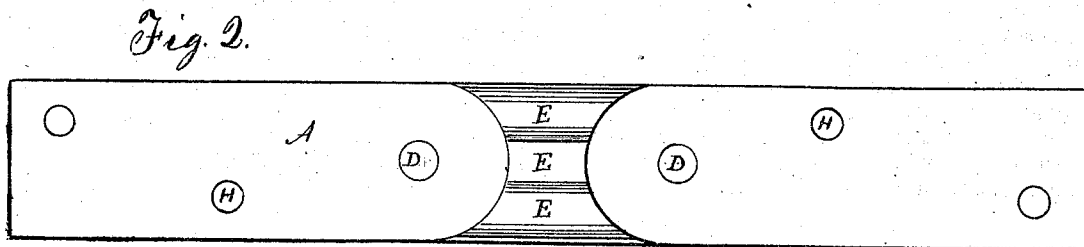
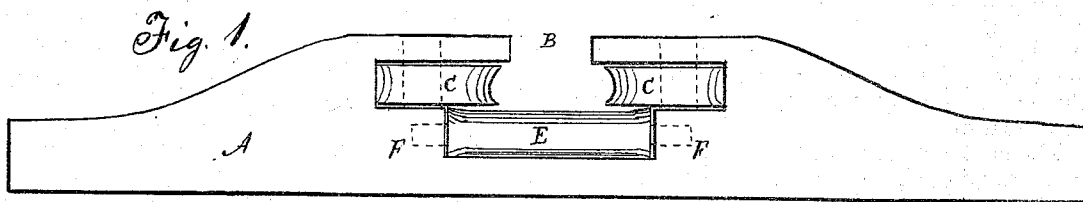


HANS TRULSEN.

Improvement in Warping Chocks.

No. 120,131.

Patented Oct. 17, 1871.



Witnesses
W. A. Morley
Darius L. Phay

Hans Trulsen.
By his Atty. J. Dennis.

UNITED STATES PATENT OFFICE.

HANS TRULSEN, OF PAINESVILLE, OHIO.

IMPROVEMENT IN WARPING-CHOCKS FOR VESSELS.

Specification forming part of Letters Patent No. 120,131, dated October 17, 1871.

To all whom it may concern:

Be it known that I, HANS TRULSEN, of Painesville, Lake county, in the State of Ohio, have invented certain new and useful Improvements in Warping-Chocks for Ships and Vessels; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

The nature or essence of my invention consists in a warping-chock with two sheaves with vertical axles, in combination with two rollers with horizontal axles, so arranged as to turn freely by the friction of the rope and save it from being chafed or worn so much as it would be if there were no sheaves or rollers, so that the rope will constantly pass over surfaces that move with the rope, and thus save it from being worn.

In the accompanying drawing, Figure 1 is an elevation of a warping-chock with my improvements. Fig. 2 is a plan or top view of the same.

In this drawing, A is the block or bed of the chock, made of wood or iron in the form shown

or in such other form as will answer the purpose. There is an open score, B, across the top of the chock, with sheaves C C fitted in each side of the score B and arranged to turn on the vertical pins D D in the chock. The score B is elongated at the bottom below the sheaves C C for the horizontal rollers E E, which extend under the sheaves C C, and are provided with journals or pivots at each end, which turn in recesses or seats F F in the chock A, shown by dotted lines in Fig. 1 of the drawing. This chock may be fastened to the gunwale or other part of the vessel by bolts or spikes in the holes H H.

What I claim as my invention and improvement in the above-described warping-chock is—

The two sheaves with vertical axles, in combination with the two rollers with horizontal axles.

HANS TRULSEN.

Witnesses:

JOHN J. MITCHELL,
A. L. TINKER.

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