

H. I. Crandall.

Reefing Sails.

Nº 12,020. Patented Dec. 5, 1854.

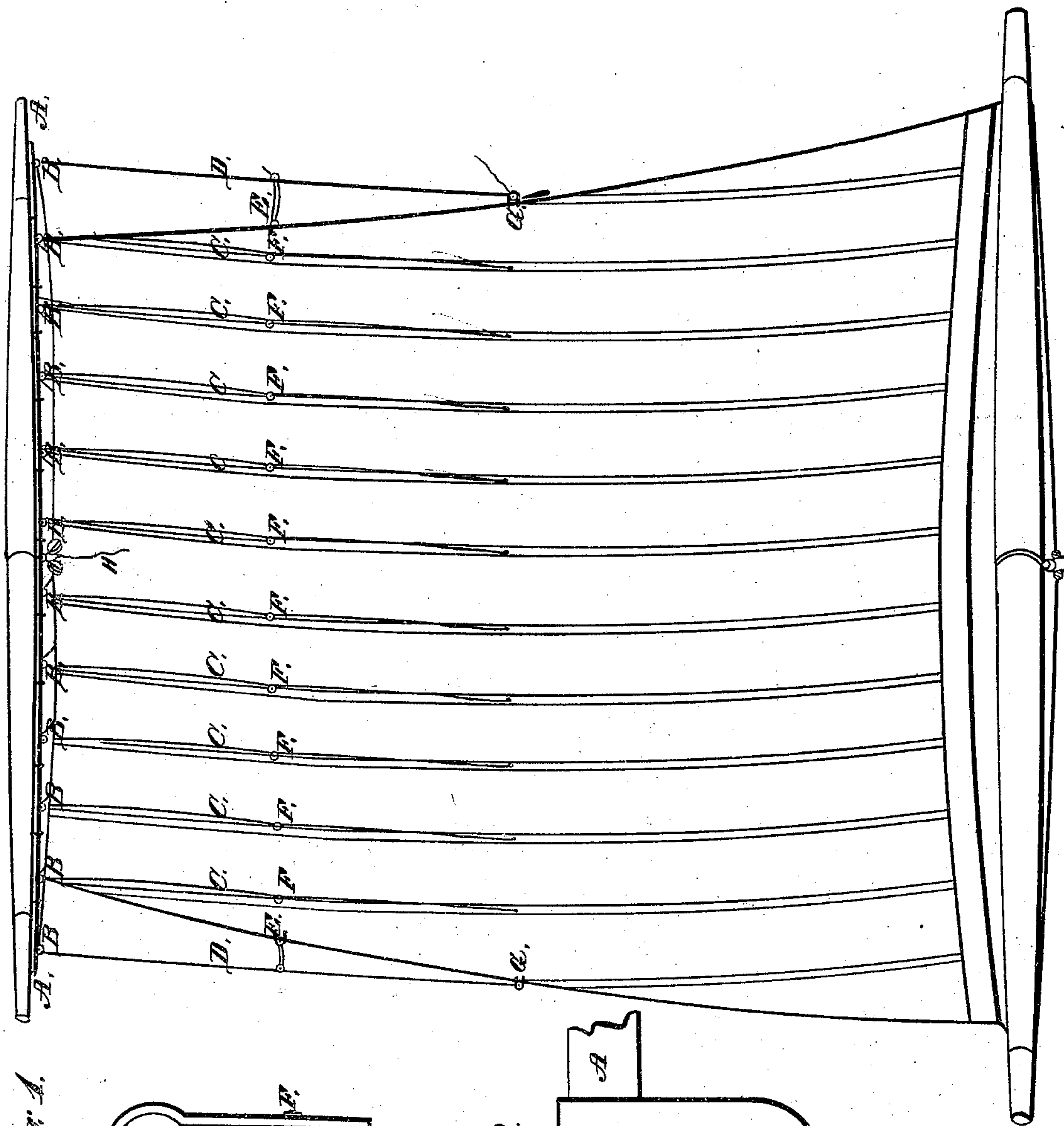


Fig. 1.

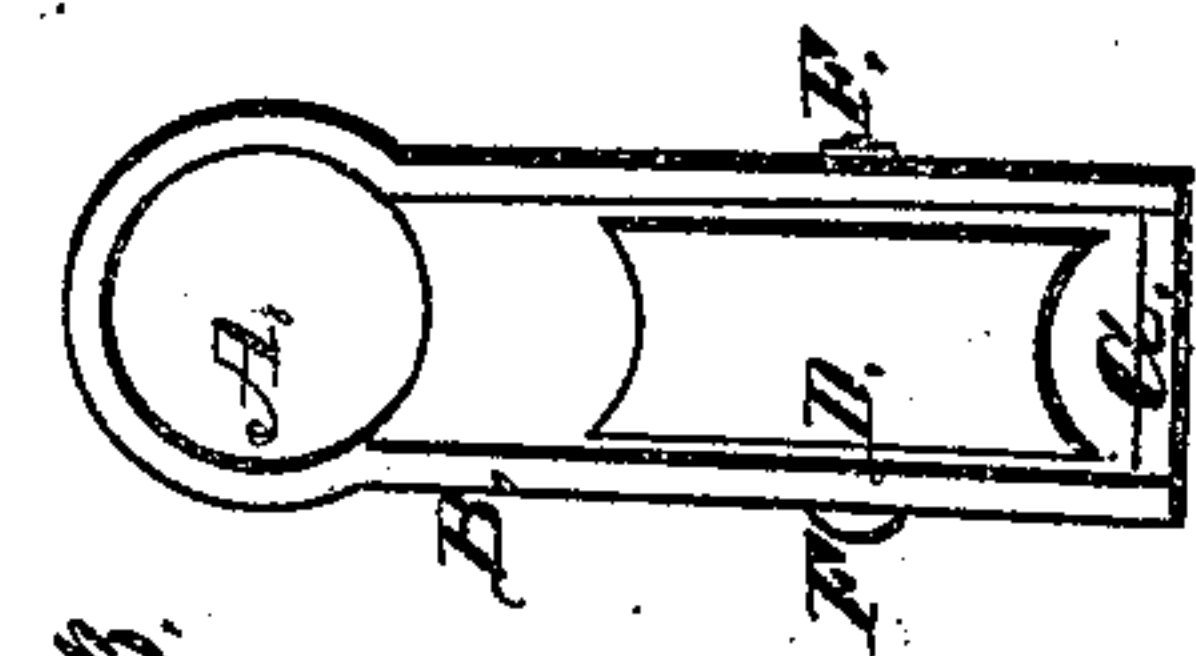
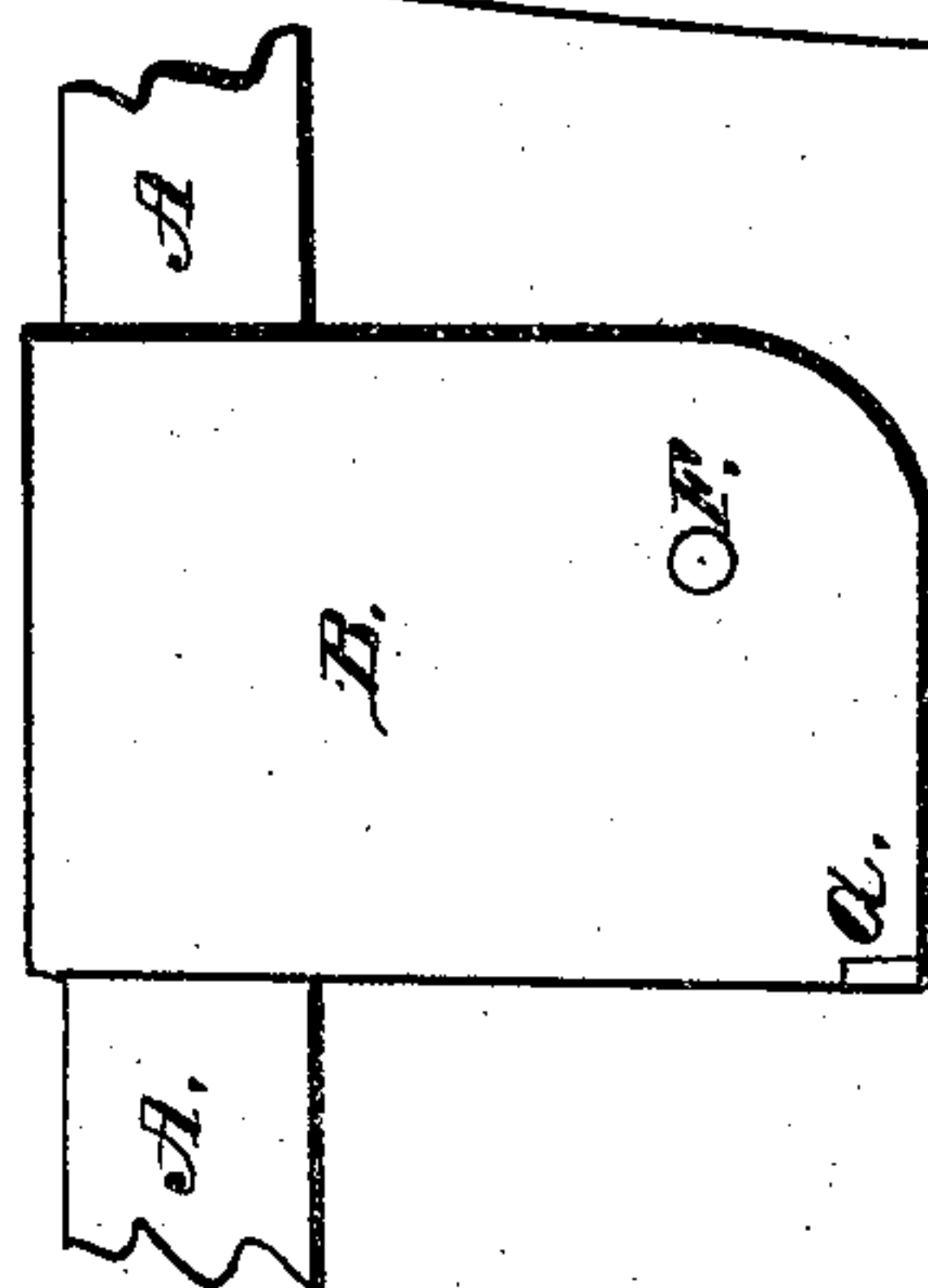


Fig. 2.

Fig. 3.



UNITED STATES PATENT OFFICE.

HORACE I. CRANDALL, OF EAST BOSTON, MASSACHUSETTS.

ARRANGEMENT FOR REEFING SAILS.

Specification of Letters Patent No. 12,020, dated December 5, 1854.

To all whom it may concern:

Be it known that I, HORACE I. CRANDALL, born in Westerly, State of Rhode Island, and now resident in East Boston, in the
5 county of Suffolk and State of Massachusetts, have invented a new and Improved Method for Reefing Sails; and I do hereby declare that the following is a full and exact description thereof, reference being had
10 to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1st is a view of the after side of a sail with improved method attached.

15 Attached to the under side of the yard by means of eyelets or bands is a metallic rod A on which are leaders or blocks B for the reef lines C and the reef pennants D to lead through. Attached to the first or up-
20 per reef cringles E are straps with leaders for the reef pennants D to lead through. The reef points in other reefs than the close reef will have a leader spliced or twisted into the after end which will be drawn close
25 up to the after side of sail and there secured by knotting or sewing. The forward end will hang at liberty as usual. The reef pennants D will be attached to the close reef cringles G from thence lead up through the
30 leaders attached to the other reef cringles E then through the outer blocks on the bar and thence through a block at or near the center of the yard and connecting together be led to the deck with purchase to suit. The reef
35 lines C will be attached to the close reef, from thence lead through the leaders at-

tached to the other reefs, and through the leaders on the bar and connect with the reef pennant. The leaders B will be so constructed as to be moved along the bar to any
40 place required and there secured by keying or a shoulder.

Fig. 2d is a side view of the leaders B in which A is the rod on which the block slides and B is the shell of the block. 45

Fig. 3d is an end view of levers B in which A is the rod D the sheave and B the shell E E the pen to secure the sheave and G is a bar across the shell to keep the reef line in its place. To close reef the sail, haul
50 upon the purchase at H as the yard comes down or sheets are slacked away until the reefs are all up to the yard. If only one or two reefs are required secure the points of those reefs and reef cringles and the sail
55 can then be set to those reefs.

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

The arrangement of the rod with the leaders on the underside of the yard; and the
60 manner of reeving the reef lines and pennants attached to the close reef, through the leaders connected with the other reefs; and the connecting the reef points with the leaders for the reef lines on the after side of the
65 sail; and the peculiar arrangement together of the forementioned parts.

HORACE I. CRANDALL.

Signed in presence of—

JOHN A. LORING,
JONATHAN SMITH.