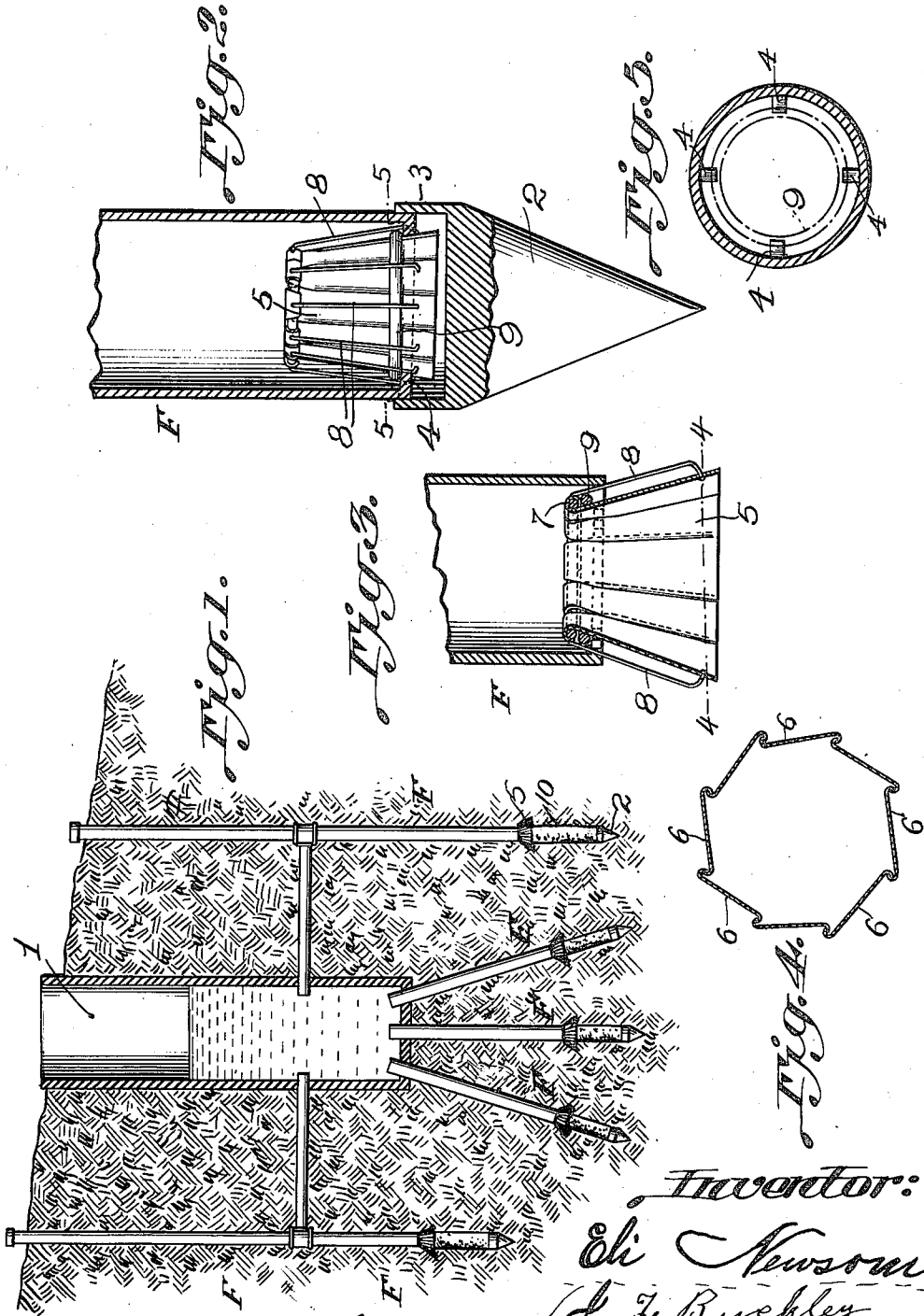


E. NEWSOM,
 WELL OR SUBTERRANEAN RESERVOIR FOR USE IN IRRIGATION AND OTHER PURPOSES.
 APPLICATION FILED SEPT. 11, 1916.

1,241,003.

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Witnesses

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To all whom it may concern:

Be it known that I, ELI NEWSOM, a citizen of the United States of America, residing at Center Valley, in the county of Dona Ana and State of New Mexico, have invented certain new and useful Improvements in Wells or Subterranean Reservoirs for Use in Irrigation and other Purposes; and I 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.

This invention is designed as an improvement upon the construction described and claimed in my U. S. Letters-Patent No. 551,646, dated Dec. 15, 1895, wherein the particular improvements claimed are shown in connection with means for irrigation, but while the invention is particularly useful for irrigation purposes, it is to be expressly understood that it is not limited to such uses.

In devices of this kind, a suitable well or reservoir is sunken into the ground, and means are provided for conducting water from the area surrounding the well or reservoir or from subterranean currents lower down into such well or reservoir from which the water is drawn for use for irrigation or otherwise. The water from that portion of the terrain surrounding and beneath the well or reservoir is conducted thereinto by means of suitable tubes having openings through which the water is conducted into the well or reservoir, such tubes being inserted into the ground as by driving the same for a suitable distance.

The present invention has for its object to provide a simple and effective means for thus collecting the water from the ground and depositing it in the well or reservoir, while at the same time providing means for preventing the entrance of an undue amount of sediment or earthy matter through the tubes into the reservoir. A further object is to provide means whereby such sediment as may collect in said tubes may be readily removed therefrom, and generally, to provide improved means in the construction of the device under consideration.

The inventive idea involved is capable of being embodied in a variety of mechanical structures, one of which, for the purpose of illustrating the invention, is shown in the accompanying drawings, but it is to be

understood that the invention is not limited to the precise construction so shown in the drawings, reference being had to the claims for that purpose.

In the accompanying drawings—

Figure 1 is a vertical section of a well or reservoir and connections showing my invention in place;

Fig. 2 is a vertical section of one of the driving tubes showing a portion of the driving point and a filtering screen in elevation;

Fig. 3 is a vertical section through the lower end of one of the tubes and the filtering screen;

Fig. 4 is a horizontal section through the extreme lower portion of Fig. 3; and

Fig. 5 is a horizontal section through the bottom of the tube in Fig. 2, showing certain of the parts in dotted lines.

Referring to the drawings, in which like reference numerals indicate like parts, 1 indicates any suitable well or reservoir provided with a plurality of openings in the bottom thereof, through which tubes F, F, F, are driven, said tubes being provided with driving points 2 (Fig. 2) frictionally engaging said tube through the medium of the flange 3 on said driving point. Each of the tubes F is provided with a plurality of interiorly projecting lugs 4 at the bottom thereof, which serve as a support for the expanding screen 5, whose construction will now be described. The screen proper is made up of a plurality of strips 6 preferably of galvanized metal, each narrower at its top than at its bottom, and the whole interlocked so as to form, when in an open and expanded condition, a frustum of a cone. Each of the strips 6 at its upper end is suitably connected to a ring 7 so as to swing thereon. Each of the strips has a bail-wire 8 connected to the strip at its upper and lower ends, as clearly shown in Fig. 3. A second ring 9 (Figs. 3 and 5) is located between the outer surface of the strips 6, 6, and the bail-pieces 8, said ring 9 being of greater diameter than the ring 7, and of sufficient diameter to rest upon the lugs 4, 4, at the bottom of the tube F, and support the conical screen, and prevent it from passing through the bottom of the tube.

When the tube is being driven into position in the earth, the conical screen 5 is supported in its collapsed position, as shown in Fig. 2, by the ring 9. The tube is driven to

the required depth, after which it is withdrawn for a suitable distance, say one or two feet, leaving the point in the bottom of the hole, and leaving a collecting reservoir 5 between the bottom of the tube and the point 2. A suitable rod or plunger is then inserted into the tube F upon the top of the expanding conical screen 5, and the latter is forced downward, and by reason of the fact 10 that the ring 7 is of less diameter than the ring 9, the screen is expanded from the form shown in Fig. 2 to the form shown in Fig. 3, which expanded condition is diagrammatically illustrated in Fig. 1 on the lower 15 end of each of the tubes F. This leaves a reservoir 10 above the driving point 2 and the conical screen 5 above the reservoir and on the end of each of the tubes F (see Fig. 1). A suitable sand-pump may now be inserted 20 through the tube F, and the sand, sediment or other matter that may have entered the reservoir 10 or be within the cone 5, is pumped out, the conical screen 5 acting to prevent additional sand and dirt from fall- 25 ing into the reservoir. With the parts in this position, the water from the surrounding terrain enters the sub-reservoirs 10, and rises through the tubes F, and is emptied into the well or reservoir 1, in a manner 30 which will be readily understood. Should sediment or dirt again fill up the sub-reservoir 10, or in any way act to collect within the conical screen 5, it may be removed by a sand-pump, as previously described.

35 By this construction there is afforded a ready means for efficiently collecting the water from the terrain surrounding and below the well or reservoir 1, and at the same time affording a place where any sediment 40 in the water may be collected and prevented from rising, and delivered into the main well or reservoir 1. Moreover, ready means are provided for removing such sediment, sand 45 or dirt as may collect at the lower end of the tubes, without withdrawing the same or without the use of any other apparatus than the ordinary and well-known sand pump.

It will be readily understood that each of the tubes F in effect constitutes a driven well 50 emptying into the main well or reservoir 1.

Having thus described my invention, what is claimed is:

1. The combination in a driven-well, of a tube, a distensible retaining member adapted 55 to be projected therefrom, and coacting means on said tube and member whereby the

projection of said member from said tube causes the same to distend.

2. The combination in a driven-well, of a tube, a distensible retaining member adapted 60 to be projected therefrom, means whereby the projection of said member causes the distention of the same into operative position, and means within said tube for retaining 65 such element in operative relation thereto.

3. The combination in a driven well, of a tube, a distensible retaining member adapted to be projected therefrom, coacting means 70 on said tube and member to distend the latter when projected from the tube, and a separable driving point on the lower end 75 of the tube.

4. The combination in a driven-well, of an open-ended tube, a separable driving point held thereon, means within said tube 80 serving as a filtration device when in extended position at the bottom thereof, and means supporting said device at the open 85 end of said tube.

5. The combination in a driven-well, of a tube, a separable point frictionally held 80 thereon, a distensible filtration device of less cross-sectional area at the top than at the bottom when in operative position, and co- 85 acting means on said tube and member whereby the projection of said member from said tube causes the same to distend.

6. The combination in a driven-well, of a tube, a distensible and contractible conical retaining device, a ring surrounding said 90 device, elements secured to the exterior sides of said device and embracing said ring, a ring of smaller diameter upon which the integral parts of said device are hinged, and 95 retaining means for said device within said tube.

7. In combination, a filtration device comprising a plurality of sections having interlocking flanges on their longer edges, a ring 100 from which each section is supported for inward and outward movement, a larger ring encircling said sections, a plurality of bail members connected to and parallel with the outer faces of said sections and embracing 105 said larger ring, and means within the open end of the tube supporting said larger ring.

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Witnesses:

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