

No. 885,264.

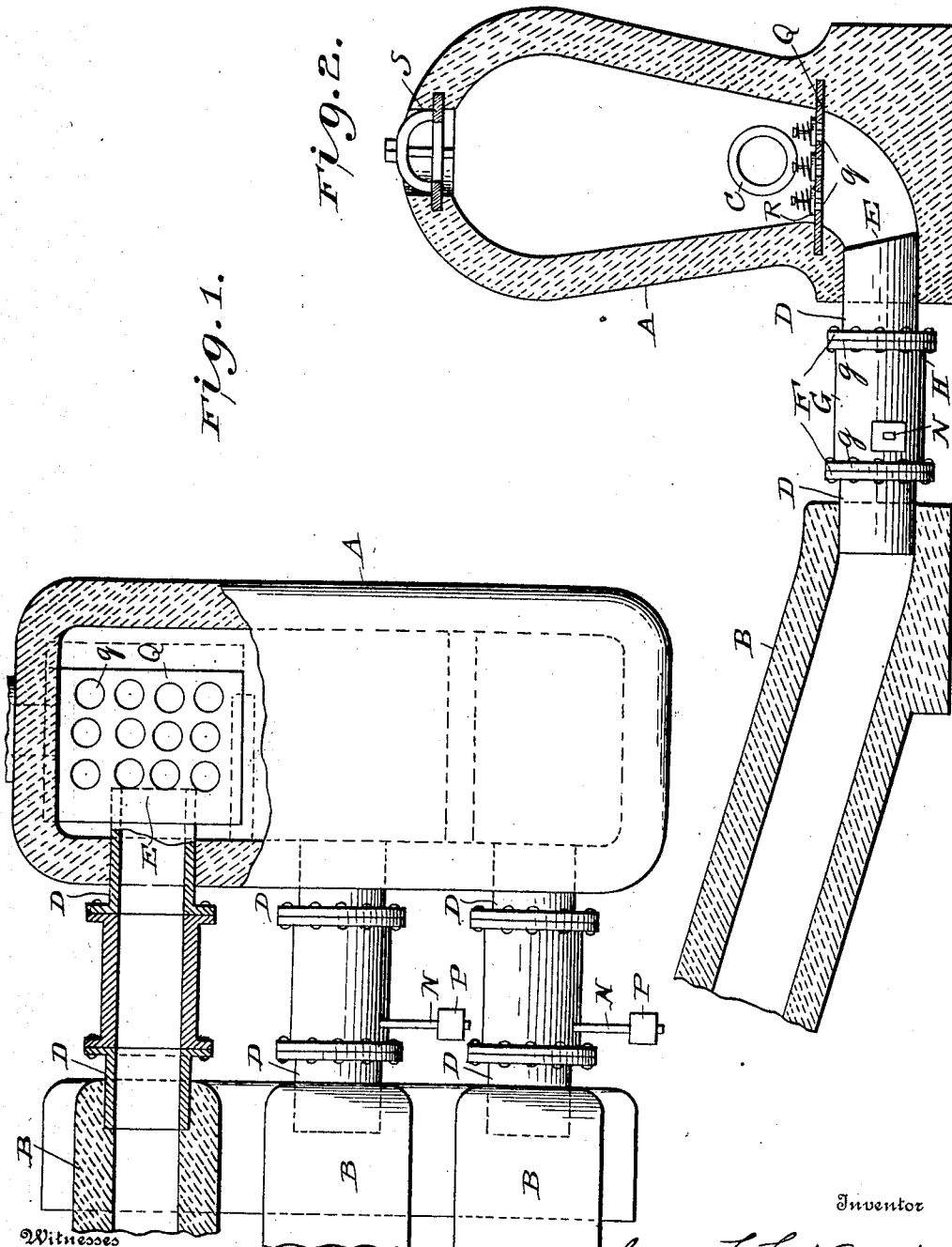
PATENTED APR. 21, 1908.

G. L. LE VESCONTE.

RAM.

APPLICATION FILED JUNE 8, 1907.

2 SHEETS—SHEET 1.



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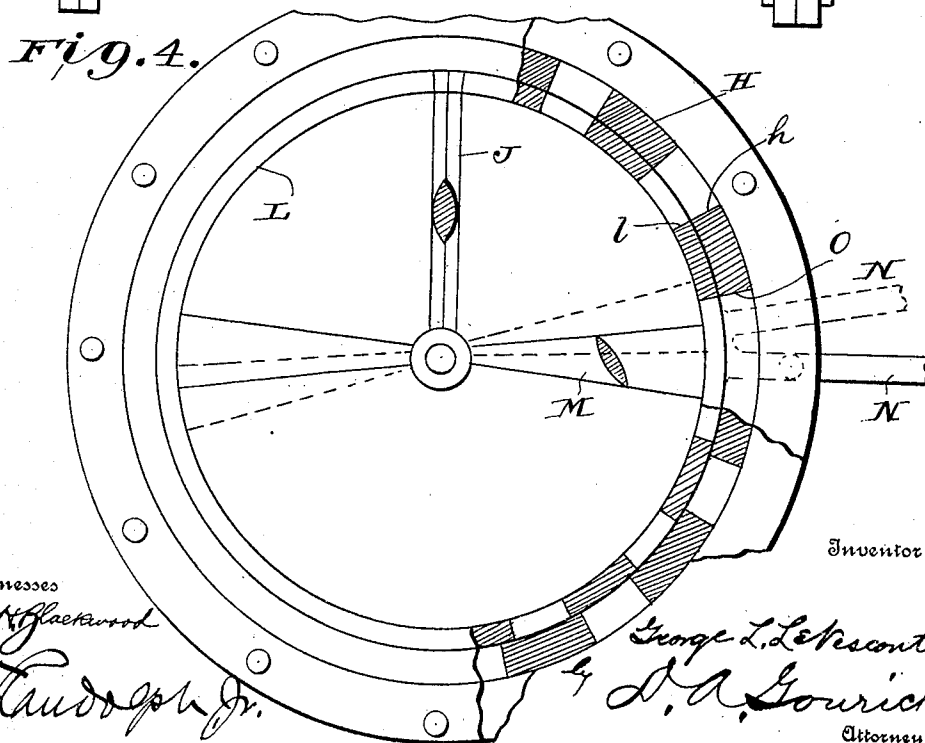
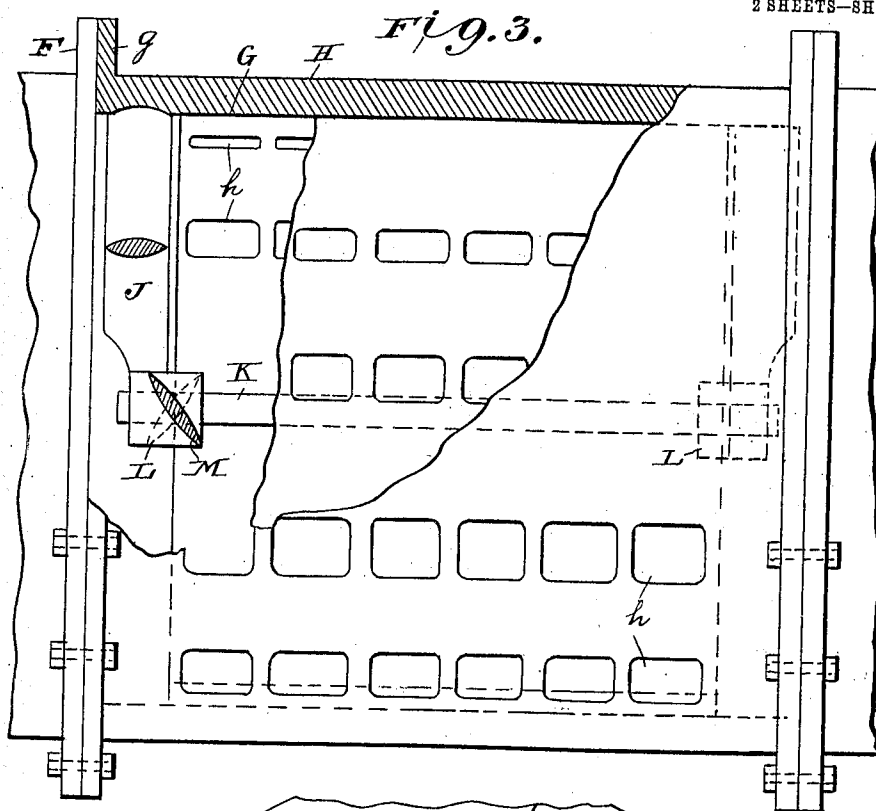
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UNITED STATES PATENT OFFICE.

GEORGE L. LE VESCONTE, OF ST. CLOUD, MINNESOTA.

RAM.

No. 885,264.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed June 8, 1907. Serial No. 377,969.

To all whom it may concern:

Be it known that I, GEORGE L. LE VESCONTE, a citizen of the United States, residing at St. Cloud, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Hydraulic Rams, of which the following is a specification.

My invention relates to devices for lifting water of the hydraulic ram type and consists in making the bulk of the device of concrete or other suitable plastic so that powerful rams may be located in isolated places, such as the remote parts of this country for irrigation purposes, which is impossible to be done with rams constructed entirely of metal because of the impracticability of transporting the parts of the device.

Another object of my invention is the provision of a plurality of drive pipes connected with the air chamber to add to the lifting force of the device.

A further object of my invention is the provision of a novel construction of waste valve of a quick acting and automatic type.

The details of the construction and operation of my invention will be described hereinafter and illustrated in the accompanying drawings in which—

Figure 1 is a top plan view partly in section of my improved ram, Fig. 2, a vertical sectional view of the air chamber and a fragment of one of the delivery pipes, Fig. 3, a side view partly broken away of one of the waste valves, and Fig. 4, a cross section of the valve.

In the drawings similar reference characters indicate corresponding parts throughout the several views.

As stated hereinbefore my improved ram is preferably made partly of a plastic material such as cement, the air chamber A being made of this material as well as the drive pipes B, there being a plurality of drive pipes connected with the air-chamber as shown in the drawings though the number may be more or less than the number shown in the drawings without altering the spirit of my invention. If desired the plastic material of which the air chamber and drive pipes are formed may be reinforced with a metal skeleton of any desired structure. At one end of air chamber A is connected the delivery pipe C also made of the plastic material of which air chamber A is constructed.

In molding the air chamber A and drive

pipes B short lengths of pipe D are inserted in the inlet ports E of the air chamber and the delivery ends of the drive pipes, said lengths of pipe having flanges F to which are secured the flanges *g* of waste valves G. Each waste valve G consists of a cylindrical casing H having perforations *h* therein and arms J extending inwardly from its inner surface, one adjacent to each end of the casing.

K indicates a bar connecting the inner ends of arms J.

L indicates a sleeve having cross arms M journaled on bar K said cross arms M being twisted to form propeller blades. The sleeve L is formed with perforations *l* that register with the perforations *h* at times.

N indicates an arm secured to sleeve L, extending through a slot O in casing H and having a weight P adjustably mounted thereon.

Q indicates a plate in each inlet port E molded in the plastic material in forming the air chamber A. The plates Q are formed with perforations *q* in each of which are secured a back pressure valve R.

S indicates a man hole in the top of air chamber A to permit of access to the air chamber.

In operation the man hole S is closed. The weights P normally turn the sleeves L so that the perforations *l* therein register with the perforations *h* in casing H and water flowing down drive pipes B escape through said perforations until the force is sufficient to rotate sleeves L by means of propeller blades M so as to close the perforations *h*, when the water will enter the air chamber A through valves R from whence it flows out through delivery pipe C. When the resistance in the air chamber is sufficient to stop the flow of the water through the waste valves G the weighted arms rotate the sleeves L so as to start the flow of water out of the perforations *h* which causes it to again close the perforations by rotating the sleeve against the force of the weighted arm and the water flows into the air chamber again. The opening and closing of the perforations *h* is rapidly and automatically accomplished so that the force exerted by the inertia of the water is utilized to the full and the water is raised through the delivery pipe C to a great height.

By making my device principally of plastic material the cost of the ram is lessened considerably while at the same time it is

capable of erection and use in remote localities which can not be done with rams made of metal as at present constructed because of the expense attendant on transporting the
5 necessary castings.

Having thus described my invention what I claim is—

1. A hydraulic ram comprising the combination of an air chamber, drive pipes connected therewith, a waste valve in each drive
10 pipe consisting of a casing having longitudinal slots and a transverse slot therein, a sleeve having longitudinal slots therein to register at times with the longitudinal slots
15 in the casing and a weighted arm extending laterally therefrom through the transverse slot, and propeller blades secured to the sleeve, substantially as shown and described.

2. A hydraulic ram comprising the com-

bination of an air chamber, drive pipes, and 20
a delivery pipe made of cement compound, a waste valve in each drive pipe made of metal and consisting of a casing having longitudinal slots and a transverse slot therein,
25 a sleeve revolubly mounted in said casing having longitudinal slots therein to register at times with the longitudinal slots in the casing, a weighted arm extending laterally therefrom through the transverse slot, and
30 propeller blades secured to the sleeve, substantially as shown and described.

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

GEORGE L. LE VESCONTE.

Witnesses:

J. I. DONOHUE,
J. E. C. ROBINSON.