

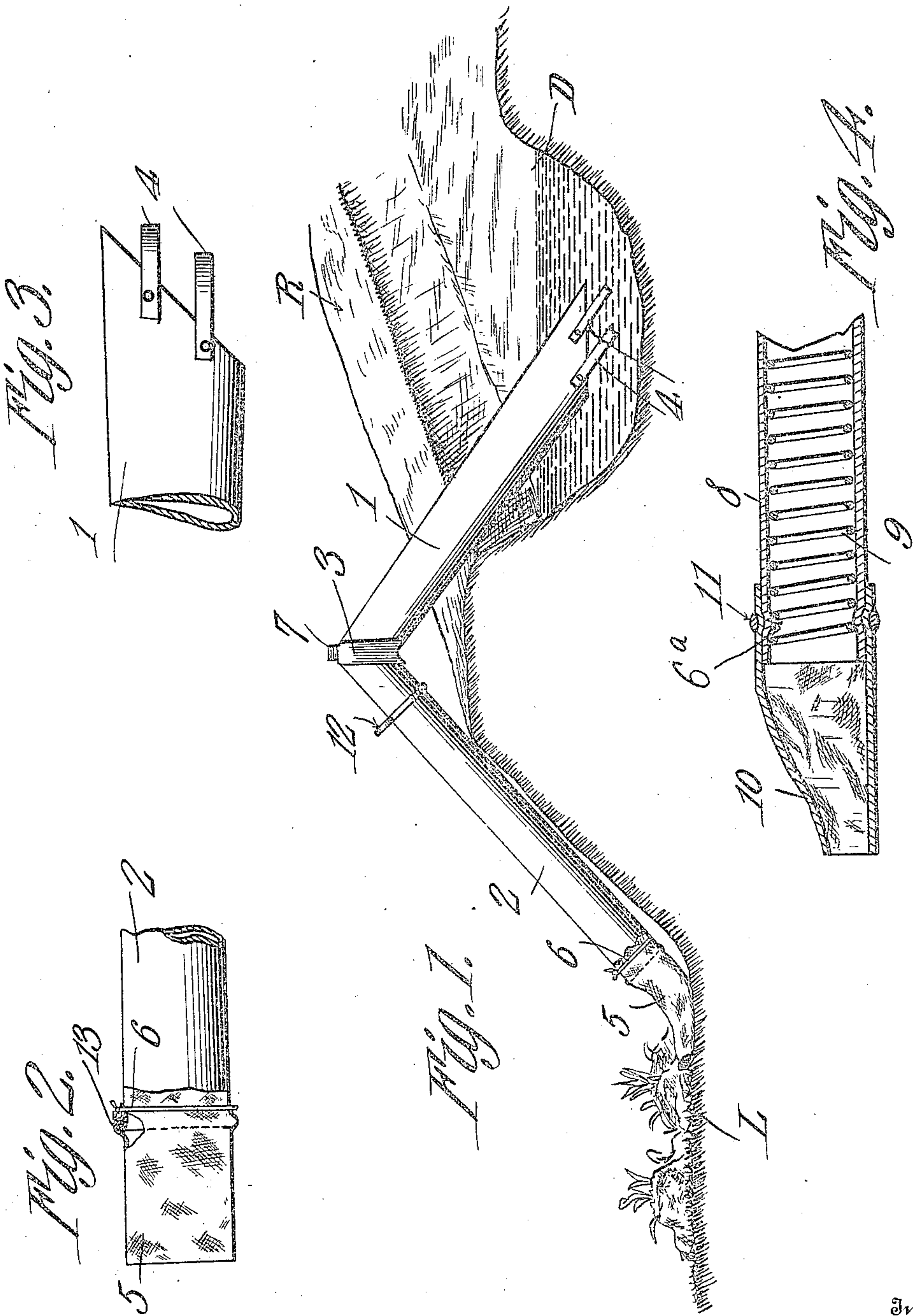
E. C. COOK.

SIPHON.

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962,624.



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SIPHON.

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Specification of Letters Patent. Patented June 28, 1910.

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To all whom it may concern:

Be it known that I, EGBERT C. COOK, a citizen of the United States, residing at Lakewood, in the county of Eddy and Territory of New Mexico, have invented a new and useful Siphon, of which the following is a specification.

This invention relates generally to siphons, and particularly to one adapted for use in irrigating land.

As is well known, in certain sections of the United States artificial irrigation has to be resorted to. This is generally accomplished by digging ditches at intervals in a field, and then cutting outlets through the ditches to lead the water to the land to be irrigated. Of course, the bottoms of the ditches have to be higher than the adjacent land for this purpose. While efficient in securing the results designed, this mode of irrigation is exceedingly expensive and requires the attention of many employees to retain the ditches in condition and to see that the gates employed for closing the outlet cuts are in proper working order. Moreover, as the escaping water cuts away the walls of the outlets, a waste of water results which is a serious matter, and moreover, to remedy the above defect, considerable expense ensues, by reason of the fact that workmen have constantly to be employed in building up or repairing the washed away portions of the outlets.

It is the object of the present invention, in a ready, efficient, thoroughly feasible and practical manner to obviate the above objectionable features, and further materially to reduce the labor incident to artificial irrigation.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a siphon, as will hereinafter be fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in perspective displaying the siphon operatively positioned relatively to a ditch and to the land to be irrigated. Fig. 2 is an enlarged detail sectional view of a portion of the effluent leg. Fig. 3 is a similar view of a portion of the influent leg. Fig. 4 is a longitudinal sec-

tional view through a slightly modified form of siphon.

As shown in Fig. 1, the siphon consists of an influent leg 1 and an effluent leg 2, the two being disposed at an angle of about 40 degrees relatively to each other. These legs will, by preference, be constructed of sheet metal, such as galvanized iron, and will be connected at their meeting point by a band 3, which may be held in position by solder or rivets.

To render the apparatus operative under all conditions of use, it is essential that the inlet end of the influent leg be protected against the entrance of any substance that would tend to clog it. In the present instance two simple expedients are utilized for this purpose, the first of which consists in partially closing the intake mouth by two outwardly bowed metallic semi-bands 4, riveted or otherwise secured to the leg, and the second of which consists in beveling the intake mouth at any desired angle to the length of the leg, both of which features are clearly shown in Fig. 3.

The outlet end of the effluent leg has combined with it a novel means to prevent back-siphoning and also to establish siphonic action in the device. This means consists of a tubular length of fabric 5 which may be of knitted hose or of one or more plies of heavy canvas, and which is held assembled with the effluent leg by a band or wire 6. By preference, the leg 2 will be provided with a circumferential crimp or groove 6^a adjacent to its discharge end to receive the wire, as shown in Fig. 4, thus to insure an air-tight connection between the extension 5 and the effluent leg, and also to secure a stable union between the parts.

In order to check the operation of the siphon without lifting the influent leg out of the water, a suitable air inlet is provided, which may be in the nature of a valve, or, as shown in Fig. 1, it may be an ordinary screw cap 7 which will engage with a nipple provided on the band 3 for the purpose.

In the form of invention shown in Fig. 4, in which only a portion of the effluent leg is displayed, it being understood that the entire length of the siphon will be constructed in the same manner, the effluent leg 8 is constructed of a length of hose, which may be either fabric or rubber, and which is held assembled against collapsing by a

coiled spring 9. The extension or discharge mouth 10 is constructed in the same manner as shown in Fig. 5, and is held in position by a band or wire 11.

5 In order to facilitate handling the device, a handle 12 is provided, which is herein shown as a metallic band, secured to the effluent leg, and provided with a suitable handhold, although if preferred, a strap or
10 loop may be employed, and will be found to secure the object sought.

In order to protect the member 5 from being cut by the discharge end of the effluent leg, the margin of the latter is beaded
15 and wired, as shown at 13 in Fig. 2, the bead being on the exterior of the leg, thus to provide a shoulder to hold the band or wire 6 from becoming detached, and thus dispense with the groove shown in Fig. 4.

20 In the use of the device, the entire siphon is immersed in the water of the ditch so that all the air is expelled, the vent 7 being sealed. The operator then grasps the mouth piece 5 and squeezes it, so as to prevent the
25 escape of water and the entrance of air, and then lifts the effluent leg, care being observed that the inlet end of the influent tube remains submerged. The siphon is then positioned upon the ridge R of the ditch, as shown in
30 Fig. 1, and upon the mouth piece 5 being released, the water will flow on the land L. Should it be desired to check the operation of the siphon without removing it from the ditch, it will only be necessary to loosen the
35 screw cap whereupon air will pass into the interior of the siphon and thus stop its operation. The mouth piece 5 subserves another very important function namely, that of preventing back-siphoning by preclud-
40 ing entrance of air. This result is secured by making the mouth piece wholly of flexible material which, when the siphon is in operative position, will flatten out and thus accomplish the object for which it is de-
45 signed.

The use of the siphon herein described will be found equally as efficient as the old methods heretofore in vogue, and which have

been briefly outlined, and will enable one operator to accomplish more work with less
50 waste of water than has been heretofore possible.

While the siphon has been described as used for irrigation purposes, yet, as will be obvious, it may be employed in any situ-
55 ation where it may be found of practical advantage.

From the foregoing description of the invention it will be understood that the influent end of the leg 1, being cut at an angle,
60 the said leg need not be immersed in the water in the ditch D to any considerable depth as the plane of the said end will be approximately parallel with the water surface in the ditch when the device is in proper
65 position, such for example as shown in Fig. 1 of the drawings. It will further be understood that by providing the semi-bands 4, the said influent end of the leg 1 is prevented from coming itself into contact with the
70 mud at the bottom of the ditch but on the other hand is supported above the bottom and clogging of the leg by the mud in the ditch is in this manner obviated.

I claim—

1. In a siphon of the class described, an influent leg having its intake end cut at an angle, and semi-bands secured at the said
75 end of the leg and extending in advance of its said angularly cut end.

2. In a siphon of the class described, an influent leg having its intake end cut at an angle, and semi-bands secured at the said
80 end of the leg and extending in advance of its said angularly cut end, the said bands being arranged in parallel relation with their bowed extremities terminating in a plane at an angle to the plane occupied by the said
85 angularly cut end of the leg.

In testimony that I claim the foregoing
90 as my own, I have hereto affixed my signature in the presence of two witnesses.

EGBERT C. COOK.

Witnesses:

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