

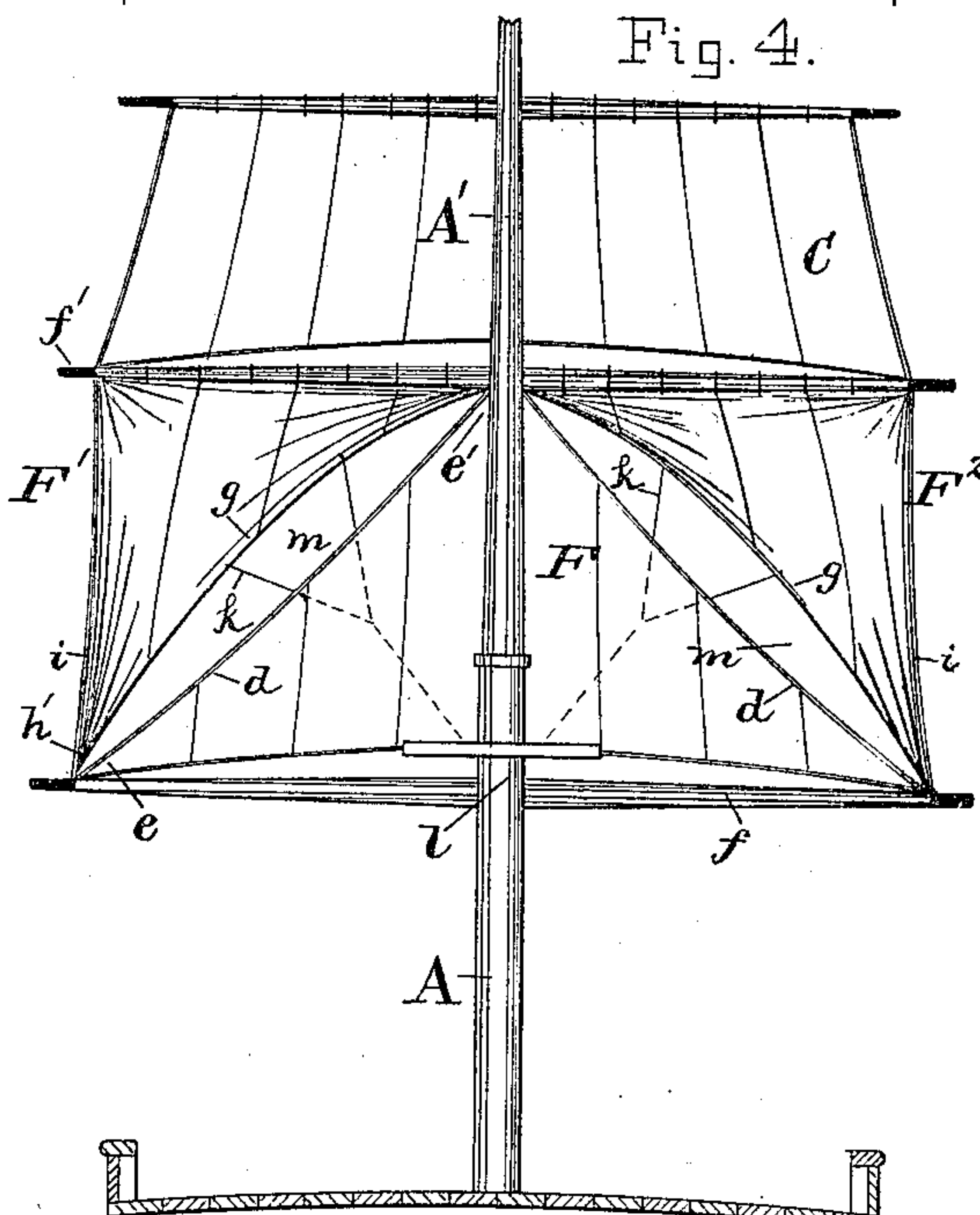
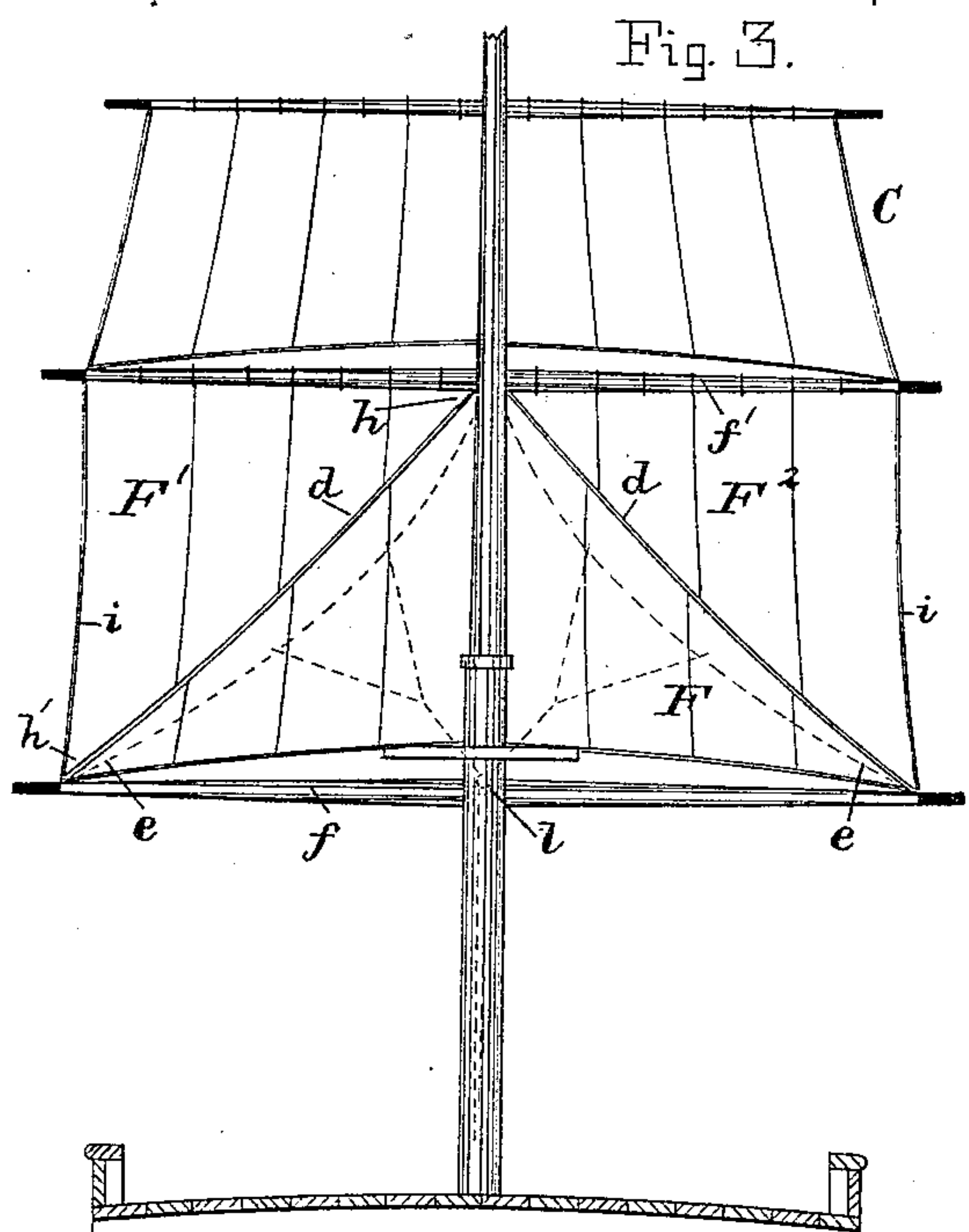
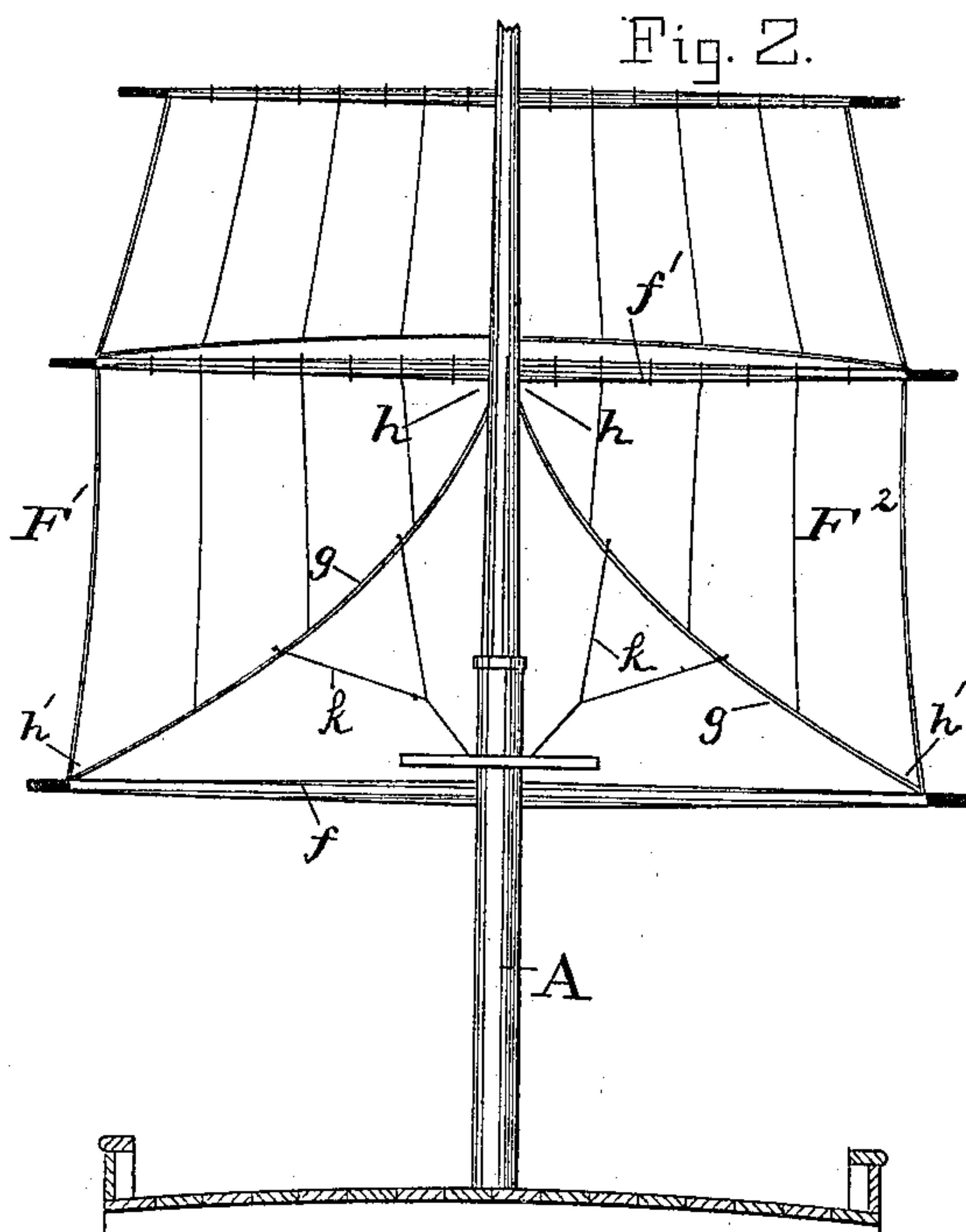
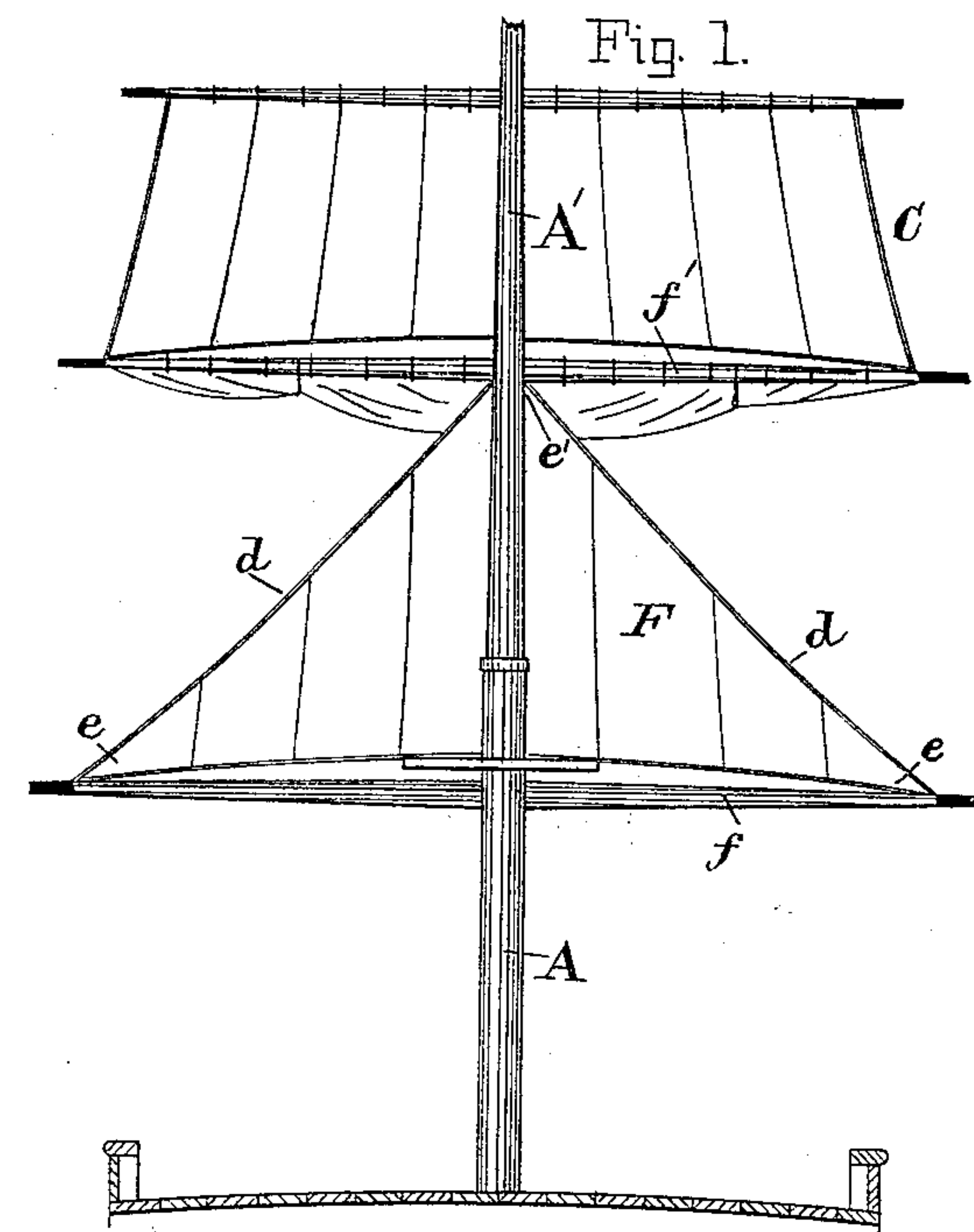
(No Model.)

J. C. WHEEDEN.

SAIL FOR VESSELS.

No. 371,396.

Patented Oct. 11, 1887.



WITNESSES: .

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# UNITED STATES PATENT OFFICE.

JAMES C. WHEEDEN, OF BALTIMORE, MARYLAND.

## SAIL FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 371,396, dated October 11, 1887.

Application filed May 28, 1887. Serial No. 239,613. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES C. WHEEDEN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Sails, of which the following is a specification.

My invention relates to an improved sail for vessels, and has particular reference to vessels which carry square sails.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows the center three-cornered sail spread and the wings furled. Fig. 2 shows the wings which combine with the center three-cornered sail, the latter, however, not being shown. Fig. 3 shows the center three-cornered sail and the wings all spread and together making a main-topsail. Fig. 4 shows the curved edges of the wings slacked away from the center sail to allow the wind to blow through.

The letter A designates the mast; A', the top-mast; C, the top-gallant sail, all of which are of ordinary or well-known construction.

My improvement relates to the main-topsail, all the parts comprising which are shown in Fig. 3 spread for sailing. This sail comprises three parts, the center three-cornered sail, F, and the two wings F' F<sup>2</sup>. The center three-cornered sail, F, has two corners, *e*, made fast to the lower yard, *f*, while the third and top corner, *e'*, is made fast to the upper yard, *f'*. Thus the center sail stands pyramid shape, having two edges, *d*, inclining down from the top corner. This sail may be always spread, and is equal to a close-reefed main-topsail. The two wings F' F<sup>2</sup> are also three-cornered sails, each having two straight edges and one full-curved edge, *g*. These two wings have one straight edge attached to the upper yard, *f'*, a corner, *h*, of one wing adjoining a corner of the other wing at the center, and the other straight edge forms the leech *i*, the bottom corner, *h'*, being made fast to the lower yard, *f*. The full-curved edge *g* of each wing overlaps one of the inclined edges *d* of the center sail. Each wing has a crow-foot line, *k*, attached to its curved edge *g*, and from thence extends through a snatch-block located (but not visible on the drawings) on the side of the mast at about the point designated by the letter *l*, and from thence the two lines may ex-

tend down the mast, and may be made fast in any suitable manner. While these lines *k* are drawn taut the curved edges *g* of the wings will be kept overlapping the inclined edges *d* of the center sail, and the said three parts F F' F<sup>2</sup> thus rigged comprise a full-spread main-topsail, as in Fig. 3. If it is desired to reef this sail, the lines *k* may be slacked to allow the curved edges *g* to part from or slack away from the center sail and form openings *m*, as shown in Fig. 4, thus allowing the wind to blow through the said openings *m*.

If desired, the two wings F' F<sup>2</sup> may be furled by letting go their bottom corner, *h'*, and drawing them up to the upper yard, *f'*, as shown in Fig. 1; or they may be taken down.

A sail thus constructed has more surface, because across the top of wings it may have greater breadth than would be possible for a square sail provided with the usual reefs. A vessel will therefore sail faster with it.

Having described my invention, I claim—

1. An improved square sail consisting of three parts, namely: the central three-cornered sail, F, having two corners made fast to a lower yard, and the single or third corner made fast to an upper yard, said sail F having inclined edges *d d* and the wings F' F<sup>2</sup> each having one of its edges overlapping the inclined edges of sail F, and the crow-foot line *k*, attached to the bottom edges of the wings F' F<sup>2</sup>, substantially as and for the purpose set forth.

2. An improved square sail consisting of three parts, namely: the central three-cornered sail, F, having two corners made fast to one yard and the third corner made fast to another yard, said sail F having two inclined edges, *d d*, and the two wings F' F<sup>2</sup>, having curved edges *g g*, and each provided with a line, *k*, whereby the said curved edges are adapted to overlap the inclined edges *d d* of sail F or form openings *m*, as and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES C. WHEEDEN.

Witnesses:

JOHN E. MORRIS,  
JNO. T. MADDOX.