(No Model.)

W. C. HANNA, Jr.

BONDING AND TYING DEVICE.

No. 543,014. Patented July 23, 1895.

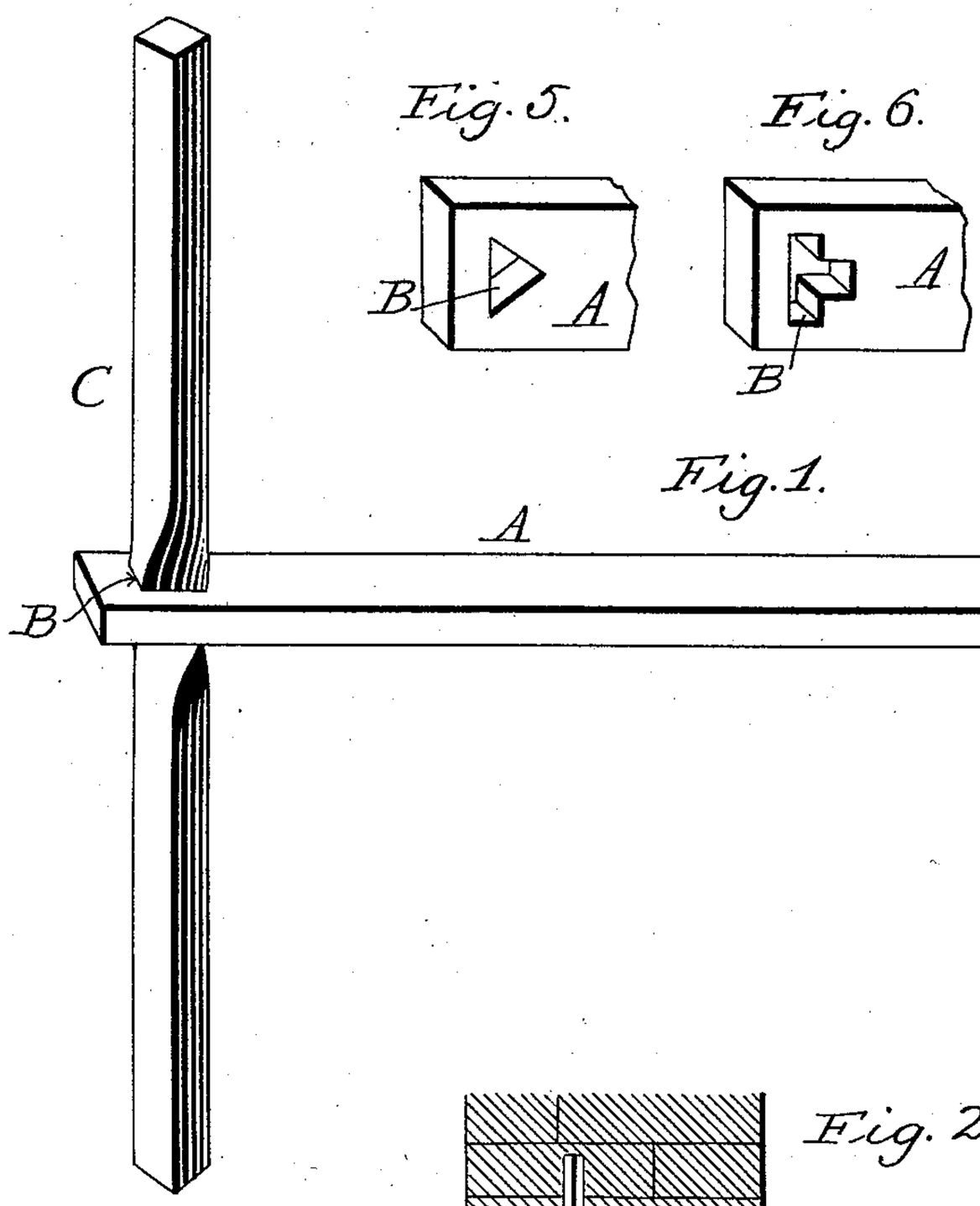


Fig. 1.

Fig. 5.

Fig. 6.

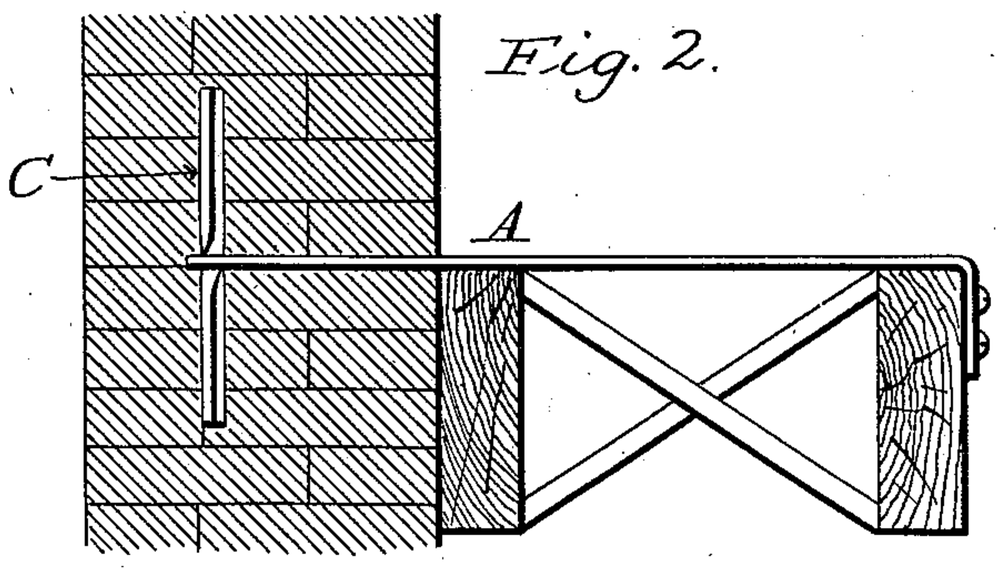


Fig. 2.

Fig. 3.

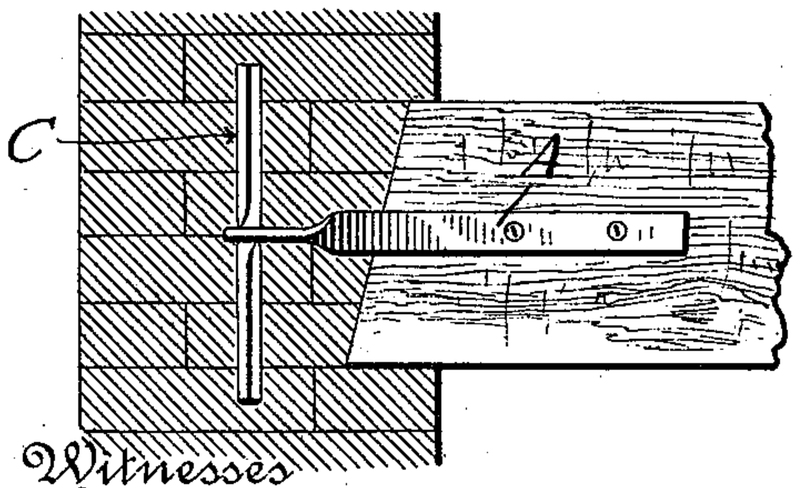
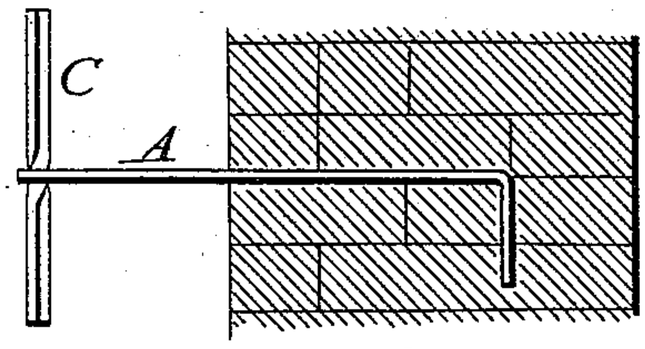


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. HANNA, JR., OF NEW YORK, N. Y.

BONDING AND TYING DEVICE.

SPECIFICATION forming part of Letters Patent No. 543,014, dated July 23, 1895.

Application filed April 19, 1895. Serial No. 546,357. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HANNA, Jr., a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bonding and Tying Devices, of which the following is a specification.

My invention relates to bonding and tying devices, the advantages and construction of which will be hereinafter set forth.

In the drawings, Figure 1 is a perspective view of my improved anchor tie-rod; Figs. 2, 3, and 4, views illustrating the device in use, and Figs. 5 and 6 views showing modified forms of construction.

Anchor tie-rods as heretofore usually constructed have had their spear or pin so arranged with relation to the rod or bar that they become loose when in the hands of the workman, which is a great source of annoyance. Other constructions which provide against this contingency are expensive and cumbersome. The object of my invention is to overcome these objections, and to produce an article which is not only cheap, but durable and permanent in its structure.

A designates the rod or bar, having an opening B near its end. In Fig. 1 this opening is represented as being square, which is the preferred form, but the opening may be made in any angular form, two of which forms are shown for the purposes of illustration in Figs. 5 and 6. Through the opening B is passed the pin or spear C, its cross-section corresponding preferably to the shape of the opening. When it has been passed through the opening to the desired extent, the spear is twisted both above and below the bar, thereby securely and permanently fastening it in place. This construction of the device is both simple and strong. No heating and welding are necessary. The opening B is stamped out, and the pin or spear is easily twisted without the application of heat. As there are no welded joints, or in fact, no welding whatever about the device, the tensile strength is much greater than in that class of anchors where such joints are employed.

The rod or bar A may be made in various forms, as necessary and desired.

In Fig. 2 my device is shown as a hook-anchor, in Fig. 3 as a side anchor, and in Fig. 4 as a wall-anchor.

Having thus described my invention, what I claim is—

As a new article of manufacture, a bonding or tying device comprising a rod or bar provided with an angular opening at one end,—the opposite end being adapted to be secured to the structure in connection with which it is to be used; and a pin or spear passing through said angular opening,—said pin being permanently secured therein by twisting it above and below the bar.

In witness whereof I hereunto set my hand in the presence of two witnesses.

WILLIAM C. HANNA, JR.

Witnesses:

J. W. FISKE, 2d.,

L. P. SOUTHARD.