

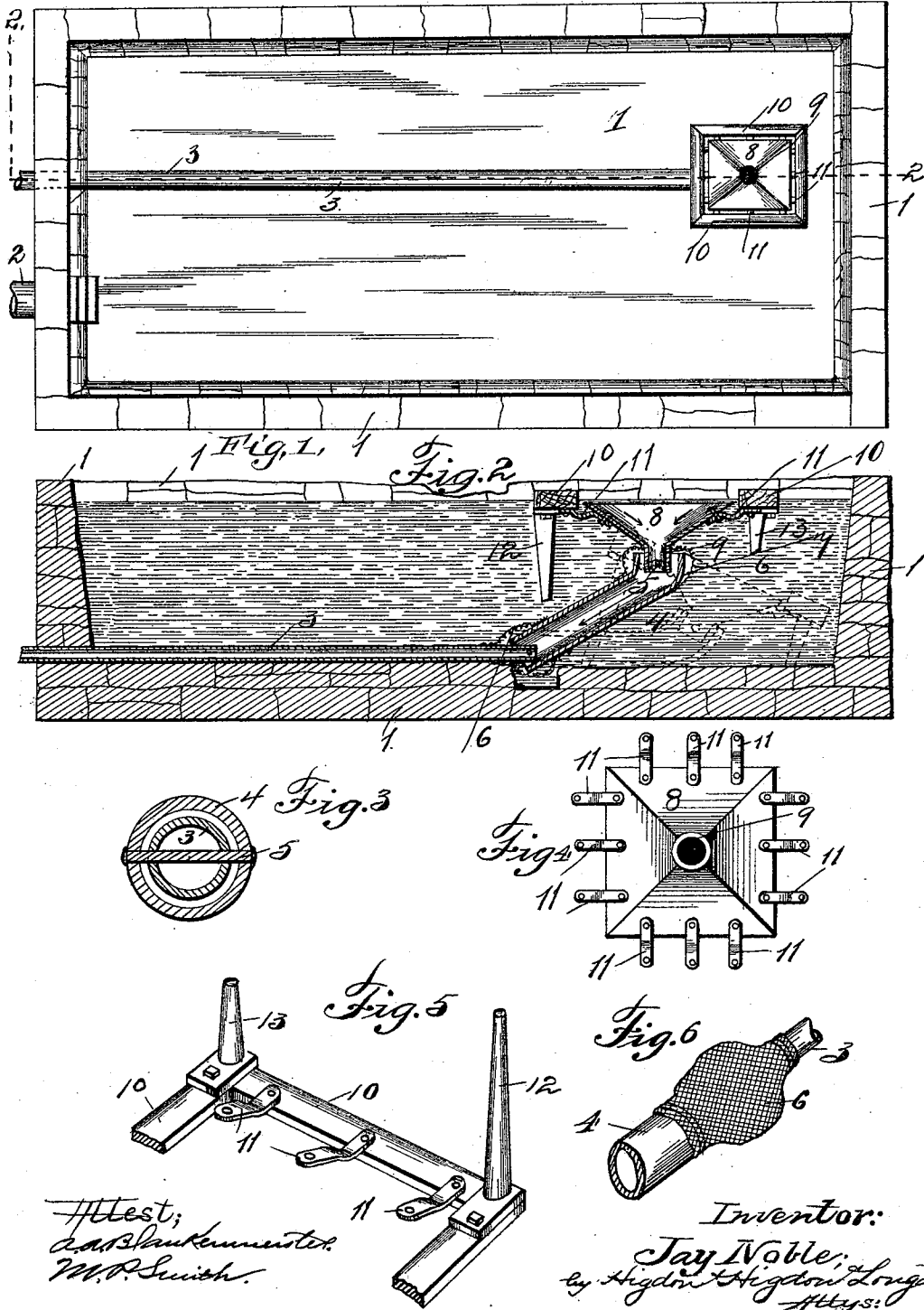
(No Model.)

J. NOBLE.

DEVICE FOR TAKING CLEAR WATER FROM SURFACES OF RESERVOIRS
OR OTHER SOURCES OF SUPPLY WHEN WATER IS TURBID OR
CONTAINS SEDIMENT.

No. 538,461.

Patented Apr. 30, 1895.



UNITED STATES PATENT OFFICE.

JAY NOBLE, OF ST. LOUIS, MISSOURI.

DEVICE FOR TAKING CLEAR WATER FROM SURFACES OF RESERVOIRS OR OTHER SOURCES OF SUPPLY
WHEN WATER IS TURBID OR CONTAINS SEDIMENT.

SPECIFICATION forming part of Letters Patent No. 538,461, dated April 30, 1895.

Application filed October 29, 1894. Serial No. 527,266. (No model.)

To all whom it may concern:

Be it known that I, JAY NOBLE, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Devices for Taking Clear Water from the Surface of Reservoirs or other Sources of Supply when the Water is Turbid or Contains Sediment, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a device for taking clear water from the surface of reservoirs, or other sources of supply, and consists in the novel construction, combination and arrangement of parts, hereinafter described and designated in the claim.

The object of my invention is to provide an improved pipe-connection which shall be suspended at all times near the surface of the body of water from which the supply is to be taken, and which shall rise and fall automatically with the level of the body of water, so that no matter what the height of the water may be, or how turbid or muddy, a supply of comparatively clear water may be obtained.

In the drawings, Figure 1 is a plain view of a rectangular reservoir having my invention applied thereto. Fig. 2 is a sectional side elevation of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a transverse section taken through the exit-pipe at the point where the pivotal point or rod is located with the flexible joint-covering removed. Fig. 4 is an inverted plan view of a flaring or enlarged inlet for the exit-pipe, the same being detached from the supporting-float. Fig. 5 is a detail view in perspective of a portion of the float inverted. Fig. 6 is a detail view in perspective of a flexible pipe-joint made use of in carrying out the invention.

1 indicates a common water-works reservoir, which is provided with the usual inlet pipe 2 and also with an outlet pipe 3. I desire to state, however, that my invention may be applied to any suitable body of water, such as a river or lake from which it is desired to draw a supply of clear water. I preferably locate the exit pipe 3 at the bottom of the body of water and pivotally connect one end

of a movable pipe section 4 with it by means of a flexible joint, so that the opposite end of said pipe-section may be moved up and down, while the inlet-pipe remains stationary. Any common form of tight flexible joint may be used for this purpose, although I contemplate using the joint now to be described.

The exit-pipe 3 and the pipe-section 4 are preferably of different diameters; that is, one has a greater cross-sectional area than the other, and the end of the section 4 is placed over the end of said exit-pipe and pivotally secured in position by means of a pivotal pin or bolt 5 passing diametrically through both parts, as shown in Fig. 3. The pin or bolt 5 is preferably located in a horizontal position, so that the upper end of the movable section 4 may be moved up and down, but not laterally to any appreciable degree. This construction prevents the said movable section and the parts connected to its upper end from moving so far laterally as to be thrown out of order or broken by the wind.

A flexible covering 6 of canvas, or other suitable water-proof material, is placed around the joint and secured at one end to the exit-pipe 3 and at the other end to the movable section 4 and wrapped securely in position by means of wire or cord, or otherwise secured so as to form a secure joint. The upper portion of the movable section 4 is curved upward, or provided with an elbow 7.

8 indicates a flaring inlet for permitting the water to flow into the movable section 4. This inlet is preferably in the form of a rectangular hopper, although of course it may be circular or of other shape in plan view. It is provided upon its under side with a depending hollow neck 9 which projects into the curved upper portion or elbow 7 of the movable section 4, and said neck and said movable section are connected by a flexible joint, which is here shown identical with that which connects the movable section to the exit-pipe 3 and previously described. The flaring inlet 8 is suspended from a suitable float 10, and which surrounds the periphery of said inlet. This float may be made of wood, as here shown, or any common material of which floats are made. Said flaring inlet

is suspended by means of suitable arms or brackets 11, which have one end secured to said float by means of bolts or rivets, and the opposite end secured to the sides of said inlet, 5 so that the upper side of said float will project a distance above the said inlet, and so that the latter will be held a slight distance beneath the surface of the water while said float projects a distance above said surface, there- 10 by permitting the clear water at the surface to pass beneath said float into said inlet by way of the space between the outer edge of said inlet and the inner edge of said float, while all floating objects and rubbish will be 15 excluded by coming in contact with the outer edge of said float.

12 and 13 respectively indicate supporting-legs secured at their upper ends to the float 10, so that when the level of the body of water falls, said legs will rest upon the bottom 20 and the weight of the float and movable parts supported thereby will come upon said legs and prevent possible breakage or injury of the parts. The legs 13 at one end of the float 25 are made shorter than those at the opposite end, so that as said float descends with the level of the water, the longer legs 12 will first strike the bottom and the shorter legs 13 will strike it later on, thereby causing the float 30 and flaring inlet to be tilted or placed at an angle with relation to the level of the water and permitting one side of said float and said

inlet to drop lower than it would if the legs were all of the same length. The said flaring inlet is thus depressed at one edge, bringing 35 such edge sufficiently near the bottom to permit water to flow into it after the height of water has decreased to such an extent that it would not flow into said inlet with the latter in its normal position. 40

It is well known that water-works reservoirs often supply very turbid streams, and also that other bodies of water are muddiest or most turbid at a point near the bottom 45 where the sediment settles and that the water is clearest at the surface. By my invention the clear water at the surface is made available.

What I claim is—

A float having legs of one length at one end 50 and of less length at the opposite end or side, in combination with an inlet suspended from said float, a fixed pipe or conduit, and flexible connections between said inlet and said pipe 55 or conduit, whereby said inlet will be tilted or inclined when said legs rest upon the bottom of the reservoir, river or lake, substantially as herein specified.

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

JAY NOBLE.

Witnesses:

W. C. HOWLAND,
JNO. C. HIGDON.