

No. 607,269.

Patented July 12, 1898.

C. O'BRIEN.  
BOOM.

(Application filed Nov. 13, 1897.)

(No Model.)

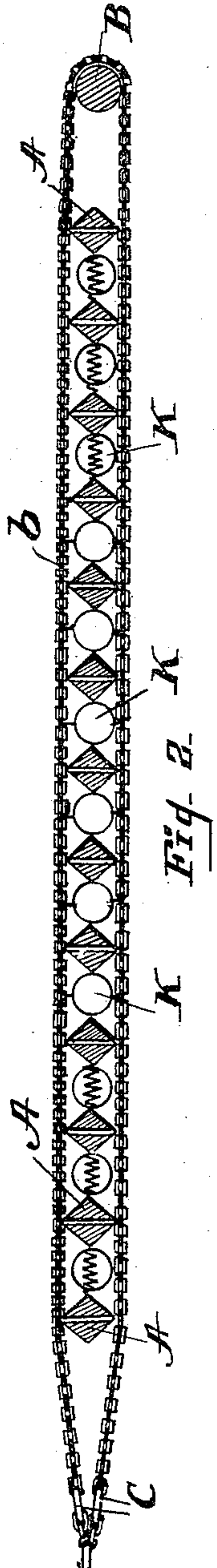


Fig. 2.

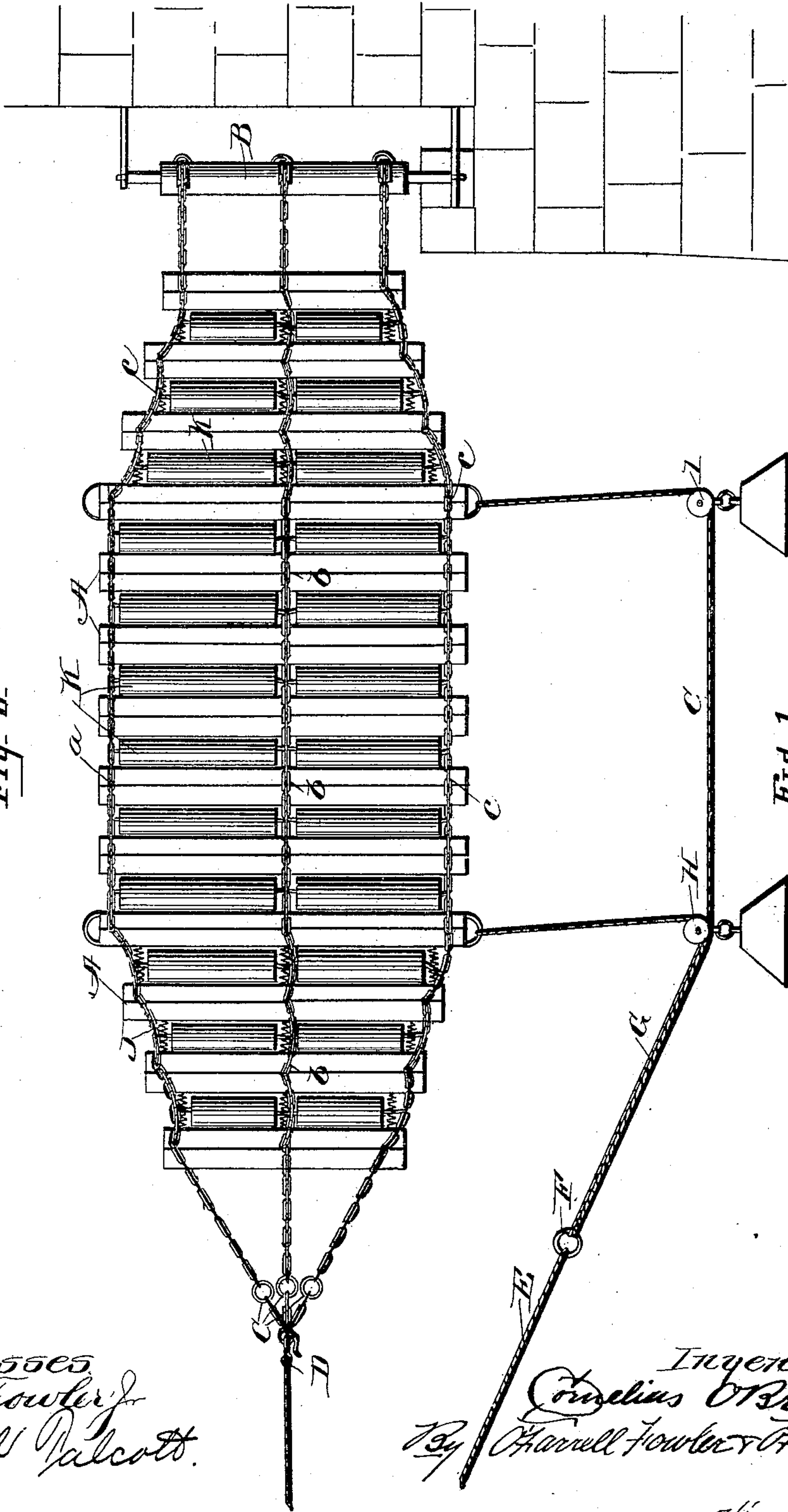


Fig. 1.

Witnesses  
J. M. Fowler  
Russell Walcott.

Inventor  
Cordellius O'Brien  
By Harrell Fowler & Harrell  
Attorneys.



# UNITED STATES PATENT OFFICE.

CORNELIUS O'BRIEN, OF ROCK CREEK, SOUTH DAKOTA.

## BOOM.

SPECIFICATION forming part of Letters Patent No. 607,269, dated July 12, 1898.

Application filed November 13, 1897. Serial No. 658,419. (No model.)

*To all whom it may concern:*

Be it known that I, CORNELIUS O'BRIEN, a citizen of the United States of America, residing at Rock Creek, in the county of Miner and State of South Dakota, have invented an Improvement in Booms, of which the following is a specification.

The object of my invention is to provide a defense for harbors, rivers, and lakes; and it consists in the stretching of a flexible boom across the navigable part or mouth of the harbor, river, or lake which it is desired to defend at such an angle that when the ship collides with the said boom it will glance along the same, and should it strike with sufficient force the undercurrent or tow made by the velocity of the ship it will turn her over.

With this object in view my invention consists in certain novel features and organizations, the details and operations of which will be fully set forth in the claims hereinafter.

In the drawings forming a part of this specification, Figure 1 is a side elevation of the complete device. Fig. 2 is a longitudinal sectional view.

The boom consists of a series of square timbers A, of any size and length desired, placed at regular intervals apart and held together by suitable chains *a*, *b*, and *c*, secured to the edges of the timbers at the top, bottom, and center by bolts projecting through the same and in like manner securing the chains to the opposite sides. While I have shown my invention and more particularly described it as being constructed with three chains, I do not limit myself to any particular number, as two or more may be used with the same result. At one end of the boom the chains are looped around a pivoted post B and are held thereon by a ratchet or any other suitable means, the post being strongly secured and supported by masonry, while at the other end of the boom the chains are provided with large links C, which are adapted to be secured in the hook on the end of the hoisting-cable D. The advantage of securing the chains in this manner is to afford means whereby the boom may be brought broadside to the ship, thus affording greater resistance.

When it is desired to allow a ship to pass, the boom is drawn to the bottom of the channel by the cable E, which is secured to a ring F, having a cable G secured thereto, the ends of which pass through a double tackle H, held

in the bottom of the channel by a weight. One end of the cable is then passed up and connected to the boom. The other end is passed along the bottom of the channel through another blocking-tackle I, which in like manner is held in the bottom of the channel, and it is then also passed up and connected to the boom.

At each end of the boom intermediate a series of timbers A and parallel with the chains *a*, *b*, and *c* are spiral or coiled springs J, connected by their ends in any suitable manner to the timbers. These springs are of sufficient length that when in the state of expansion the chains form a safety, thereby rendering the boom more flexible and relieving the strain from the chains, thus giving a more steady resistance. Interposed intermediate the timbers and springs are suitable buoys K, connected to the chains by links and adapted to support the boom.

It will thus be seen that I provide a boom which is exceedingly cheap and simple in its construction and one that will proficiently perform all of its intended functions.

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

1. In a boom the combination of a series of timbers held together by a number of chains, bolts passing through the said chains and timbers, coiled or spiral springs interposed between and secured to the said timbers parallel to the chains, and buoys secured between the springs and timbers, substantially as shown and described.

2. In a flexible boom, the combination of a series of timbers held together by chains, said chains forming loops at one end of the said boom which pass around a pivoted post, and provided at the other with enlarged links, a second cable connected to a ring which is secured to a cable having both ends passed through a double blocking-tackle, one end passed up and connected to the boom, the other passed along the bottom of the channel, through a single blocking-tackle and connected to the boom, substantially as described and for the purpose set forth.

CORNELIUS O'BRIEN.

Witnesses:

BEN BERNARDY,  
PETER BACH.