H. Townsend,

Ship's Trestle Tree.

No. 113,471. Patented Apl. 4, 1871.

Fig. 1.

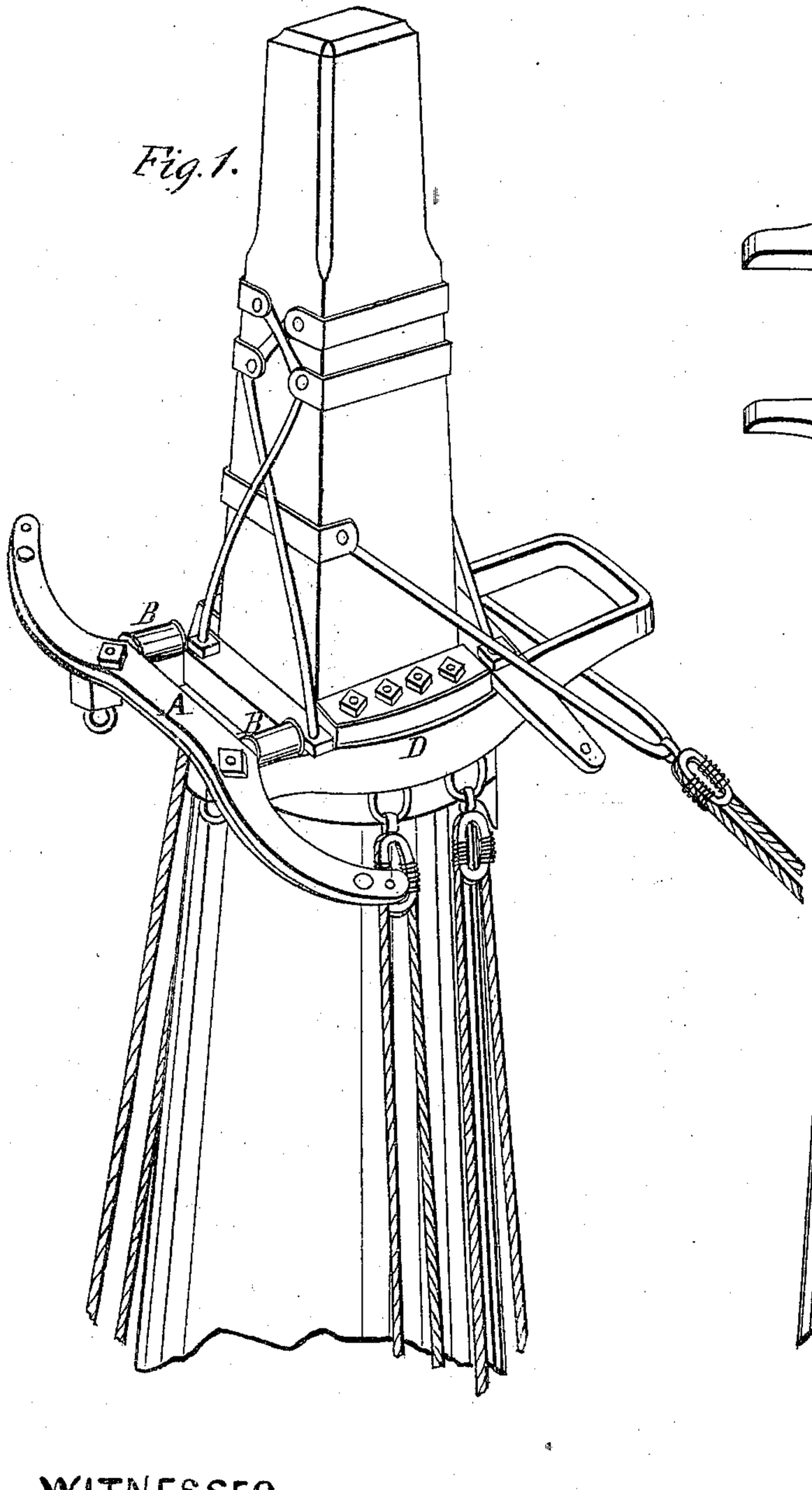
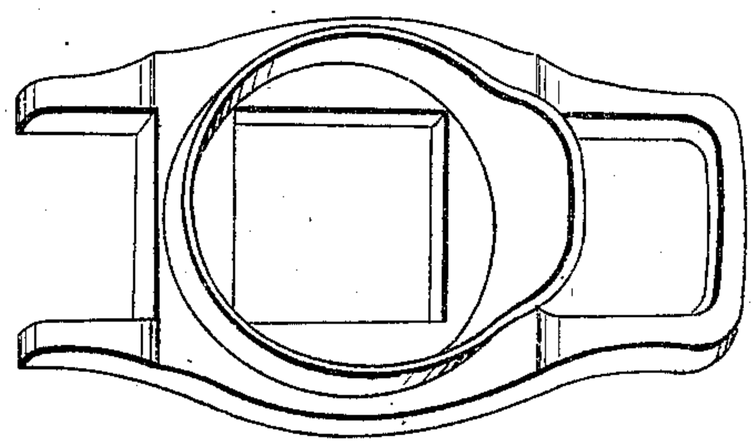


Fig. 2.



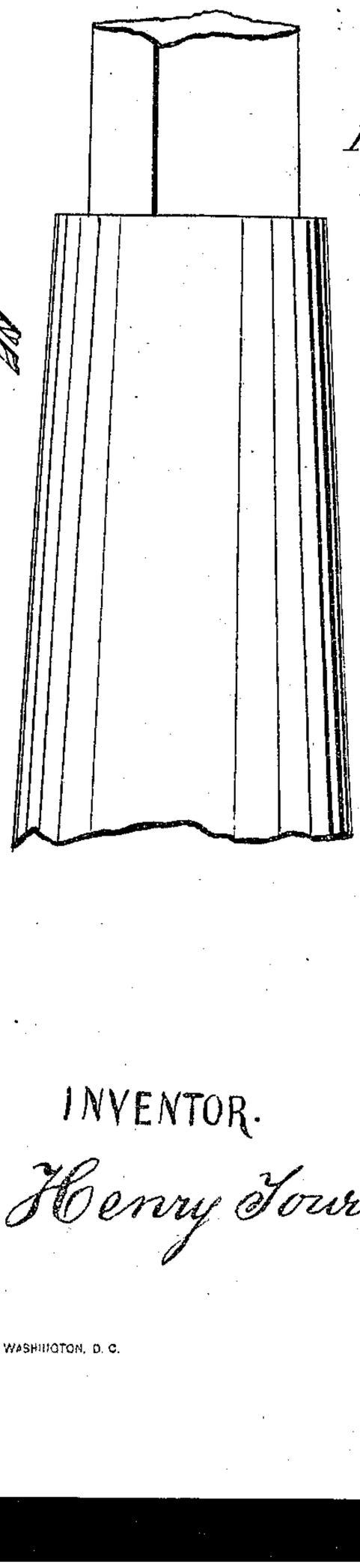


Fig. 3.

WITNESSES.

Thomas Welham

Charles Graf.

INVENTOR.

Henry Townsend.

United States Patent Office.

HENRY TOWNSEND, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 113,471, dated April 4, 1871; antedated March 22, 1871.

IMPROVEMENT IN SHIPS' TRESTLE-TREES.

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

To all whom it may concern:

Be it known that I, HENRY TOWNSEND, of the city and county of Philadelphia and State of Pennsylvania, have invented Improvements in Trestle-Trees and Ship-Rigging; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents the mast-head with the trestle-tree and cross-tree so constructed as to give room for the ropes called peak-halliards, and also showing friction-rollers to prevent the ropes chafing on the trestle-trees.

Figure 2 shows the under side of a trestle-tree made to fit a square shoulder of the mast-head.

Figure 3 shows the square shoulder of the mast-head.

The nature of my invention consists of making a cross-tree of such a crooked shape that the ropes have free play without chafing when the sails are hoisted or lowered; and to give strength to this cross-tree I make the under side of iron and the top of wood, the wood being more safe to stand upon; or, if made wholly of iron, the top side is roughened, so that a man may stand upon it without slipping.

I also attach friction-rollers to the cross-trees or trestle-trees to prevent the rope from rubbing on the trestle-tree.

To enable others to understand my invention I refer to the drawings, in which—

Letter A marks the cross-tree.

Letters B B, the friction-rollers.

Letter D marks an elastic packing in combination with the metallic trestle-tree and wire-shrouds.

The object of making a metallic trestle-tree with a square shoulder is to adapt it to the standing mast now in use without lowering or cutting away the shoulder of the same. By this means a metallic trestle-tree is a band of strength to an old mast.

It is well known to seamen, the great wear and tear of ropes by chafing upon the cross-tree as the sails are hoisted and lowered. Therefore, a cross-tree of this peculiar shape is very essential to allow the ropes free play; and it will be seen by the drawings herewith that this plate of metal, in combination with the wood, gives great strength to a cross-tree of this shape, as herein described.

Claim.

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

A cross-tree for a ship's mast, with projecting brackets for the reception of friction-rollers, and constructed with a plate of metal for strength, as shown and herein described, instead of a straight piece of wood, as heretofore.

The above specification of my said invention signed and witnessed at Philadelphia this 16th day of December, A. D. 1869.

HENRY TOWNSEND.

Witnesses:

OWEN MCDONALD,

JOSEPH BAYMORE.