

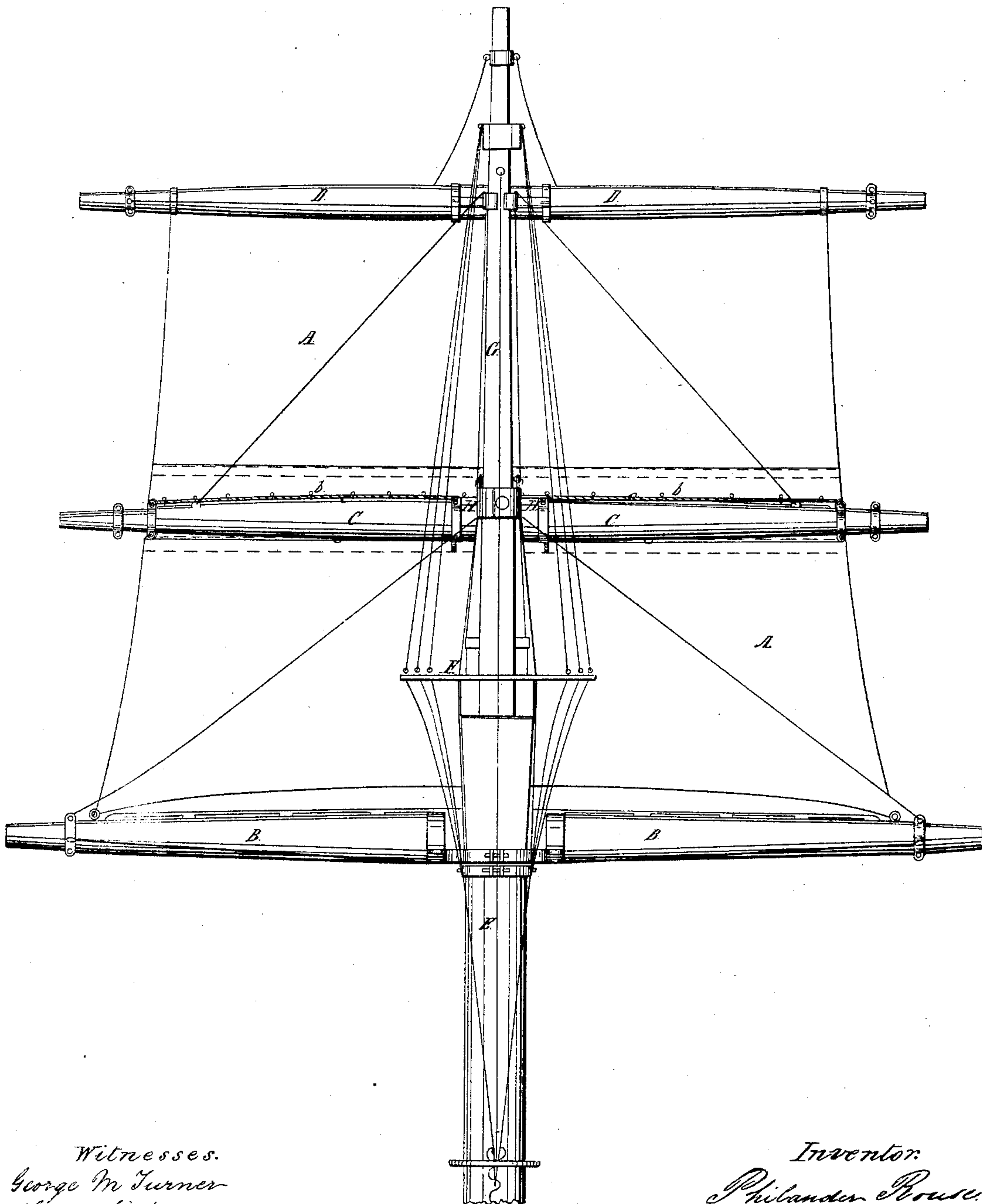
*P. Rowse,  
Sails & Rigging.*

*3 Sheets. Sheet 1.*

*N<sup>o</sup> 34,924.*

*Patented Apr. 8, 1862.*

*Fig. 1.*



*Witnesses.  
George M. Turner  
Hiram Wilkinson*

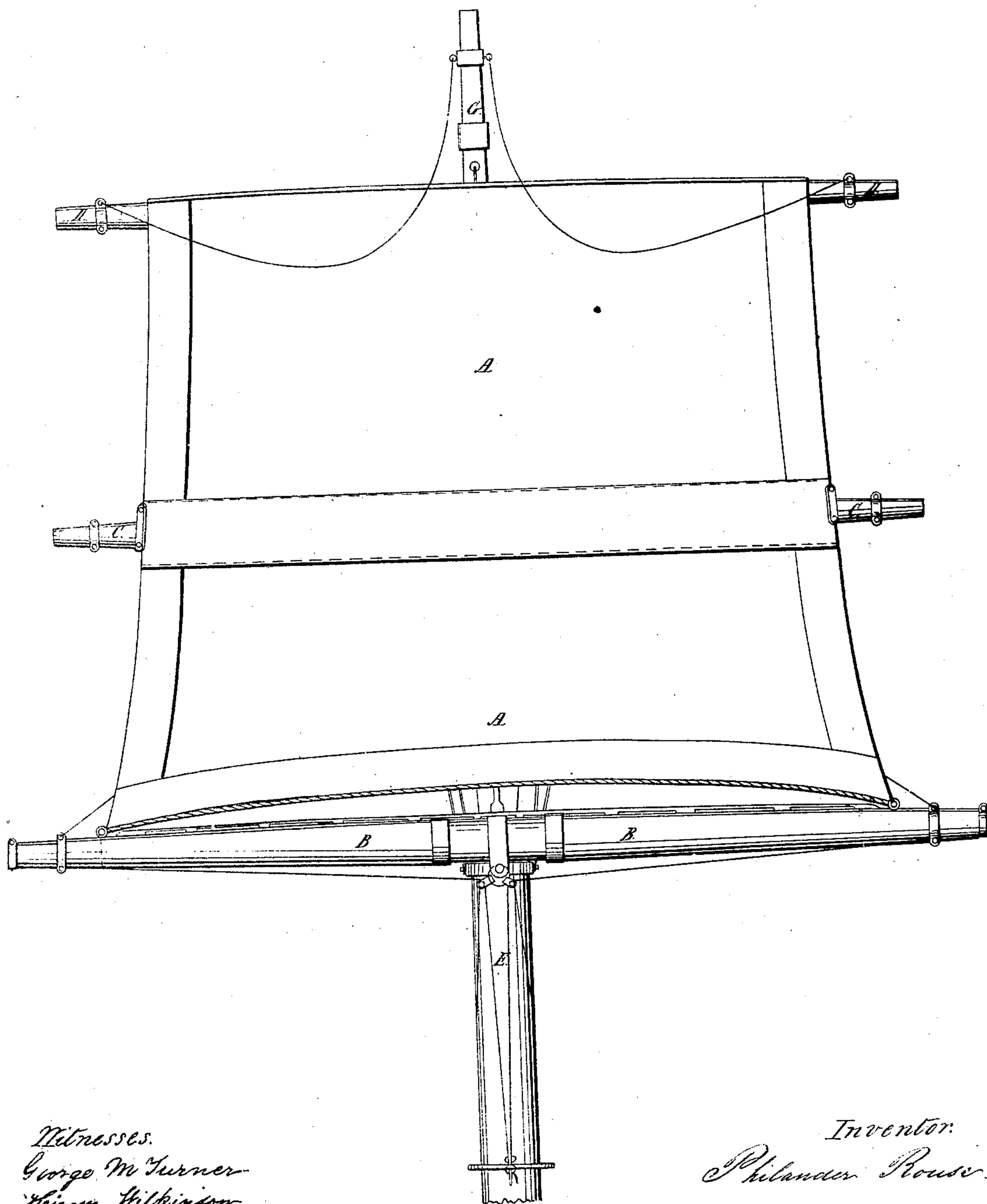
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*N<sup>o</sup> 34, 924.*

*Patented Apr. 8, 1862.*

*Fig: 2.*



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N<sup>o</sup> 34, 924.

*Patented Apr. 8, 1862.*

*Fig. 3.*

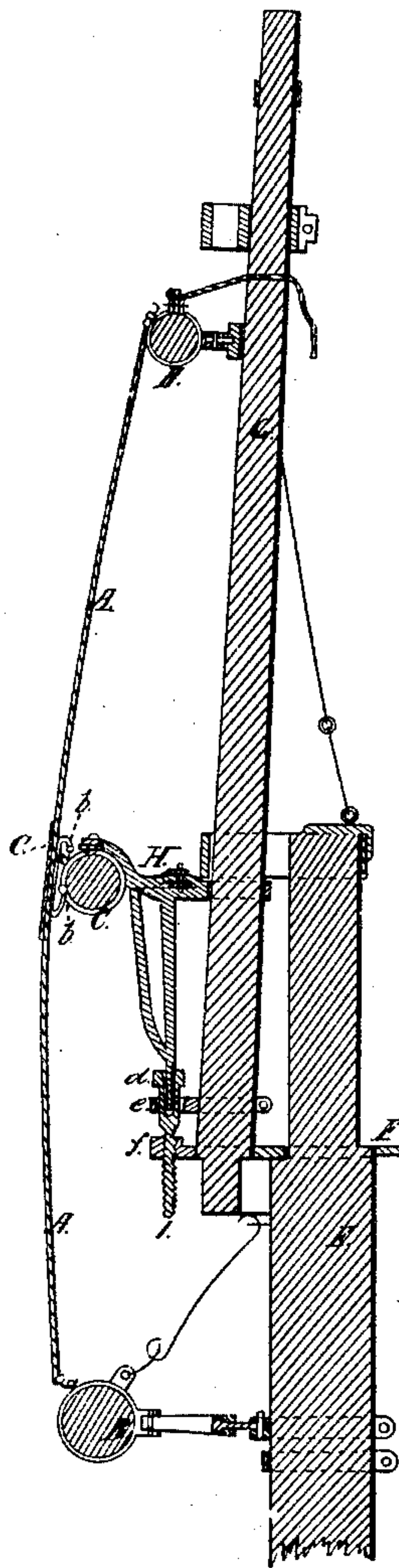
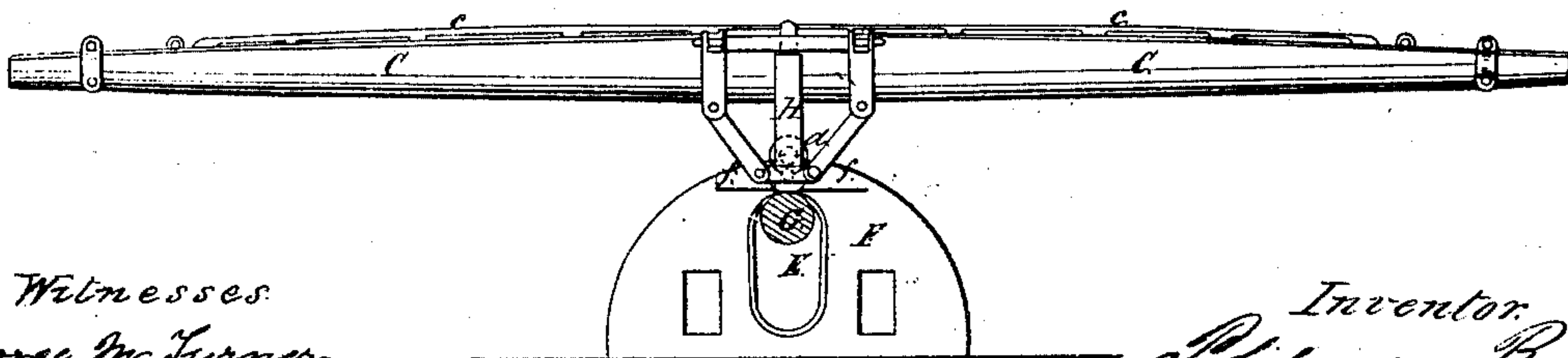


Fig: 4.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

PHILANDER ROUSE, OF MACEDON, NEW YORK, ASSIGNOR TO HIMSELF AND  
WILLARD S. HIGGINS, OF NORTH BRIDGEWATER, MASSACHUSETTS.

## IMPROVED TOP-SAIL RIG.

Specification forming part of Letters Patent No. 34,924, dated April 8, 1862.

*To all whom it may concern:*

Be it known that I, PHILANDER ROUSE, a citizen of the United States of America, and a resident of Macedon, in the county of Wayne and State of New York, have invented a new and useful Top-Sail Rig; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation of a mast and top-mast having my invention applied to them. Fig. 2 is a rear view of the top-sail. Fig. 3 is a vertical section taken through the mast, top-mast, three yards, and the top-sail. Fig. 4 is a top view of the auxiliary yard and its connection with the top-mast and the cap of the mast.

The nature of my invention or improvements consists, first, in a combination of three yards with a single top-sail extending from the upper to the lower of the said yards, and so as to be capable of being used either with or without the auxiliary yard; second, in the arrangement and combination of an elevating-screw or its mechanical equivalent with the mast or its cap, the auxiliary yard, brace, or supporter, and the auxiliary and upper and lower top-sail yards, substantially as hereinafter explained.

When an extra yard is employed between a yard and top-sail yard, it has been customary to employ two separate top-sails, one extended from the top-sail yard to the auxiliary yard, while the other extended from the latter yard to the yard below it. Under these circumstances the two top-sails cannot be set without the extra yard; but with my invention I not only retain all the advantages of two top-sails with the extra yard and its fellow yard, but I am able, whenever the same may be desirable, to lower down or dispense with the extra yard and set the full sail. In running down "the trades," or on such parts of the ocean where the winds are generally steady and constant, it becomes desirable to lower the extra yard down to the deck, as by so doing I lessen the top hamper and thereby diminish the strain on the masts and standing rigging.

In carrying out my invention I make use of one top-sail A, to extend from the lower yard B to the upper or top-sail yard D and

alongside of the auxiliary yard C. Along the middle of the after-side of the top-sail, and so as to run from one leech-rope to the other, I provide the sail with a band *b*, raised at its middle and provided with a series of eyelets, grommets, or lacing holes, to enable the sail to be laced or affixed to the extra yard, the latter being furnished with a lacing rail or bar *c*, extending along it, as shown in Fig. 4.

The head and foot of the sail are to be attached to the top-sail yard and the lower yard in the usual manner, the top-sail yard being so applied to the top-mast as to be capable of being either lowered downward toward or raised upward from the auxiliary yard, the object thereof being to enable the upper half of the sail to be reefed, which it will be by simply dropping the top-sail yard down to the auxiliary yard, in which case the said upper half will drop in front of the lower half of the sail.

E exhibits the mast, F the cap, G the top-mast, and H the brace or supporter, of the auxiliary yard. The said brace at its lower end is pivoted or stepped into the head *d* of an elevating-screw I, which extends through a strut *e*, and screws into the cap, or a suitable box *f*, fixed thereon, the brace being properly constructed to allow of the necessary bracing around of the yard. The object of this application of the elevating-screw is to enable the extra yard to be elevated, in order to take up any stretching of the lower part of the sail, as while a sail may be in use, and particularly when new, it is apt to stretch or become slack, in which case the extra yard-elevating device affords a ready means of raising the yard, and thus taking out the slack of the sail. This may be done by revolving the screw so as to cause it to rise upward. Should it be desirable to further strengthen the sail, it may have a band applied to its front side and opposite to where the eyelet-band is arranged.

Other advantages of my rig over the double top-sail rig may be thus stated: No necessity exists for mutilating a top-sail in order to apply it to my invention. With the single top-sail there is no open space directly over the extra yard, as there is when two top-sails are used with such a yard. Consequently the wind can act on the sail with better effect. It is frequently the case while a vessel may be



in tropical latitudes or sailing in the trades that a single top-sail rig is preferable to the two top-sails and extra yard. A few minutes or a short period of time with my rig suffices without any material inconvenience to separate the extra yard from the top-sail and send such yard down to the deck, there being little or no necessity in the meantime of unbinding the halyards of the upper yard. With my improved rig there is no such a wrinkle in the sail when reefed as commonly takes place with the "double top-sail rig." With my invention the extra yard may be used for the top-sail yard should the latter become either injured or carried away.

I do not claim the combination of an auxiliary yard, a lower yard, and a top-sail yard with two separate top-sails, one extending

above and the other below the auxiliary yard; but

I claim—

1. The third or intermediate yard, the lower yard, the top-sail yard, and the single top-sail as arranged and applied together, substantially in manner and so as to operate as hereinbefore specified.

2. The arrangement and combination of the elevating-screw I or its mechanical equivalent, with the mast or its cap, the three yards, and the auxiliary yard supporter or brace H, the whole being to operate substantially as specified.

PHILANDER ROUSE.

Witnesses:

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HIRAM WILKINSON.