

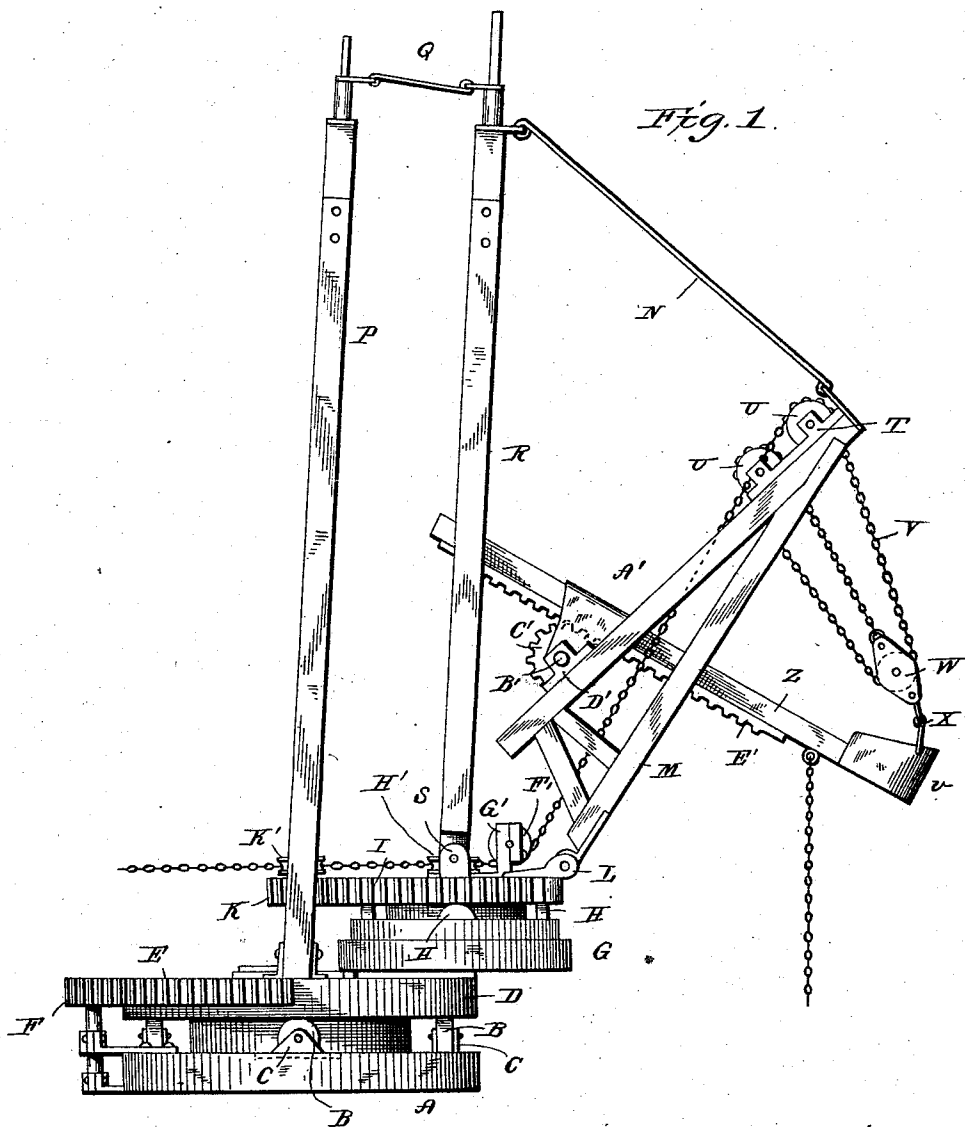
(No Model.)

2 Sheets—Sheet 1.

A. COOK
DREDGING MACHINE.

No. 287,631.

Patented Oct. 30, 1883.



Witnesses.
Edwin L. Jewell.
J. J. McCarthy.

Inventor.
A. Cook.
By C. H. Bryan Jr.
Attorney

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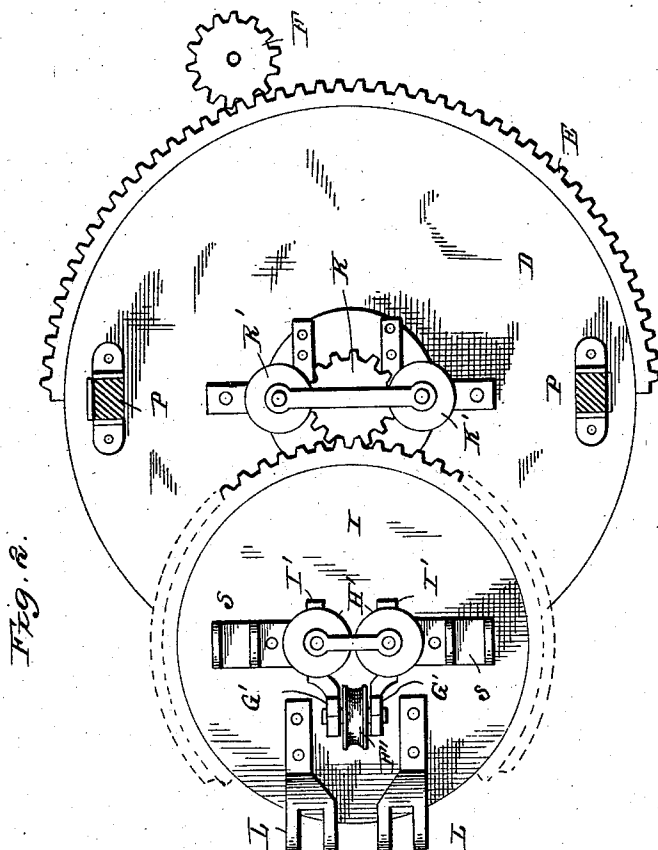
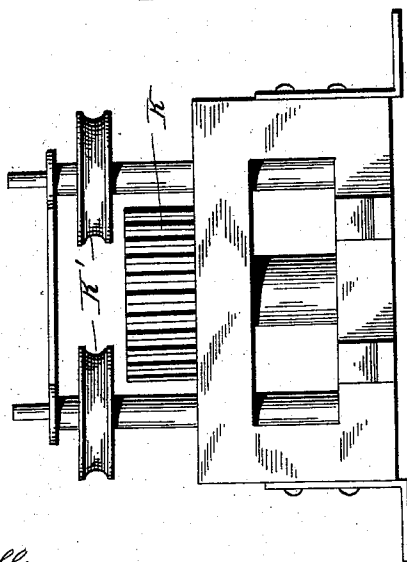


Fig. 3.



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UNITED STATES PATENT OFFICE.

AUGUSTINE COOK, OF SALISBURY, MARYLAND.

DREDGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 287,631, dated October 30, 1883.

Application filed May 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTINE COOK, a citizen of the United States, residing at Salisbury, in the county of Wicomico and State of Maryland, have invented certain new and useful Improvements in Dredging-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain improvements in dredging-machines; and it has for its objects to provide a compact and efficient machine which may be employed to dredge to any practicable depth, either upon a flat or sloping bed, and by means of which the soil may be deposited at a greater distance from the dredge and with more convenience than heretofore. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved machine; Fig. 2, a partial plan view, and Fig. 3 a detached side elevation, enlarged, showing a portion of the working-gear of the machine.

The letter A indicates the bed of the machine, which at suitable intervals is provided with anti-friction rollers B, mounted in bearings C.

The letter D indicates a rotating table mounted upon the said rollers, and centered so as to rotate upon the bed. A portion of the periphery is provided with a cogged section, E, which intergears a cogged driving-pinion, F.

The letter G indicates a circular bed secured to the rotating table above mentioned at one side of the same. The said bed is provided with rollers H, suitably journaled, and upon said rollers is mounted a rotating table, I, which at its periphery is provided with cog-teeth, as indicated in the drawings, with which intermesh the teeth of a cog-pinion, K, by means of which said table may be rotated. To the forward upper edge of said table is pivoted in suitable bearings, L, the lower end of the derrick-frame M. The upper end of said frame is held in the relative position to the vertical standard R of the rotating table G, being maintained by means of a stay-rod, N.

The letter R indicates a standard pivoted in bearings S, attached to the table I, and connected with the standard P by means of a brace, Q. The standard P serves to hold the standard R by means of the brace Q, the object of

pivoting the standard R being to give the apparatus greater or less range of operation by connecting the standards by means of interchangeable links of different lengths.

The derrick-frame, near its upper end, is provided with journal-bearings T for the journals of the grooved rollers U, around which passes the elevating-chain V, which also passes around suitable pulleys in a block, W, connected by suitable links, x, to the edge of the bucket v of the dredge. The said bucket is located at the forward end of a beam, Z, which is arranged to slide in a sheet-metal box, A', pivoted to the shaft B' of a cog-pinion, C', the said shaft being journaled in pillow-blocks D', secured to the rear of the crane-frame. The beam is provided on its under side with a rack, E', which intermeshes with the pinion C', and operates in connection therewith, as more fully herein-after specified.

The elevating-chain passes under a groove-pulley, F', the shaft of which is journaled in pillow-blocks G', secured to the upper rotary table, and then backward between the horizontal groove-pulleys H', which have their shafts journaled in bearings I' on the upper rotary table above mentioned.

The letter K' indicates two grooved pulleys horizontally located on the lower rotary table, the shafts of which are journaled in bearings secured thereto in such manner that as the tables are shifted the chain will pass around one or the other, so as to permit it to work with freedom. The chain is connected to any suitable drum, by which it may be wound and unwound to operate the dredging mechanism.

The dredging machinery is to be located on any suitable vessel, and the working parts connected with any proper motor, so that the derrick may be directed to any quarter, and the rack-beam moved so as to operate the bucket to excavate, elevate, and discharge the soil, as will be apparent from the above description.

The operation of my invention is as follows: The dredging mechanism may be turned so as to work upon either side of the machine by rotating the lower table by means of the gearing provided therefor, and when in position may be moved to a more limited extent, so as to be adjusted laterally to the work by partially rotating the upper table, the connections at the top of the frames permitting the same and their

supporting-tables to turn freely independently of each other. The excavating-bar is operated by the system of chains, as shown, to insert the bucket in the soil and elevate it, as indicated in Fig. 1 of the drawings.

I am aware that dredging machines and excavators have been constructed having double rotating tables and suitable elevating mechanism, and this I do not desire to claim, broadly.

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

1. The combination, in a dredging-machine, of the two rotating tables, the derrick-frame and its pulleys mounted thereon, the rack-bar and pinion, and the chain and gearing, all arranged to operate substantially in the manner and for the purposes specified.

2. The combination, with the upper and lower tables, of the upright standard secured to the same, respectively, and connected by a link at their tops, and the derrick-frame connected to the same by a bar or rod, substantially as and for the purposes specified.

3. The combination, in a dredging-machine, of the upper and lower rotary tables, the derrick-frame pivoted to the upper table, the grooved rollers mounted at its upper end, the rack bar and pinion, the elevating-chain, and the grooved pulleys mounted on the rotating tables, respectively, substantially as and for the purpose specified.

4. The combination, in a dredging-machine, with the upper and lower tables of the connected standards, the derrick, and gearing for operating the same, the grooved horizontal pulleys having their shafts mounted in suitable bearings on the respective tables, and the elevating-chain, all arranged to operate substantially in the manner specified.

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

AUGUSTINE COOK.

Witnesses:

J. C. BELL,

JNO. P. OWENS.