

JOHN T. CLARKSON.

Improvement in Sand Dredging Machines.

No. 125,023.

Patented March 26, 1872.

Fig. 1

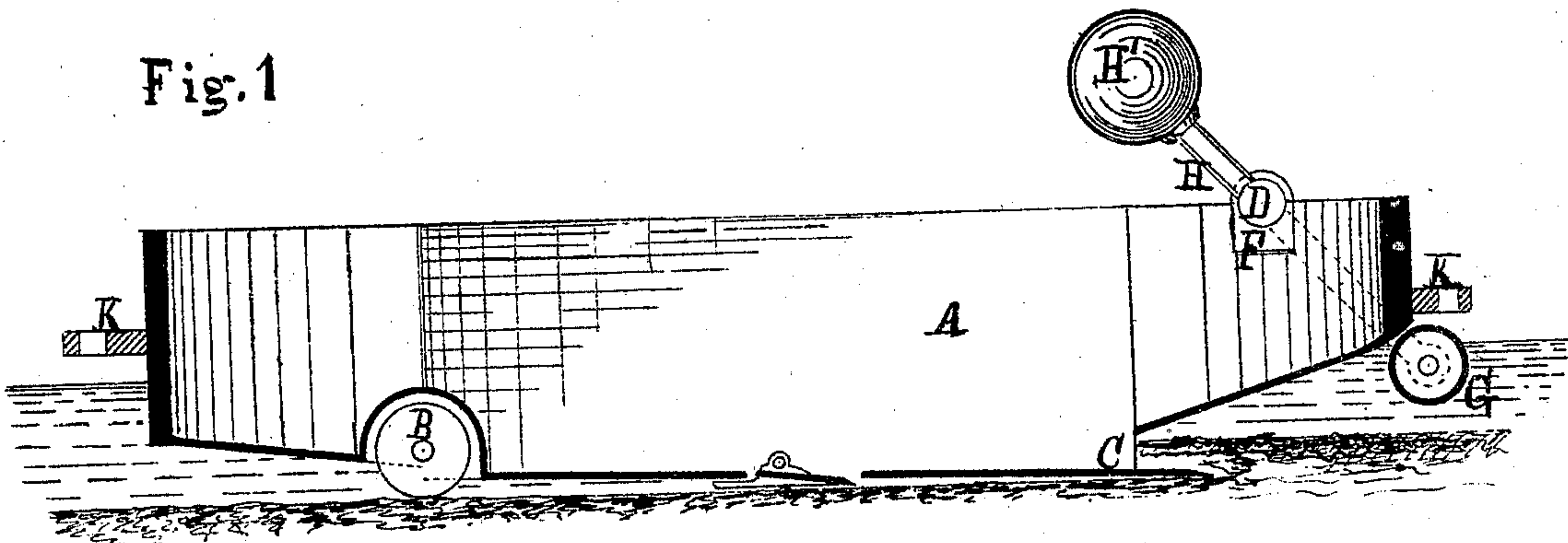


Fig. 2

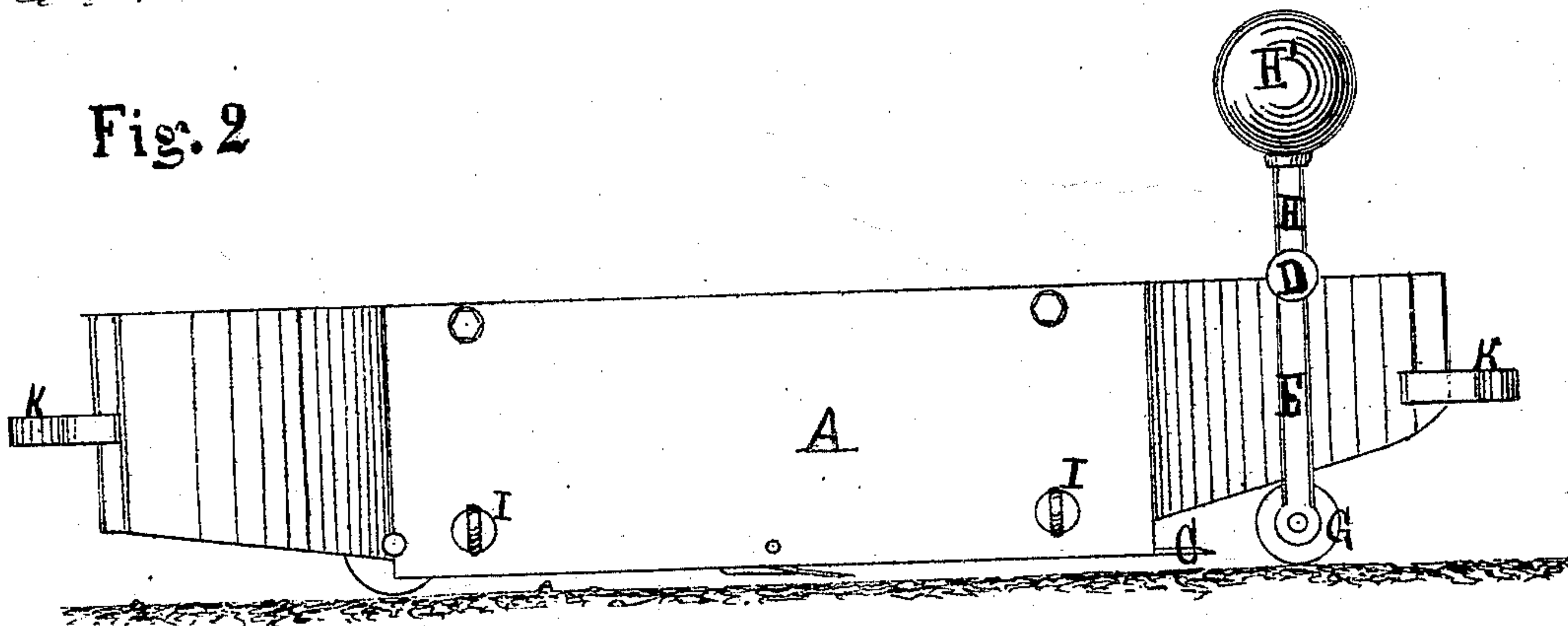


Fig. 3

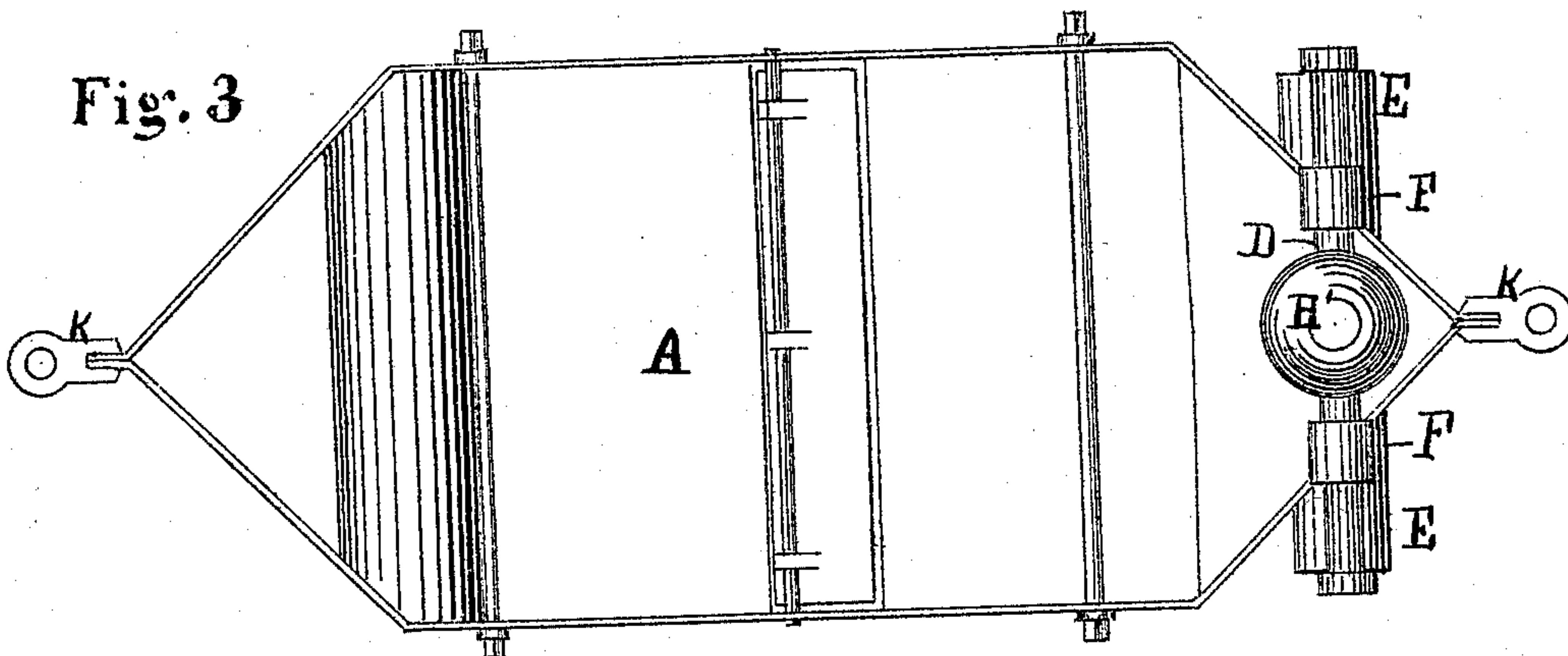
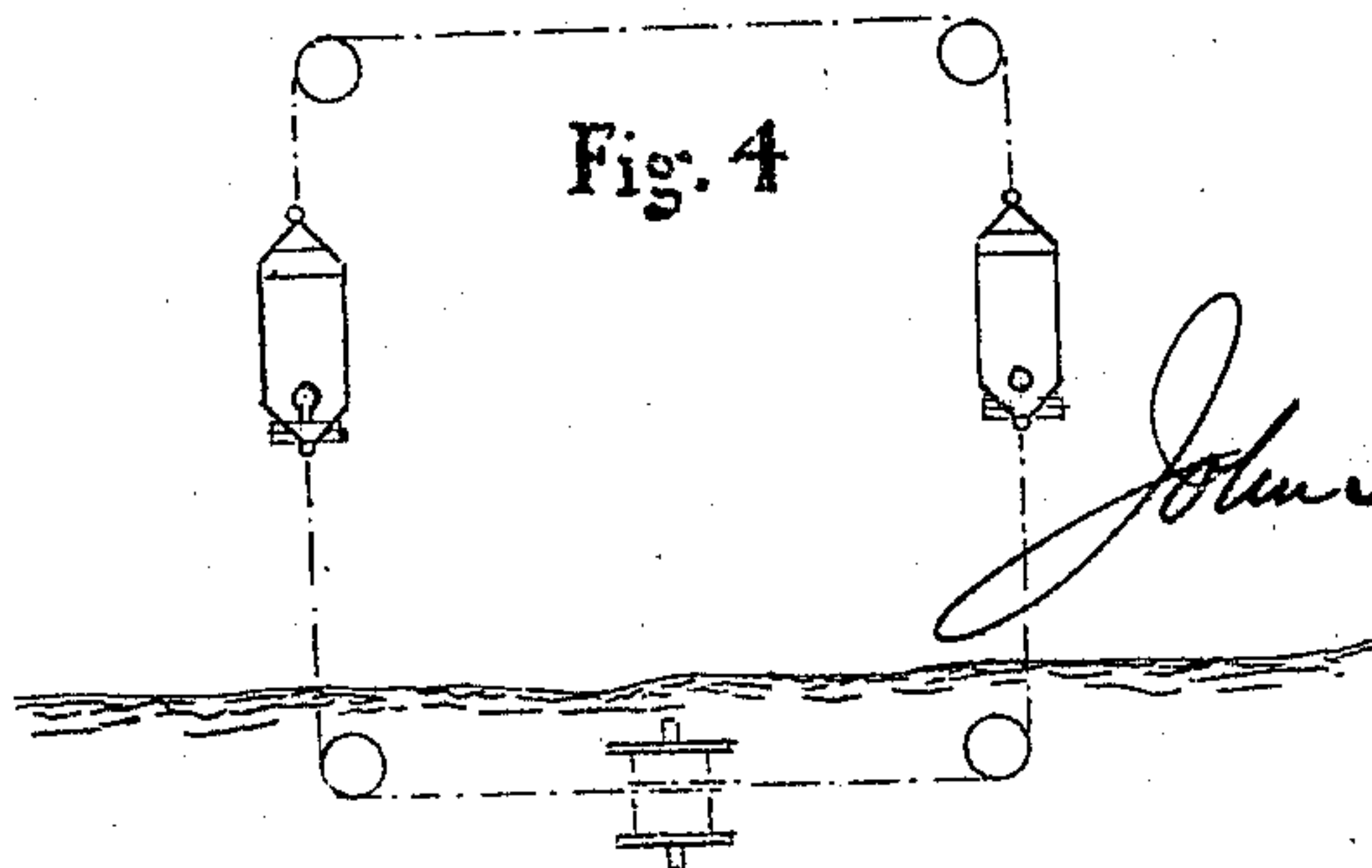


Fig. 4



Witnesses:

*Julius Vileke*  
*Wm H Lotz*

Inventor:

*John T. Clarkson*

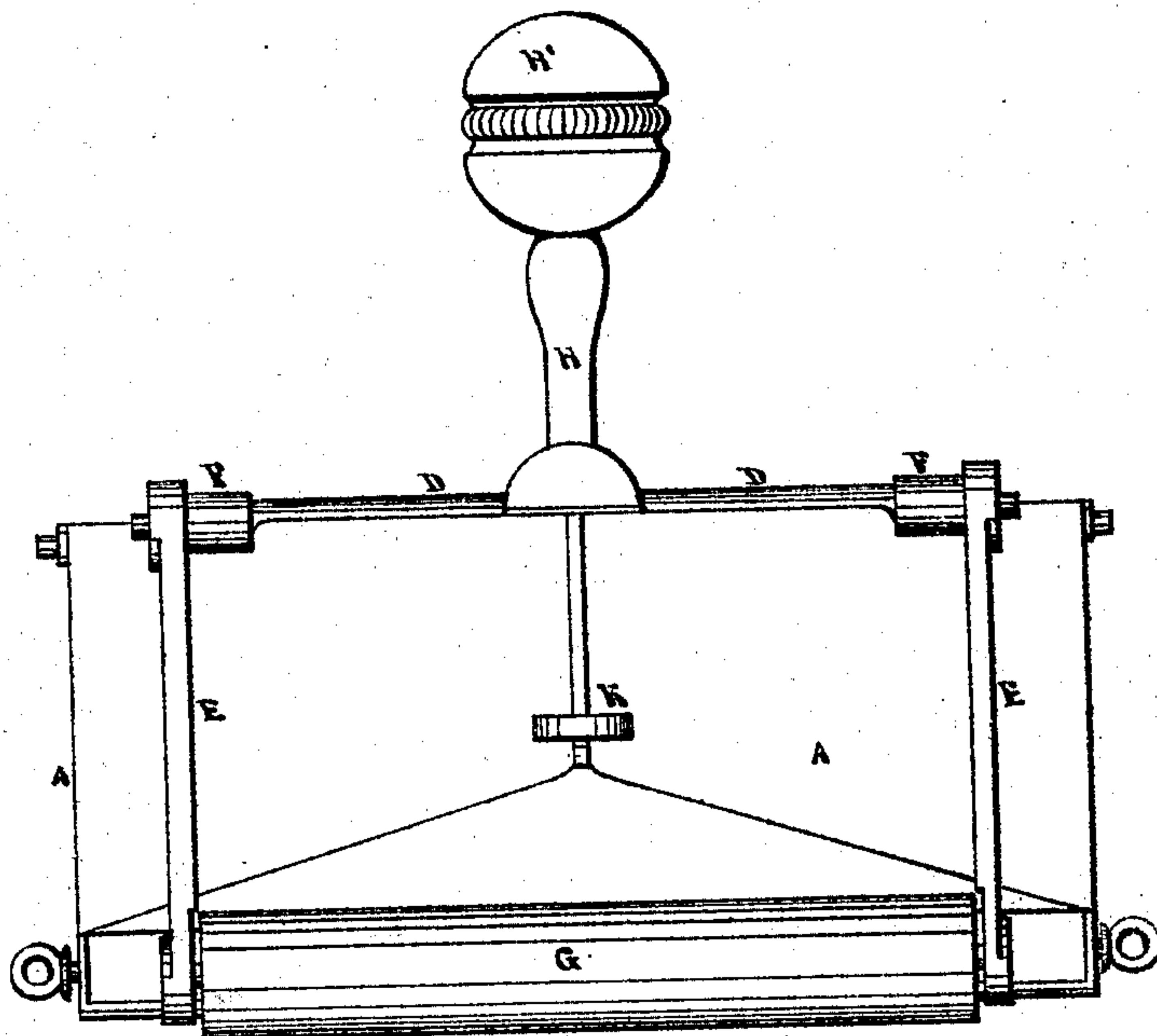
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Fig. 5



Witnesses.

*R. W. Steele*  
*J. G. Noyes*

Inventor.

*John T. Clarkson,*  
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# UNITED STATES PATENT OFFICE.

JOHN THORNE CLARKSON, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN SAND DREDGING-MACHINES.

Specification forming part of Letters Patent No. 125,023, dated March 26, 1872.

*To whom it may concern:*

Be it known that I, JOHN THORNE CLARKSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sand-Dredges; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a side elevation of my dredge in the operation of gathering a load of sand. Fig. 2 is a similar view of the same as when loaded and drawn out of the water. Fig. 3 is a plan view, and Fig. 4 is a general plan view, showing the operation of a pair of these dredges. Fig. 5 is a front-end elevation of the dredge.

Like letters refer to like parts in each figure.

The nature of this invention relates to a sand-dredge, to be used for gathering sand from the bed of a body of water, and to be operated from the shore, and is so constructed that the dredging process will only be carried on while the dredge is immersed. The invention consists, first, in the peculiar construction and form of a metallic dredge-boat; and second, in a peculiar roller and its attachments, whereby the dredge is lifted from the bottom, and is supported by the said roller as it leaves the water.

In the drawing, A represents a boat-shaped dredge, preferably made of boiler-plate. It is supported under the counter by a roller, B, which keeps that part clear of the ground. The bow has an incline or rake to its flat bottom, and terminates in an offset as it joins the sides of the dredge, the space in the hull below it being open. A knife, C, is secured across the front edge of the floor of the dredge the full length of this opening, to serve as a scraper to scoop up the sand in the advance of the dredge when in contact with the bottom. D is a shaft, journaled transversely across the top of the bow in bearings F, at the sides thereof. A rigid arm, E, is secured to the ends of said shaft, and to the lower ends of said arms there is journaled a hollow, air-tight, metallic roller, G, extending across the bottom of the bow, the arms being of such length that,

when brought to a perpendicular, the hollow roller G will rest upon the ground and raise the knife C clear from it, together with the body of the dredge. A central arm, H, projects from the shaft in line with the arms E, and carries a counter-weight, H', so proportioned that when the dredge is out of the water it will just counterbalance the weight of the arms E and roller G; but when the dredge enters the water, it will overbalance the said roller and throw it forward, allowing the front part of the dredge to drop until the knife engages with the bottom. K is an eye-bolt at each end, for connecting the dredge to wire tow-ropes. I I are ring-bolts at each side, by which the dredge may be slung to derrick-ropes and upset to dump its load.

The dredge thus constructed I use for gathering sand from the bed of a lake, for building and other purposes, two of them being used in the system shown in the general plan, Fig. 4, in which two clusters of piles are driven into the ground near the beach, and two parallel therewith out in the water, all four being provided with drums or sheaves, around which passes an endless wire-rope, a turn of which is also taken around the drum of a winch, between the shore-piles, operated by an engine or other motor.

The dredges as they move back and forth fill with sand, and as they reach the shore the counter-weight, as above described, allows the roller G to take the ground, and in the further advance of the dredge it is moved upon the two rollers B G. At the proper place the slings of a derrick are hooked into the eye-bolts I and the contents dumped.

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

1. The boat-shaped dredge A, provided with the roller B and knife C, constructed and arranged substantially as described and shown.
2. In a sand-dredge, the roller G, constructed substantially as described, for the purposes set forth.

JOHN THORNE CLARKSON.

Witnesses:

WM. H. LOTZ,  
JULIUS WELCKE.