

No. 723,131.

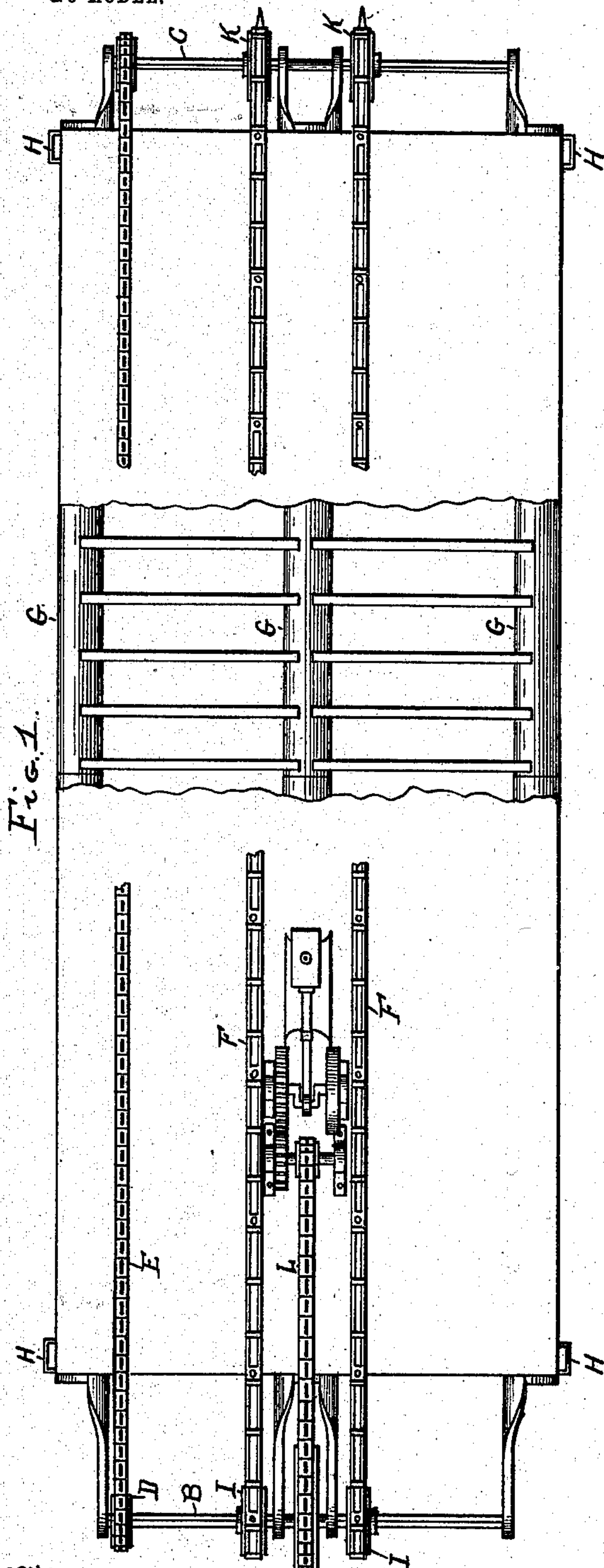
PATENTED MAR. 17, 1903.

E. BRACE.

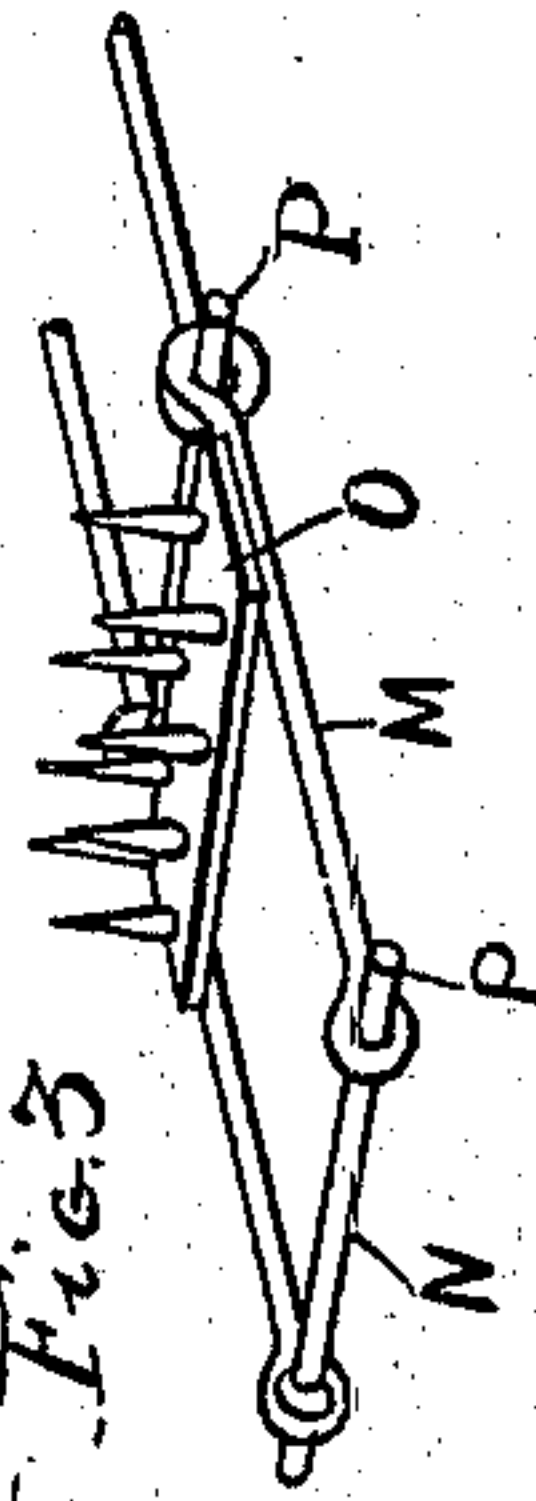
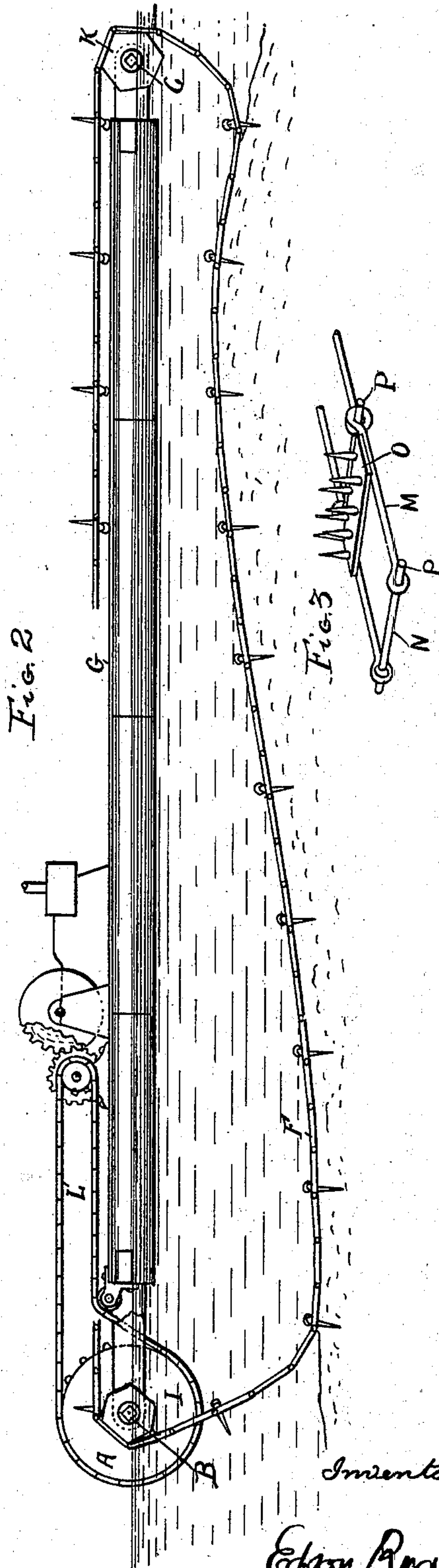
APPARATUS FOR REMOVING BARS AND SHOALS.

APPLICATION FILED JULY 2, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR REMOVING BARS AND SHOALS.

SPECIFICATION forming part of Letters Patent No. 723,131, dated March 17, 1903.

Application filed July 2, 1902. Serial No. 114,118. (No model.)

To all whom it may concern:

Be it known that I, EDSON BRACE, of the city of St. Louis, Missouri, have invented certain new and useful Improvements in Apparatus for Dredging Navigable Channels Through Bars and Shoals in either Rivers or Tideways, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to devices for dredging channels; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of this invention is to construct an improved device in the form of a light-draft barge or raft to be conveyed to any portion of the stream for dredging and cleaning the channels and especially for dislodging sand-bars.

Figure 1 is a top plan view of my invention with a part broken away, showing its construction. Fig. 2 is a side view of the same. Fig. 3 is a detail perspective view of one of the sections of the chain used in connection with my invention.

In the construction of the device, as shown, I provide a plurality of sectional pneumatic tubes G, being hermetically sealed and connected by joists in any desirable manner, and upon the same is placed the floor. Upon the floor is placed an engine or suitable motor driven by any convenient motive power, said engine or motor by means of intermediate gearing operating the chain L, which communicates with and operates a sprocket-wheel or drum A, being properly keyed upon a shaft B, which is supported and has bearing in the projecting arms secured to the ends of the pneumatic tubes G. Upon the opposite end of the pneumatic tubes are like projecting arms in which is supported a like shaft C. Said shafts B and C are each provided with a sprocket-wheel D, over which operates an endless sprocket-chain E. Each of said shafts B and C, as will be observed, have their portions between the outer and inner projecting arms formed square and are for the purpose of driving the sprocket-wheels I and K, mounted thereon, and at the same time allowing the sprocket-wheels to be shifted laterally while in motion. The sprocket-wheels I and K operate the dredging-chains F.

The dredging-chains F are composed of sections, and, preferably, each alternating sec-

tion is constructed with cross-bars N. Over the ends P thereof are placed the side rods M, and upon said side rods M is placed a plate O, having a plurality of projections or teeth, and as the chains are dragged the teeth come in contact with the sand or obstructions in the channel, loosening the same, and the said obstructions are carried away by the current of the stream.

The operation of my invention is as follows: The dredging-chains, as before stated, are placed in operation by means of the engine or motor, and as the channel is properly cleaned by the continuous dragging of the teeth the operator moves the chains laterally by shifting the sprocket-wheels I and K upon the shafts B and C in any desirable well-known manner. This might be done by means of a block and tackle or the use of crow-bars.

Upon the corners of the device are placed pockets H, through which may be placed spuds which are driven into the bottom of the stream to be used as anchors and retain the device in position while in operation. It may also be anchored in ways well known to the art.

I claim—

1. A device for dredging channels, comprising a frame, an engine mounted upon said frame, shafts carried at the ends of said frame, sprocket-wheels slidably mounted upon said shafts, dredging-chains operated by said sprocket-wheels, said engine operating the device, and means for anchoring the device, substantially as specified.

2. The improved dredger, consisting of a float having end bearings, shafts mounted in said bearings, sprocket-wheels slidably mounted upon said shafts, an endless toothed dredging-chain operated by said sprocket-wheels, and means for imparting movement to said shafts, substantially as specified.

3. The improved dredger, comprising a float made of sectional pneumatic tubes, a suitable motor mounted upon said tubes, and a suitable dredging device operated by said motor, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDSON BRACE.

Witnesses:

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