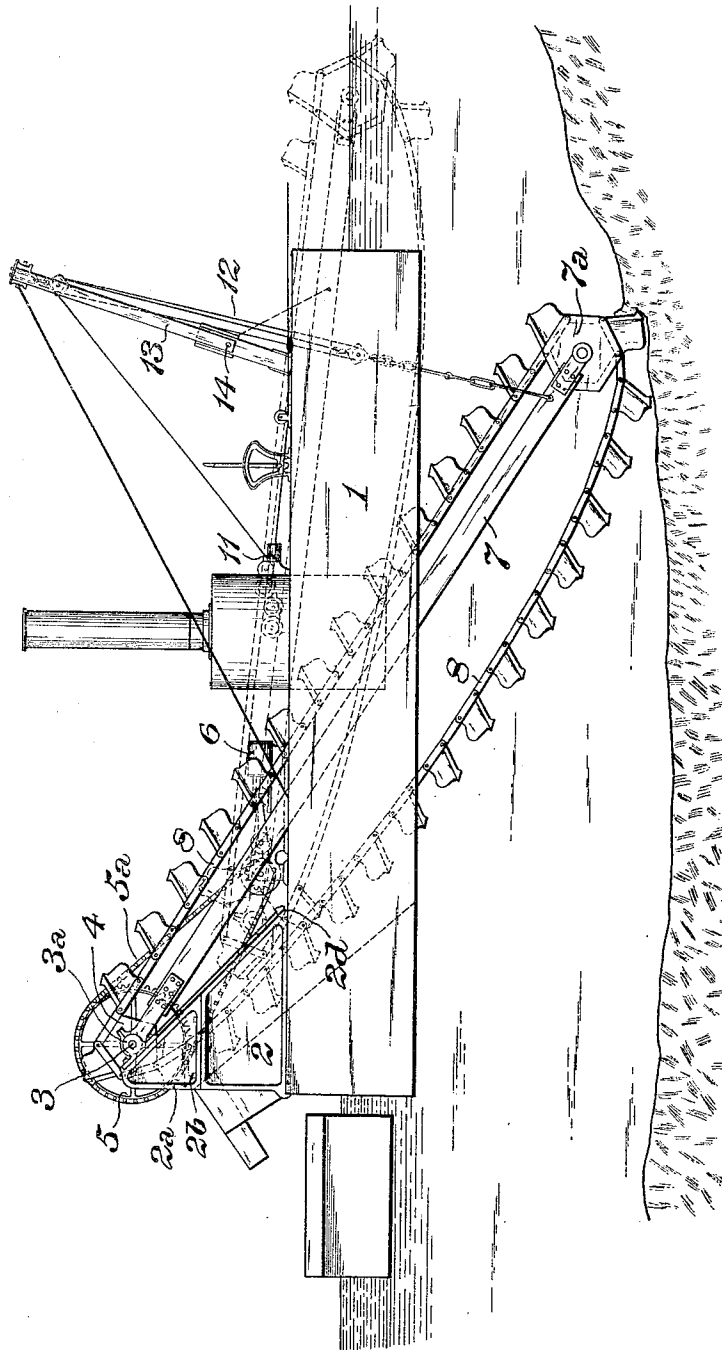


APPLICATION FILED FEB. 9, 1911.

Patented Jan. 26, 1915.

2 SHEETS--SHEET 1.



WITNESSES
Edward Wright
S. R. Bell.

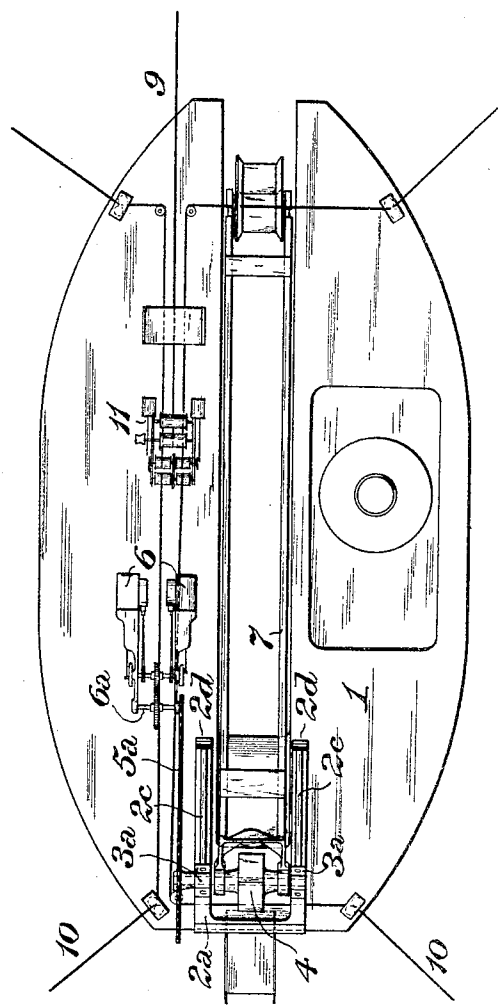
INVENTOR
Wm Sheppard
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W. SHEPPARD.
ELEVATOR DREDGE.
APPLICATION FILED FEB. 9, 1911.

1,126,306.

Patented Jan. 26, 1915.
3 SHEETS—SHEET 2.

—FIG. 2—



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UNITED STATES PATENT OFFICE.

WILLIAM SHEPPARD, OF PATERSON, NEW JERSEY.

ELEVATOR-DREDGE.

1,126,306.

Specification of Letters Patent.

Patented Jan. 26, 1915.

Application filed February 9, 1911. Serial No. 607,467.

To all whom it may concern:

Be it known that I, WILLIAM SHEPPARD, of Paterson, in the county of Passaic and State of New Jersey, have invented a certain new and useful Improvement in Elevator-Dredges, of which improvement the following is a specification.

The object of my invention is to provide an elevator dredge which shall be capable of properly performing all the operations of dredging and dumping for which this type of dredges is designed, and which shall further be of such construction as to admit of the ready and expeditious temporary adjustment of its mechanism to allow it to pass under low bridges, and corresponding subsequent adjustment to normal operative position.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings: Figure 1 is a side view, in elevation, of an elevator dredge embodying my invention; and, Fig. 2, a plan or top view of the same.

My improvement is herein exemplified as applied in an elevator dredge having a hull, 1, of the ordinary form, upon one end of which is secured a frame or main gauntree, 2, 2^a, on the upper portion of which are supported the bearings, 3^a, of the upper tumbler shaft, 3. The tumbler shaft has secured upon it a tumbler, 4, and sprocket wheel, 5, and is rotated by a chain, 5^a, passing around the sprocket wheel and around a smaller sprocket wheel on a countershaft, 6^a, which, in turn, is rotated by a double reversible engine, 6, on the deck of the dredge. A ladder, 7, passing through a well in the hull, is journaled, at its upper end, on the tumbler shaft bearings, 3^a, said ladder having a lower tumbler, 7^a, journaled in its lower end. The bucket chain, 8, passes around the upper and lower tumblers in the usual manner, and the head and stern lines, 9, 10, by which the dredge is adjusted and maintained in position for operation, are wound up by a winch engine, 11. The lower end of the ladder is connected by ropes, 12, passing around a pulley on a front gauntree, 13, with a winding drum rotated by the winch engine, 11. The upper section of the front gauntree is pivoted to the lower end thereof by a pin, 14.

In the practice of my invention, the frame

or main gauntree is formed in two sections, 2, 2^a, the lower of which, 2, is firmly secured to the hull of the dredge, and the upper, 2^a, is detachably connected to the lower by bolts, 2^b. Guides or ways, 2^c, are formed or fixed on the upper sides of the gauntree sections, for the purpose of guiding the tumbler shaft bearings as they are slid down thereon as hereinafter described, the adjustment of the bearings and guides being maintained by tongue and groove meeting surfaces, in the ordinary manner.

As shown in full lines in the drawings, the members of the mechanism of the dredge are in the positions which they normally occupy in dredging and dumping. When it is desired to move the dredge under a low bridge, the lower end of the ladder, 7, and bucket chain, 8, is allowed to rest on the bed of the river or cut, and the bolts by which the bearings, 3^a, of the upper tumbler shaft, are secured to the upper section, 2^a, of the main gauntree, are removed, to permit the bearings and shaft to slide down on the guides, 2^c. The head line, 9, which holds the dredge to its work, is then gradually let out, and the stern lines, 10, are wound on their drums, so as to gradually draw the hull backward. The lower end of the ladder, 7, being anchored by its own weight on the bed of the river, the bearings, 3^a, will, by gravity, slide to the bottom of the lower section, 2, of the main gauntree, carrying with them the upper tumbler shaft, tumbler, and ladder with its bucket chain. When the bearings reach the bottom of the lower section, they abut against stops, 2^d, thereon. The head line, 9, is then again anchored by the operation of the winch engine, and the lower end of the ladder and bucket chain is raised to a horizontal position by the ropes, 12, and supported from the deck. The upper section, 2^a, of the main gauntree, is then removed, and the upper section of the front gauntree, 13, lowered by being turned about its pivot, 14. It will, of course, be understood that the stack of the boiler of the dredge may be hinged, and as is common in such cases hence may be lowered in the ordinary manner.

After the dredge has been moved past the low bridge, and into a position where sufficient head room is available, the members of the mechanism are returned to their nor-

mal operative positions by the repetition, in reverse order, of the operations above described.

I claim as my invention and desire to secure by Letters Patent:

1. In an elevator dredge, the combination of a hull, a lower gauntree section fixed thereon and having an inclined side, a detachable upper section secured to the lower gauntree section and having a side forming a continuation of the inclined side of the lower gauntree section, bearings detachably connected to the inclined side of said upper section and having means adapting the same to be guided and to slide down the inclined sides of the upper and lower gauntree sections, and a bucket chain dredging mechanism supported by said bearings and movable therewith, as a whole, upon the main gauntree, toward and from the hull.
2. In an elevator dredge, the combination of a hull, a lower gauntree section fixed

thereon and having an inclined side, a detachable upper section secured to the lower gauntree section and having a side forming a continuation of the inclined side of the main gauntree bearings detachably connected to the inclined side of said upper section, and having means adapting the same to be guided and to slide down the inclined sides of the upper and lower gauntree sections, an upper tumbler shaft journaled in said bearings, an upper tumbler fixed on said shaft, a bucket chain carrier on said tumbler, a ladder journaled on the tumbler shaft bearings, and guides fixed to the inclined sides of the upper and lower gauntree sections and engaging the bottoms of said bearings.

WILLIAM SHEPPARD.

Witnesses:

FRANK GRIMSHAW,
A. LINTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."