

J. J. PETRIE.
 WATER DISTRIBUTER.
 APPLICATION FILED JAN. 20, 1912.

1,041,509.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 1.

Fig 1

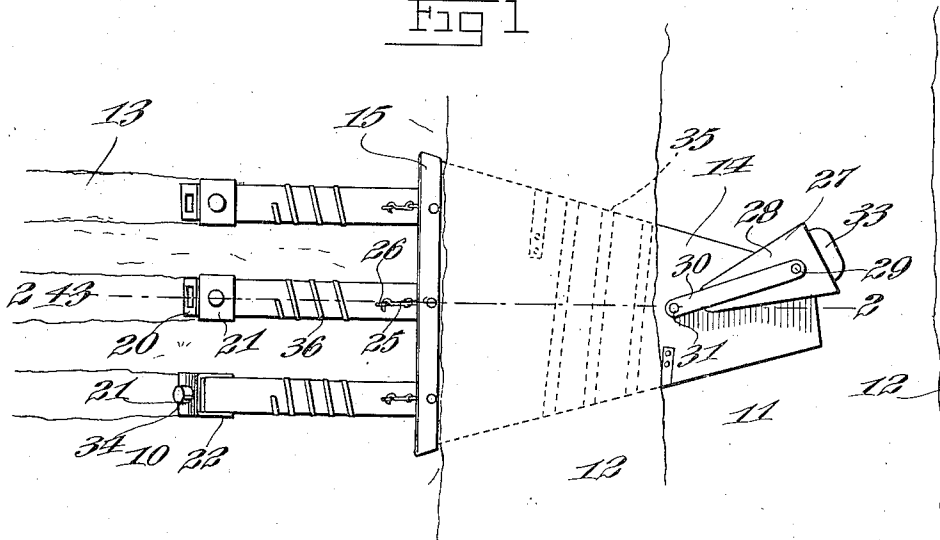
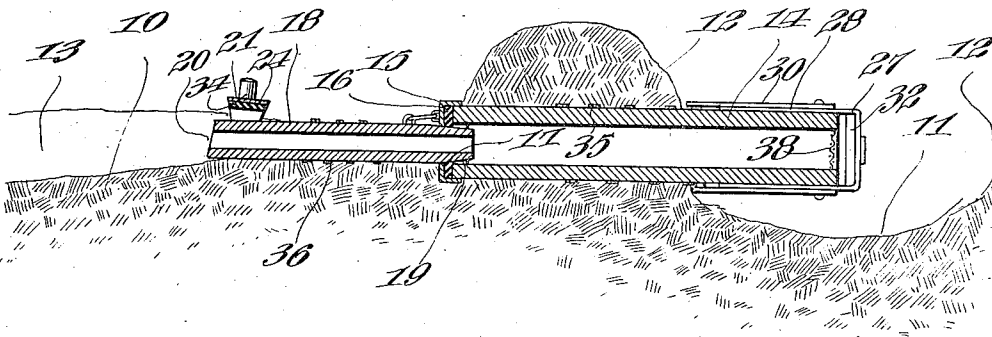


Fig 2



Witnesses

W. N. S. S. S.
H. O. S. S. S.

Inventor

James J. Petrie

Victor J. Evans

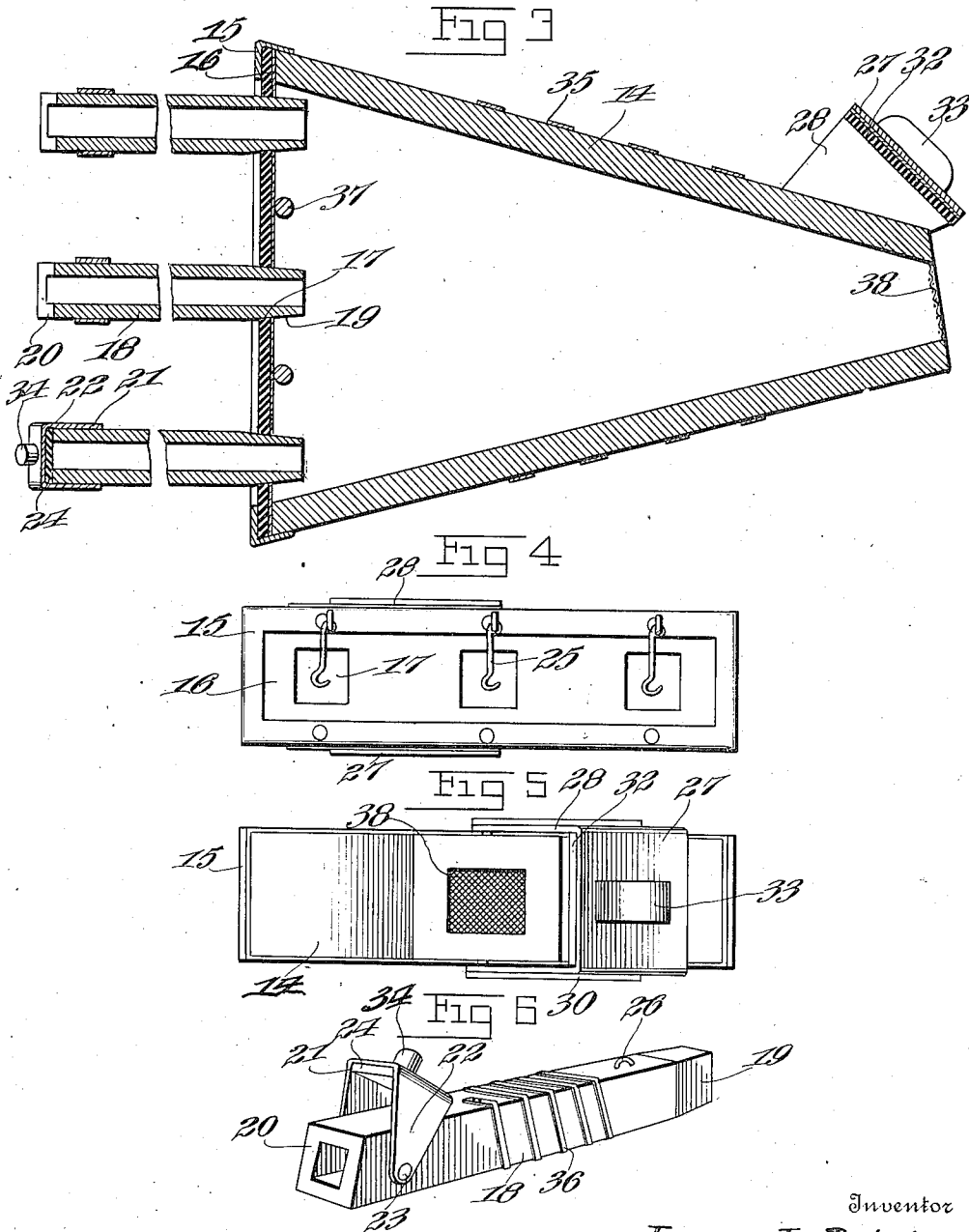
Attorney

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2 SHEETS—SHEET 2.



Witnesses

W. H. S. S. S.
H. O. Parker

Inventor
James J. Petrie

By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

JAMES J. PETRIE, OF PALISADES, COLORADO.

WATER-DISTRIBUTER.

1,041,509.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES J. PETRIE, a citizen of the United States, residing at Palisades, in the county of Mesa and State of Colorado, have invented new and useful Improvements in Water-Distributers, of which the following is a specification.

The invention relates to irrigating devices, and more particularly to the class of water distributers.

The primary object of the invention is the provision of a device of this character in which the flow of water from a head or supply ditch to the irrigating ditches in arable land is regulated, thereby enabling the irrigating ditches to receive the requisite amount of water for moistening the ground adjacent thereto.

Another object of the invention is the provision of a device of this character in which irrigation water may be properly distributed, so as to assure conditioning of the ground for vegetation.

A further object of the invention is the provision of a device of this character in which water from a head or supply ditch may be let into or cut-off from the irrigating ditches, according to the condition of the land to be irrigated.

A still further object of the invention is the provision of a device of this character which is simple in construction, thoroughly reliable and efficient in its purpose, and inexpensive in manufacture.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a fragmentary plan view of the usual supply and irrigating ditches, showing a device constructed in accordance with the invention arranged therein. Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1. Fig. 3 is a horizontal longitudinal sectional view through the device. Fig. 4 is an end elevation, with the branch pipes removed. Fig. 5 is a similar view, looking toward the opposite end. Fig. 6 is a perspective view of one of the branch pipes adapted to deliver water to one of the irrigating ditches.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, 10 designates a portion of land, having a grade thereto, and formed in the highest point of the grade is a head or supply ditch 11, the same having banks 12 at opposite sides thereof, and disposed in the land at right angles to the course of the head or supply ditch is a plurality of irrigating ditches 13, the same being formed in the land spaced apart and in parallel relation, as usual. The irrigating ditches receive a quantity of water from a body, flowing through the head or supply ditch, and the flow of the water is controlled by means of a distributor, presently described.

The water distributor comprises a hollow tapered casing or shell 14, the smaller end thereof forming an intake, while its opposite larger end forms an outlet, the casing or shell being embedded within one bank 12 of the head or supply ditch 11, so that its smaller end will protrude into the body of water therein, while the opposite end of the shell or casing will protrude beyond the bank at the opposite side thereof in the direction of the irrigating ditches. Secured to the larger end of the casing or shell 14 is a clamping frame 15, in which is engaged a resilient end plate 16, preferably constructed from rubber and canvas material, such as hose-covering, and provided with spaced apertures or openings 17, in which are detachably inserted branch distributing elements, presently described.

The branch distributing elements each comprises a coupling pipe 18, provided with a tapered end 19 adapted to be inserted in one of the openings 17 in the plate 16, so as to form a fluid-tight joint therebetween, while the opposite end of the said pipe 18 is beveled, at 20, to permit the closing of the said pipe by means of a cap 21, having its side wings 22 hinged at 23 to opposite sides of the pipe, the cap 21 carrying a resilient packing 24 to permit a close fit of the cap, when closed, so as to prevent leakage from the pipe.

The branch pipes 18 are locked in the plate 16, so as to prevent the possibility of accidental detachment thereof, and this is effected by means of latches 25 connected with the clamping frame 15, and engaged in keeper staples 26 mounted in the pipes 18.

Connected at the smaller end of the casing or shell 14 is a closure gate 27, the same being formed with parallel wings 28 piv-

totally connected, at 29, to swinging arms 30, the same being pivoted, at 31, to the top and bottom walls of the casing or shell 14. The gate 27 is adapted to open in the direction of flow of the water in the head or supply ditch 11, so as to interrupt the water current to deflect it into the smaller end of the said casing or shell. The gate is provided with a resilient washer or band 32, so that when the gate is closed, the water in the head or supply ditch is prevented from entering said casing or shell 14, it being seen that by opening the gate 27 at a different angle with respect to the intake end of the casing or shell, the quantity of water admitted thereto will be varied, as the occasion may require.

The branch pipes 18, when engaged with the casing or shell 14, will aline and communicate with the irrigating furrows or ditches 13, so that water may be delivered thereto from the head or supply ditch, the caps 21 being adjusted to permit the required amount of water to flow into the said irrigating ditches.

The gate 27 is formed with a finger knob 33 to permit the convenient opening and closing thereof, and likewise the caps 21 are provided with finger knobs 34 for the same purpose.

To prevent the bursting of the shell or casing 14, there is provided a reinforcing band 35 which is wrapped about the same and has its ends fixed thereto, and likewise the pipes 18 have coiled about the same reinforcing bands 36, the ends of which are suitably fixed to the said pipes.

Of course, it is to be understood that changes, variations and modifications may be made in the invention, such as come properly within the scope of the appended claims, without departing from the spirit of the invention, or sacrificing any of its advantages.

Located within the casing or shell 14, at the larger end thereof, are vertical posts 37, the same being arranged in juxtaposition to the inner face of the clamping frame 15, so as to prevent the inward bulging thereof, when the coupling pipes 18 are inserted in the openings provided in the resilient end plate 16, and also to materially strengthen the said casing or shell. Also located within the said casing or shell, at the inlet end, is a wire mesh cloth 38 which prevents the accumulation of foreign matter therein, that would cause the clogging of the coupling pipes, as will be obvious.

What is claimed is:

1. In an irrigating device, a tapered body, the smaller end being adapted for communication with a head ditch, a gate pivoted to the smaller end and adapted for opening

and closing the same, a perforated flexible end wall mounted at the larger end of said body, and branch coupling tubes detachably engaging in the perforations in the said end wall and adapted to communicate with irrigating ditches.

2. In an irrigating device, a tapered body, the smaller end being adapted for communication with a head ditch, a gate pivoted to the smaller end and adapted for opening and closing the same, a perforated flexible end wall mounted at the larger end of said body, branch coupling tubes detachably engaging in the perforations in the said end wall and adapted to communicate with irrigating ditches, and means for controlling said branch coupling tubes.

3. In an irrigating device, a tapered body, the smaller end being adapted for communication with a head ditch, a gate pivoted to the smaller end and adapted for opening and closing the same, a perforated flexible end wall mounted at the larger end of said body, branch coupling tubes detachably engaging in the perforations in the said end wall and adapted to communicate with irrigating ditches, and gates pivoted to the free ends of said branch coupling tubes and adapted for opening and closing the same.

4. In an irrigating device, a tapered body, the smaller end being adapted for communication with a head ditch, a gate pivoted to the smaller end and adapted for opening and closing the same, a perforated flexible end wall mounted at the larger end of said body, branch coupling tubes detachably engaging in the perforations in the said end wall and adapted to communicate with irrigating ditches, means for controlling said branch coupling tubes, and means for securing the tubes against displacement with respect to the body.

5. In an irrigating device, a tapered body, the smaller end being adapted for communication with a head ditch, a gate pivoted to the smaller end and adapted for opening and closing the same, a perforated flexible end wall mounted at the larger end of said body, branch coupling tubes detachably engaging in the perforations in the said end wall and adapted to communicate with irrigating ditches, means for controlling said branch coupling tubes, means for securing the tubes against displacement with respect to the body, and means for reinforcing the body and said tubes.

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

JAMES J. PETRIE.

Witnesses:

G. M. HAND,
C. C. WOOLF.