

J. W. NORCROSS.
Tackle-Block.

No. 220,644.

Patented Oct. 14, 1879.

Fig. 1.

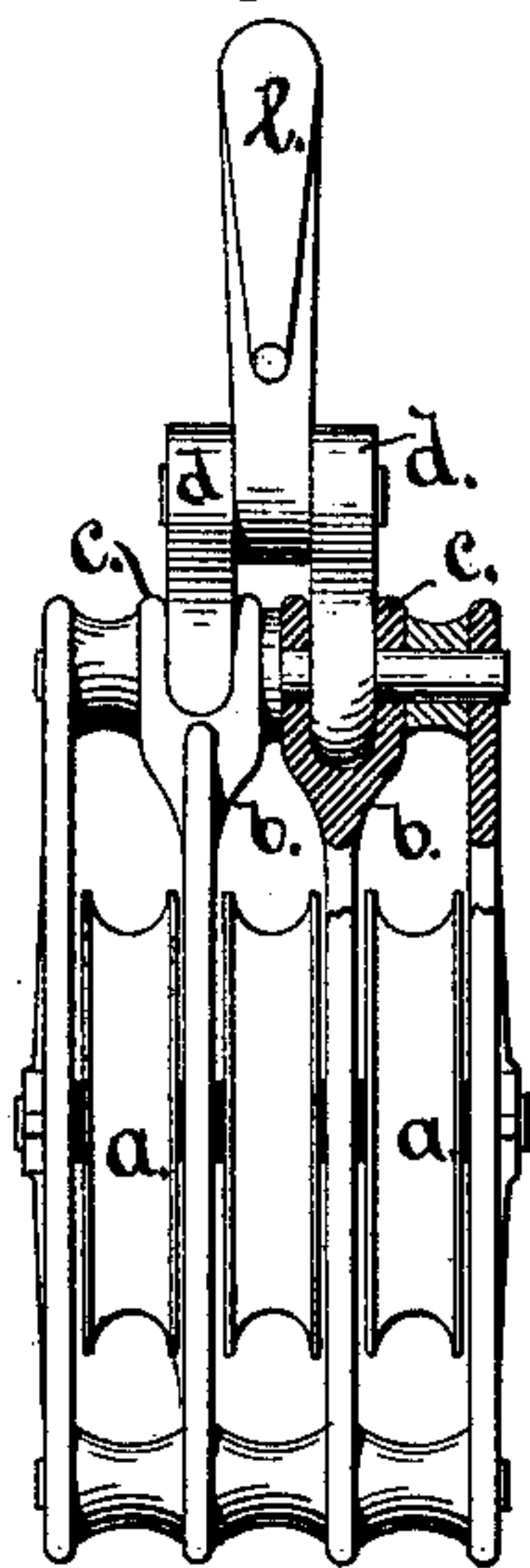


Fig. 2.

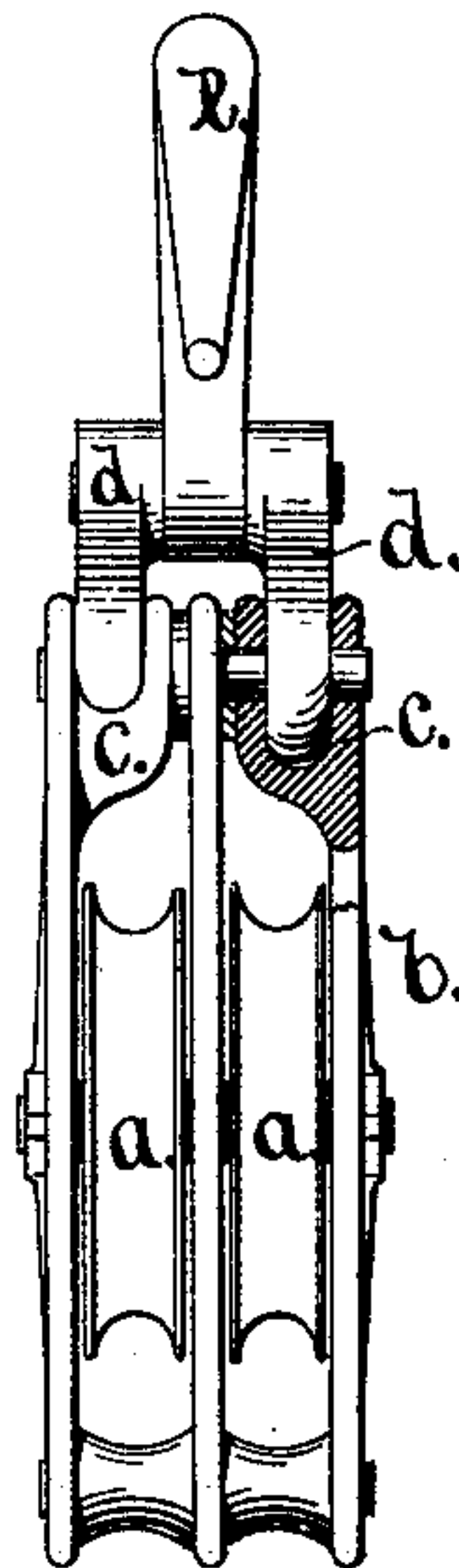


Fig. 3.

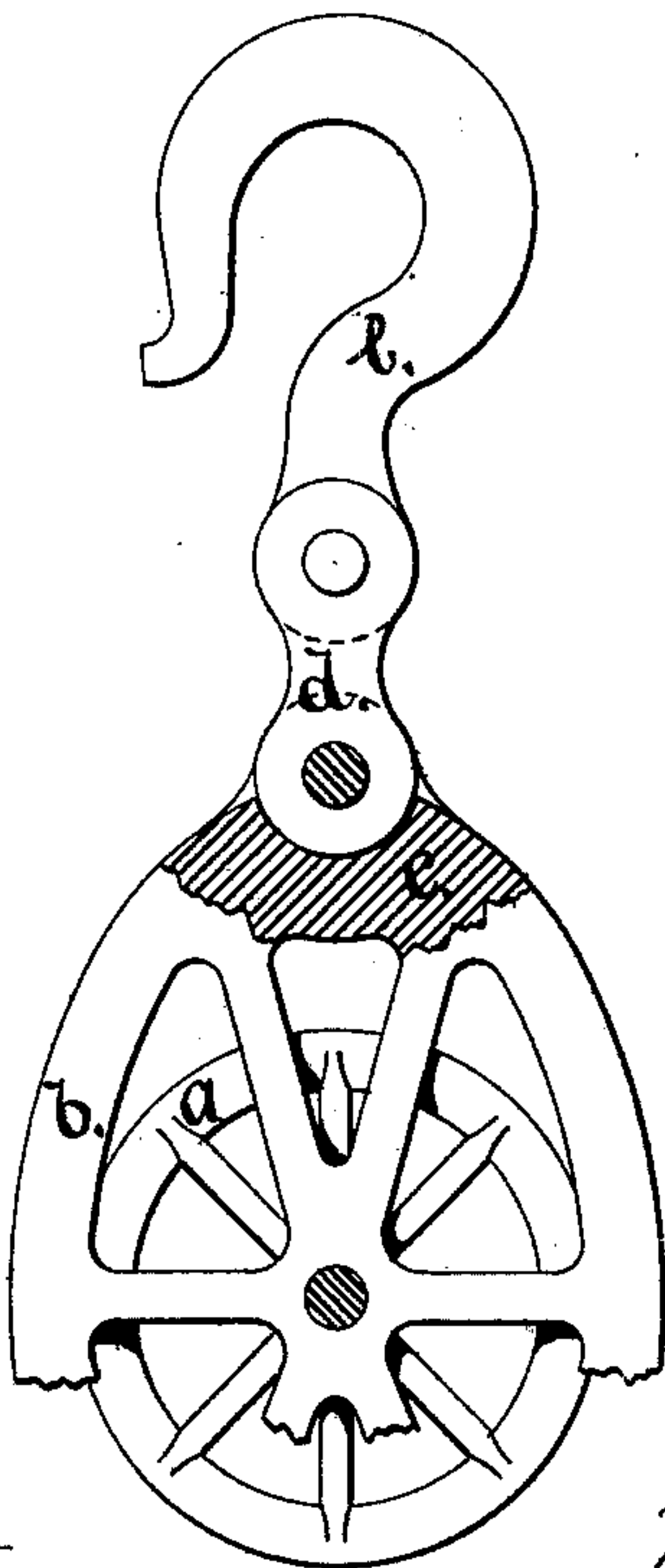
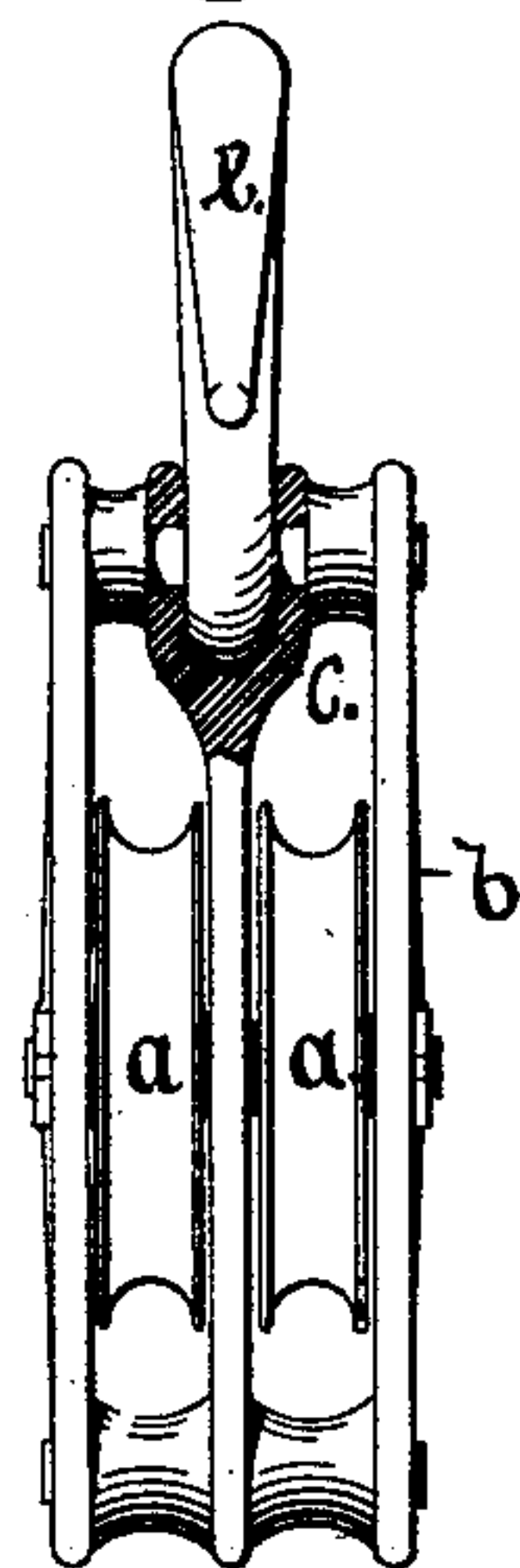


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH W. NORCROSS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TACKLE-BLOCKS.

Specification forming part of Letters Patent No. **220,644**, dated October 14, 1879; application filed March 5, 1879.

To all whom it may concern:

Be it known that I, JOSEPH W. NORCROSS, of the city of Boston, county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Tackle-Blocks; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention has reference to improvements in the side or partition frames of tackle-blocks, and consists in providing such frames with a forked eye, in which the shackle-bars are secured by the pin passing through all the frames, so that the strain will be transmitted directly to the side or partition frame, and greater strength secured in a cast-metal block, as will be more fully set forth hereinafter.

Figure 1 is a view of a triple tackle-block, showing the connection, with the block-frame, of the hook by means of the shackle-links secured in the eyes, cast in one piece with the two central partition-frames. Figs. 2 and 4 are views of double tackle-blocks, showing the eyes cast in one piece with the side frames of a tackle-block and the manner of connecting the hook by means of the shackle-links or without the same. Fig. 3 is an enlarged view of a tackle-block partly in section, showing the connection of the hook with the block-frame.

In the drawings, *a a* are the sheaves of the tackle-block; *b*, the open cast-metal frame of the same; *c*, the forked eyes, cast in one piece with the frame, and arranged to receive the shackle-bars *d*, to which the hook *e* is secured by a pin.

When in cast-metal tackle-blocks the hook

is secured directly to the block, which can be readily done in a single or triple block, the strain is not on a line with the frame, but between the two frames, and the metal resisting the strain is that portion which is above the pin by which the hook is secured. When, now, as is clearly shown in Fig. 1, the frames are provided with forked eyes *c*, the strain is transmitted from the hook *e*, by means of the links *d*, to the eyes *c*, and is on a line with the frames provided with the eyes, the pin passing through the frames, and the shackle-links bear against the metal of both sides of the forks. Greater strength is thus secured, and as the strength of the whole block depends on the strength of this, the weakest part, this block will sustain a greater strain than tackle-blocks as heretofore constructed. Greater flexibility is also secured in the connection of the hook with the block, so that the same can adjust itself more readily.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In cast-metal tackle-blocks, the frame having the bifurcated eye *c* cast in one piece with the frame, forming a support for the shackle-bars and hook-pin, substantially as and for the purpose described.

2. The combination of the frame *b*, having the bifurcated eye *c*, the shackle-bars *d*, and hook *e*, substantially as and for the purpose described.

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