

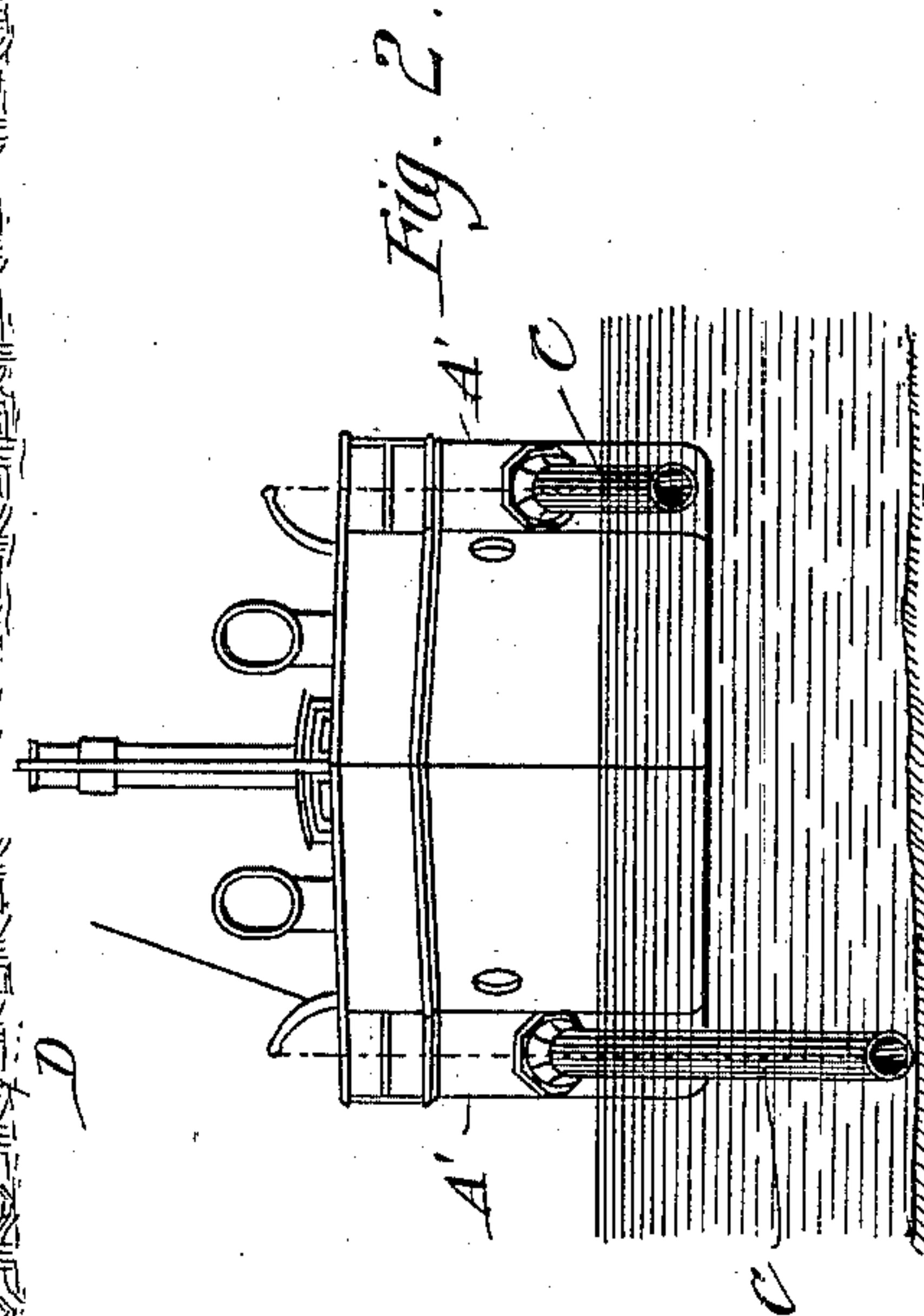
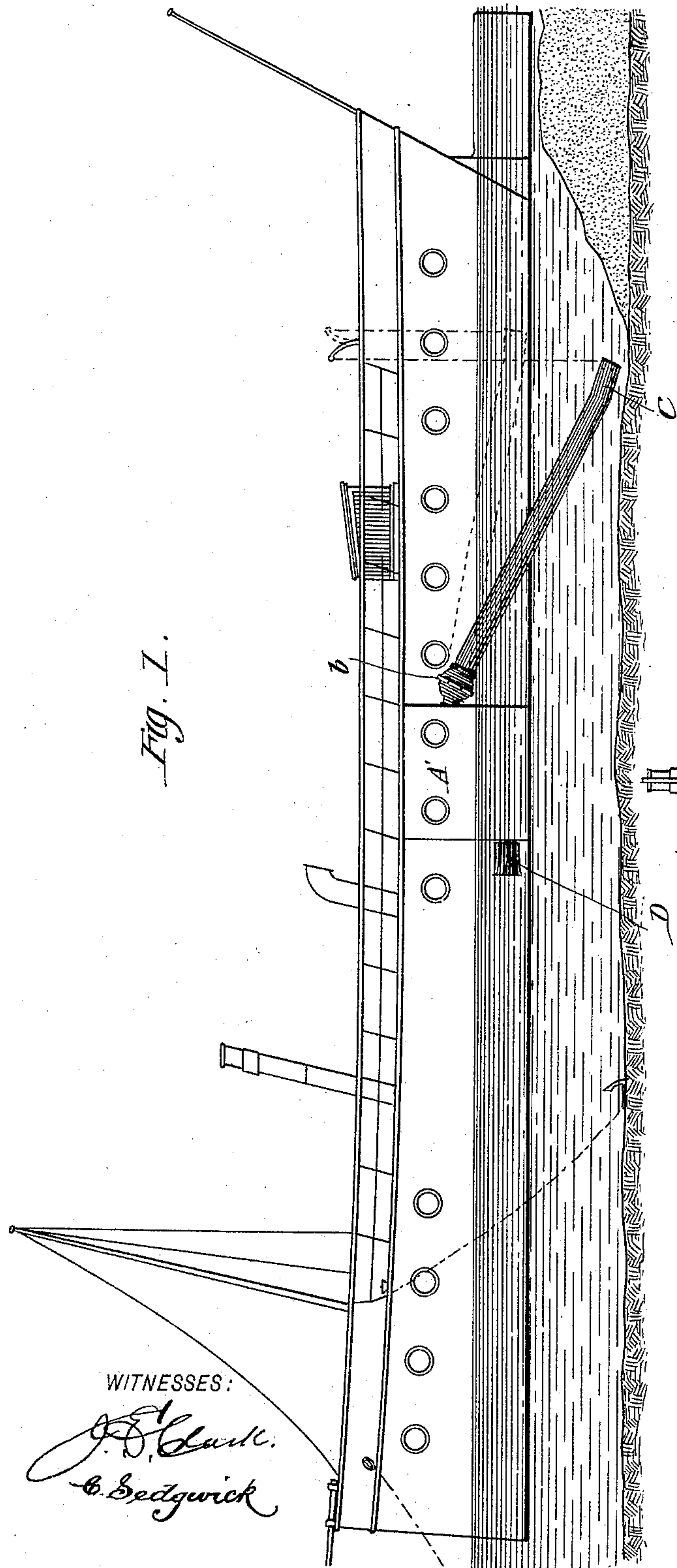
(No Model.)

2 Sheets—Sheet 1.

H. ROESSLER.  
DREDGER.

No. 445,862.

Patented Feb. 3, 1891.



WITNESSES:

*J. D. Clark.*  
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INVENTOR:

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ATTORNEYS





# UNITED STATES PATENT OFFICE.

HUGO ROESSLER, OF ERBACH-ON-THE-RHINE, GERMANY.

## DREDGER.

SPECIFICATION forming part of Letters Patent No. 445,862, dated February 3, 1891.

Application filed October 30, 1890. Serial No. 369,795. (No model.)

*To all whom it may concern:*

Be it known that I, HUGO ROESSLER, a subject of the Emperor of Germany, and a resident of Erbach-on-the-Rhine, Germany, have  
5 invented new and useful Improvements in Dredgers, of which the following is a specification.

My invention relates to improved means for deepening rivers and other water-ways,  
10 and for removing the sand, mud, and other material deposited, and which in some harbors form bars which greatly impede navigation.

The invention is based on the fact that  
15 sand and such material deposited on the bed of the river or harbor may be removed or dispersed by a sufficiently powerful stream of water directed against the material to be removed.

20 The object of my invention is to provide a simple and efficient means for forcing the water against the material; and to this end my invention consists in certain features of construction and combinations of parts which  
25 will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

30 Figure 1 is a side elevation of a vessel provided with the apparatus embodying my invention. Fig. 2 is an end view of the same. Fig. 3 is a sectional plan view of the same, and Fig. 4 is a plan showing several dredgers  
35 at work in removing a bank or bar.

A barge or vessel of any approved character is provided with ordinary centrifugal pumps A, which are driven by a steam-engine and are located as near as possible to  
40 the sides of the hull of the vessel, the said pumps having delivery-pipes B, which extend rearwardly from the side projections A' of the vessel, and suction-pipes D, which project forwardly from the said projections, although  
45 the position of the suction and delivery pipes may be reversed, if desired. These pumps are preferably placed horizontally to enable

the suction and delivery pipes to be arranged in as close proximity to the hull as possible, and the delivery-pipes B are provided with  
50 prolongations C, which may be of any desired length, and which are connected to the delivery-pipes by means of ball-and-socket joints, as shown at b, so that they may be brought into any desired position.

To operate the apparatus, the vessel is brought adjacent to a bank or bar to be removed. The elongated pipes C are directed against the bank and the pumps are started, when the water will be drawn through the  
60 suction-pipes D and discharged through the delivery-pipes B and the elongated pipes C against the bank, thus dispersing the material composing the bank. In case the material to be removed is too solid to be acted  
65 upon sufficiently by the stream from the pumps it may be loosened by employing cutters or other approved means.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A dredging apparatus comprising a vessel having offsets on opposite sides thereof, pumps located in opposite sides of the vessel and provided with suction and delivery pipes  
75 extending through the offsets, and pipes pivotally coupled to the delivery-pipes, substantially as described.

2. A dredging apparatus comprising a vessel having offsets upon opposite sides, centrifugal pumps arranged near the offsets and provided with suction and delivery pipes extending through opposite ends of the offsets, and prolonged pipes having a ball-and-socket connection with the delivery-pipes, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HUGO ROESSLER.

Witnesses:

FRANZ HASSLACHER,  
FRIEDRICH QUELL.