

(No Model.)

G. A. FORD.
TACKLE BLOCK.

No. 350,238.

Patented Oct. 5, 1886.

Fig. 1.

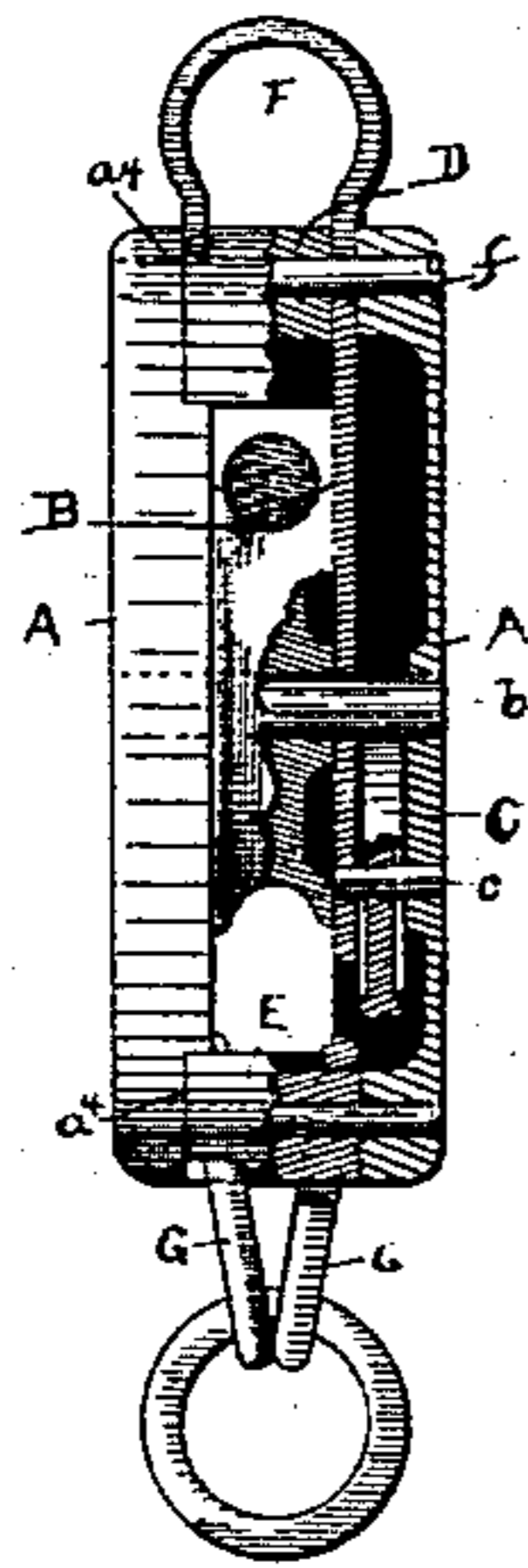


Fig. 2.

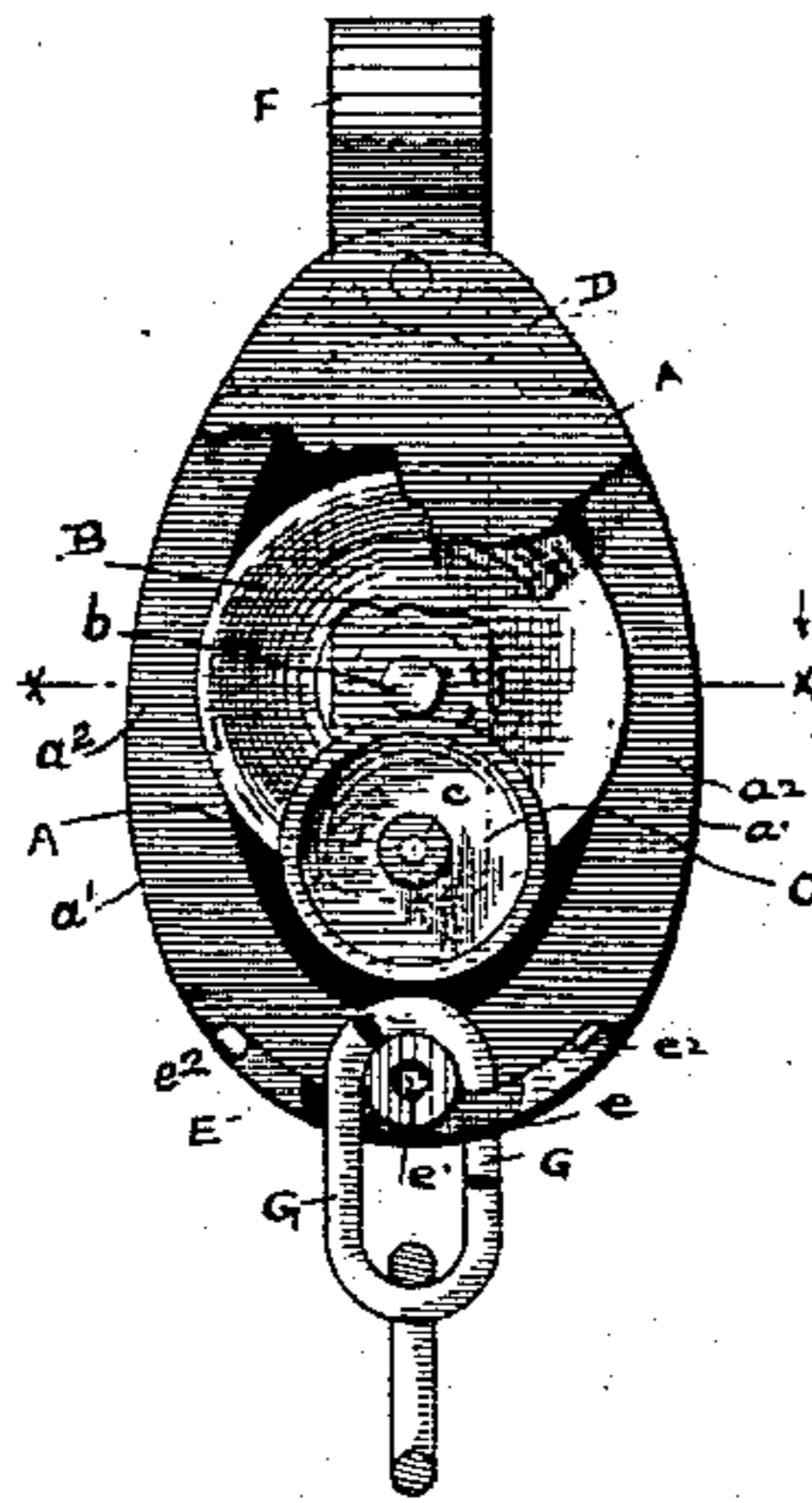


Fig. 3.

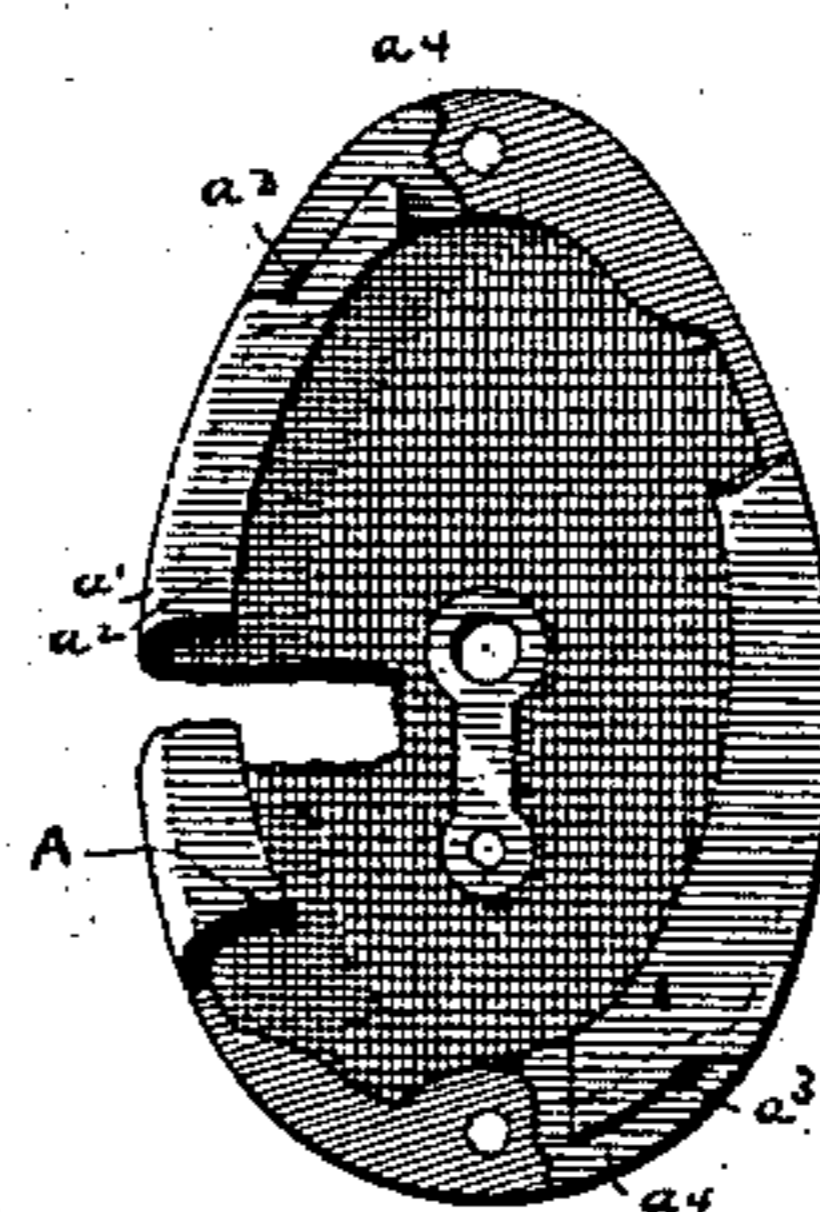


Fig. 4.

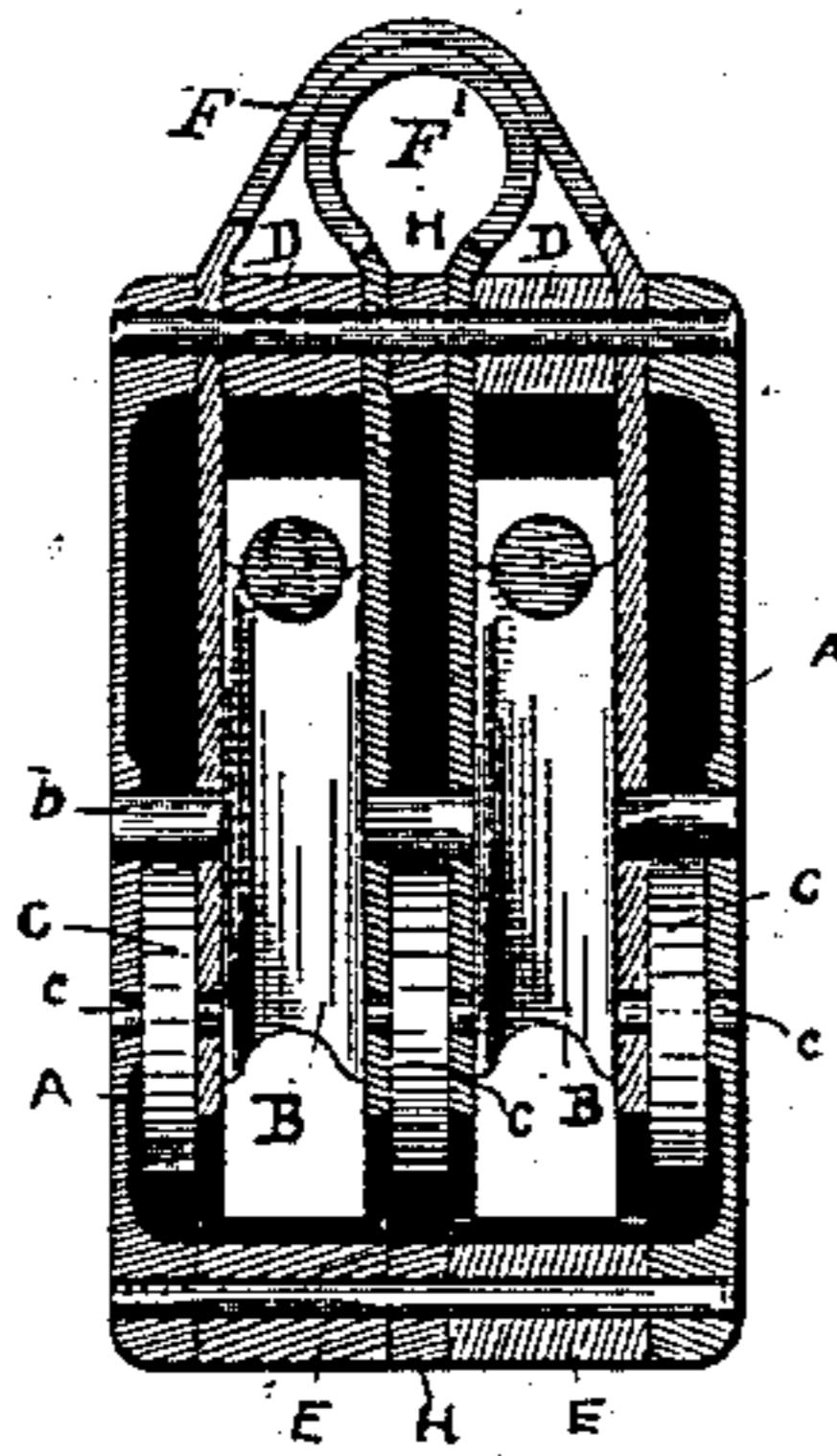


Fig. 5.

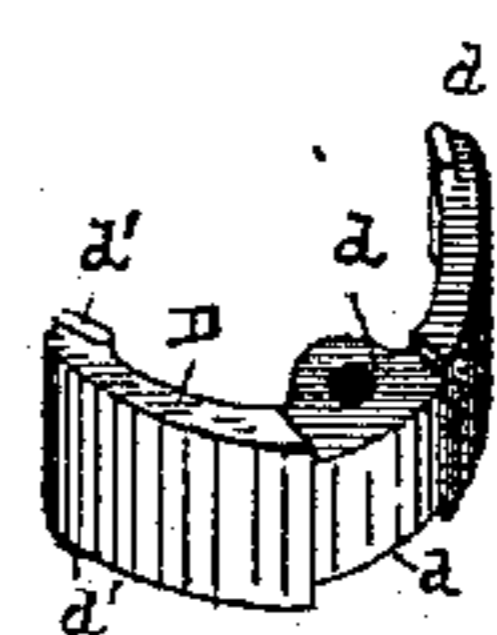
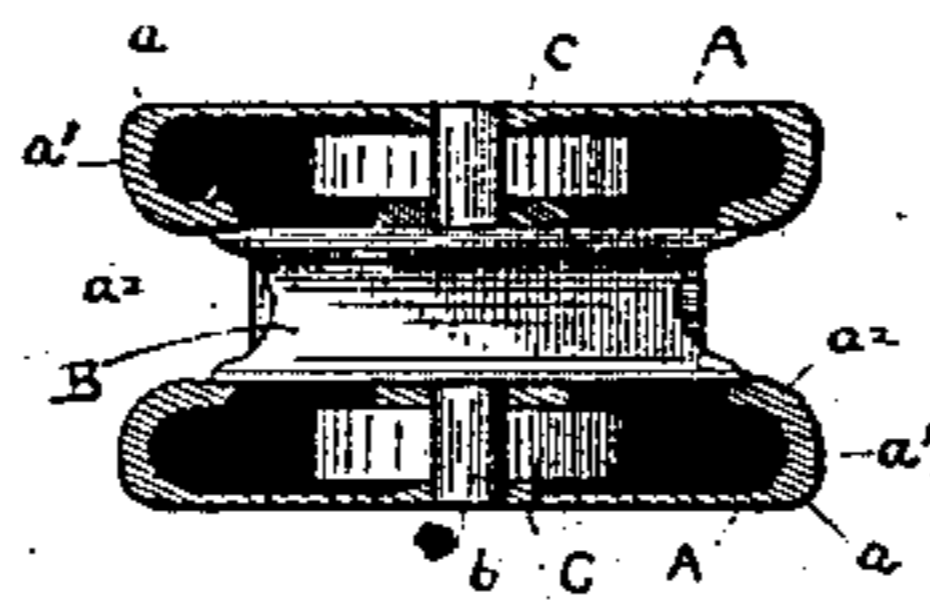


Fig. 6.

Fig. 7.

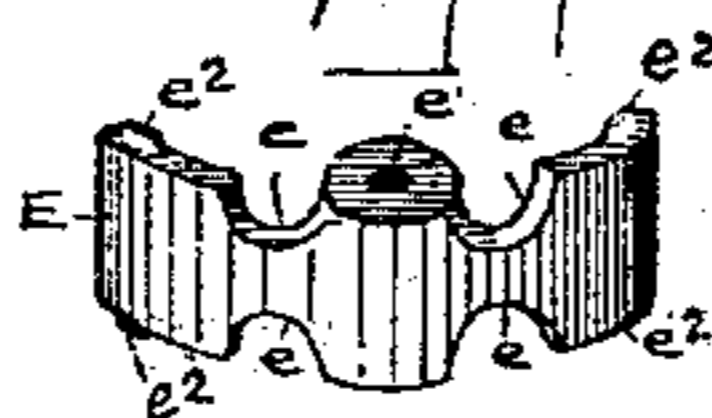
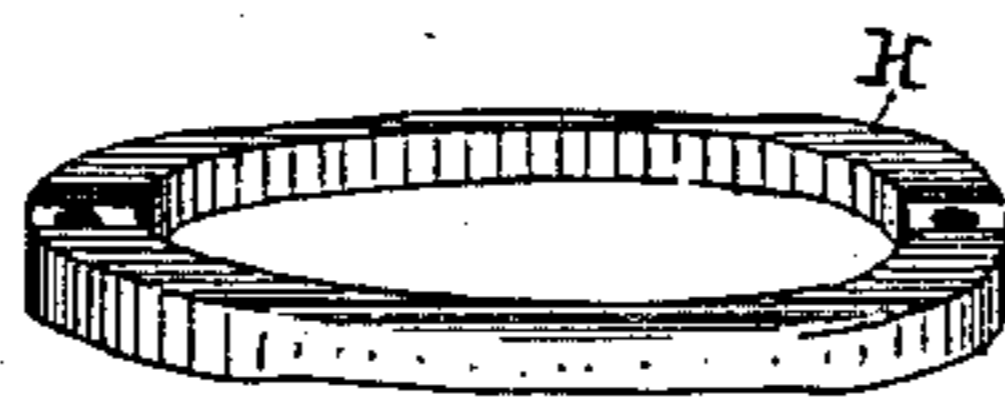


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE A. FORD, OF CLEVELAND, OHIO.

TACKLE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 350,238, dated October 5, 1886.

Application filed April 5, 1886. Serial No. 197,856. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. FORD, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful
5 Improvements in Tackle-Blocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 My invention relates to improvements in metal tackle-blocks; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

15 In the accompanying drawings, Figure 1 is an edge view, partly in section, of a tackle-block having a single sheave, the same embodying my invention. Fig. 2 is a side elevation in section through the center of the
20 block. Fig. 3 is an elevation of the inside of one of the cheek-pieces, portions being broken away to show more clearly the shape thereof. Fig. 4 is an elevation in transverse section through the center of a double-sheave tackle-
25 block. Fig. 5 is a horizontal section through the center of a single-sheave block. Figs. 6 and 7 are views in perspective showing in detail the blockings that separate the cheek-pieces at the ends of the block. Fig. 8 is a
30 view in perspective of the center pieces for a double-sheave block.

A represents the cheek-pieces, which are made preferably of malleable cast-iron. These cheeks have substantially flat surfaces inside
35 and outside, except that they may be a trifle thicker where the holes are made for the spindles of the sheaves B and the anti-friction rollers C, such being on the inner surface. The shape of the cheeks along that portion of the periphery thereof where the ropes may
40 engage the same are shown more clearly in Figs. 3 and 5. The outer corners, at a , are rounded so as to avoid a sharp edge. From thence inward at a' a surface is had substantially at right angles to the sides of the cheek,
45 to give comparatively a broad surface, so that the tackle in striking against the rigging of a vessel, or against other objects, will not cut or be likely to mar the same. From thence at
50 a^2 the rim of the cheeks curves inward, so as

to come inside the sheave, thus forming a smooth surface of considerable radius for the ropes to draw across. By this construction of the cheek-pieces are avoided several objectionable features that are more or less common to metal tackle-blocks—to wit, a thin
55 edge that would cut or bruise, and a sharp curve on the inner edge that would injure the rope, and by means of the lateral depth of the rim and of the chamber thus formed
60 inside of the cheek room is made for the roller C inside the block. At the extreme ends of the cheeks, where the blocks D and E are placed the rim is not turned inwardly, but is cut away on the inside and made thinner at
65 a^4 , to allow for the thickness of the draft-strap F, that consequently lies flat against this part of the cheek and is spanned by the notch d of the strap. A bolt or rivet, f , passes through the block D, strap F, and the cheek-pieces,
70 thus firmly securing the parts. The block has lugs d' , that fit into mortises a^3 of the cheeks, to hold the block securely as against turning on the bolt or rivet f . The strap F is bored to receive the spindle b of the sheave B,
75 and to receive the spindle or a trunnion, c , of the roller C. The anti-friction rolls are thus inclosed out of sight and out of the way, and well protected from dust and dirt and against accidents. These rollers sustain the draft on the
80 tackle-block, and the spindles of the sheaves have only to be held in place by the cheeks and strap F, and consequently little wear is had on the journal-bearings through these parts. The sheave-spindle is fitted rigidly
85 into the sheave, and in case of two or more sheaves the latter are mounted loose on the spindle. The block E is cut away at e , to receive the link G. The block E has a bolt or rivet hole, e' , and lugs e^2 , and is secured in the
90 same manner as the block D, already described. With a tackle-block for two sheaves a center piece, H, (see Figs. 4 and 8,) receives the inner end of the blocks D and E, and a strap, F', has journaled therein the trunnions or spindle of the center anti-friction roller, C. (See
95 Fig. 4.)

With the construction shown the same cheek-pieces are used for single or double sheave tackle-blocks, and by making blocks D and E
100

of different thicknesses sheaves of any face, according to the thickness of the rope, may be used.

With the construction shown the tackle-block may be light and strong, the parts are easily assembled, and are easily separated for repairs.

What I claim is—

1. In a metal tackle-block, a cheek-piece comprising one face of the block and made of a single piece of metal, having substantially flat side and inwardly-projecting rim, substantially as set forth.

2. In a metal tackle-block, cheek-pieces each comprising one face of the block, and having substantially flat sides with inwardly-projecting rims forming broad surfaces along the edges of the cheeks, the inner edges of the rims being curved inward beyond the edge or periphery of the sheave, substantially as set forth.

3. In a metal tackle-block, cheek-pieces having substantially flat sides with inwardly-projecting rims, said rims being cut away at the ends of the cheek-pieces to form seats for the blockings that separate the cheeks, substantially as set forth.

4. In a metal tackle-block, the combination, with metal cheek-pieces having flat sides and inwardly-projecting rims, substantially as described, of anti-friction rolls located inside the cheek-pieces, substantially as set forth.

5. In a metal tackle-block, the combination, with cheek-pieces having inwardly-projecting

rims forming chambers, of anti-friction rolls for supporting the sheave-spindle, said rolls being located in the chambers of the respective cheek-pieces, substantially as set forth.

6. In metal tackle-blocks, the combination, with chambered cheek-pieces, substantially as described, of blockings to separate the cheeks, a draft-strap made to embrace the sheave-spindle, and friction-rolls located in the chamber of the cheek-pieces, the trunnions of said rolls being respectively journaled in the cheeks and draft-strap, the parts being arranged substantially as set forth.

7. The combination, with cheek-pieces arranged substantially as described, and having mortises a' , of the blocks E and D, the latter having notches d to span the draft-strap, and lugs d' to engage the mortises a' , the parts being arranged substantially as set forth.

8. In a metal tackle-block, the combination, with cheek-pieces, draft-strap, blockings, and friction-rolls, arranged substantially as indicated, of a center piece and sheaves forming a double-sheave block, and a center draft-strap having a center friction-roll, the trunnions of the latter being journaled in the inner draft-strap, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 16th day of March, 1886.

GEORGE A. FORD.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.