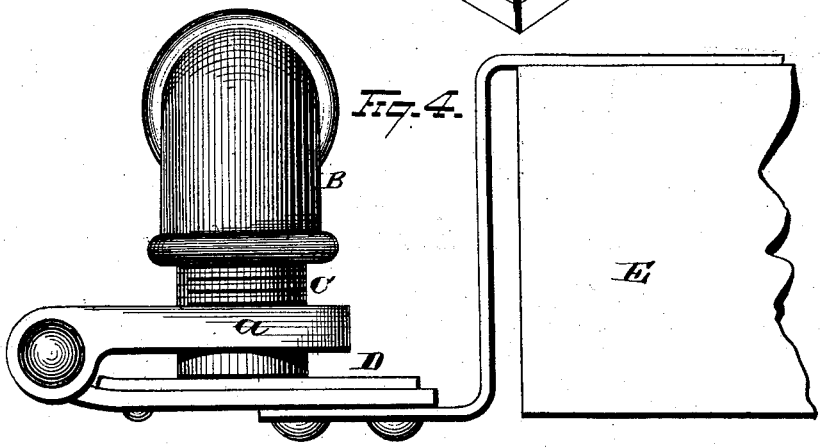


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN S. CAMPBELL, OF CLAYTON, ILLINOIS.

IMPROVEMENT IN DEVICES FOR WATERING STOCK.

Specification forming part of Letters Patent No. **221,031**, dated October 28, 1879; application filed September 3, 1879.

To all whom it may concern:

Be it known that I, JOHN S. CAMPBELL, of Clayton, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Devices for Watering Stock; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to a device for watering stock, and is intended to combine simplicity and economy of construction with durability and efficiency in accomplishing the general purpose required of devices of this class.

Heretofore there has been no means provided whereby automatic valve mechanism can be vertically adjusted as a whole, so as to cause its operation to be performed in a higher or lower plane, and thereby permit the height of water in the drinking-trough to be varied, as desired, by vertically adjusting the point at which the automatic valve mechanism shall close the water-feed opening.

The invention consists, first, of mechanism adapted to raise and lower both the valve-seat and the automatic valve mechanism connected thereto, so that the water in the trough may be correspondingly increased or decreased in depth.

The invention consists, secondly, of the structural means employed to protect said valve mechanism, so that the latter may be duly guarded against extremes of temperature, and also be readily accessible, so as to permit of the desired adjustment.

Referring to the drawings, Figure 1 is a longitudinal sectional view. Fig. 2 is a central transverse sectional view. Fig. 3 is a view showing the means to separate large and small stock while using the same drinking-cap. Fig. 4 is a detail view of the valve mechanism, part in section.

The water-feed pipe A communicates with a pond or other body of water, and its discharge end is connected with the tubular elbow-coupling B, the opposite extremity of which latter connects with the downwardly-projecting nipple C. Arms *a* extend laterally from the nipple, and to them is hinged the valve D. The free end of the valve is provided with the float E, connected therewith, and adapted to automatically open or close the feed-opening of the nipple, according as the water lowers or rises in the trough F.

The elbow-coupling is engaged, respectively, with the feed-pipe and the discharge-nipple by screw-thread engagement. To adjust the valve the elbow-coupling is turned slightly on the feed-pipe, and the point of the valve is thrown up or down a material distance. For instance, in use of a right-hand valve, by turning the elbow on the feed-pipe an eighth of an inch the point of the valve is thrown down probably a distance of two inches, and hence the normal height of the water in the trough will be lowered two inches. Under the same premises, if the elbow is turned to the left on the feed-pipe the point of the valve with the attached float will be raised two inches, and the normal height of water in the trough will be elevated the same distance. The normal height of water in the trough is thereby regulated and made greater or less, as desired.

The trough may be provided with one or more drinking-caps, G, fitted on the top edge of the trough, and of sufficient height to permit packing to be interposed between the trough and the sides of the curb H, to extend above the horizontal line of the highest level of water in said trough. Seated upon the trough and over the valve mechanism is the chamber L, having an open bottom and top. Within the chamber is a removable cover, M, for the valve mechanism, said cover being supported therein at a point such as will permit packing in any suitable quantity to be placed on said cover and within said chamber.

Partition-inclines N extend transversely across the curb and inclose said chamber L. They extend laterally outward and downward in opposite directions, and are readily removable from the curb by sliding movement in grooved ways *b*, secured to the inner sides of said curb.

A cover, P, is placed over said inclines, and incloses the space occupied by the valve mechanism and the chamber L, which immediately guards the latter.

Horizontal partitions R are fitted in the top

of the trough, and extend from the inner end of each drinking-cap to the chamber L. Said horizontal partitions R prevent air from entering beneath the bottom of the chamber L at its end between said chamber and the surface of the water in the trough.

As previously indicated, packing of any suitable character may be placed between the trough and the inner walls of the curb, and also within the inclosure formed by the partition-inclines N. The chamber L is inclosed by said packing of sawdust or other substance, and the valve mechanism is thereby protected against all extremes of temperature.

The packing outside of the inclosure formed by inclines N extends above the top of the trough, and the drinking-caps maintain said packing in place.

The removable covers M and P permit access to the valve mechanism for purposes of adjustment, the packing which is placed within the chamber L upon cover M being readily removable for such purpose.

If desired, one or more of the drinking-caps may be adapted to be divided into drinking-compartments, respectively, for large and small stock.

The vertically-inclined partition S extends transversely across the curb above a drinking-cap, and divides the latter into an inner and an outer compartment.

The curb end is cut away, so as to permit small stock, such as hogs, to drink from the outer compartment, while horses or cattle can drink at the curb side from the inner compartment. This partition is removable, and has sliding movement in a grooved way, *c*.

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

1. In a device for watering stock, the combination, with a feed-pipe and an elbow-coupling having screw-threaded engagement therewith, of valve mechanism and a float to automatically control the latter, said parts being adapted to operate substantially as described, whereby the rotary movement of the elbow-coupling on the feed-pipe vertically adjusts the normal position of the float in the water, substantially as set forth.

2. In a device for watering stock, the combination, with a trough and automatic valve mechanism, of a chamber having an open bottom, and seated on the trough above said valve mechanism, together with a cover, which is fitted within said chamber, so that packing may be filled in the latter above said cover, substantially as set forth.

3. In a device for watering stock, the combination, with a curb and a trough located therein, of two transverse partition-inclines, which extend laterally outward and downward in opposite directions and slide in grooved ways on the interior sides of the curb, together with a cover, which fits over said inclines and incloses the space occupied by the valve mechanism and its covering-chamber, substantially as set forth.

4. In a device for watering stock, the combination, with a trough having a drinking-cap fitted on its top, of valve-feed mechanism and an open-bottom chamber located over the latter, together with a horizontal partition fitted in the top of the trough between said drinking-cap and chamber, whereby air is prevented from entering the bottom of the latter, substantially as set forth.

5. In a device for watering stock, the combination, with a drinking-cap fitted on the trough, of a removable partition extending across the curb above said cap and dividing the latter into two compartments, one at the curb end for small stock and one at the curb side for large stock, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of August, 1879.

JOHN S. CAMPBELL.

Witnesses:
Q. BURGESSER,
FRANK W. BURGESSER.