(No Model.)

D. TRUE.

BOAT KNEE.

No. 286,870. Patented Oct. 16, 1883.

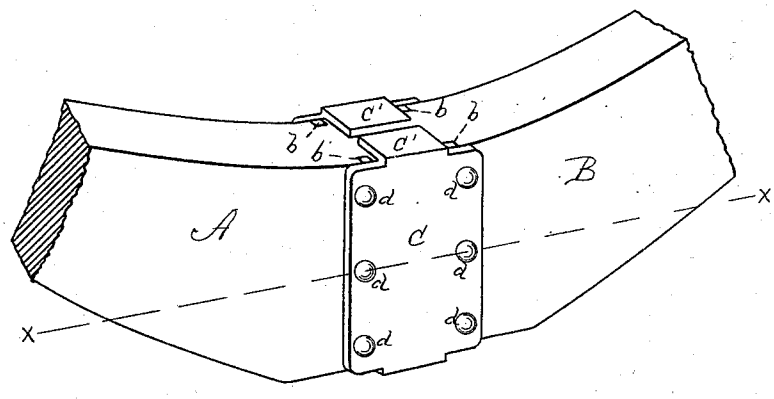


Fig. 1.

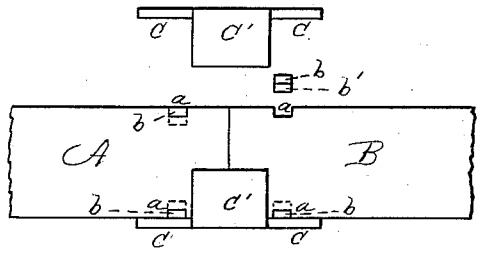


Fig. 2.

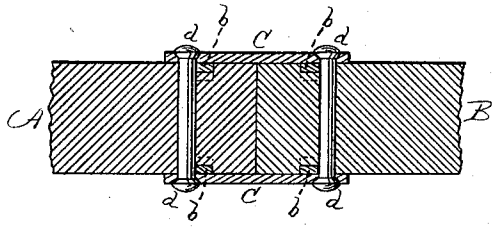


Fig. 3.

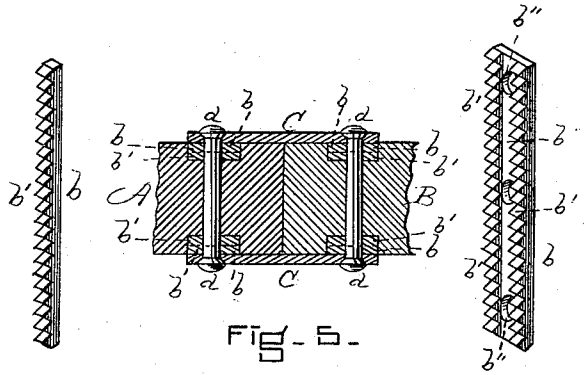


Fig. 5.

Fig. 4.

Fig. 6.

WITNESSES

Joseph Ishbaugh.
Irving H. Baker.

INVENTOR

David True.

By his Atty.
Henry W. Williams.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

DAVID TRUE, OF SALISBURY, MASSACHUSETTS.

BOAT-KNEE.

SPECIFICATION forming part of Letters Patent No. 286,870, dated October 16, 1883.

Application filed March 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID TRUE, of Salisbury, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Boat-Knees, of which the following is a specification.

This invention relates to that class of boat-knees made in two (or more) parts and held together at the adjacent or adjoining portions of said parts, and is applied more particularly to knees used in the construction of dories and similar craft.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a view in perspective of a portion of a boat-knee embodying my invention. Fig. 2 is a plan view of the same with some of the parts moved out of position. Fig. 3 is a horizontal section on line *x*, Fig. 1. Fig. 4 is a view of one of the fastening-bars. Figs. 5 and 6 are views of modifications, the former being a horizontal section and the latter a perspective view of a fastening-bar.

A and B represent the two main portions of the knee, meeting at the bend, and held firmly and immovably together by the means below described. Each of the portions A and B is provided with the vertical or nearly vertical grooves *a*, cut in its sides, as shown.

b b are metallic bars, provided with teeth *b'*. The main or unbroken portions *b* of the bars are of the size and shape to fit into the grooves *a*.

C C are side plates, preferably, but not necessarily, provided with flanges *c'*, and *d d* are rivets or equivalent mechanical devices.

In putting the parts of the knee together the bars *b* are laid teeth inward in the grooves *a*, and then by blows or pressure the teeth *b'* are forced into the wood constituting the bottoms of the grooves, bringing the bars flush with the sides of the knee. The plates C are then laid against the sides of the knee, so that the rivet-holes in said plates are just outside the bars *b*. The rivets *d* are then driven through the knee, all the parts being in the position shown in Figs. 1 and 3, the plates lying tightly against the sides of the knee, and the rivets being outside, *i. e.*, farther from the dividing-line between the two portions of the knee than the bars *b b'*, and preferably close to said bars. The two parts of the knee are firmly and immovably held together, although the holding portion or device consists of three distinct or separate pieces or parts—viz., the plates, bars, and rivets.

In the modification shown in Figs. 5 and 6 the bars *b* are broadened, provided with two rows of teeth each, and openings *b''* for the rivets to pass through. The rivets thus pass between the rows of teeth, the main strain being of course against the inner rows, and the grooves in the knee are made broad enough to accommodate said bars.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A device for holding the inner ends of two portions of a boat-knee, consisting, essentially, of the following parts, viz: bars or plates provided with teeth adapted to be pressed into the sides of the knee, side plates made separate from the toothed bars or plates and extending from the toothed bar or plate on one side of the dividing-line between the two portions of the knee to that on the other side of said line, and rivets or equivalent mechanical devices, whereby the side plates are held in position to keep the toothed bars or plates in their places projecting into the knee, substantially as and for the purpose set forth.

2. In a boat-knee made in two or more parts, the combination, with said parts, of the toothed bars *b b'*, side plates, C, and rivets *d*, all arranged and constructed substantially as and for the purpose described.

3. In a boat-knee made in two or more parts, the combination, with said parts, of toothed bars or plates whose teeth are adapted to be pressed into the knee, and plates extending from the toothed bars or plates on one of said parts to those on the other or next of said parts, said extending plates being held down upon the toothed bars or plates by means which clamp the latter and pass into the knee beyond or farther from the dividing-line between the two parts of the knee than said toothed bars or plates, substantially as and for the purpose set forth.

DAVID TRUE.

Witnesses:
HENRY W. WILLIAMS,
JOSEPH ISHBAUGH.