

(No Model.)

J. E. PATTISON.

DEVICE FOR REMOVING SEDIMENT FROM THE BOTTOMS OF TANKS,
CISTERNS, &c.

No. 307,323.

Patented Oct. 28, 1884.

FIG. I.

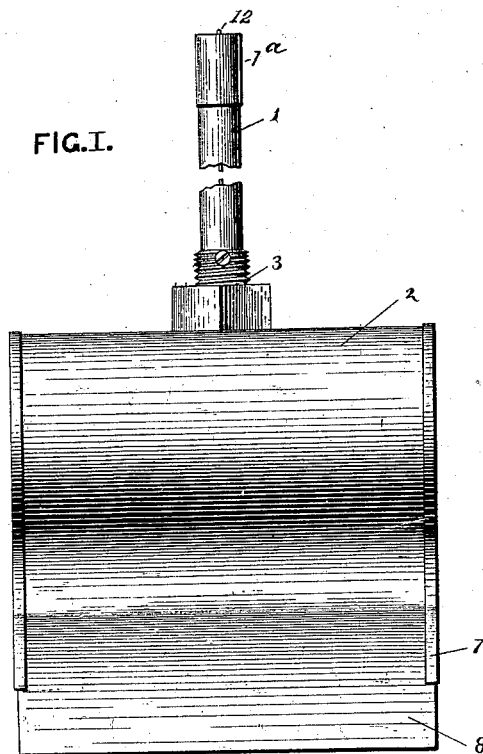
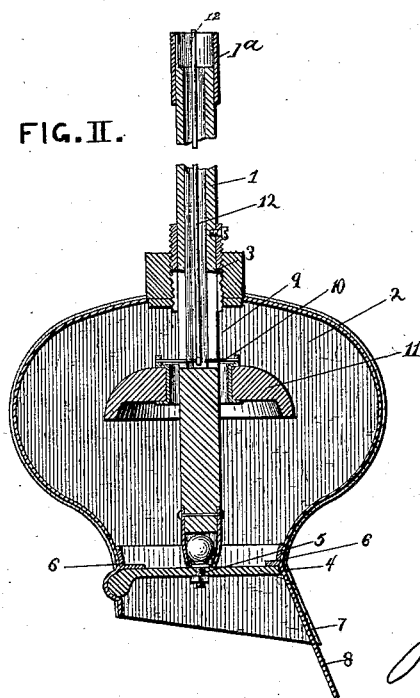


FIG. II.



ATTEST.

J. Henry Kaiser.
Geo. T. Smallwood.

INVENTOR.

John E. Pattison
By Knight Bros.
Atty's

UNITED STATES PATENT OFFICE.

JOHN E. PATTISON, OF NEW ORLEANS, LOUISIANA.

DEVICE FOR REMOVING SEDIMENT FROM THE BOTTOMS OF TANKS, CISTERNS, &c.

SPECIFICATION forming part of Letters Patent No. 307,323, dated October 28, 1884.

Application filed October 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. PATTISON, of New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Devices for Removing Sediment from the Bottoms of Tanks, Cisterns, &c., of which the following is a specification.

This invention is especially adapted to remove the sediment from the bottoms of tanks or cisterns situated below the surface of the ground for containing water, sugar-juice, wine, or any other liquid, and from which the sediment cannot readily be drawn off without the removal of all the contents of the cistern or tank.

To this end my invention consists in the provision, at the end of a hollow staff of such length as to adapt it to extend to the bottom of the cistern or tank, of a hollow head having a brush or scraper for loosening the sediment from the bottom, and a door adapted to be operated from the top of the cistern or tank to admit the flow of sediment within the hollow head under pressure of the superincumbent mass of liquid. A float within the head connected to a wire or rod extending through the hollow staff serves to notify the operator when the head is full of sediment and should be withdrawn from the cistern.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a vertical transverse section of my improved device for removing sediment. Fig. II is a side elevation of the same.

1 represents the staff, preferably made in the form shown, having several joints or sections capable of being joined together by ferrules or rings 1^a, which may be smooth or adapted to screw to place on the meeting ends of the sections of the staff, to adapt the apparatus to cisterns or tanks of any depth. The said staff is hollow and opens at its lower end into a chamber within the head 2, to the top of which it is secured by a screw-collar, 3. The walls of the head 2 are preferably constructed in the form here shown of metal or wood. The head is provided at the bottom with a hinged door, 4, which has at or near its middle a pin,

5, screwed or otherwise fixed thereto. The lower end of the staff 1 and the upper end of pin 5 are connected by a universal joint in such a manner that by the raising or lowering of the staff (which is effected by screwing it up or down in the head) the door 4 may be opened or closed. When in its closed position, said door bears on a rubber or other water-tight packing on a frame, 6, in the inside of the head 2, so as to make a water-tight joint. One of the lower edges, 7, of the head 2 is made to project somewhat below the level of the surrounding portion, so as to form a bearing for a scraper or brush, 8. A slot, 9, in the lower end of staff 1 permits the egress of air into and through said staff. Within the said slot also travels a cross bar, 10, fixed to a float, 11. To the center of the said cross-bar is fixed a wire or rod, 12, projecting up through the central hollow space in the staff, of such diameter as not to interfere with the free passage of air through said staff.

The following is the operation of my invention: The staff 1 having first been screwed up so as to firmly close the door 4 and convert the head into a water-tight chamber, the said head is lowered into a tank or cistern until it reaches the bottom thereof, the door then being opened by screwing down the staff to such an extent as to permit the flow of sediment through the passage thus formed into the hollow head. In rushing in, the sediment will force out the air contained in said head, which air will rise through the center of the staff and escape. The implement is then moved slowly forward, keeping the aperture in the head in front of and a little above the brush or scraper. The sediment, being banked up by the scraper, will be forced up into the interior of the head by the superincumbent mass of water until the air shall all have been expelled and the head be full of sediment. When the water in the head reaches the float 11, said float will of course be carried upward thereby until it comes in contact with the top of said head.

12 is a wire or rod attached to the float 11 and extending upward through the hollow handle 1, its end being about flush with the end of said handle when the float is in its lowest position. It is evident that when the rod begins to rise the operator will know that the water is near—

ing the top of the chamber, and that when said rod ceases to rise the water is at the top or within such a short distance thereof that by the time he closes the door the chamber will
5 be full. When sufficient sediment has thus been collected, the door 4 is closed by screwing up the staff 1, the implement removed from the liquid, and the sediment allowed to run out by screwing down the staff and opening
10 the door.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A device for removing sediment from the
15 bottoms of cisterns, tanks, &c., consisting of a hollow head having an opening, a door for closing the same, and one common handle for manipulating said hollow head and door, and means for permitting the exit of the air there-
20 from, as set forth.

2. A device for removing sediment from the bottoms of cisterns, tanks, &c., consisting of a hollow head having a door, and a hollow staff for manipulating said head and door, and af-
25 fording means for the escape of air from said hollow head, as set forth.

3. In a device for removing sediment from the bottoms of cisterns, tanks, &c., the combination of a hollow head, a hollow staff verti-
30 cally adjustable in said head, a door, and means for opening and closing said door at the will of the operator, as set forth.

4. In a device for removing sediment from

the bottoms of cisterns, tanks, &c., the combination, with a hollow head having a door, 35 and a hollow staff for the purposes set forth, of a scraper or brush, arranged and operating as described.

5. In a device for removing sediment from the bottoms of cisterns, tanks, &c., the combination, with a hollow head having a hollow
40 staff, of means, substantially as described, for announcing the height of the sediment in the hollow head, as set forth.

6. In a device for removing sediment from the bottoms of cisterns, tanks, &c., the combination, with a hollow head having a hollow
45 staff, of a float having a rod extending upward therefrom through said hollow staff, as and for the purposes set forth. 50

7. In a device for removing sediment from the bottoms of cisterns, tanks, &c., the combination, with a hollow head having a door, of a staff adjustable in said head, and having
55 connection by a universal joint with said door, substantially as set forth.

8. In a device for removing sediment from the bottoms of cisterns, tanks, &c., the combination, with a hollow head having a door, of a staff connected with said door, and adapted
60 to be screwed into said head, as and for the purpose set forth.

JOHN E. PATTISON.

Witnesses:

JAS. TYMAN,

H. M. HYAMS.