

S. C. SMITH.
CLAM SHELL DREDGER.
APPLICATION FILED MAY 6, 1911.

1,018,848.

Patented Feb. 27, 1912.

Fig. 1.

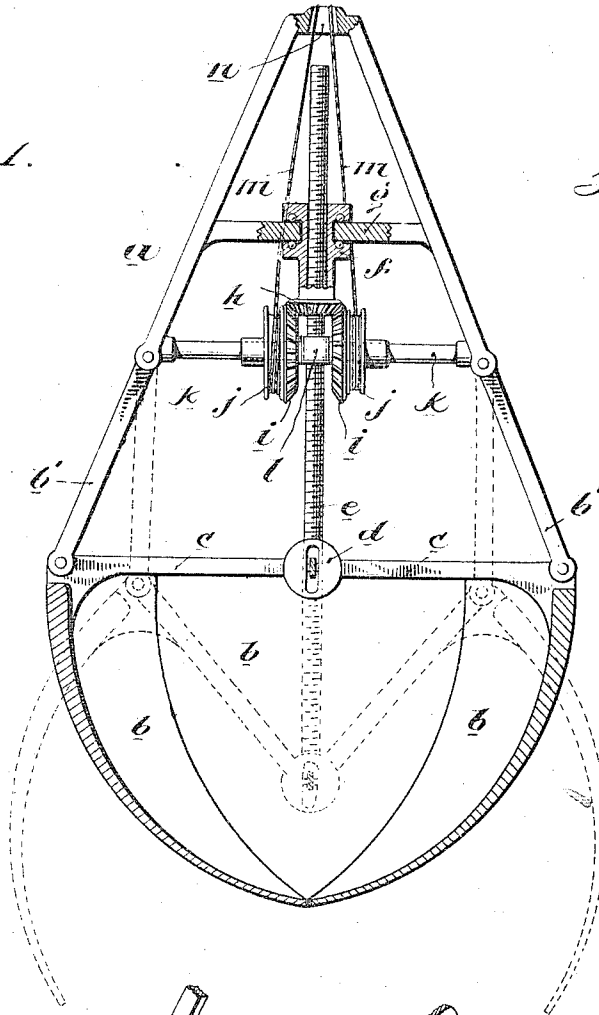


Fig. 3.

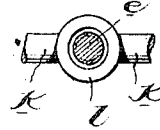
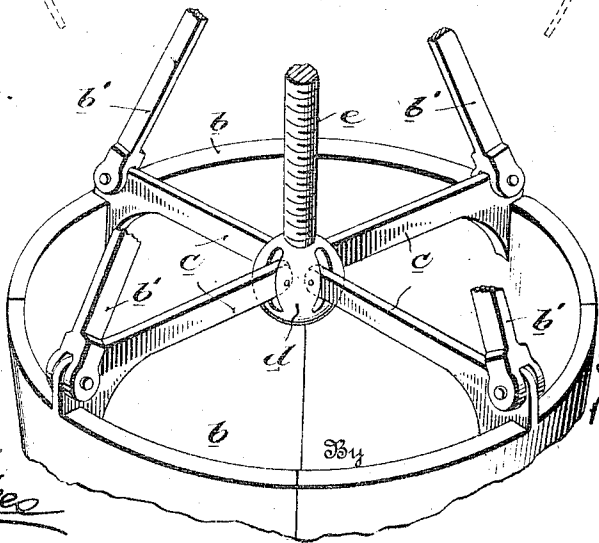


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL CHARLES SMITH, OF DAISY, LOUISIANA.

CLAM-SHELL DREDGER.

1,018,848.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application Aled May 6, 1911. Serial No. 625,546.

To all whom it may concern:

Be it known that I, SAMUEL C. SMITH, a citizen of the United States of America, and a resident of Daisy, in the parish of Plaquemines, State of Louisiana, have invented certain new and useful Improvements in Clam-Shell Dredgers, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view partly in side elevation and partly in vertical section; Fig. 2 is a perspective view showing the parts connected with the upper edges of the scoops; and Fig. 3 a detail plan of the rods for supporting the drums.

The object of this invention is to provide a simple means whereby the act of raising the scoop or dredger will cause the buckets to close and gather up the load and the act of lowering will conversely open the buckets or scoops to a position to properly enter the material or articles to be elevated, as more fully hereinafter set forth.

In the drawing, *a* designates a frame to the lower end of which a series of four shells or scoops *b* is pivotally hung by means of a series of depending links *b'*. Each scoop is provided with an arm *c* extending inwardly and pivotally connected to a knob or ball *d* rigidly attached to the lower end of a screw *e*. This screw rod *e* extends upwardly to near the upper part of the frame and is threaded through a sleeve nut *f* mounted rotatably upon a cross bar *g* of the frame *a* and provided at its lower end with a bevel gear *h*. At opposite sides of the screw rod is mounted a pair of gear wheels *i* each having affixed to its outer face a drum *j*. These gear wheels *i* mesh with the gear wheel *h* and they and their drum are loosely mounted upon horizontal rods *k*. The outer ends of these rods *k* are rigidly fastened to the side bars of the frame and their inner ends are rigidly fastened to an open frame ring *l* surrounding the screw rod and thus adapted to support the inner ends of the rods *k*. Wound on the

drums in opposite directions are the lower ends of cables *m*, these cables passing up through a ring or hole *n* in the top of the frame *a*.

In lowering the device, the weight of the device is allowed to come entirely on one of the cables *m* while the other cable is slacked up; the effect of this is to cause the taut cable to unwind and rotate its drum, and the rotation of this drum causes gear *h* and the other gear *i* to be rotated, whereupon the slack cable is wound up on its drum and the screw is forced downwardly to the position shown in dotted lines to open the scoops or shells. The weight of the apparatus will cause the shells or scoops to enter the material or articles to be elevated; and then upon raising the device by means of the other cable, *i. e.* the cable which was permitted to run slack in lowering the apparatus, the screw will be turned in the opposite direction to close the shells or scoops and the lowering cable will be wound up again on its drum or pulley.

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

In combination, a frame, a rotatable nut vertically mounted in the frame and provided with a beveled gear at one end and having its other end held against movement upwardly or downwardly, a vertical screw extending through said nut and having threaded engagement therewith, shafts supported in the frame at right angles to said screw, drums on said shafts each provided with a beveled gear meshing with the gear carried by the nut, oppositely wound suspending cables respectively attached to said drums, scoops pivotally attached to the lower end of said screw and means for pivotally suspending them from the frame.

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

SAMUEL CHARLES SMITH.

Witnesses:

CHARLES A. VOGT, Jr.,
MILTON HINCK.