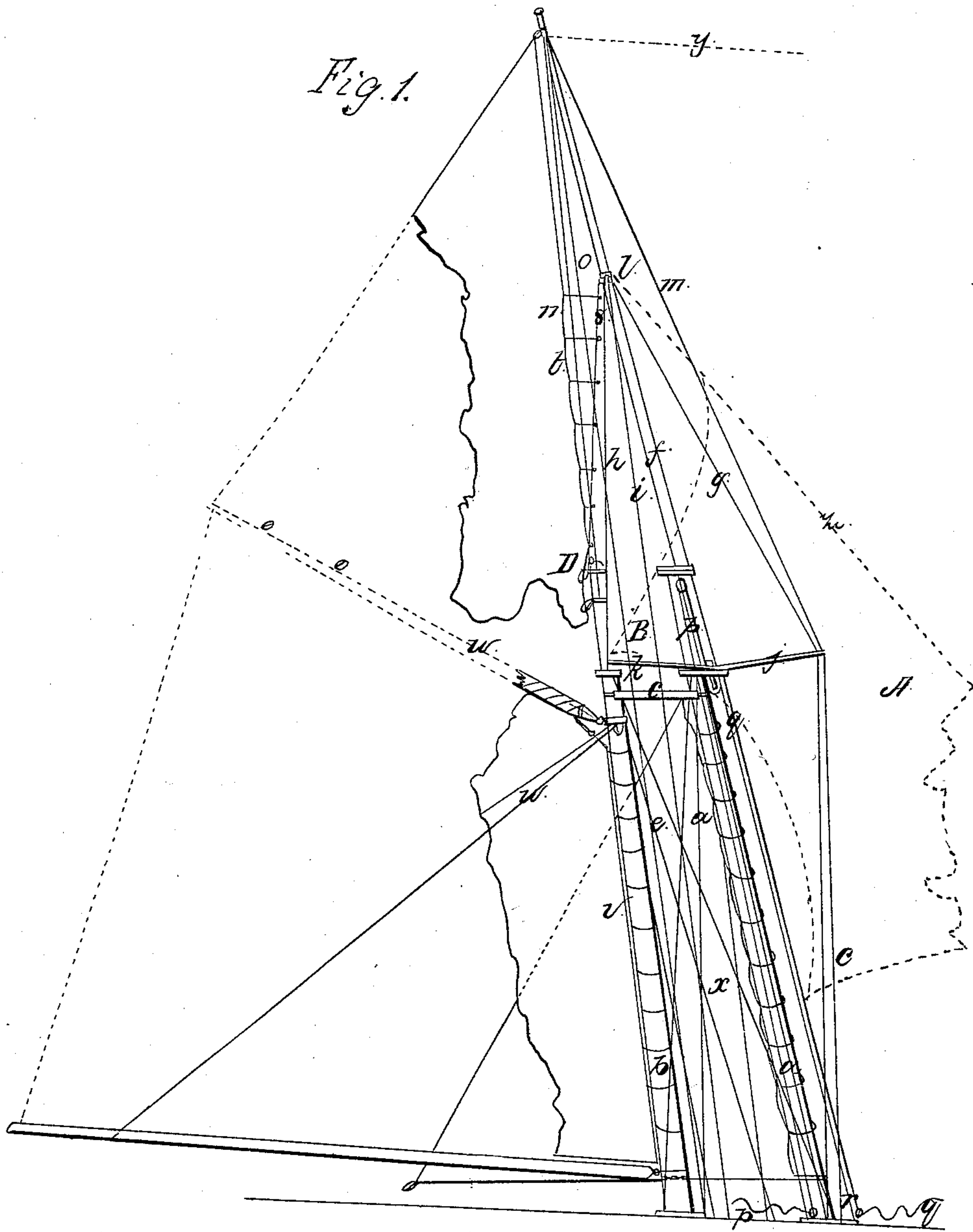


*G. T. May Sheet 1,
2 Sheets.
Mast & Rigging.
N^o 35,882. Patented Jul. 15, 1862.*



*Witnesses:
L. W. Holland
John Pratt.*

*Inventor:
George T. May*

G. T. May. Sheet 2,
Mast & Rigging. 2 Sheets.
N^o 35,882. Patented Jul. 15, 1862.

Fig. 3.

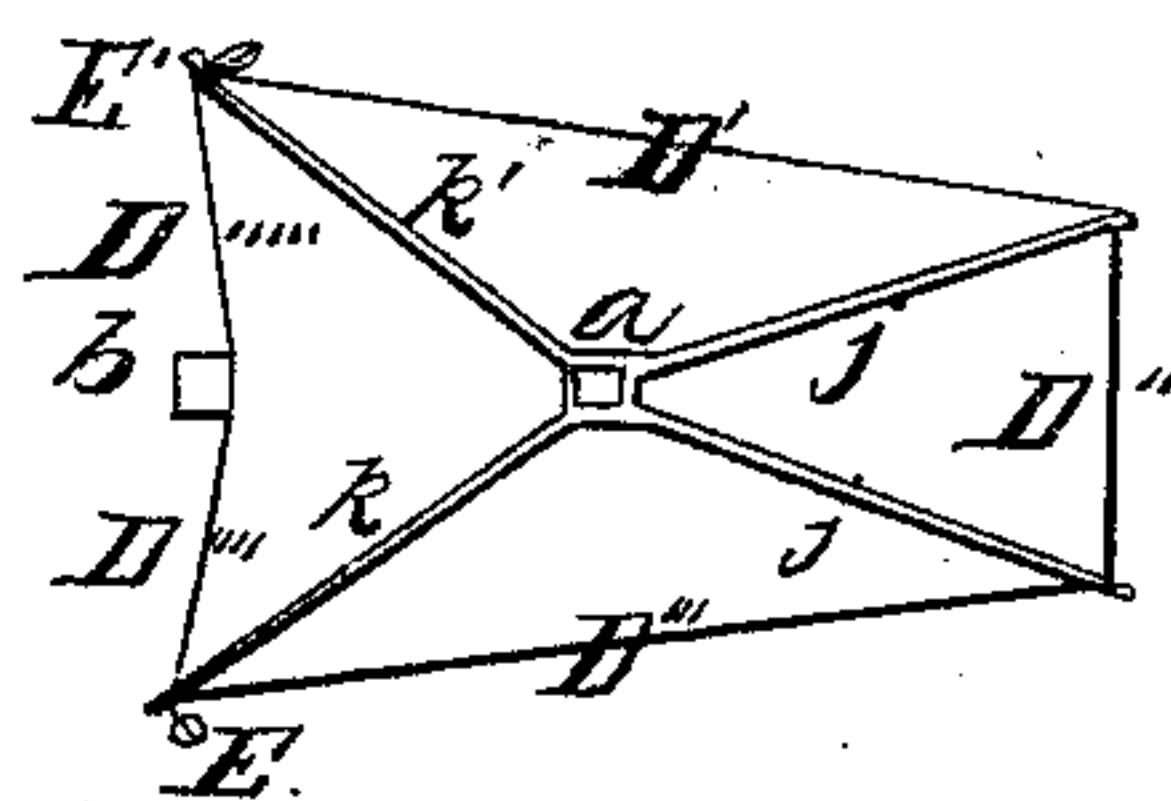
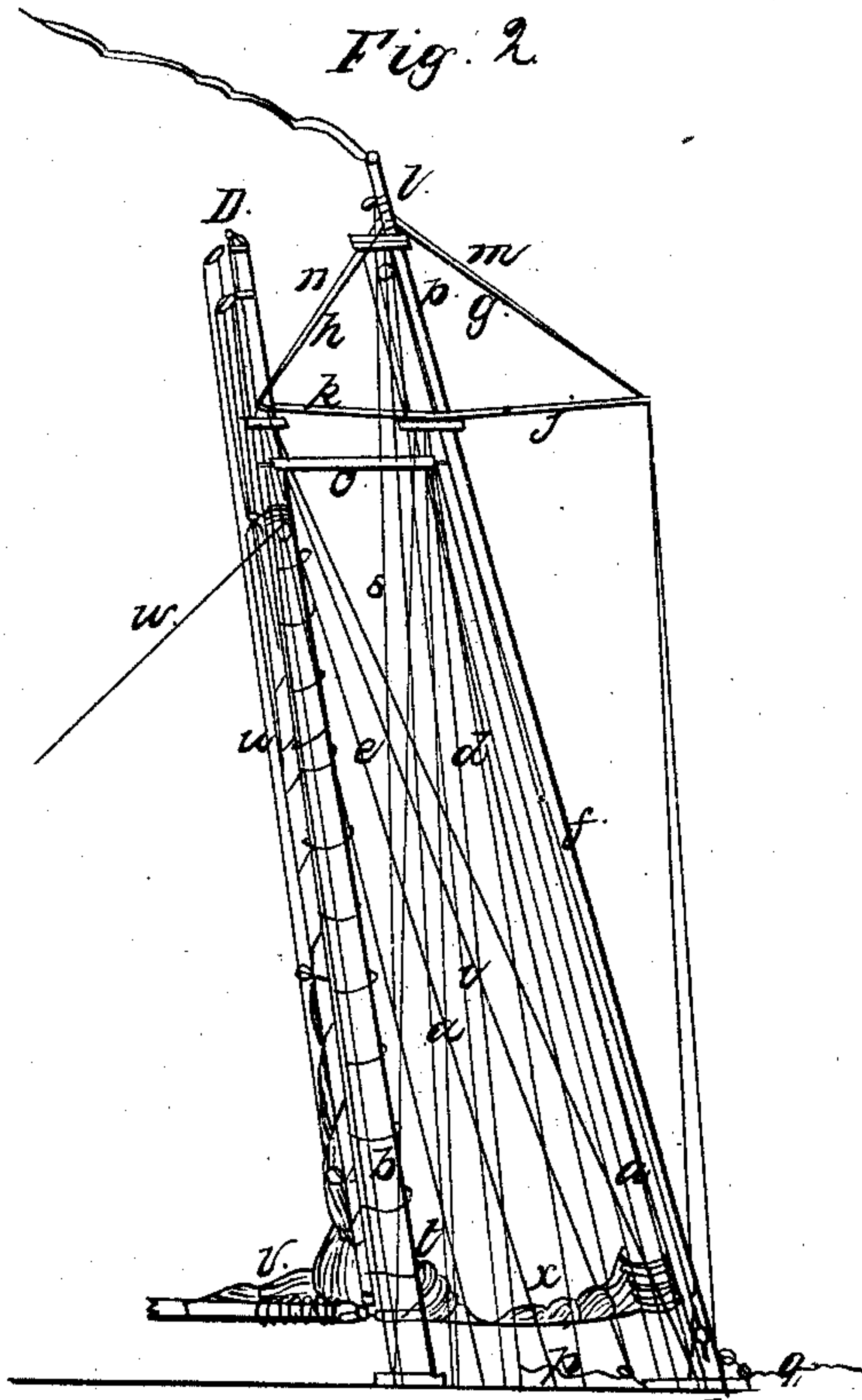
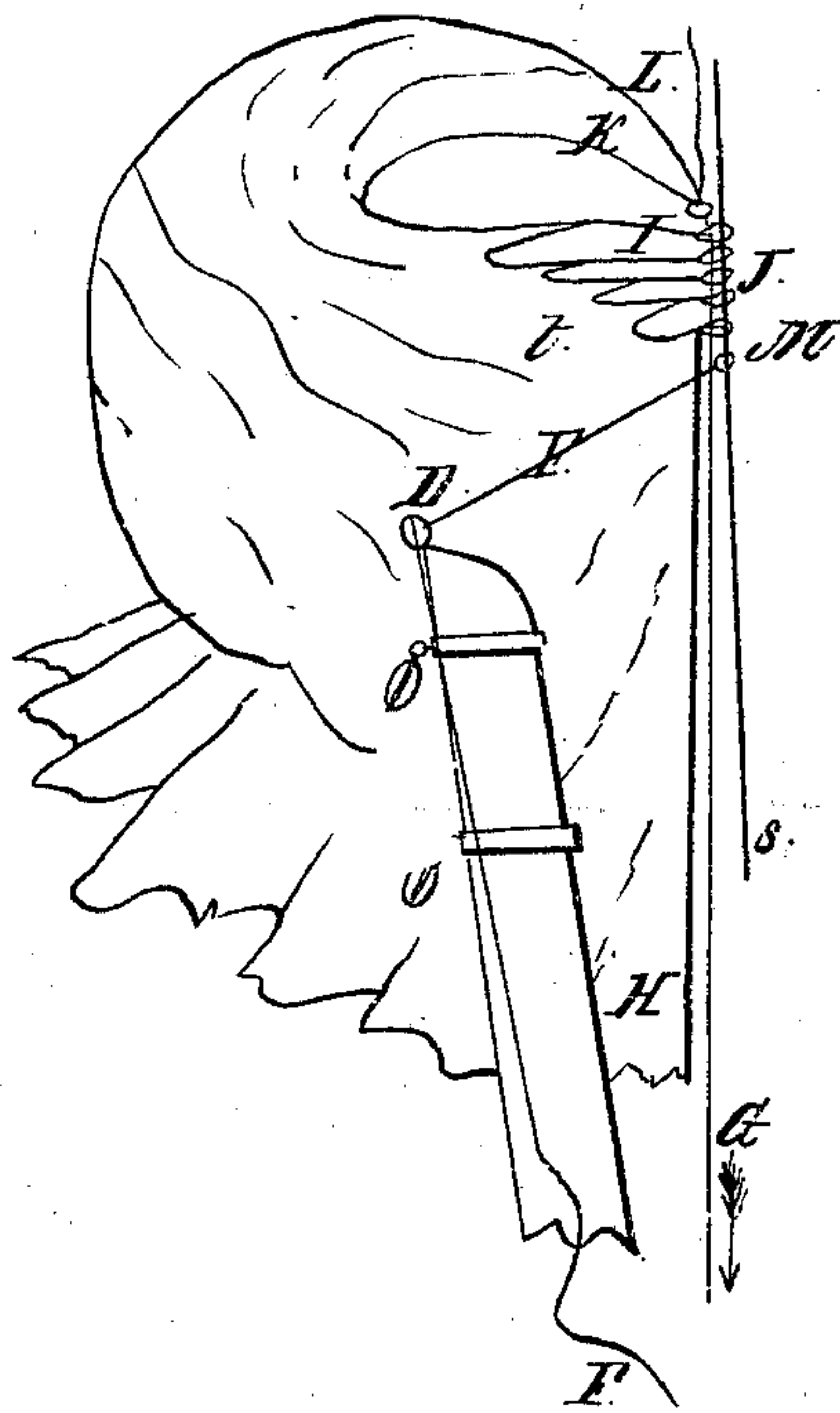


Fig. 4.



Witnesses:
Wm. Holland
John Pratt

Inventor:
George T. May

UNITED STATES PATENT OFFICE.

GEORGE T. MAY, OF TOMPKINSVILLE, NEW YORK.

IMPROVED MAST AND RIGGING.

Specification forming part of Letters Patent No. 35,882, dated July 15, 1862.

To all whom it may concern:

Be it known that I, GEORGE T. MAY, of Tompkinsville, in the county of Richmond and State of New York, have invented certain new and useful Improvements in the System of Masts and Rigging known as the Union Rig, (for which Letters Patent of the United States were issued to me on the 28th day of April, 1857, No. 17,165;) and I do hereby declare that the following is a true and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, the drawings referred to being those which did accompany the original specification.

This my improvement consists in substituting for the doubled upper masts and rigging of the original invention a single spar and a simplified arrangement of rigging and fittings thereto, retaining still the doubled lower masts, and adapting to them for the peculiar purposes of the invention the substituted spar, rigging, and fittings.

Figure 1 is a side view elevation of a "set" of masts thus improved. The parts of the original invention still retained are the "spring-mast" or proper lower mast, *a*, the "right mast" or pivot-mast *b*, the "bridge," with hounds and clamps, as originally, *c*, and the lower rigging, *d* and *e*, and only these. The parts now newly introduced are the upper mast, *f*, rigging on each side, as follows: top-mast forward stays, *g*, top-mast back-stays *h*, top-mast breast-rigging *i*, on each side a forward outrigger, *j*, a back outrigger, *k*, the collar *l*, to which all the top-mast rigging is fitted; on each side a top-gallant forward stay, *m*, back-stay *n*, and breast-shroud *o*, the permanently-rove mast-rope *p*, the mast down-haul *q*, the step *r*, the gaff-topsail jack-stay *s*, and upon the extreme head of the pivot-mast the bull's-eye *D*, (the use of the two last-named parts being explained in Fig. 4.) The upper mast is so proportioned in length that when the heel is lowered into the step *r* on deck the eyes of the top-gallant rigging will be brought so closely down to the lower cap that there will be left just good room for the collar *l* with the top-mast rigging to lie snugly on the cap without disturbing the top-gallant rigging from its place on the hounds of the top-gallant mast, the collar *l* being fit-

ted for traveling up and down along the top-gallant mast both in striking and resetting the upper mast. In order to illustrate more clearly the mode of constructing and working the improved rig, the following-named parts not comprised in the claimed improvement are also shown in this figure, (Fig. 1:) the luff of the gaff-topsail *t*, the gaff *u*, the luff of the gaff-sail *v*, the boom-topping lift *w*, the storm-sail *x*, the lines where optional or temporary stays may be placed, *y* and *z*, and the place and outline of a midsail, A B C.

Fig. 2 is a side view elevation of substantially all the parts shown in Fig. 1, but representing the improved set of masts when snugged, the upper mast being housed and all sails furled. The letters of reference apply to the same parts as in Fig. 1.

Fig. 3 is a plan view of the outriggers. *j j'* are the forward outriggers; *k k'*, the back outriggers; *D' D'' D''' D'''' D'''''*, the ridge-lines, affording a mutual support or steadiment to the outriggers. *E E'* are blocks for the upper sheet of the midsail. The top-mast and top-gallant forward stays and back-stays are led through the ends of the outriggers to their respective setting-up places below, as indicated in Figs. 1 and 2. *a* and *b* are the lower mast-heads.

Fig. 4 is an enlarged side view of the extreme head of the pivot-mast, and is illustrative of the device used for operating the gaff-topsail with this improvement and for preserving, essentially, the pivot-line for the wing of canvas. *D* is the bull's-eye, as in Figs. 1 and 2. *t* is the luff of the gaff-topsail; *s*, the gaff-topsail jack-stay extending from the collar *l* of the top-mast to the deck. *F F* is the guess-rope having on its upper end the thimble *M*, through which the jack-stay is rove and being itself led through the bull's-eye *D* to the deck. *K* is the head of the gaff-topsail. *H* is the tack of the same; *L*, the gaff-topsail halyards; *G*, the down-haul. There are rings or hanks *J* traveling on the jack-stay *s*, to which the sail is attached by the lanyards *I*. It will be readily perceived by nautical experts that on setting up the guess-rope *F F* (on deck) the jack-stay *s* will be brought to the bull's-eye *D* on the head of the pivot-mast. Then, by hoisting on the halyards, the sheet being home, the sail will be set with its luff substantially on the pivot-line; also

it will be apparent that by letting go the guess-rope, sheet, and halyards the sail can be at once hauled down to the deck by means of the down-haul and the tack and may be stowed ready for resetting, as at *t* in Fig. 2.

The advantages that I claim for this improvement are the attainment of a more complete efficiency and by the employment of more simple means than heretofore.

I do not now claim as my invention the specified parts: *a*, the lower mast; *b*, the pivot-mast; *c*, the bridge with hounds and clamps; *d* and *e*, the lower rigging, because the use of these is already secured to me by Letters Patent dated April 28, 1857. Neither do I claim, broadly, for the use of any of the other parts described either separately or in any combination among them only.

What I do claim as my invention, and desire now to secure by Letters Patent, is—

1. The use, in combination with the lower mast, *a*, the pivot-mast *b*, the bridge with hounds and clamps *c*, and the lower rigging,

d and *e*, of the following-named specified parts: the upper masts, *f*, the top-mast forward stays, *g*, the top-mast back-stays *h*, the top-mast breast-rigging *i*, the forward outriggers, *j j'*, the back outriggers, *k k'*, the collar *l*, the ridge-lines *D' D'' D''' D'''' D'''''*, the top-gallant forward stays, *m*, the top-gallant back-stays *n*, and the top-gallant breast-shrouds *o*, substantially as described, and for the purpose set forth.

2. In combination with the above, the gaff-topsail jack-stay *s*, the bull's-eye *D*, the guess-rope *F F*, the thimble *M*, the lanyards *I*, and the rings *J*, substantially as and for the purpose set forth.

3. In combination with all the above, the mast-rope *p*, the mast down-haul *q*, and the step *r*, substantially as and for the purpose specified.

GEORGE T. MAY.

Witnesses:

A. CREYPER,

PHILPOT WOLFE.