F. HINMAN.

DREDGE-BOAT ANCHOR.

No. 188,364. Patented March 13, 1877.

Fig. 1.

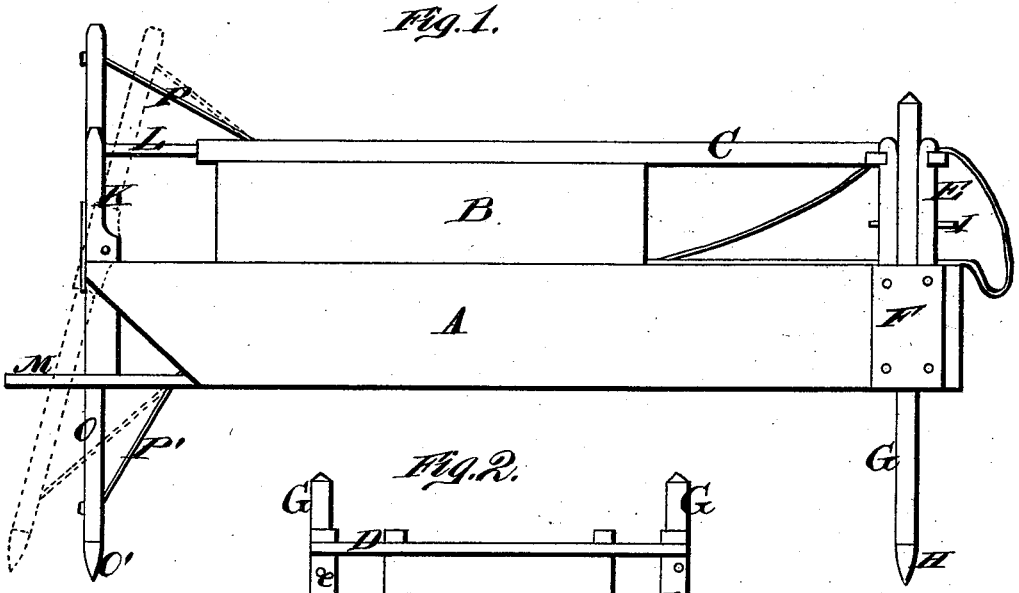


Fig. 2.

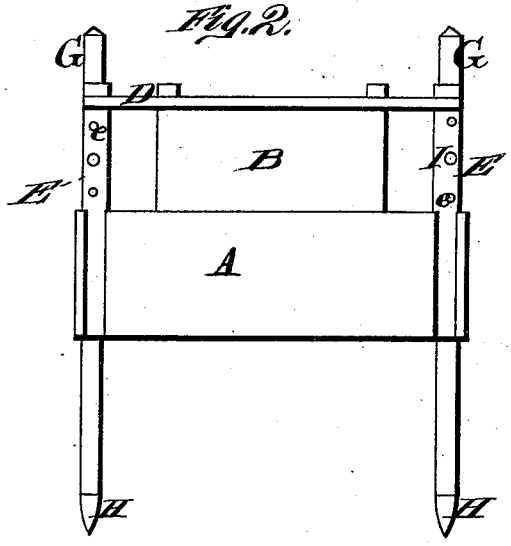


Fig. 3.

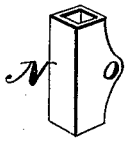
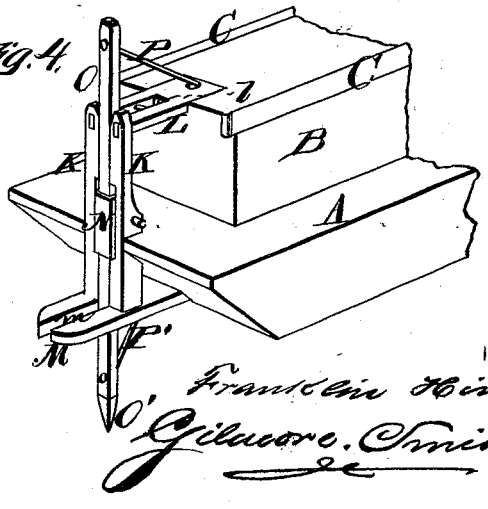


Fig. 4.



WITNESSES

Robert Everett

Fred. Acker, Jr.

INVENTOR.

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANKLIN HINMAN, OF LOCKPORT, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO THE POUND MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN DREDGE-BOAT ANCHORS.

Specification forming part of Letters Patent No. **188,364**, dated March 13, 1877; application filed January 27, 1877.

To all whom it may concern:

Be it known that I, FRANKLIN HINMAN, of Lockport, in the county of Niagara and State of New York, have invented a new and valuable Improvement in Dredge-Boat Anchors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved dredge-boat anchor, and Fig. 2 is an end view of the same. Fig. 3 is a detail view, and Fig. 4 is a perspective view thereof.

The object of this invention is to prevent a dredge-boat from being forced out of line by the current while moving forward from one position to another. This object I effect, mainly, by the employment of a spud or guide anchor on the lower end of a long shaft, at the rear of the dredge boat or scow, said spud shaft or shank being arranged to slide lengthwise in a pivoted sleeve or casing, and provided with ropes or cords or chains, whereby it may be operated.

In the annexed drawings, A designates the hull of a dredge-boat, and B designates an upper compartment, which rests thereon, and supports two longitudinal beams, C C, that extend beyond the front end of said compartment to points above the front end of said scow, where they are connected by a broad flat cross-piece, D. The ends of said cross-piece extend to the front corners of the said dredge-boat. Into each one of said ends of said cross-piece is set the upper parts of two standards, E, which have a small interval between them. The lower parts of said standards are rigidly attached to hull A, and are provided with a rigid shield, F, so as to form a guideway between each pair for a vertically-movable shaft or shank, G, which has on its lower end a point or spud, H. Said standards E of each pair are provided with corresponding perforations *e*, arranged in vertical series, and registering with similar holes in the said spud-shaft, which slides vertically between said standards. The said spud-shaft G may thus be locked in a raised, lowered, or intermediate position by means of a small rod or pin, I, which passes transversely through the registering-perforations in said standards and spud-shaft. The arrangement of said parts E, F, G, and H at each front corner of said dredge-boat is substantially the same, as shown in Fig. 2. To the middle of the rear of said dredge-boat, as clearly shown in Fig. 4, are secured two guide-standards, K K, which are braced at their upper ends by an extension-piece, L, rigidly attached to the rear end of compartment B, and are braced at their lower ends by a similar though longer extension-piece, M, rigidly attached to the rear end of hull A. Extension-piece L is longitudinally recessed at *l* in front of standards K K and extension-piece M is similarly recessed or cleft at *m*, behind the same. Standards K K are correspondingly recessed in their opposite edges or faces, so as to receive a pivoted shell, sleeve, or case, N, (shown in detail in Fig. 3,) and allow the backward and forward vibration of the same. In said shell or case, which is open at both ends, slides a shaft or shank, O, which has on its lower end a spud or point, O′, and has attached to its upper and its lower end, respectively, cords, or cords and chains P P, that extend to the front end of said dredge-boat, where they may be united so as to form a continuous cord, as shown in Fig. 1. Anti-friction rollers may be employed instead of case N.

The operation of the above-described devices is as follows: After the excavation has been completed within the reach of the scoop or dipper when located at one spot, the two front spuds or anchors H H are raised, and the rear spud or anchor O′ is allowed to drop to the bottom, or remain (as it is already) on bottom. The dredge-boat is now moved forward to its next position, during which movement the dipper at the front of said dredge-boat (not shown) and the rear spud O′, respectively, rest upon the bottom, and operate to keep the dredge-boat from being turned sidewise by the force of the current. The resistance of the bottom on which spud O′ rests causes shaft or shank O to assume an inclined position, as shown in Fig. 1. When the

dredge-boat has reached the desired position front spuds or anchors H H are dropped, so as to anchor said dredge-boat, and the shaft or shank O is raised and restored to a vertical position by pulling upon lower cord or rope or chain P′, so as to lift spud O′ from the bottom, and to be in readiness for use again. Pivoted case or sleeve N allows said shaft O to swing backward or forward from a vertical to an inclined position, and vice versa, as shown and described; and the said shaft can slip through the same far enough to rest upon the bottom without unnecessary strain until the movement of the dredge-boat is ended. Slotted pieces L and M guide and brace the movements of said spud-shaft O.

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

1. A dredge-boat, provided with an adjustable rear guiding-spud, substantially as and for the purpose set forth.

2. The combination of pivoted case or sleeve N, or its equivalent, with spud-shaft O sliding therein, and standards K K, constructed and arranged substantially as and for the purpose set forth.

3. The combination of sliding spud-shaft O, pivoted case N, or its equivalent, and cords or chains P P′, substantially as set forth.

4. The combination of sliding spud-shaft O, pivoted sleeve or case N, cords P P′, and slotted guide-pieces L and M, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANKLIN HINMAN.

Witnesses:
WM. E. MCCOMB,
GEO. T. MCCOMB.