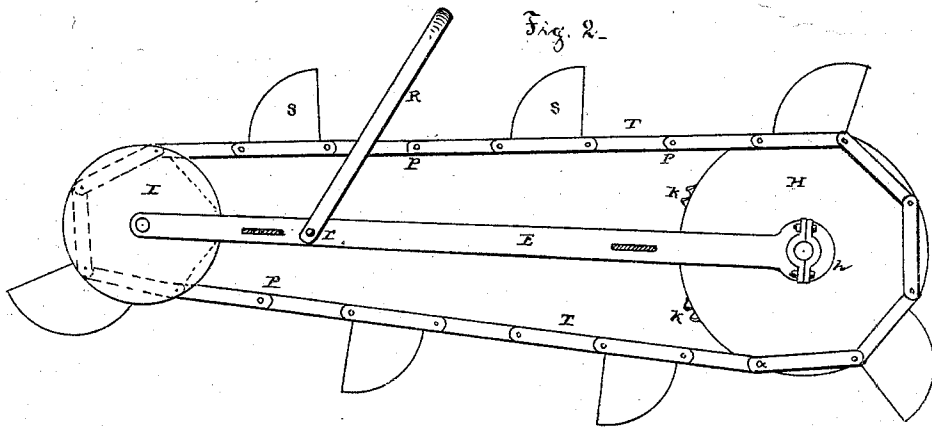
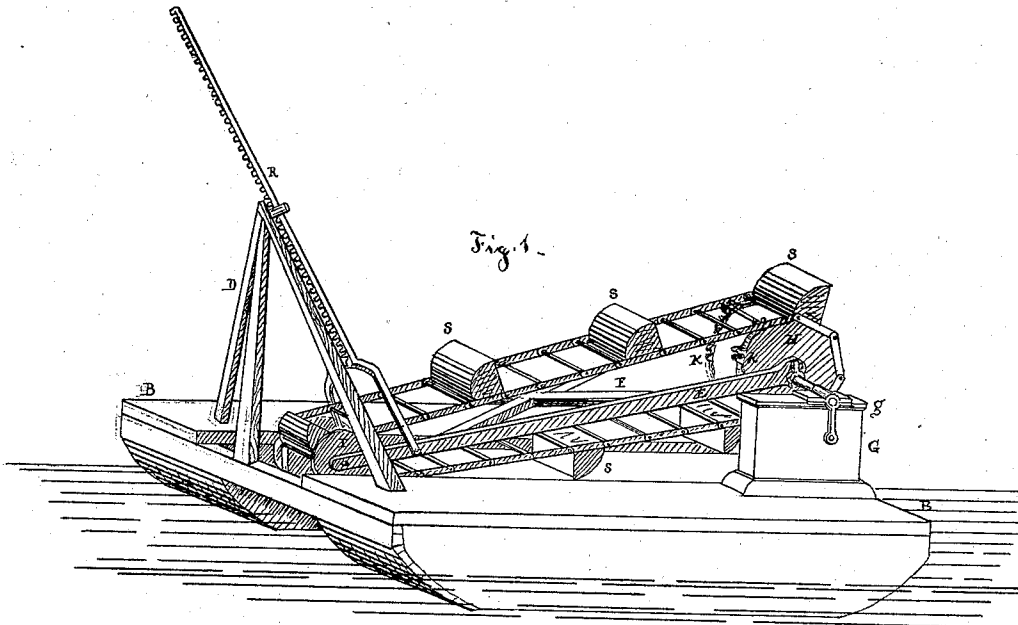


T. J. CLEPPER

Dredgers.

No. 133,303.

Patented Nov. 26, 1872.



Witnesses-

Philip Pyle
Sam'l J. Fisher

Inventor-

Thomas J. Clepper,
per Jacob Stauffer Atty

UNITED STATES PATENT OFFICE.

THOMAS J. CLEPPER, OF COLUMBIA, PENNSYLVANIA.

IMPROVEMENT IN DREDGERS.

Specification forming part of Letters Patent No. 133,303, dated November 26, 1872.

To all whom it may concern:

Be it known that I, THOMAS J. CLEPPER, of Columbia, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in the Mode of Raising Sand from the Bed of a River, of which the following is a specification:

The nature of my invention consists in providing a more efficient means to raise sand from the river's bottom, by the use of a derrick, buckets on an endless chain, and appliances made adjustable and operating between two ordinary boats firmly united at stem and stern, or a double boat, in order to overcome the tedious and laborious process of the shovels now in use, and which are found inefficient, especially in windy weather.

The accompanying drawing illustrates my arrangement, in which Figure 1 shows a perspective view of my united boats with the derrick, the chains with their buckets elevated. Fig. 2 is a side view of the chain-wheel and central beam for the lower pulley with the buckets, the chains shown in a single series.

Near the rear of this double boat B B, and on the edge of the open space which separates the two united boats sufficiently to admit of the free action of the lower pulley and its appliances, I erect a standard, G, on each side, for the bearings of the shaft of the chain-wheel H in boxes *g*. The chain-wheel H consists of three cast projecting flanges, say two inches thick, separated the proper distance apart, and provided with eight notched projections on their circumference, at regular intervals, in such a manner as to receive the round bars P, which connect the two series of flat links T, while the links remain on the outer face of said flanges H of the chain-wheel combined in their movement over the said wheel. There are also two beams, E, united by cross-timbers F. These beams are provided at one end with boxes *h*, and hang outside each flange H of the chain-wheel on its shaft as a fulcrum. The lower ends of these beams E approximate each other, and form the bearings for the five-angled flanged pulley I, for the endless chain and buckets S, placed at regular intervals, to scoop up the sand and

discharge the same at the rear of the boat. These beams E have a hanger and rack-rod, R, near the lower or forward end, operated by a pinion and pawl for the purpose of adjusting, raising, or lowering the dip of the buckets, by any of the ordinary mechanical appliances for operating and holding the same, attached to the upper end of the derrick D, which is raised in front centrally, and provided with two legs, one on each boat or side of the open space, and in an inclined position.

There is no special novelty in the construction of the endless chain, links, buckets, &c., separately considered, as such are met with in dredging-machines and elevators of various kinds; nor in the application of steam to propel the chain-wheel by suitable gearing, as the intention is; nor for anchoring the boat when employed for scooping up the sand. The novelty consists, mainly, in the combination and arrangement of the parts to adapt it for scooping up from any depth (from eight to twenty feet) sand from the bottom of a river, and discharging the same at the stern into a boat drawn up for its reception, which, as it is being filled up, is pushed forward across the stern of the sand-elevators until the same has a full load, to move off to give place for another boat to be filled in like manner. The hanging weight of the chains and buckets will offer sufficient traction to overcome the resistance of the sand in scooping up.

The arrangement of the several parts to adapt the whole for collecting, elevating, and discharging sand into another boat is both novel and useful; therefore,

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the boat or boats B, with its derrick D, hanger R, beams E, forming a bearing for the chain-pulley I, and swinging in boxes *g* on the shaft of the chain-wheel H, together with the buckets S and endless chain T, all arranged substantially in the manner and for the purpose specified.

THOMAS J. CLEPPER.

Witnesses:

S. B. CLEPPER,
HENRY MULLEN.