No. 728,714. PATENTED MAY 19, 1903.

W. B. HOGG.

CLEANING MECHANISM FOR TANKS.

APPLICATION FILED NOV. 21, 1902.

NO MODEL.

Fig. 2.

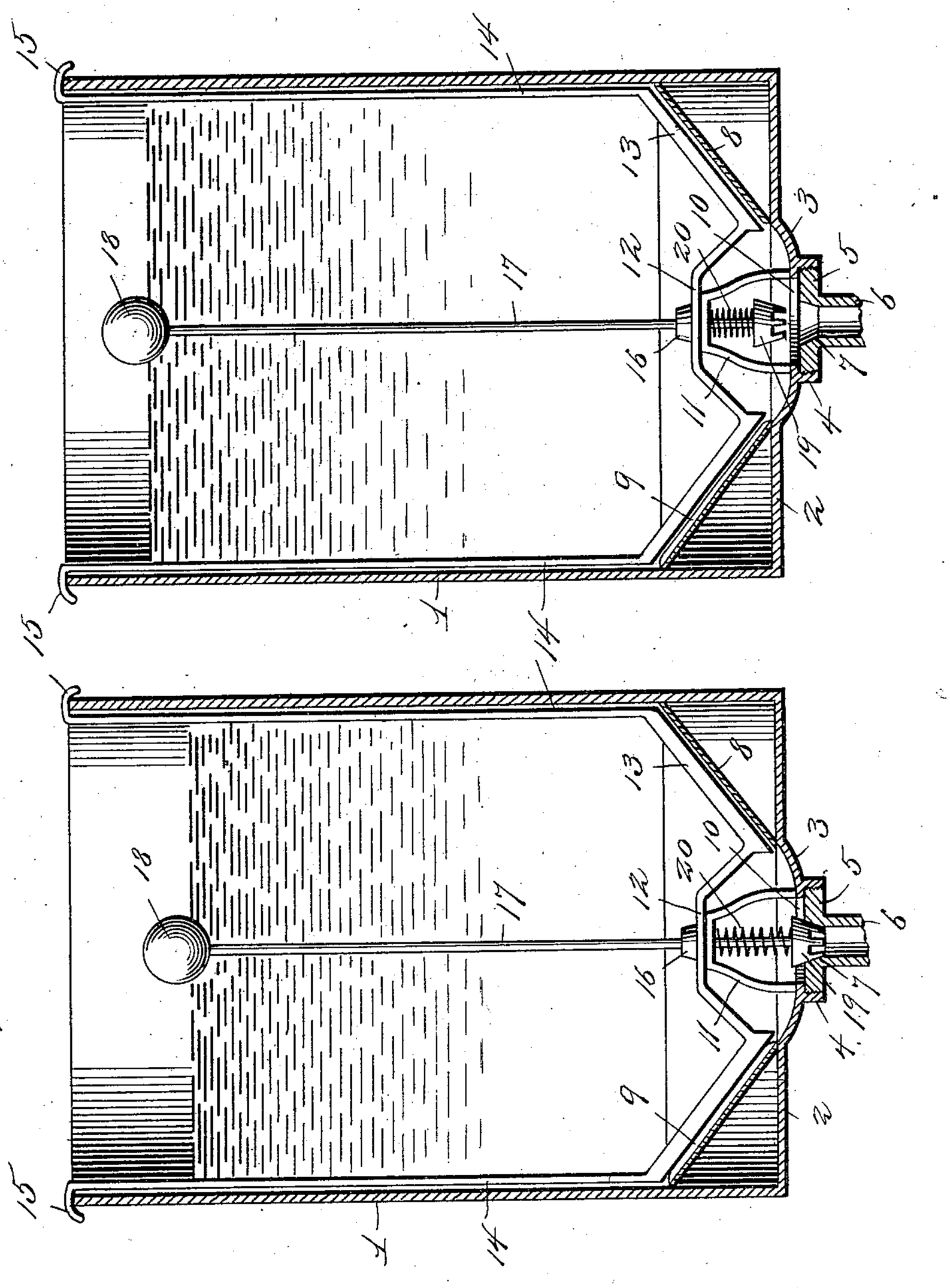

Fig. 1

Witnesses

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UNITED STATES PATENT OFFICE.

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CLEANING MECHANISM FOR TANKS.

SPECIFICATION forming part of Letters Patent No. 728,714, dated May 19, 1903.

Application filed November 21, 1902. Serial No. 132,290. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. HOGG, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented new and useful Improvements in Cleaning Mechanism for Tanks, of which the following is a specification.

This invention relates to mechanism for cleaning oil and water tanks; and the purpose of the same is to provide a simple and effective organization of parts for removing mud or sediment from the bottom of a tank and causing it to be washed out to thereby conveniently maintain a tank in cleanly condition, the improved mechanism being readily applicable to a tank without materially affecting the capacity of the same.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a transverse vertical section of a tank, showing the improved cleaning mechanism applied thereto and a valve comprised in said mechanism as closed. Fig. 2 is a similar view showing the valve open.

Similar numerals of reference are employed to indicate corresponding parts in the views.

The numeral 1 designates a tank of any preferred form of construction and adapted for use in containing oil or water for various purposes. This tank has a lower bottom 2, with a central drain depression 3, from which a collar 4 depends and is interiorly screw-threaded for the application of the collar 5 at the upper end of an outflow-pipe 6, having a valve-seat 7. Within the tank, close to the bottom 2, is an inclined false bottom 8, having its lower edge terminating coincidently with the periphery of the drain depression 3, and on the said false bottom is a trough 9, which extends completely from the upper to the lower edge thereof. The depression 3 has an enlarged opening 10 through the center thereof, and rising above said opening is a yoke 11, on which is rotatably mounted the lower arcuate member 12, terminally connected to the lower ends of scraping-blades 13, which are disposed close to the upper surface of the false bottom 8 and have operating-rods 14 extending vertically from their upper ends to the top of the tank, where they are provided with hooks 15, movably resting on the upper edge of the tank. The center of the arcuate member has an upstanding vertically-apertured bearing 16, and therein and in the upper central portion of the yoke 11 is a valve-rod 17, having a float 18 on its upper end and a valve 19 secured to the lower terminal thereof to coöperate with the valve-seat 7. Between the valve 19 and the upper portion of the yoke 11 a spring 20 surrounds the rod 17 and has such tension as to hold the valve in normal closed position.

In the operation of the improved device the scraper-blades 13 are rotated through the medium of the rods 14 after the contents of the tank have been removed or drawn off, and during such operation the valve 19 is held closely down to its seat 7. As the scraper-blades move over the trough 9 the sediment collected thereby is deposited in the said trough, the parts being so arranged that the opposite edges of the trough will be engaged by the lower edges of the scraper-blades, and by this means the sediment that may collect on the false bottom can be drawn to one point, and after this has ensued the tank is then flushed or filled with water to a level sufficient to affect the float and elevate the valve 19 from its seat and permit the sediment close to the trough to be washed out, and after the water falls to a certain level the valve 19 will be again closed, and the water that may be thereafter allowed to flow from the tank through other connections (not shown) or through the outflow-pipe 6 will be in a clean condition. The same is equally true of oil, and the first quantity of oil that may flow out through the pipe 6 after the bottom 8 of the tank has been scraped will be unfit for use before purification by any suitable means.

The improved cleaning attachment or mechanism can be readily operated and will be found materially advantageous. Instead of the application to an oil or water tank the improved mechanism may be disclosed in connection with other analogous devices. To accommodate different applications, changes in the proportions, dimensions, and minor details may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a device of the class set forth, the combination with a tank having a bottom with a central drain depression, of an outlet-pipe connected to the depression and provided with a valve-seat, an inclined false bottom, scraper-blades rotatable in close relation and said false bottom having operating means accessible from the top of the tank, and a valve with a float to control the outlet of the contents of the tank.

2. In a device of the class set forth, the combination of a tank having a bottom with a depression and an upper inclined false bottom having its lower extremity coinciding with the depression, scraper-blades rotatably held in close relation to the said false bottom and provided with means accessible from the top of the tank for operating the same, an outlet-pipe secured to said depression, and means for controlling the open and closed condition of said outlet-pipe.

3. In a device of the class set forth, the combination of a tank having the usual bottom provided with a central depression, the latter having an opening therethrough, an outlet-pipe connected to said depression, a downwardly-inclined false bottom above the usual bottom having a trough thereon, scraper-blades held in rotatable relation close to the said false bottom, and means for controlling the outflow of the contents of the tank.

4. A tank having an outflow connection at the bottom thereof, an inclined false bottom disposed above the regular bottom, and rotatable scrapers held in close relation to the upper surface of said inclined false bottom and provided with operating-rods projecting upwardly to and having terminals extending over the upper edge of the tank.

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

WILLIAM B. HOGG.

Witnesses:
E. L. GUY,
J. S. CARTER.