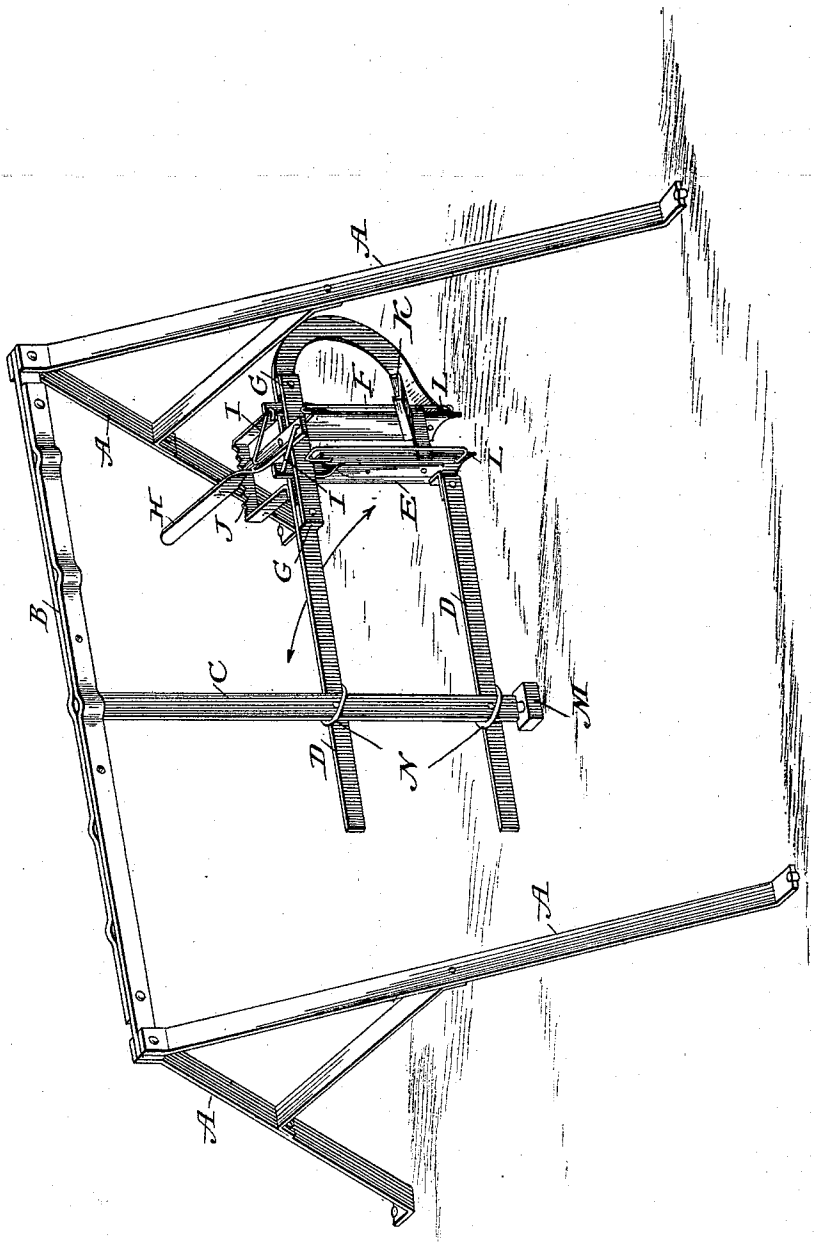
(No Model.)

F. E. GREGORY.

GROUT WATER TANK MACHINE.

No. 604,387. Patented May 24, 1898.



Witnesses.

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FRANK E. GREGORY, OF VICTOR, MICHIGAN.

GROUT WATER-TANK MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,387, dated May 24, 1898.

Application filed March 21, 1896. Serial No. 584,357. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. GREGORY, a citizen of the United States, residing at Victor, in the county of Clinton and State of Michigan, have invented certain new and useful Improvements in Grout Water-Tank Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others to use the same.

A A A A are four iron or steel standards firmly braced and bolted to beam B above. Said beam consists of two pieces of iron or steel provided with corrugations and bolt-holes arranged at intervals along each piece, so that any of the corrugations in one of the pieces may be brought opposite one of the corrugations in the other piece, the mating corrugations forming a bearing for the upper end of upright shaft C. By this means the length of the beam B may be varied and the apparatus accommodated to tanks of different diameters. The bolt-holes are so placed as to be in register for all adjustments of the beam.

Shaft C enters beam B B at its top and rests upon block M, which rests upon the ground. The arms D D are fastened by grips N N to the shaft C. The lower arm D is to shape the bottom of the tank and holds the inside shaper E bolted thereto with a loose joint to allow the top of said shapers to be moved to and from the sides of the tank as it is being constructed by means of lever H. The shapers are concaved plates, between which the grout is shaped to form the wall of the tank. The upper arm D passes over the top of the shapers and curves down to the bottom of the outside shaper F, where it is bolted with a loose joint to allow said shaper to be moved to and from the tank by means of said lever H.

To one side of upper arm D is bolted a plate G, to the center of which is pivoted lever H, and to the other side of upper arm D is bolted the gage-plate J, provided with notches on its upper edge, as shown, which engage lever H and hold it in the required set position. Lever H is connected with shapers E F by rods I I, as shown.

The position of the shapers may be changed by placing the lever H in different notches, and such changes of position vary the thickness of the wall of the tank toward and at the top, while the bottom is not varied, being held stationary by the arms D D.

The trough K, constructed of iron or steel, is loosely attached by rods L L to the shapers and receives the grout used in the construction of the tank, which passes therefrom between the shapers E and F and rises, as the walls of the tank are built, to the lower edge of the upper arm D, which forms the top of the tank. Said rods L L are fastened to edge of shapers E and F.

The upright or lower part of trough K is placed loosely between rods L L and edge of shapers E and F to hold trough K in position and admit of its being raised as wall is built, bottom of trough K resting on top of wall.

To operate said machine in the formation of a tank, first adjust and level the beam and plumb the shaft, the standards being staked down to hold the machine in place. Then the arms and shapers are to be adjusted to form the desired sized tank. A layer of grout is first placed where the tank is desired, and the bottom is formed by revolving the lower arm D over the surface of the grout sufficient to level it after it has been thoroughly packed. To form the wall of the tank, set the lever in gage-notch to make the thickness of the top of tank required. Then put grout down trough, packing solid between shapers and upright part of trough, turning lever to throw shapers from the sides of the tank, and, taking hold of upper arm, turn shapers toward the trough within about an inch of their width. Repeat this process around the tank until built to required height. Then adjust the arms and shapers to allow a coat of cement being put upon the tank already formed for

a finishing coat. The place occupied by block M is to be filled with grout after removal of machine.

What I claim as my invention, and desire to obtain Letters Patent upon, is—

A machine for forming grout tanks having the combination of standards A, adjustable cross-beam B, vertical shaft C having its upper end journaled therein and its lower end supported, horizontal arms D secured to the shaft C, shapers E and F secured at their lower ends to the free ends of the arms D and their upper ends adjustably controlled substantially as described.

FRANK E. GREGORY.

Witnesses:
DELIA BRUNSON,
HARRIET I. WOODHAMS.