Sheet 1, 2 Sheets

W. C. Choate.

Sail for Ships.

No. 3,547. Patented Apr. 17, 1844.

Fig: 1.

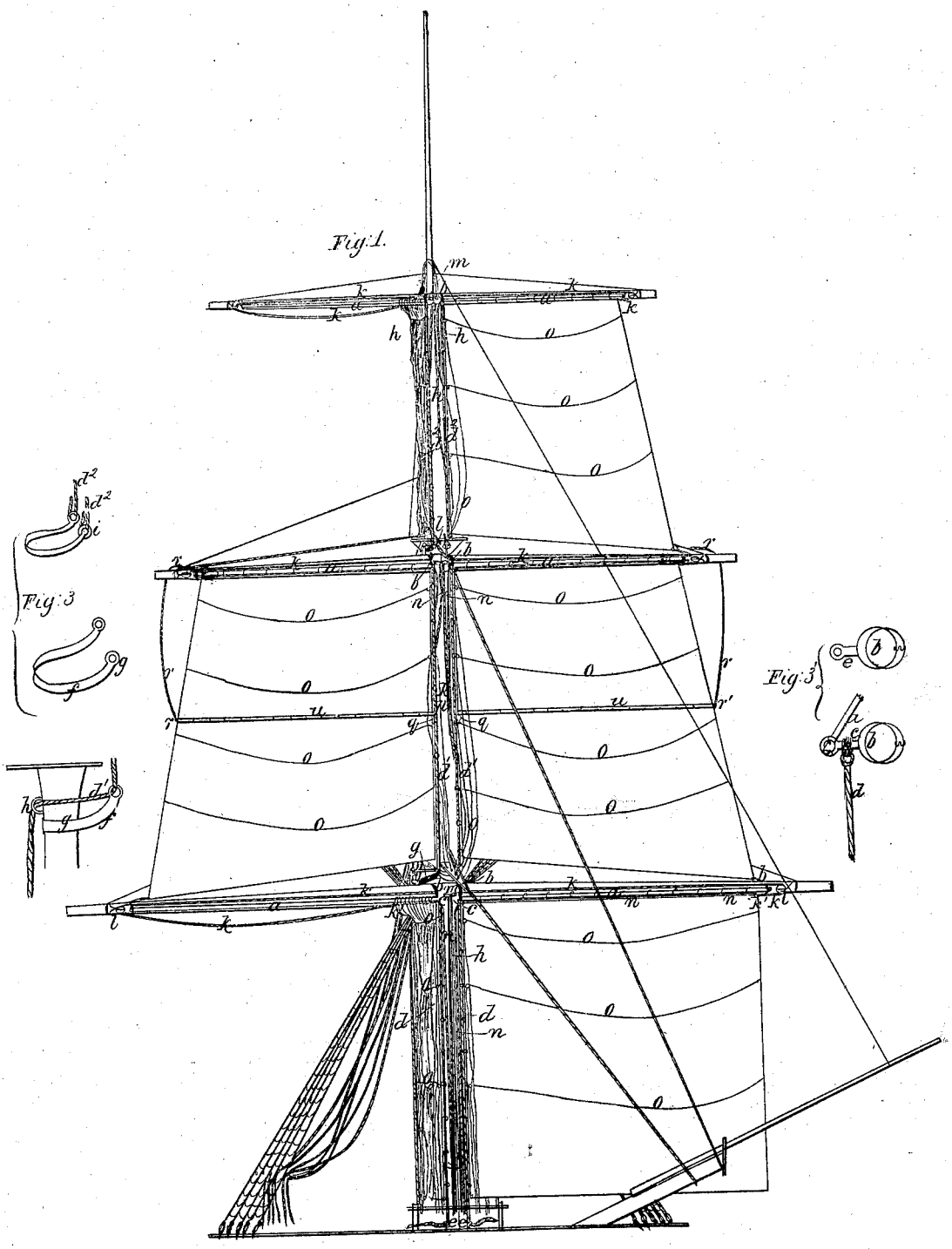

Fig: 3

Fig: 3'

Sheet 2, 2 Sheets.

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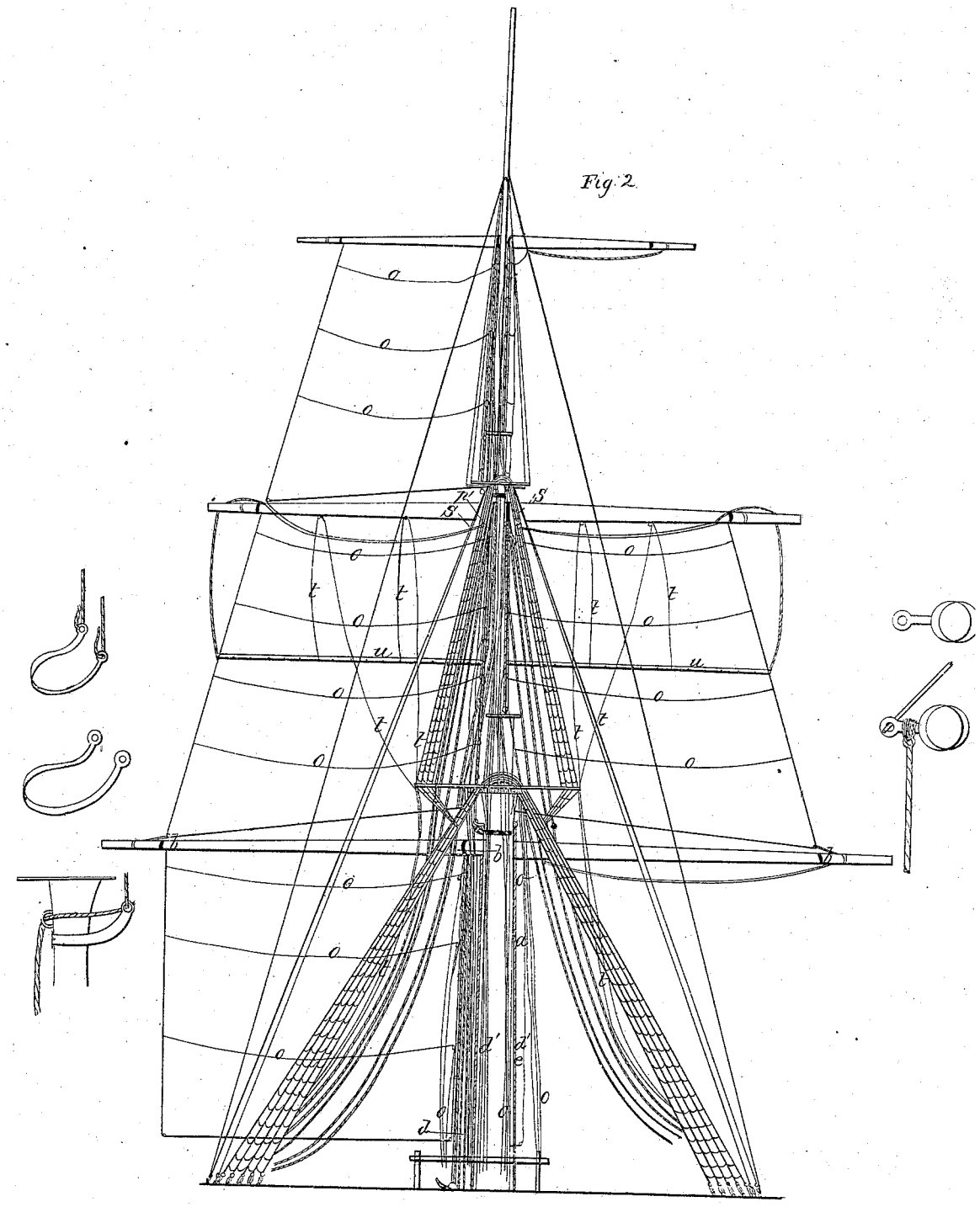
Fig. 2.



UNITED STATES PATENT OFFICE.

WARREN C. CHOATE, OF WASHINGTON, DISTRICT OF COLUMBIA.

MODE OF FORMING AND RIGGING THE SAILS OF SQUARE-RIGGED VESSELS.

Specification of Letters Patent No. 3,547, dated April 17, 1844.

To all whom it may concern:

Be it known that I, WARREN C. CHOATE, of the city of Washington and District of Columbia, have invented a new and Improved Mode of Cutting, Fitting, and Rigging Sails to Square-Rigged Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1, is a drawing of the front of the sails, &c.; Fig. 2, after side.

The construction is as follows: The yards are furnished with round iron rods (*a*) which extend from the slings of each yard outward on both sides to the sheave holes for the topsail sheets or top gallant sheets near the ends of the yard arm; these rods are denominated jack yards; they are secured to the yard in front thereof, at the ends by iron bands (*b*) which are put around the yards and have a goose neck (*c*) see Fig. 3 (detached) projecting from them to which said jack yards are fastened at a sufficient distance from the yard to permit the rings or hanks, to which the sail is bent, to run out and in freely upon them. The rings or hanks are in number sufficient to bend the sail to and sustain it when spread; to each of the inner goose necks (*c*) which hold the inner ends of the jack yards, is fastened the upper end of a jack stay (*d*) which runs down parallel with the mast, those for the fore and main sail being set up to ring bolts (*e*) on the deck or they can be shifted forward. There is an iron band (*f*) fitted around snugly to the cheeks of the lower mast between the tops, and trusses; from this band an arm (*g*) projects on each side of the mast, out forward over the lower yards far enough to clear the top; the end of each arm is formed into an eye through which the topsail jack stay (*d'*) passes. It is then carried back under the top and through another ring or leader (*h*) at the mast, and from thence down on deck; this jack stay may be set taut by a two or three fold pulley. The lower ends of the top gallant jack stay (d^2) can be set up to an eye bolt (*i*) on a band around the top mast, between the topmast cross trees and the sheave hole for the topsail type. On all the jack stays are rings or hanks for binding the sail to, similar to the manner employed on the jack yard.

By the above, it will be seen that all the sails are in two parts, the starboard and larboard halves of the sail being entirely independent of each other. The head of each sail is bent onto the rings or hanks on the jackyard which run out and in thereon; an outhauler (*k*) is bent to the outer head cringle (*k'*) and runs through a block (*l*) on the outer end of the yard arm and thence through a block (*m*) near the center of the yard, from which it descends to the deck; by this the sail is hauled out; an inhauler (*n*) is also bent to the outer head cringle and runs through the rings or hanks on the jackyard, and thence down on deck by which the head of the sail is hauled in to the mast, assisted by brails (*o*) and the sail is hauled in and furled like a trysail or spanker.

I use but one reef in the topsails, which is the close or storm reef; an inner reef pendant (*p*) is made fast to the inner reef cringle (*q*) and running up to the yard near the slings passing through a leader (*p'*) is brought down to the deck; an outer reef pendant (*r*) is made fast to the outer reef cringle (*r'*) and runs up through a block or sheave hole at the end of the yard then in through a sister block (*s*) in the topmast rigging and thence down on deck; two reef ropes (*t*) are also attached at equal distances on the reef band (*u*) which run up to the yard, and then in to the rim of the top, and thence down on deck, these reef ropes haul the reef band snug up and along the yard. If the topsail yard is on the cap, and the reef cringles are hauled up, and out, by the reef pendants, and the reef band hauled snug up to the yard, you have an excellent reef in a heavy storm; by this method you have two close reefed topsails, *i. e.* a starboard and a larboard, either of which can

be taken in, or set, with the greatest safety without interfering with the other.

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

1. Constructing the sails for square rigged vessels in two separate parts, the starboard and larboard halves being entirely independent of each other.

2. I also claim the combination of the jackyards and rings and out, and in haulers, with the yards of vessels constructed and arranged in the manner and for the purpose herein set forth.

3. I also claim in combination with the above, what I denominate a jackstay for the inner leach of the sail to traverse on as herein described.

W. C. CHOATE.

Witnesses:
J. J. GREENOUGH,
I. CALDWELL.