(No Model.)

W. KOUNS.

WATER TUBE.

No. 351,781. Patented Nov. 2, 1886.

Fig. 1

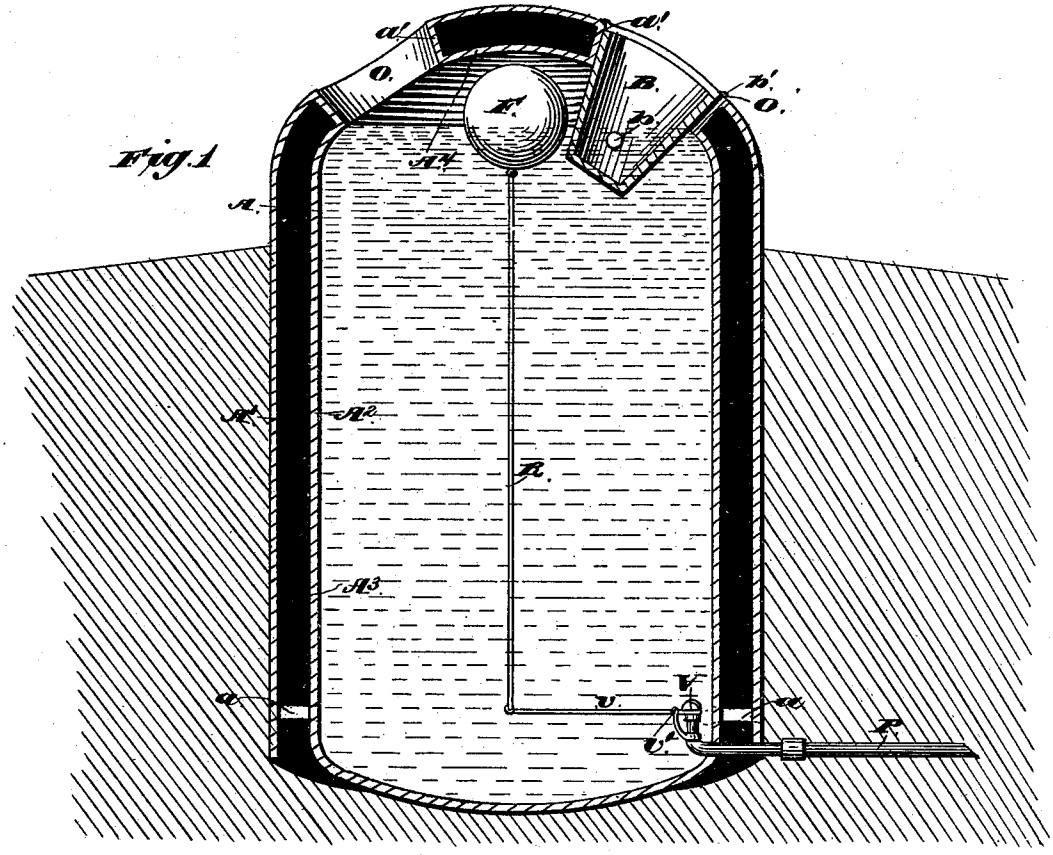


Fig. 2.

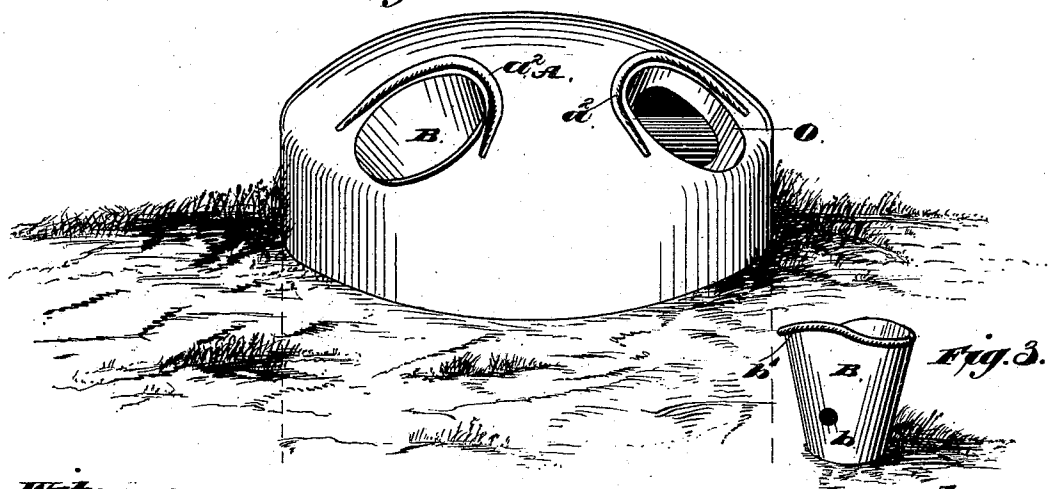


Fig. 3.

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WESLEY KOUNS, OF SOLOMON CITY, KANSAS.

WATER-TUBE.

SPECIFICATION forming part of Letters Patent No. 351,781, dated November 2, 1886.

Application filed June 26, 1886. Serial No. 206,343. (No model.)

To all whom it may concern:

Be it known that I, WESLEY KOUNS, a citizen of the United States, residing at Solomon City, in the county of Saline and State of Kansas, have invented certain new and useful Improvements in Water-Tubes; 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 appertains to make and use the same.

My invention relates to water-tubes; and it consists in the construction and arrangement of the parts, which will be more fully hereinafter described, and pointed out in the claims.

One object of my invention is to provide a water-tube which is automatically fed with water from a suitable source and having a suitable drinking attachment, whereby accessible means are obtained for watering live-stock.

A further object of my invention is to provide the tube with an encircling air-jacket, whereby the water is prevented from freezing in cold weather and kept cooler and more nourishing in warmer weather.

A still further object of my invention is to construct the parts of the device in a simple and efficient manner, and at the same time rendering it convenient, easily handled and operated, and readily placed in an operative position.

I attain these objects by the mechanism illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a longitudinal vertical section of my improved water-tube, illustrated as arranged in an operative position. Fig. 2 is a perspective view of the device as it appears from the surface of the ground. Fig. 3 is a detail perspective view of one of the buckets.

A indicates the casing of the tube, which is constructed with two walls, A′ and A^2. The wall A′ covers the inner wall, A^2, an air-space, A^3, being left between the said outer and inner walls. The wall A′ extends downward to near the bottom of the tube entire, being open and free from connection with any portion of the interior wall, A^2, except by means of the supporting tie-bolts *a a*, which may be placed at such intervals as are necessary. The inner wall, A^2, is formed with a dome-shaped top, A^4, and bottom A^5, constructed of one piece of metal or of several pieces bolted together, thereby rendering it water-tight. The outer wall, A′, entirely covers the inner wall, A^2, forming an air-space between said walls at all points.

Through the upper or dome portion of the tube a series of openings, O, are formed, the walls of the shell being constructed to close in around these openings *a′ a′*, and thereby maintain the air-chamber. In the openings O are removable buckets B, whose upper edges correspond in contour to the form of the outer surface of the dome. The lower portion of the buckets B is provided with apertures *b b* for the ingress of water into the said buckets. The holes or openings O are formed in the walls on an incline, so that when the buckets B are inserted therein they will also be in an inclined position, being held from slipping into the interior of the tube by flanges *b′*, formed on the top rim of each bucket, thereby more readily conforming to the contour of the said outer surface of the top or dome, and more accessible for drinking therefrom.

Through the lower portion of the walls A′ and A^2 a pipe, P, enters, passing into the lower internal part or reservoir of the tube. This pipe P connects with any suitable water-supply, said pipe being situated below the frost-line, and has a short elbow formed on its inner end, in which is seated a check-valve, V. This check-valve V has a suitable operating-lever, *v*, pivotally fulcrumed at the point *v′*, and connected to the said valve proper. The other end of this lever *v* has an eye formed therein, to which is connected a vertical rod, R, which extends upward through the central portion of the tube and connects with a float, F, of any desired form, but, as shown, preferably spherical. The outer surface of the dome is also provided with suitable guards, a^2 a^2, to prevent any dirt or other substance which may collect on the top of the dome from being washed into the buckets B, thereby keeping the water in the tank clear and free from external substances.

In setting up the tube in operative position

a hole or cavity is dug in the earth and the tube placed therein, a portion thereof extending above the surface of the ground, as shown in Fig. 2, and then filled in around the outside wall, so as to place it in a suitable stable position. The water-pipe P may be arranged in the most convenient and desirable position and by the best-known means. A portion of the said pipe P may be secured to the tube and joined to the portion thereof which is connected to the supply-source by means of a suitable form of union. The water having been allowed to flow into the reservoir formed in the interior of the tube, the float F assumes the position shown in Fig. 1 in consequence of its buoyancy. The said float is so regulated that when the water reaches a level slightly below the lowermost portions of the openings O, it will close the valve V through the medium of the rod R and the lever *v*, which parts form the connections between the said float and valve. The buckets B are made of such depth as to extend below a predetermined level, as heretofore described, and consequently the water flows through the apertures *b* in the said buckets B and assumes the same level as in the tube itself by a well-known law of physics. When the water in the reservoir is lowered by the animals drinking from the buckets B, the float F is lowered, and the rod R will be depressed, the lever *v* lowered on an incline, and the valve V opened, and a new supply of water allowed to be fed to the reservoir until the predetermined level is reached, when the said parts will assume the position shown in Fig. 1 and the valve V be closed. This operation continues as often as it is necessary to keep the water at the proper level, which is desirable at all times. By this arrangement the water is constantly kept fresh and stagnation prevented. The holes *b* are arranged some distance above the bottoms of the buckets B, and any dirt or other substance which may be deposited therein sinks to the bottom of the said buckets and does not pass into the reservoir containing the water. Said buckets, being removable, are readily withdrawn from the openings O and cleaned, and the water thereby kept in a condition productive of the health of the animals.

The parts of the device can be constructed of metal of such thickness and quality suitable to the desired use.

The chamber, A^3, formed between the two walls of the tube is supplied with air from below, said air being allowed to circulate around and between the said walls, thereby preventing the water from freezing in cold weather, and in warmer weather keeping the water at a nourishing temperature.

It is obvious that many minor details in the construction and arrangement of the parts could be made and substituted for those shown and described without in the least departing from the nature and principle of my invention.

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

1. In a water-tube, the combination of the inner and outer walls having an air-compartment formed between them, a suitable automatically-operated water-supply, and removable drinking-buckets situated in openings in the top portion of the tube, substantially as described.

2. In a water-tube, the combination of the inner and outer walls having an air-compartment formed between them, the said outer wall extending downward to near the bottom of the inner wall and forming an opening for the passage of air, a suitable automatically-operated water-supply, and removable drinking-buckets having feed-apertures situated in openings in the top portion of the tube, substantially as described.

3. In a water-tube, an inner and outer wall, said inner wall being constructed as a closed compartment, and forming a reservoir having a dome-shaped top and bottom, the outer wall connected to the inner wall and open at its lower portion, and circular walls forming the openings for the reception of the buckets connecting the inner and outer walls, said walls having a space left between them for the circulation of air, substantially as described.

4. In a water-tube, the combination of the internal and external walls having an air-space formed between them, an automatically-operated water-supply adapted to feed water to the reservoir formed by the internal wall, removable drinking-buckets having apertures arranged at suitable distances above the bottoms thereof, and guards on the exterior surface of the dome adjacent to the flanges of the buckets, substantially as described.

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

WESLEY KOUNS.

Witnesses:
F. C. MILLER,
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