G. MARTIN.

Tackle-Block.

No. 160,534. Patented March 9, 1875.

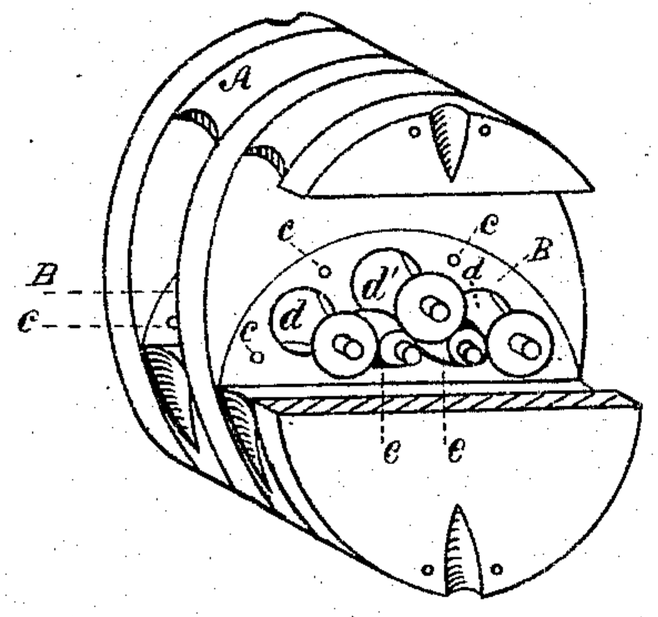

Fig. 1.

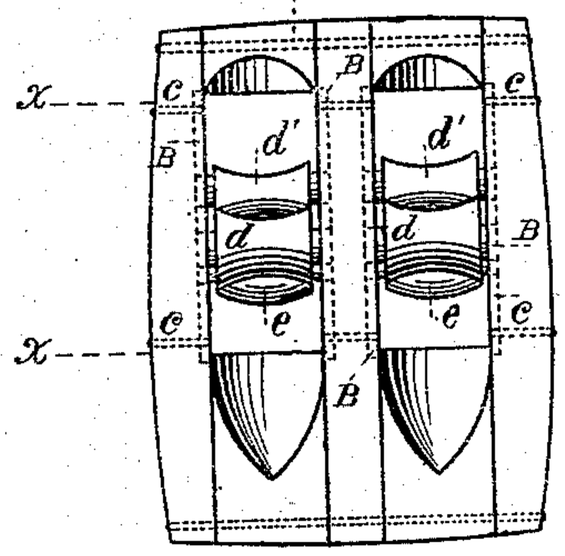

Fig. 2.

Witnesses;
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Gratin Martin,
Per C. A. Shaw,
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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

GRATIN MARTIN, OF LYNN, ASSIGNOR OF ONE-HALF HIS RIGHT TO ROBERT McINTYRE, OF EVERETT, MASSACHUSETTS.

IMPROVEMENT IN TACKLE-BLOCKS.

Specification forming part of Letters Patent No. **160,534,** dated March 9, 1875; application filed December 4, 1874.

To all whom it may concern:

Be it known that I, GRATIN MARTIN, of Lynn, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Tackle-Blocks, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a sectional perspective view, and Fig. 2 a side elevation.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to means for reducing the friction, at the same time strengthening the block; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

In the drawing, Fig. 1 represents a double mortise-block, with that portion of its outer shell between the lines *x x*, Fig. 2, removed; and B, metallic plates, which are firmly riveted to the sides of the mortises by the rivets *c c c*. Three concaved rollers, *d d' d*, are arranged in the arc of a circle in the mortise, being journaled in the plates B, and under and in contact with the central roller *d'* are two convex supporting-rollers, *e e*, also journaled in the plates B, and arranged in respect to the rollers *d d*, as shown.

The plates B greatly strengthen the block, and prevent it from splitting, while the rollers *e e*, by affording support to the other rollers, render it feasible to dispense with the ordinary pulleys or sheaves without increasing the friction, at the same time bringing the path of the rope nearer the center of the block, and rendering it less liable to cant or "choke."

I am aware that a sheave or pulley has been used in a tackle-block, having a series of friction-rollers arranged around its axis, and do not claim the same, my invention being essentially different from such a device; but,

Having thus described my invention, what I claim is—

In a tackle-block, the concave rollers *d d' d* and convex rollers *e e*, combined and arranged to operate substantially as and for the purpose specified.

GRATIN MARTIN.

Witnesses:

C. A. SHAW,

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