

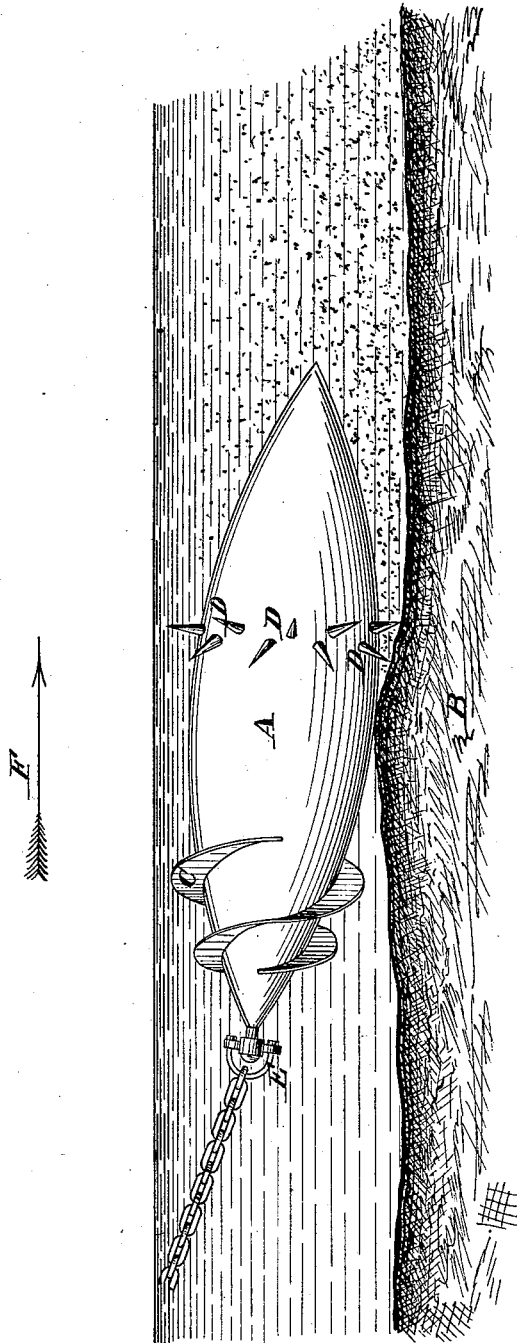
(No Model.)

E. C. G. THOMAS.

DREDGER.

No. 306,787.

Patented Oct. 21, 1884.



Witnesses:

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E. C. G. Thomas

Inventor:

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UNITED STATES PATENT OFFICE

E. C. GREENWAY THOMAS, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

DREDGER.

SPECIFICATION forming part of Letters Patent No. 306,787, dated October 21, 1884.

Application filed April 1, 1884. (No model.) Patented in England April 23, 1883, No. 2,049.

To all whom it may concern:

Be it known that I, EDWARD CROFT GREENWAY THOMAS, a subject of the Queen of Great Britain and Ireland, and a resident of the city of London, in the county of Middlesex, in that part of Great Britain called England, have invented a new and useful Dredging-Machine, (for which I have obtained a patent in Great Britain, No. 2,049, bearing date April 23, 1883,) of which the following is a specification.

I construct a cigar-shaped body having a specific gravity a little in excess of that of water, so that it will sink, but will lie on the bottom without much pressure. At one end of this cigar-shaped body I fix helical blades, and I hold such body by a chain or rope attached thereto by a swivel, so as to leave the body free to revolve. On the body I fix spikes or sharp projections. When such body is thrown into a current of water, it sinks and lies lightly on the mud or sand at the bottom, and as it is held stationary by the rope or chain the current, acting on its helical blades, causes the body to revolve, so that its spikes or sharp projections, revolving, stir up the mud, sand, gravel, or other sedimentary deposit, which the current sweeps away.

The accompanying drawing shows an elevation of my automatic dredger according to my invention.

A is the cigar-shaped body, which I prefer to construct of hollow metal. It is so constructed as to sink in water without pressing too heavily on the mud or sand bottom B.

On the front part of the body A, I fix helical blades C, which may be either continuous, as shown in the drawing, or may be separate segments, like the blades of a screw-propeller.

On the bulge, or slightly in the rear of the largest periphery of the body A, I affix sharp projections or spikes D, which may be plain spikes, as shown, or may be sharp projections of a form to suit the character of the material at the bottom B. The number of such spikes varies in like manner with the character of such material.

The dredger being held by a rope or chain attached to a swivel, E, in a current of water flowing in the direction of the arrow F, the current, acting on the blades C, causes the body A to revolve, and the revolving spikes D break up and agitate the mud, sand, or other loose sedimentary material at the bottom, so that the disturbed layer is washed away by the current.

The dredger, instead of being stationary, may be drawn along against the current, so that it may revolve with increased force; or it may be revolved by being towed in still water.

Having thus described the nature of my invention and the manner of its operation, what I desire to claim and secure by Letters Patent is—

1. An automatic dredger composed of the cigar-shaped body A, having a specific gravity a little in excess of that of water, furnished with sharp projections D, suitably formed and disposed for stirring up mud, gravel, or sand at the bottom of a stream of water, such body being provided with helical blades C, and a swivel, E, so constructed and placed as to cause the body to revolve when placed at the bottom of a current of water and held or drawn against such current.

2. In a dredger, a revolving body actuated by the force of a current of water acting on blades or screws attached to such body, and armed with spikes or sharp projections for the purpose of breaking up and agitating mud, sand, or other sedimentary material, substantially as described.

3. In a dredger, the combination of the revolving body A, the blades C, and the spikes or sharp projections D, arranged and operating substantially as described.

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