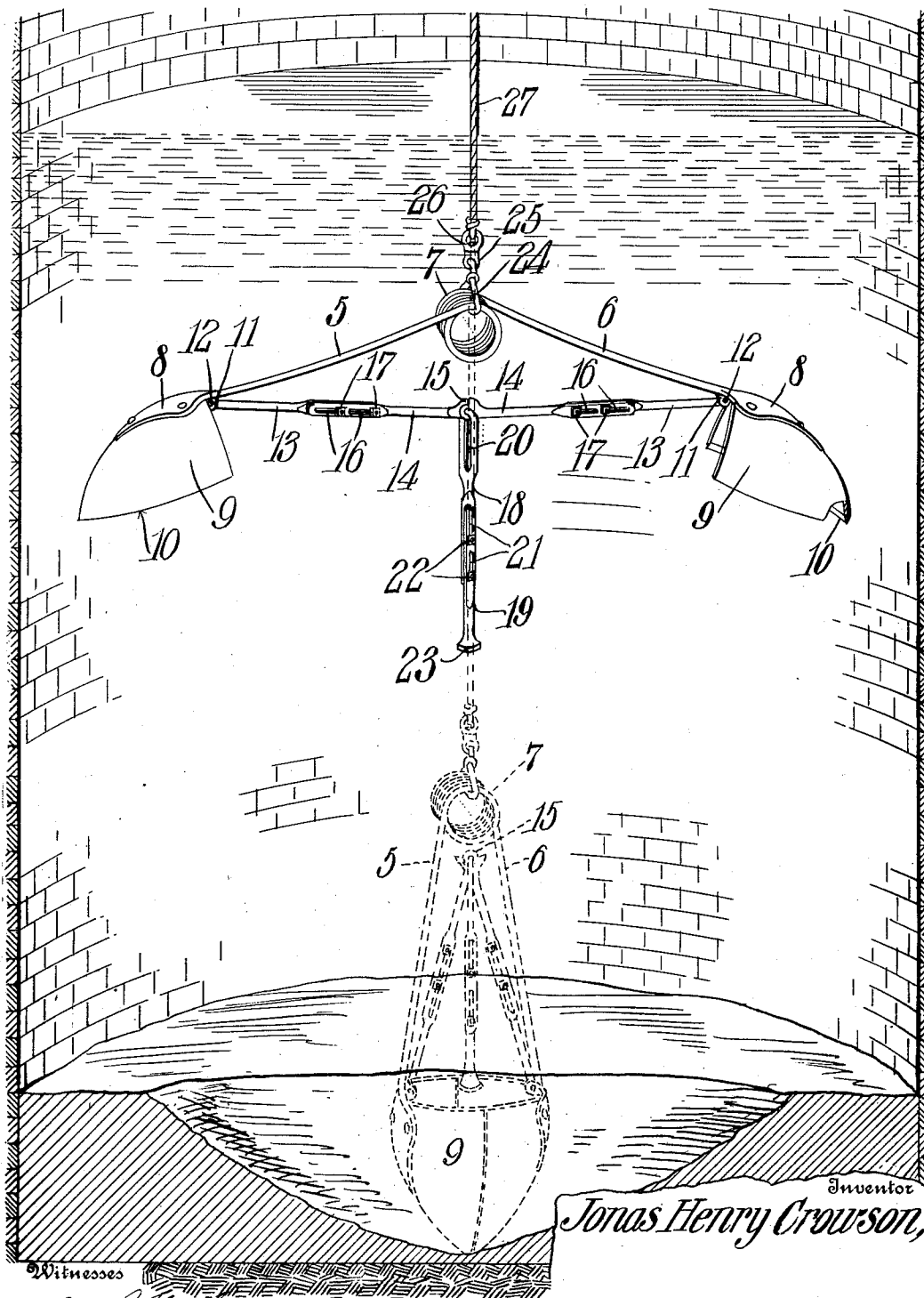


No. 866,628.

PATENTED SEPT. 24, 1907.

J. H. CROWSON.
WELL CLEANING MACHINE.
APPLICATION FILED JULY 18, 1907.



Witnesses
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UNITED STATES PATENT OFFICE.

JONAS HENRY CROWSON, OF ATLANTA, TEXAS.

WELL-CLEANING MACHINE.

No. 866,628.

Specification of Letters Patent.

Patented Sept. 24, 1907.

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To all whom it may concern:

Be it known that I, JONAS HENRY CROWSON, a citizen of the United States, residing at Atlanta, in the county of Cass and State of Texas, have invented a new and useful Well-Cleaning Machine, of which the following is a specification.

This invention relates to devices for cleaning wells, cisterns and the like and has for its object to provide a comparatively simple and inexpensive device of this character by means of which mud, leaves and other deposits may be effectually removed from the bottom of a well or cistern.

A further object of the invention is to provide a well cleaning device including a pair of spring actuated jaws provided with terminal scoops adapted to receive the mud or other deposits, said cleaner being provided with an operating rope or cable so that the scoop containing the mud may be conveniently removed from the well.

A further object is to provide the spring actuated jaws with adjustable spreader arms having their inner ends pivotally united and operatively connected with a depending rod or trigger adapted to engage the bottom of the well for moving the scoops to closed position.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings there is illustrated a side elevation of a well-cleaner constructed in accordance with my invention, the scoops being shown in full lines in open position and in dotted lines in closed position.

Similar numerals of reference indicate corresponding parts.

The improved cleaning device forming the subject matter of the present invention comprises a pair of spring pressed jaws 5 and 6 preferably formed from a single piece of heavy wire or other suitable material and having an intermediate portion thereof bent to form a horizontally disposed coil 7 and its opposite ends extended laterally to form terminal bearing surfaces 8 for engagement with the scoops 9. The scoops 9 are riveted or otherwise rigidly secured to the flat bearing surfaces 8 and are provided with cutting edges 10 so as to permit the scoops to readily pass through the mud when said scoops are moved to closed position.

Secured to or formed integral with the spring pressed jaws 5 and 6 at a point adjacent the scoops 9 are laterally extending ears or lugs 11 to which are pivotally connected at 12 spreader arms each preferably formed in two sections 13 and 14. The inner ends of the sections

14 of the spreader arms are pivotally united and provided with vertically disposed stop lugs 15 which bear against each other when the arms are in operative or extended position and serve to hold the scoops 9 in position to receive the mud or other deposits on the bottom of the well when the cleaning device is lowered within the same. The inner ends of the sections 13 and 14 are provided with flat portions having elongated slots 16 formed therein for the reception of suitable clamping bolts 17 whereby the spreader arms may be lengthened or shortened so as to increase or diminish the tension of the spring 7. Depending from the inner pivoted ends of the spreader arms is a rod or trigger also preferably formed in two sections 18 and 19. The section 18 of the trigger extends through the pivoted ends of the spreader arms and forms the pivotal axis of the same, said section being provided with an elongated loop 20 adapted to receive the sections 14 of the spreader arms when the scoops 9 are moved to closed position, as shown by the dotted figure in the drawing. The lower section 19 of the trigger is slidably mounted on the section 18 and is provided with one or more elongated slots 21 similar in construction to the slots 16 and adapted to receive suitable clamping bolts 22 whereby the trigger may be lengthened or shortened at will. The lower end of the section 19 is provided with a terminal head 23 adapted to bear against the bottom of the well or cistern and force the pivoted ends of the spreader arms upwardly so as to cause the intermediate coils or spring to force the scoops 10 to closed position.

Attention is here called to the fact that the abutting faces of the shoulders 15 are slightly inclined or beveled so that when the spreader arms are in extended or operative position said arms will be arranged at a slight angle to each other and thereby lock the scoops 9 in open position.

Extending through the spring coil or loop 7 is a yoke or stirrup 24 to the terminal eye 25 of which is attached a link having a swiveled connection 26. Secured to the upper end of the link is an operating cord or cable 27 by means of which the cleaner may be lowered into or removed from the well.

In operation the spreader arms are extended laterally so as to cause the scoops to assume the position shown in full lines in the drawing and in which position the cleaner is lowered to the bottom of the well by means of the operating cord or cable 27. When the head 23 of the trigger engages the bottom of the well or cistern the weight of the cleaner will force the trigger upwardly and in doing so will cause the spring 7 to move the jaws to the dotted line position shown in the drawing. As the jaws are moved to closed position the members 9 will scoop up the mud in the bottom of the well so that by exerting a longitudinal pull on the operating cable 27 the scoop containing the mud or other deposits may be conveniently removed from the well.

In order to set the device it is merely necessary to exert a downward pull on the trigger when the spreader arms will be moved outwardly, thus causing the scoops 9 to assume the position shown in full lines in the 5 drawing.

The device may be made in different sizes and shapes and may be galvanized, japanned or otherwise coated so as to prevent the same from rusting.

From the foregoing description it is thought that the 10 construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

- 15 1. A well cleaning device including spring pressed jaws each provided with a scoop, spreader arms pivotally connected with the jaws and pivotally connected with each other, and a depending trigger forming the pivotal connection between the inner ends of the spreader arms.
- 20 2. A well cleaning device including spring pressed jaws having terminal scoops secured thereto, spreader arms having their inner ends pivotally connected and provided with co-acting stop shoulders and their outer ends pivotally connected with the spring jaws, and a trigger forming 25 the pivotal connection between the inner ends of the spring jaws.
3. A well cleaning device including spring pressed jaws having scoops secured to the free ends thereof, longitudinally adjustable spreader arms pivotally connected with 30 the jaws and having their inner ends over-lapped and provided with co-acting stop shoulders, and a trigger extending through the over-lapped ends of the spreader arms and forming a pivotal connection between the same.
4. A well cleaning device including spring pressed jaws 35 provided with terminal scoops, spreader arms pivotally connected with the jaws and each formed of a plurality of sections having their adjacent ends over-lapped and provided with elongated slots, clamping bolts extending through said slots for locking the spreader arms in ad- 40 justed position, and a trigger operatively connected with the inner ends of the spreader arms.
5. A well cleaning device including spring pressed jaws,

scoops secured to the jaws, spreader arms pivotally connected with the jaws and having their inner ends pivotally united and provided with co-acting stop shoulders, 45 and a depending trigger having a loop extending through the inner ends of the spreader arms and forming a pivotal connection between the same.

6. A well cleaning device including spring pressed jaws, scoops secured to the free ends of the jaws, spreader arms 50 pivotally connected with said jaws and having their inner ends over-lapped and provided with co-acting stop shoulders, a sectional trigger having one section thereof provided with a loop extending through the spreader arms beneath the stop shoulders, elongated slots formed in the 55 sections of the trigger, and bolts extended through said slots for locking the sections in adjusted position.

7. A well cleaning device including spring pressed jaws formed of a single piece of metal having an intermediate 60 portion thereof bent to form a horizontally disposed coil, scoops secured to the free ends of the jaws, spreader arms pivotally connected with the jaws and having their inner ends over-lapped and pivotally united, a depending trigger 65 extending through the inner ends of the arms at the pivotal juncture of the latter, a stirrup threaded through the coil, and an operating rope secured to the stirrup.

8. A well cleaning device including spring pressed jaws formed of a single piece of metal having an intermediate 70 portion thereof bent to form a horizontally disposed coil and its opposite ends provided with flat bearing surfaces, scoops secured to the flat bearing surfaces and provided with cutting edges, lugs extending laterally from the jaws, longitudinally adjustable spreader arms pivotally connected with the lugs and having their inner ends pivotally 75 united, an adjustable trigger depending from the arms and provided with a loop forming the pivotal axis of the spreader arms at the inner ends thereof, a stirrup extending through the coil, and a swiveled link secured to the stirrup.

In testimony that I claim the foregoing as my own, I 80 have hereto affixed my signature in the presence of two witnesses.

JONAS HENRY CROWSON.

Witnesses:

T. G. Wood,
HILL STEWART.