H. ANDERSON.

Sheer-Boom.

No. 160,070. Patented Feb. 23, 1875

Fig 1

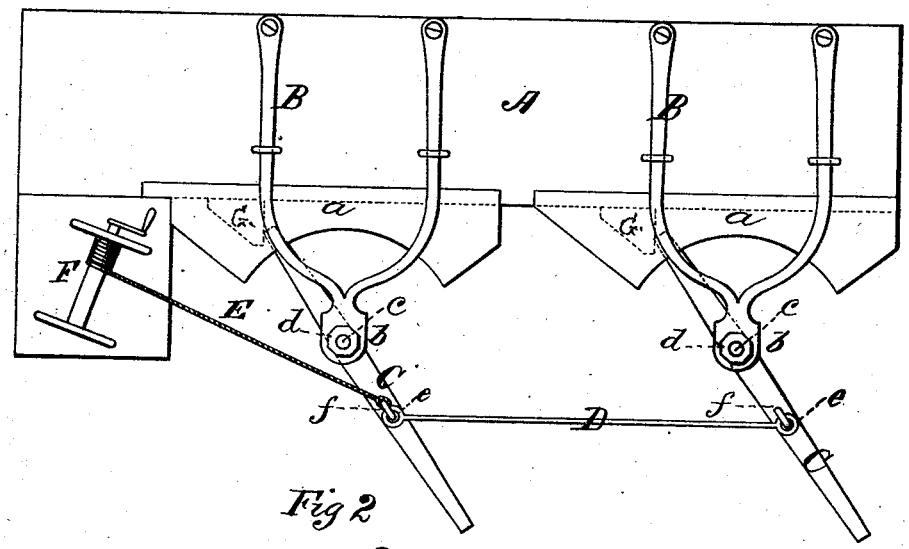


Fig 2

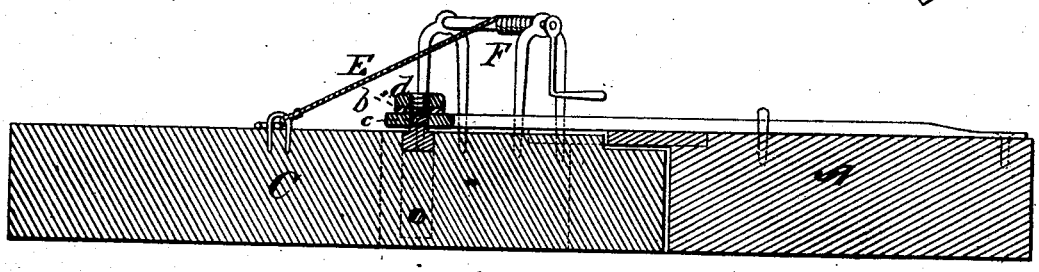
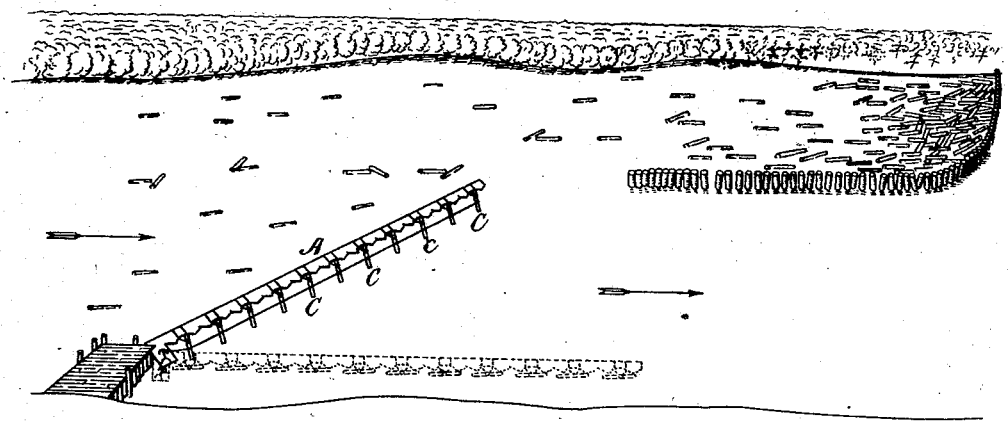


Fig 3



WITNESSES

Villette Anderson.

F. J. Masi

INVENTOR

Hector Anderson

Clipman Hosmer & Co.

ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

HECTOR ANDERSON, OF DURAND, WISCONSIN.

IMPROVEMENT IN SHEER-BOOMS.

Specification forming part of Letters Patent No. **160,070**, dated February 23, 1875; application filed January 9, 1875.

To all whom it may concern:

Be it known that I, HECTOR ANDERSON, of Durand, in the county of Pepin and State of Wisconsin, have invented certain new and useful Improvements in Fin-Rudder Booms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to improvements in booms which are designed for gathering and storing away in an inclosure logs floating down with the current of a river; and the nature of the invention consists in combining, with a sheer-boom adapted to float upon the surface of the water, and to be pivoted to a pier-head, a number of horizontally-vibrating fins or blades pivoted to the said boom, whereby they are adapted to be vibrated outward for the purpose of utilizing the force of the current for placing the sheer-boom in position for work, or inward toward the said boom, for the purpose of causing it to swing down stream out of the way when not in use, or to allow the passage of steamers or other vessels in navigable rivers, as will be hereinafter more fully explained.

In the annexed drawings, A designates a sheer-boom, preferably of wood, which is designed to be pivoted to a pier-head or other structure abutting into the river, and is provided with a number of platforms, *a*, having concavo-circular notches cut out of their rear edges. B designates a number of strong metallic U-shaped braces, rigidly secured to the upper surface of the said boom, in positions vertical to the length of the same, as shown in Fig. 1. The rounding portion of these braces projects a suitable distance beyond the rear edge of the sheer-boom, and is provided with an eye, *b*, adapted to receive a pintle, *c*, rigidly secured in the usual well-known manner to a horizontally-vibrating fin-rudder, C, which pintle is prevented from escaping from eye *c* of the brace B by means of a nut, *d*, applied upon its upper screw-threaded end, as shown in Fig. 1.

Fins C are, preferably, of wood, and of rectangular form, and are of considerable width. They are also arranged vertically in relation to the surface of the water, pintles *c* being secured thereto at or near the center of their length, for a purpose hereinafter made clear.

D indicates tie-rods pivotally attached to fins C for the purpose of securing uniformity of vibration by means of hooks *e* upon their ends, which are adapted to be engaged with eyebolts *f* on the upper edges of the said fins, and E designates a cable or rope of sufficient strength, rigidly secured to one or all of the said fins, passing thence to a windlass, F, upon the shore end of the sheer-boom, to which it is also secured.

The sheer-boom above described being in the position shown in Fig. 3 in dotted lines, it is caused to swing up stream by the force of the current in the following manner, to wit: Fins C are released from the restraint of cable E, when they are immediately vibrated outward, by the force of the current, into the position shown in Fig. 1, when they are checked from further vibration by means of stops G, (shown in dotted lines, Fig. 1,) rigidly secured to the rear or down-stream edge of sheer-boom A. In this position the fins C are broad side to the current, and, being there held by means of the said stops, they are subjected to the full force of the current, thereby throwing the free end of the said boom out into the stream, until the force of the current against its front edge, and against the broad side of the blades, becomes equal, when the boom will cease moving.

When from any cause it becomes necessary to throw the boom out of the current, windlass F is actuated to take up the slack of cable E, whereby fins C are caused to vibrate inward upon the said boom until they are parallel thereto, when they will receive the full force of the current, and will cause the latter to swing rapidly inward along shore, out of the way.

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

The fin C, pivoted near its center to the brace B, in combination with the sheer-boom A and stop G, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of November, 1874.

HECTOR ANDERSON.

Witnesses:
C. G. MAYBURY,
M. G. NORTON.