(No Model.)

S. SEED.

Splicing Masts and Ship Timbers

No. 231,974. **Patented Sept. 7, 1880.**

Fig 1.

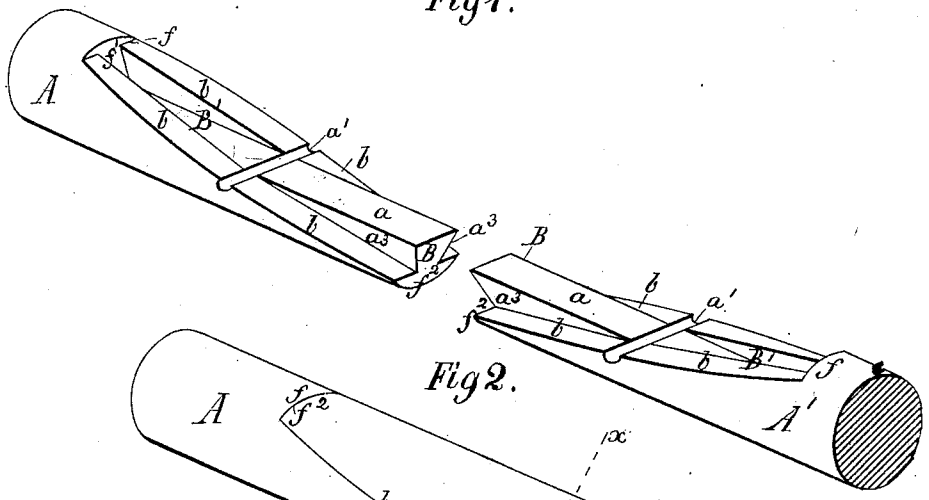


Fig 2.

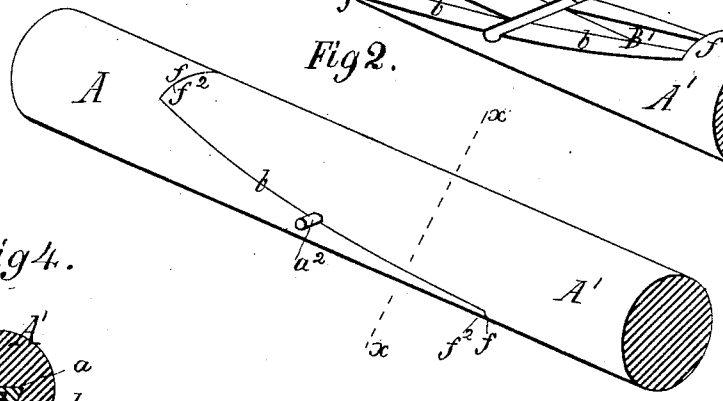


Fig 4.

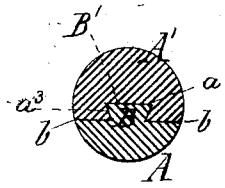


Fig 3.

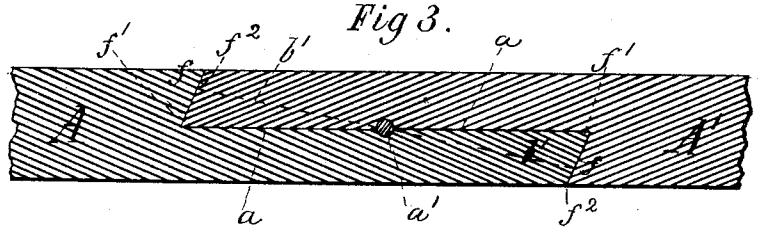
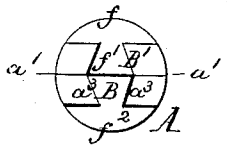


Fig 5.



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UNITED STATES PATENT OFFICE.

SAMUEL SEED, OF PORTSMOUTH, VIRGINIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JOHN W. SHARRET, OF SAME PLACE.

SPLICING MASTS AND SHIP-TIMBERS.

SPECIFICATION forming part of Letters Patent No. 231,974, dated September 7, 1880.

Application filed June 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SEED, a citizen of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented a new and useful Improvement in Splicing Masts and other Ship-Timbers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and letters of reference marked thereon, forming a part of this specification, in which drawings—

Figure 1 is a perspective view of my said improvement applied to two pieces of timber of round form, and intended to constitute a portion of the mast of a ship or other vessel, the same being ready to be joined together, as indicated in Fig. 2. Fig. 2 is a perspective view of the two pieces of timber spliced together, which in Fig. 1 are shown separated. Fig. 3 is a central longitudinal vertical section of Fig. 2. Fig. 4 is a cross-section in the line *x x* of Fig. 2, and Fig. 5 is an end view of one of the splice-pieces.

The nature of my invention consists in so splicing or uniting separate pieces of timber to form the mast of a ship or other vessel that when spliced together they shall constitute a length of timber of the same strength, or nearly so, as would be the case were the entire length made of a single or unspliced piece of timber.

The object of my invention is to utilize short lengths of timber in order to make long masts for ships, keels for ships, and other constructions requiring long lengths of timber.

In the drawings, A and A′ indicate two separate lengths of timber which it is desirable to unite together and so form a length sufficient for the mast of a ship, and both pieces A and A′ are made with like parts, which, when brought into proper juxtaposition, as indicated in Figs. 2, 3, and 4, effect the splicing or uniting together of the separate lengths or pieces A and A′. In other words, each piece A and A′ is made with a half-splice having like parts, which, when brought together, as signified in Fig. 2, effect the splicing of the two parts together.

In forming the half-splices on the pieces A A′ one-half of the body of the wood is cut away within the compass of the length of the half-splices, as shown, so as to leave an angular or dovetail tongue, as at B, with a longitudinal bearing-surface, *a*, which is exactly the longitudinal center of said pieces, and midway of the length of these half-splices a transverse key-seat, *a′*, is made in order to receive a key, a^2, one half of the circumference of which has its seat in the piece A, and its other like half in the piece A′, thereby locking the two pieces together when said pieces are adjusted in position and the key inserted, as indicated in Figs. 2 and 3.

On either side of the tongue B the half-splices represented on each of the pieces A and A′ are formed with sloping faces, as at *b*, the whole length of each half-splice, and these sloping faces abut from end to end against each other when the two pieces A and A′ are brought together, as signified in Figs. 2 and 3. Forward of the half-round key-seats *a′* the tongues B are formed with inwardly-inclined or angular sides, as at a^3, (clearly shown in Figs. 1 and 5,) while rearward from seats *a′* to the rear termination of the half-splices grooves with outwardly-inclined sides, as clearly shown in Fig. 5, at B′, are formed, which are exactly adapted to receive and fit the tongues B, respectively, of the pieces A and A′ when said pieces are in juxtaposition, as signified in Figs. 2 and 3, the bottom of said grooves B′ and the bearing-surfaces *a* of the tongues B being of the same width and on the same plane in each of the two pieces A and A′.

In Fig. 3 the dotted line *b′* indicates the line of junction of the sloping surfaces *b* of the two pieces A and A′ when joined together, and said figure also shows overhanging shoulders, as at *f* and *f′*, which overlap the respective beveled ends f^2 of the pieces A A′ when joined together, as in Figs. 2 and 3. It will thus be seen that when the piece A′ is turned over so that its tongue B will rest upon the tongue B of the piece A, and the two pieces then forced or slid together, such act will cause the tongue B of the piece A′ to enter the groove B′ of piece A, while at the same time the tongue B of piece A will enter the groove B′ of piece A′, and that when said pieces are fully forced together, as indicated in Figs. 2 and 3, the respective parts of the half-splice on pieces A

and A′ will become both longitudinally and laterally united with beveled and dovetail bearing-surfaces adjoining each other, and in which position the said pieces are finally locked by the insertion of the locking-pin a^2, as shown, and, further, that when so locked said pieces can neither have longitudinal nor transverse play independent of each other, and that such result is effected solely by reason of the formation of the half-splices in connection with the locking-pin, which latter may be made either of wood or of metal.

I claim—

1. Two pieces of timber, A and A′, each being provided with a half-splice having sloping surfaces *b*, a dovetail tongue, B, and a dovetail groove, B′, whereby the said pieces may be united together by the simultaneous entering in opposite directions of the respective tongues into the respective grooves of said pieces, substantially as and for the purpose described.

2. The locking-key a^2, in combination with the sloping surfaces *b*, tongues B, grooves B′, beveled ends f^2, and overhanging shoulders *f* and *f′*, substantially as and for the purpose described.

SAMUEL SEED.

In presence of—

JOSHUA BROWN,

JOHN W. SHARRETT, Jr.