No. 660,084. Patented Oct. 16, 1900.

F. H. SMITH.

FRAMING DEVICE.

(Application filed Feb. 5, 1900.)

(No Model.)

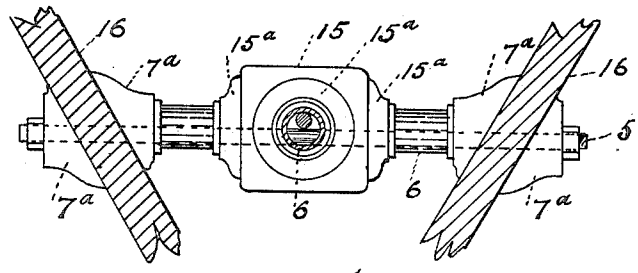


FIG 1

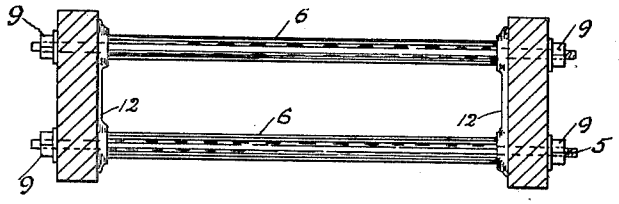


FIG 2

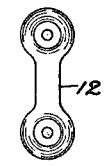


FIG 6

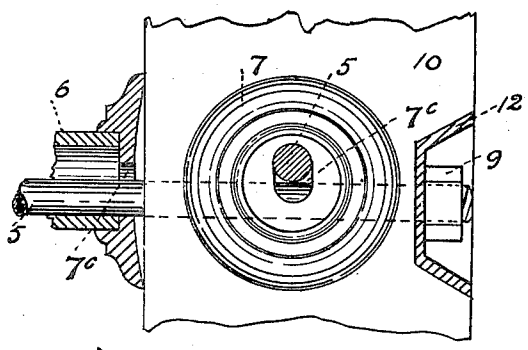


FIG 3

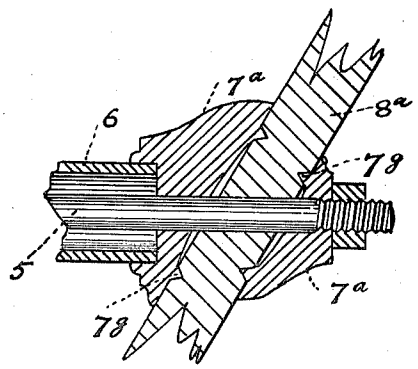


FIG 4

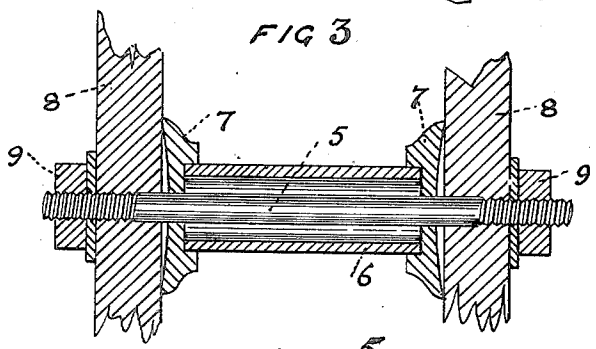


FIG 5

WITNESSES:

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UNITED STATES PATENT OFFICE.

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FRAMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 660,084, dated October 16, 1900.

Application filed February 5, 1900. Serial No. 3,953. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK H. SMITH, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Framing Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to an improved framing device adapted to take the place of the tenon and mortise in any kind of framework where a cross-girth is required, my object being to reduce the expense and increase the strength and durability of constructions of this character.

My invention will now be described in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 shows a fragmentary view illustrating one form of my improved device. Fig. 2 illustrates the use of the double form of washer. Fig. 3 illustrates the manner of connecting a part with two other parts located in different directions. Fig. 4 is an enlarged sectional detail of a portion of the construction shown in Fig. 1. Fig. 5 illustrates the simplest form of the device. Fig. 6 shows a double washer in detail.

The same reference characters designate the same parts in all the views.

The essential features of my improved device consist of a tie rod or bolt 5, a framing-tube 6, and an anchor-washer 7. In the simplest form of the device, or that shown in Fig. 5, two washers 7 must be employed. These washers are provided with sockets adapted to receive the extremities of the framing-tube 6. The washers engage the parts 8 to be connected and are provided with rod-holes registering with similar holes formed in the parts 8. The rods when passed through the tube and the openings in the washers and the parts 8 are secured by nuts 9, screwed upon the protruding extremities of the rods, which are both threaded for the purpose. When these nuts are properly tightened, the framing-tube 6 is securely held in place.

In case the parts to be connected occupy an inclined position, as shown at 8^a, (see Fig. 4,) bevel-faced washers 7^a are employed on opposite sides of each part.

When two parts located in opposite directions are to be connected with a single part 10, (see Fig. 3,) washers 7 are applied to two sides of the part 10; but their openings are elongated, as shown at 7^c, to allow the rods to cross each other in the part 10, when the washers and their engaging tubes occupy the same plane. The fastening-nuts 9 may be brought flush with the surface of the timber 10 by using a sunken washer 12. (See Fig. 2.)

The double form of washer 13 (shown in Figs. 2 and 6) consists of two washers connected by a web with which they are formed integral. They are used exactly the same as the single form of washer. In Fig. 1 a metal block is shown having three washer-faces 15^a. A rod connecting the two parts 16 is passed through the block and two of the washer-faces, while a rod connecting the block with another part (not shown) passes through the block and one of the washer-faces at right angles to the other rod.

The beveled form of washer (shown in Figs. 1 and 4) should be provided with brads 7^g to facilitate securing them in place on the parts to be connected.

Having thus described my invention, what I claim is—

1. A framing device comprising a rod, a tube and washers, the latter being provided with sockets to receive and anchor the tube extremities, the rod being passed through the tube and registering openings formed in the washers and the parts to be connected, the extremities of the rods being suitably fastened.

2. The combination of tubes, anchor-washers and tie-rods, the washer-openings being elongated to allow the rods to pass and cross each other in one of the connected parts, the opening in the tubes being made considerably larger than the rods to allow the tubes and washers to occupy the same plane when the rods are in different planes.

3. The combination with tubes and tie-rods, of a supporting-block having a number of an-

chor-washers formed integral therewith and located on different sides thereof, the block being bored in line with the washer-openings to allow the rods to cross, the rods passing through the tubes and through the block forming angles with each other and occupying different planes.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK H. SMITH.

Witnesses:
GRACE MYTINGER,
A. J. O'BRIEN.