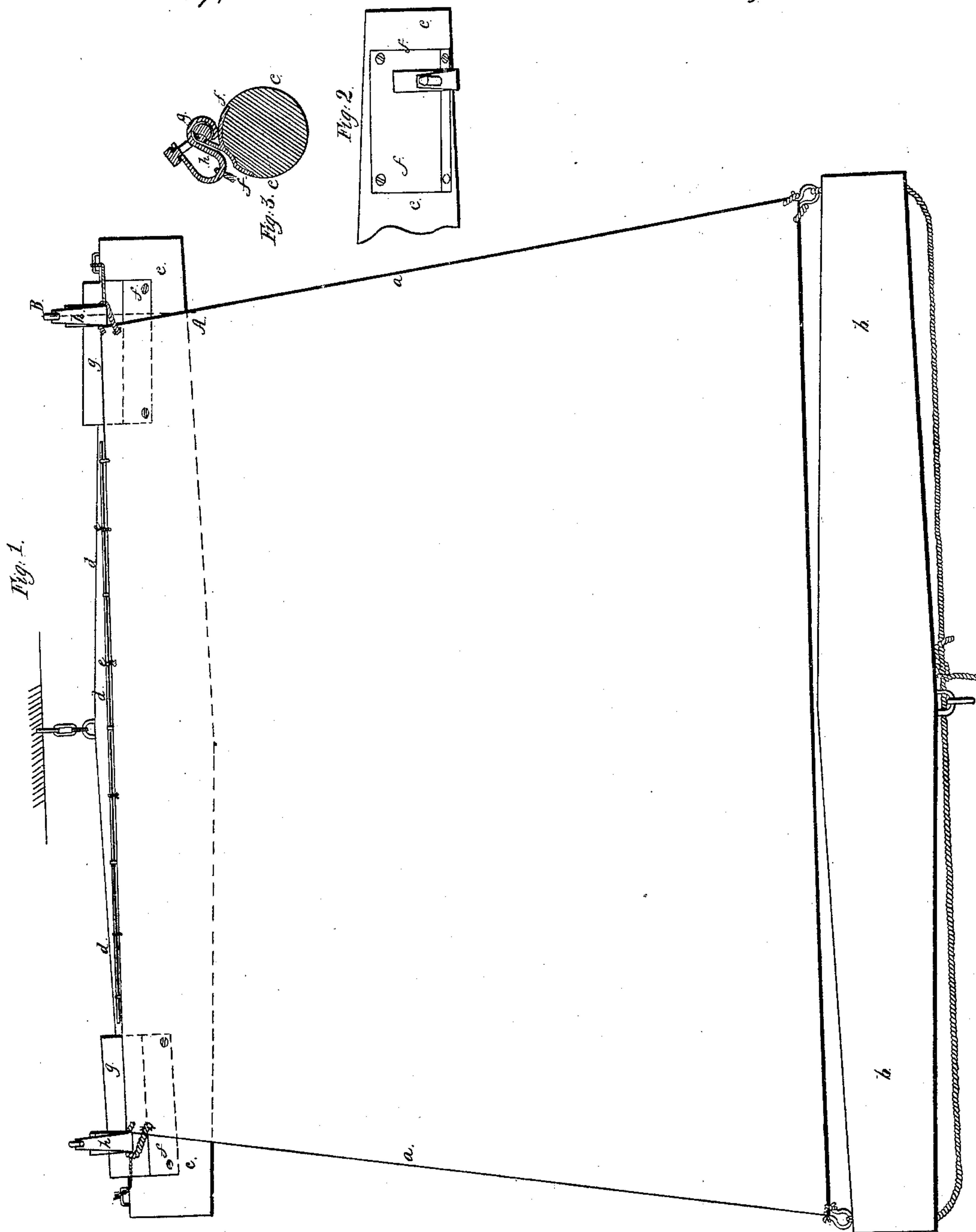


A.M. Southworth

Sails & Rigging

N^o 27,243.

Patented Feb. 21, 1860.



Witnesses:

Joseph Gavett
A. W. Brown

Inventor.

Alva M. Southworth

UNITED STATES PATENT OFFICE.

ALVA M. SOUTHWORTH, OF DORCHESTER, MASSACHUSETTS.

ATTACHMENT FOR SAIL-CRINGLES.

Specification of Letters Patent No. 27,243, dated February 21, 1860.

To all whom it may concern:

Be it known that I, ALVA M. SOUTHWORTH, of Dorchester, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in the Mode of Attaching the Head-Cringles to the Yard, and that the following description, taken in connection with the accompanying plate of drawings, herein-after referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a side elevation or view of my improved mode. Fig. 2 is a top view of the same. Fig. 3 is a section taken in the plane of the line A, B Fig. 1.

In the ordinary mode of bending a sail upon the yard of a vessel it is very desirable to keep the head of the sail always on a straight line; but this has been found difficult to accomplish as the head cringles are constantly slipping under the yard, thereby displacing and wrinkling the sail; moreover a large quantity of rope is required to lash the head cringles to the yard, the said rope being frequently broken, thereby forming a considerable item of expense.

The present invention consists in a new mode of attaching the head cringles to the yard, whereby the head of the sail is always kept in a straight line, the head cringles kept always in their place and prevented from slipping under the yard and the large quantity of rope for lashing the sail to the yard, heretofore necessary, dispensed with, and whereby also the sail can be bent in much less time than by the ordinary method.

I am aware that it has previously been attempted to effect these results by the use of an arrangement of devices for which Letters Patent of the United States were granted to Nelson Crocker Oct. 25th, 1853, and fully described in the schedule annexed to the same; the said devices consisting of horizontal rods like the ordinary jack-stay but

projecting considerably above the yard, the said rods being attached to the yard by long bolts driven through the same and having a sliding hook which traveled thereon and engaged with the head cringles, but this method has been found to operate unsuccessfully and its use has been abandoned, as the horizontal rods necessarily projected so much above the yard in order to allow sufficient room for the sliding hook to travel, as to interfere seriously with the working of the yard and its sail, and furthermore by thus standing so high above the yard operated, by the strain of the hook and sail thereon, to cause their long bolts to act like levers upon the yard, thereby frequently weakening and splitting the same. I avoid these difficulties by attaching to the top of the ends of the yard, a broad metallic plate secured thereto in any suitable manner and conforming to its circumference and having formed upon or cast with it a shoulder or flange with which engages a sliding hook that hooks into the head cringles. By this means the objections of a large projection above the top of the yard, which interfere with its working, and that of the sail and the liability of splitting the yard are avoided, the broad flanged metallic plate serving on the contrary to strengthen the yard.

a a a in the drawings represent a sail of a vessel.

b b is the lower yard, *c c* the upper yard, and *d d* the jack stay, to which the middle portion of the top of the sail is secured by wings *e e* &c. To the top surface of each end of the yard *c c* is fastened a broad metallic plate *f f* having a raised flange or shoulder *g* formed thereon and extending the whole length of the said plate. On this flange travels a hook *h* which also hooks into the head cringle which is secured by a short line to the end of the yard. By this arrangement, the head cringles will be always kept in their position viz; in the same straight line with the head of the sail and can not possibly slip down under the yard or become in any way displaced.

Having thus described my improvements, I shall state my claim as follows:

I do not claim the arrangement of devices patented by Nelson Crocker Oct. 25th,

1853 as that will not successfully accomplish the objects of my invention, but—

What I do claim as my invention and desire to have secured to me by Letters Patent,
5 is—

The arrangement of the broad metallic plate secured to the yard and having formed on it a flange or shoulder and the sliding

hook engaging with the said flange or shoulder and the head cringle of the sail, as described. 10

ALVA M. SOUTHWORTH.

Witnesses:

JOSEPH GAVETT,
ALBERT W. BROWN.