

*L. Brown,*

*Mast.*

*No. 113,738.*

*Patented Apr. 18, 1871.*

FIG. 1.

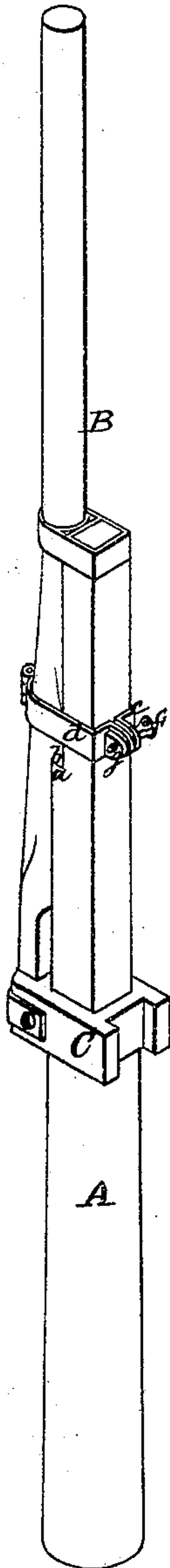


FIG. 2.

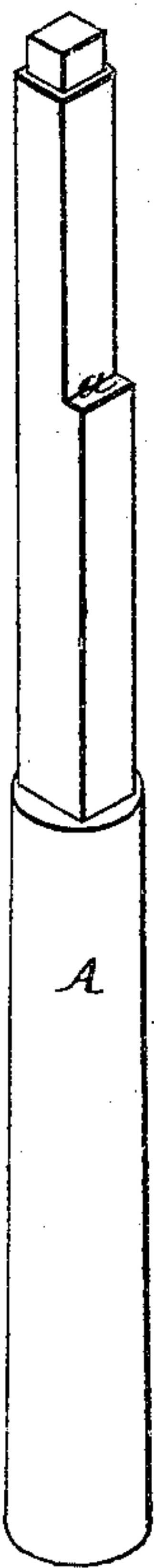
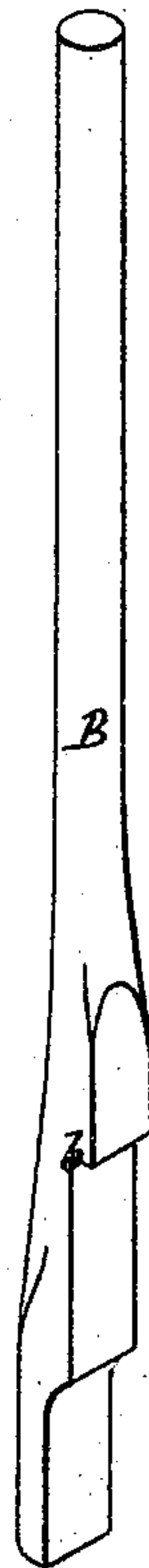


FIG. 3.



*Leverett Brown*  
*by*  
*A. Pollok,*  
*his atty.*

WITNESSES.

*A. Seely*  
*J. M. McCabe*

# United States Patent Office.

LEVERETT BROWN, OF NEW YORK, N. Y.

Letters Patent No. 113,738, dated April 18, 1871.

## IMPROVEMENT IN THE MODES OF ATTACHING TOPMASTS AND TOP-GALLANT-MASTS.

The Schedule referred to in these Letters Patent and making part of the same.

### *To whom it may concern:*

Be it known that I, LEVERETT BROWN, of New York, in the county and State of New York, have invented certain new and useful Improvements in Fitting and Fastening Topmasts and Top-Gallant-Masts; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of two parts of a mast united in accordance with my invention.

Figures 2 and 3 are like views of the two parts separate.

The ordinary method of supporting the topmast upon the lower mast of a vessel is by means of a fid passing through the lower end of the topmast, and resting on the trestle-trees; and, in like manner, the top-gallant-mast is supported upon the topmast. Thus the trestle-trees of the lower mast are required to sustain the whole weight and strain of the masts and rigging above, while the trestle-trees of the topmast must uphold the weight of the top-gallant-mast and its appurtenances. The effect of this upon the trestle-trees, and especially upon those of the lower mast, is very injurious, as is well known, and it becomes necessary to renew them comparatively frequently.

This operation is troublesome, and attended with considerable expense, for not only are the trestle-trees themselves costly, but the sending down of the masts and rigging above, which must be done before the old trestle-trees can be removed and replaced by new ones, entails an expenditure of time and money well worthy of being saved.

The object of my invention is to remove the weight of the upper masts from the trestle-trees below, and to transfer this office of the trestle-trees to the masts themselves, so that the topmast shall directly support the weight of the top-gallant-mast, and the lower mast directly support the weight of those above. To this end, the ends of the two masts are scarfed; or, in other words, I form a shoulder in the upper end of the lower mast and in the lower end of the upper mast in such manner that when the two ends are applied together the shoulder of the upper will rest directly upon the shoulder of the lower mast. The latter thus directly supports the weight of the mast or masts and rigging above it, and the two parts being united by straps or bands, form, in effect, one continuous mast.

To enable those skilled in the art to understand and use my invention, I will now proceed to describe the

manner in which the same is or may be carried into effect, by reference to the accompanying drawing.

Let it be supposed, in this instance, that A represents the lower mast, B the topmast, and C the trestle-trees, upon which is the fid which passes through the end of the topmast.

I form on the upper end of the mast A a shoulder or ledge, *a*, upon which a corresponding shoulder or projection, *b*, formed by recessing or cutting away a portion of the lower end of the topmast rests when the two masts are fitted together, as shown in fig. 1. By this means the weight of the topmast is borne directly by the lower mast, all vertical pressure being removed from the trestle-trees for the purpose hereinbefore specified.

The same mode of uniting the two ends is to be followed in fitting together the topmast and top-gallant-mast, and, in general, in all instances where the trestle-trees are ordinarily employed to sustain the superincumbent weight of spars and rigging.

The ordinary means for binding together the two ends may be employed, but for greater security I prefer to place a band around the two, near the point where the shoulders *a b* meet; and this band I prefer to construct in the manner seen in the drawing, where it is represented as consisting of two parts, *c d*, hinged together at one end, and provided on the opposite side with ears, through which a screw-bolt, *f*, passes. The head of the bolt bears against the part *c*, while its opposite end passes through a stationary nut, *g*.

By screwing up the bolts the two parts, *c d*, will be drawn tightly together, and the two masts can thus be clamped more or less tightly, as may be necessary.

Having now described my invention, and the manner in which the same is or may be carried into effect,

What I claim, and desire to secure by Letters Patent, is—

The method of fitting and securing the topmast and top-gallant-masts of vessels in the manner herein described, so that the mast above shall rest upon and be directly supported by the mast immediately below, instead of the trestle-trees of such masts, as and for the purposes set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

LEVERETT BROWN.

Witnesses:

M. BAILEY,  
A. POLLOK.