

N. M. CHANDLER.
SIPHON.
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Fig. 1.

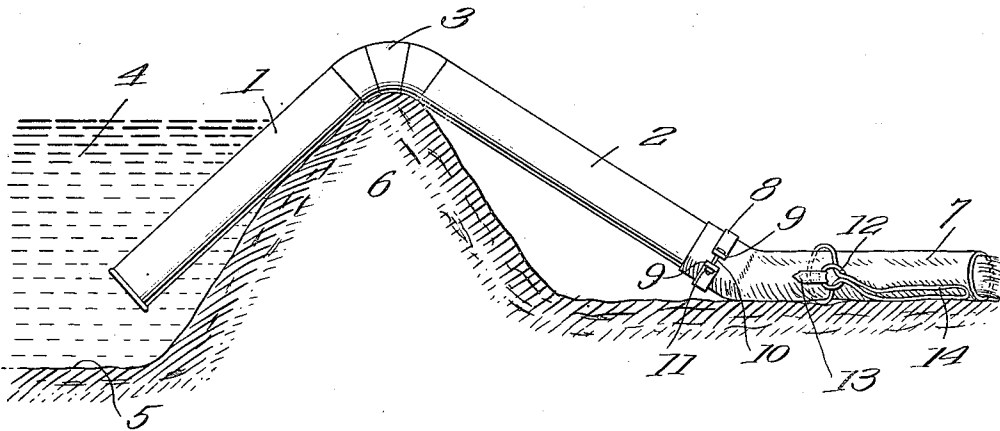
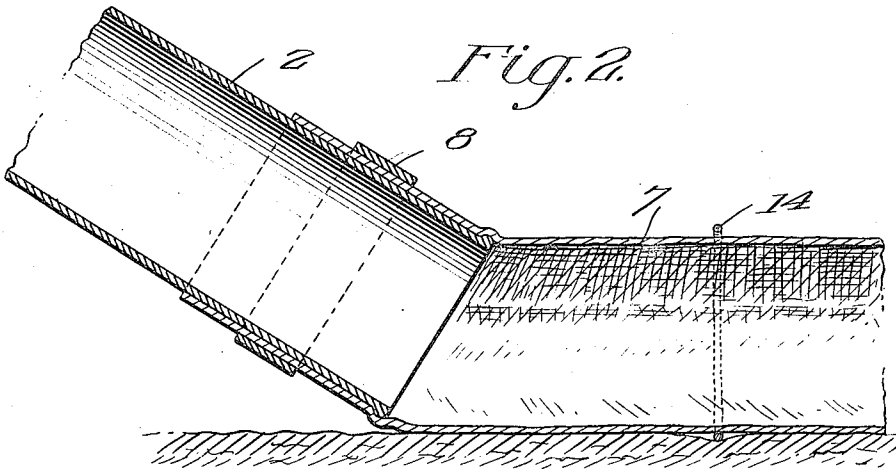
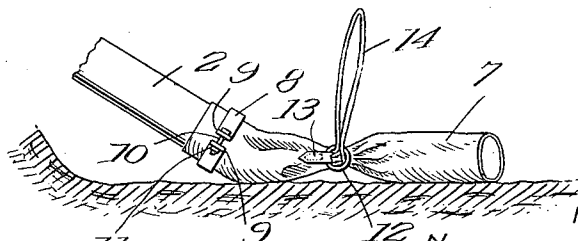


Fig. 2.



WITNESSES:

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Fig. 3.

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SIPHON.

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To all whom it may concern:

Be it known that I, NATHANIEL M. CHANDLER, a citizen of the United States, and a resident of Woodland, in the county of Yolo and State of California, have made certain new and useful Improvements in Siphons, of which the following is a specification.

My invention is an improvement in a siphon and has for its object to provide a device of the character specified, especially designed for use with siphons used in transferring liquids from one place to another, as for instance in the transfer of water from irrigating ditches to the fields to be irrigated.

A further object of the invention is to provide means for attachment to the discharge end of the siphon for sealing the said end during the process of removing the siphon from the water.

In the drawings Figure 1 is a side view of a siphon provided with the improved primer and regulator, Fig. 2 is a longitudinal section of a portion of the siphon and the improvement, and Fig. 3 is a partial side view showing the operation of the device.

The present embodiment of the invention is shown in connection with the siphon consisting of a short leg 1 and a long leg 2 connected by an elbow 3. The capacity of the siphon depends upon the cross sectional area of the interior thereof as is known, and as is also known the operation of the siphon is based upon well known physical principles.

In use the short leg of the siphon is inserted in the liquid to be moved, the said liquid being water in the present instance indicated at 4 and held in an irrigating ditch 5. The bank 6 of the ditch is, of course, higher than the water level to restrain the water within the ditch and the siphon, as shown, is arranged with one leg 1, the short leg in the present instance, extending into the water, and with the other leg 2, the long leg in the present instance, outside of the bank. In order that the water will flow through the siphon, it is necessary that the delivery end of the siphon be at a lower level than the level of the liquid being moved. Since the banks 6 of the ditch are elevated it will be obvious that the water level will be above the ground level when

the ditch contains any great amount of water. In order to permit the water to be delivered at any desired point without necessitating the moving of the siphon, a flexible tube 7 is connected with the delivery end of the leg 2 of the siphon.

One end of the tube 7 is fitted over the outer end of the long leg and is held thereto by means of a split ring 8. The ends of the ring have perforated lugs 9 and a bolt 10 is passed through the lugs, and is engaged by a nut 11 to permit the lugs to be drawn together to clamp the ring on the siphon leg. The tube 7 is of any desired length, and somewhat nearer the end engaging the siphon than the other end, a ring 12 is connected to the tube by means of a clip 13 of leather or the like. The leather strip is doubled upon itself and passed through the ring and then secured to the tube by stitching or the like.

An endless loop 14 of flexible material, as for instance cord or rope, is provided and the said loop is passed around the tube 7 and then through the ring 12. By means of the loop the cross sectional area of the tube 7 may be varied to vary the amount of water passing through the siphon, and by drawing the loop tightly around the tube, as shown in Fig. 3, the bore of the tube may be occluded to prevent any flow of water whatever.

To prime the siphon, it is immersed in the liquid until it is full. The discharge or long leg 2 is then lifted over the bank 6 by means of the loop 14, the free end of the tube 7 is laid upon the surface where it is desired to discharge the water and the loop is loosened. The amount flowing may be nicely regulated by means of the loop, reducing the cross sectional area of the tube until the desired amount is discharging at the outer end of the tube 7.

Prior to using, the siphon is immersed in the liquid until entirely filled. The operator then grasps the free end of the loop 14 and lifts the discharge leg from the ditch and over the bank in which procedure the tube 7 is closed as the weight falls upon the loop and the water is retained within the siphon and the air excluded, since the receiving end of the leg 1 remains below the surface of the liquid to be moved. The operator then

places the discharge end at the desired point outside of the ditch and as the weight is released from the loop 14, the liquid within the siphon will force the tube 7 open and the siphon action is established.

While the improved siphon is shown in connection with an irrigating ditch, it is obvious that the same principle might be employed for transferring liquids from a barrel to a container, or for any other form of siphon. When used in connection with irrigating ditches, the water may be transferred from the ditch to the field, or from the main ditch to laterals without requiring bulk heads and gates, thereby greatly reducing the expense of irrigation. In addition the water may be transferred from the ditch at any point throughout its length, and tem-

porary ditches will become as efficient as permanent ditches.

I claim:

In combination with a siphon, a flexible collapsible tube having one end fitted around the outer end of the delivery leg of the siphon, a clamp for clamping said end to the siphon leg, a handle comprising a flexible loop encircling the tube, said tube having a ring, and the loop passing through the ring after it encircles the tube to provide a handhold and means for closing the tube during the act of handling by the loop.

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Witnesses:

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