D. TRUE.

BOAT-KNEE.

No. 187,939. Patented Feb. 27, 1877.

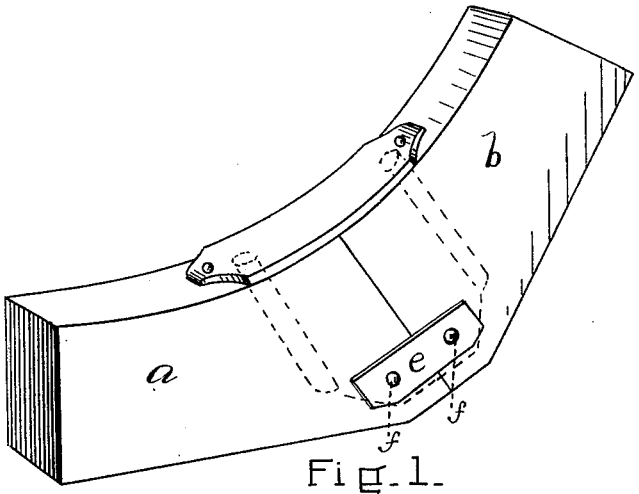

Fig. 1.

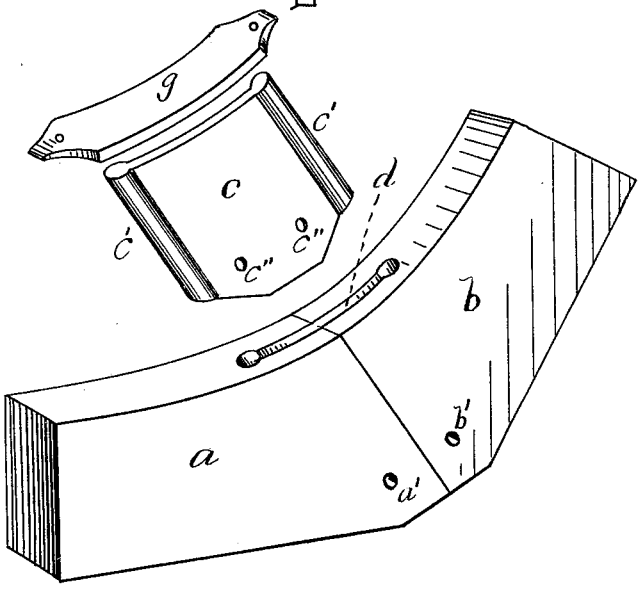

Fig. 2.

WITNESSES

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DAVID TRUE, OF SALISBURY, MASSACHUSETTS.

IMPROVEMENT IN BOAT-KNEES.

Specification forming part of Letters Patent No. **187,939**, dated February 27, 1877; application filed February 15, 1877.

To all whom it may concern:

Be it known that I, DAVID TRUE, of Salisbury, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Boat-Knee, which improvement is fully set forth in the following specification, and accompanying drawing.

This invention relates to those boat-knees which are made in two (or more) parts, and, consequently require to be firmly and strongly held at the adjoining or adjacent edges of said parts, in order that the knee may be as strong as or stronger than a knee depending upon artificial bending for its shape, and yet subject to none of the objections attaching to bent knees.

The knees to which this improvement applies are more particularly those used in connection with dories and similar craft.

Hitherto, the inner ends of two portions of a boat-knee have been connected and held by means of sockets, clamps, &c., placed around or upon different portions of the outside of the knee. Such appliances when made sufficiently strong are liable to be too expensive to come into general use.

In this invention, by means of an internal connection I provide a means of attaching or holding in position the inner ends of two portions of a boat-knee which is stronger than any merchantable outside clamp or socket can be made, while it is extremely cheap in cost.

In the accompanying illustration, Figure 1 is a view in perspective of a boat-knee embodying my invention. Fig. 2 is similar view, with the parts represented as having been separated.

Similar letters of reference indicate corresponding parts.

a and *b* represent two portions of a boat-knee. *c* is a metallic piece which forms an interior connection tightly holding together the parts *a* and *b*.

It will be seen that the edges *c' c'* are made thicker than the central portions. The opening *d* is made of the shape of the connecting-piece *c*, so that when it is in the corresponding opening *d*, there can be no possibility of the parts *a* and *b* separating.

These edges *c' c'* may be made of many different shapes, and the general form of the metallic connection *c* could be somewhat varied, and the object accomplished.

I do not propose to confine myself to the exact shape illustrated. The connecting-piece *c* may extend to the bottom of the knee or not, as desired. Preferably, but a small portion only would pierce the bottom, as the under side of the knee might require subsequent beveling.

In case the inner ends of *a* and *b* do not actually touch, but have a partition or plate interposed between them, the connection *c* would pass through such partition, or be made of a piece with it.

In order to still further strengthen the knee, a plate, *e*, is placed, one upon each side, in the position shown, and rivets *f* passed through said plates, and through openings *a' b'* in the knee, and corresponding openings *c'' c''* in the connection *c*. The plates *e* are pressed tightly against the knee, so as to force it upon the surfaces of the metallic connection and bend its thick portions.

g is a plate, placed upon the upper side of the knee to protect it and keep out moisture. It is not, however, an absolutely necessary part of my invention.

Thus it will be seen that a strong and cheap boat-knee is produced by means of an interior connection, and one in which the connecting means take up no valuable space.

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

1. In combination with two adjoining or adjacent parts of a boat-knee, an interior metallic connection, which, by means of its shape, holds or assists to hold together, or nearly so, the said portions of the knee.

2. In combination with the metallic connection *c*, the plate *g*, substantially as and for the purpose herein set forth.

3. The combination of the parts *a b*, connection *c*, plates *g e*, and rivets *f*, substantially as and for the purpose above described.

DAVID TRUE.

Witnesses:

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