

No. 712,862.

Patented Nov. 4, 1902.

A. B. TARBOX.
BLOCK.

(Application filed May 9, 1902.)

(No Model.)

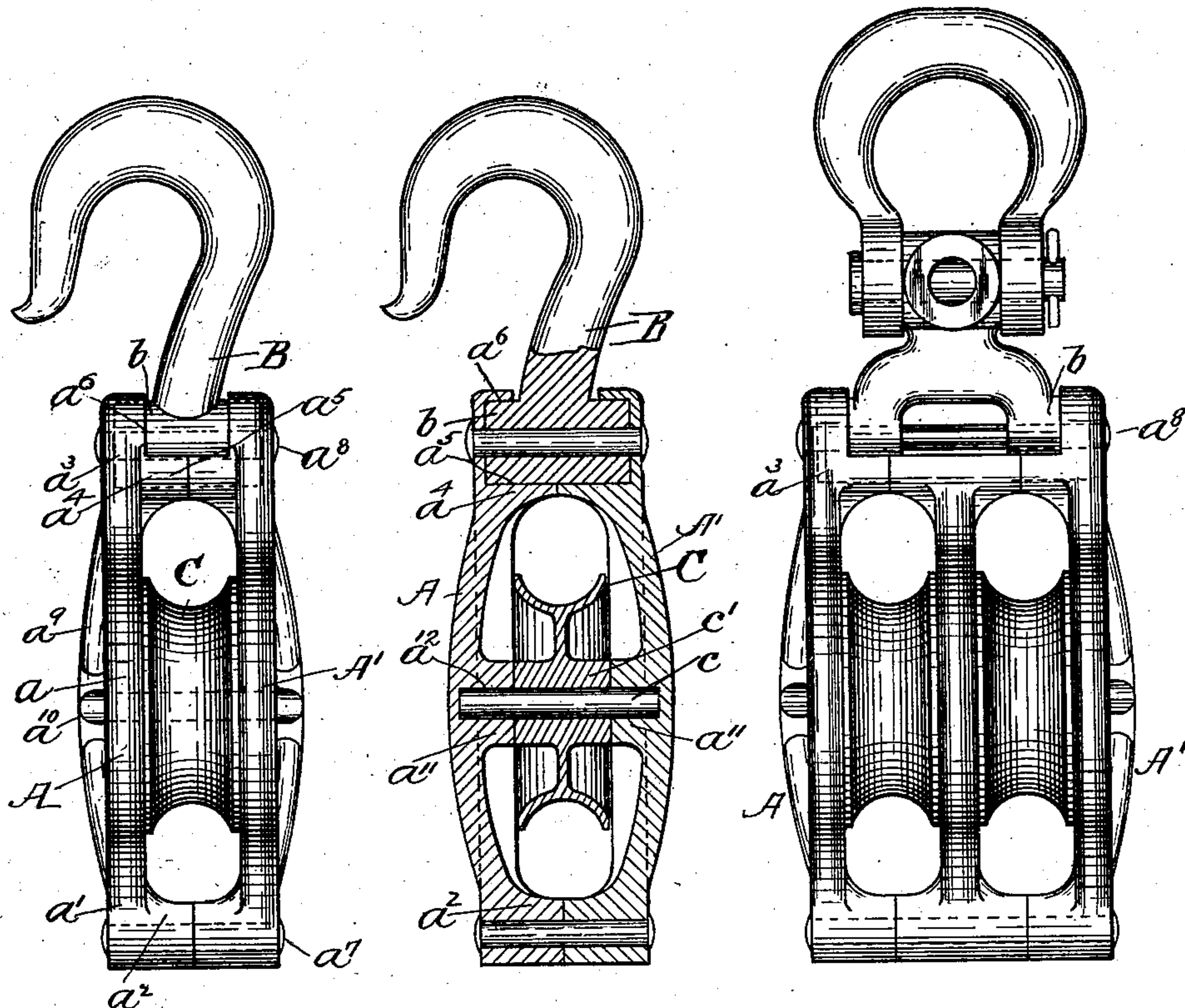


Fig. 1.

Fig. 2.

Fig. 3.

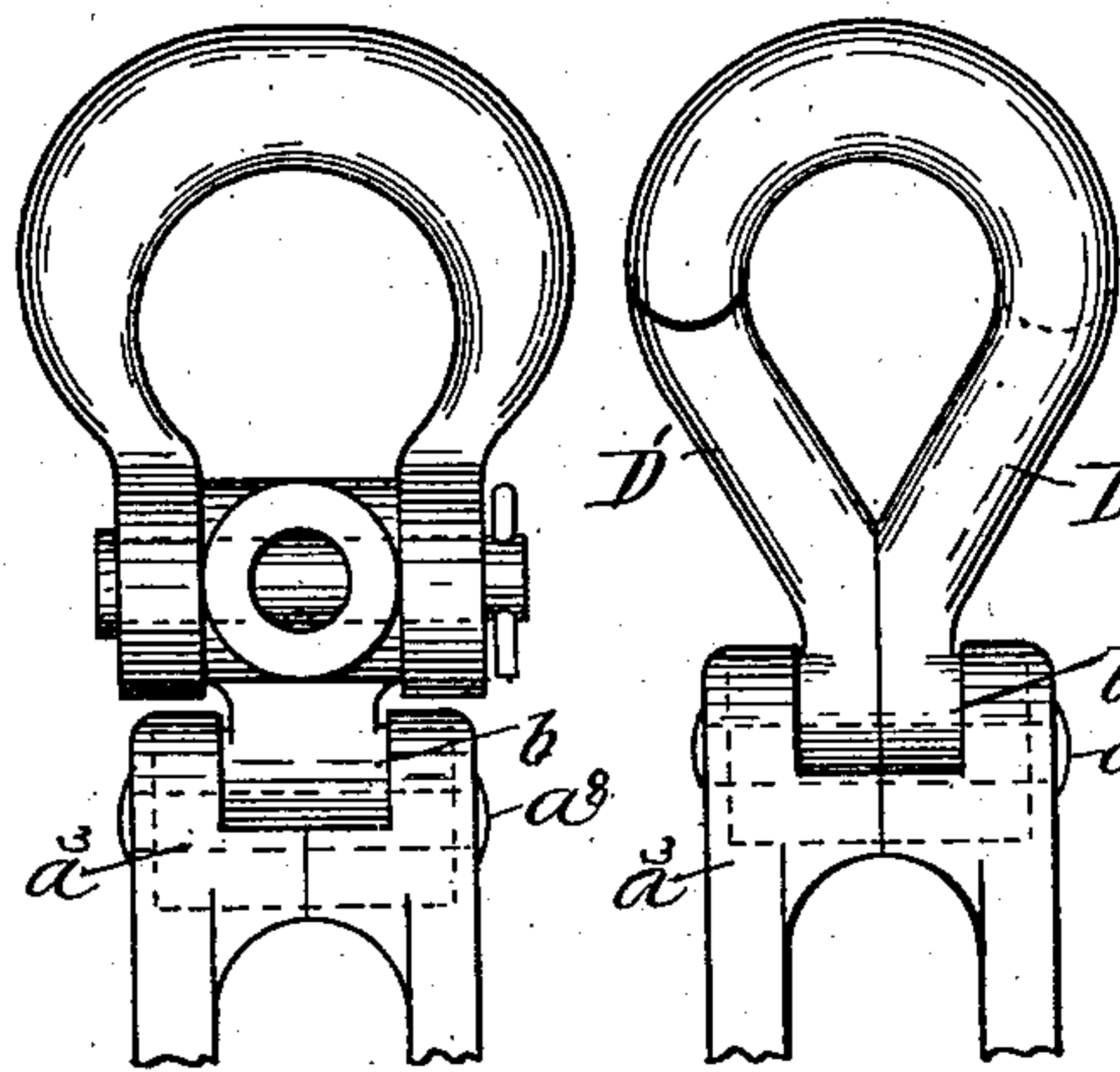


Fig. 4.

Fig. 5.

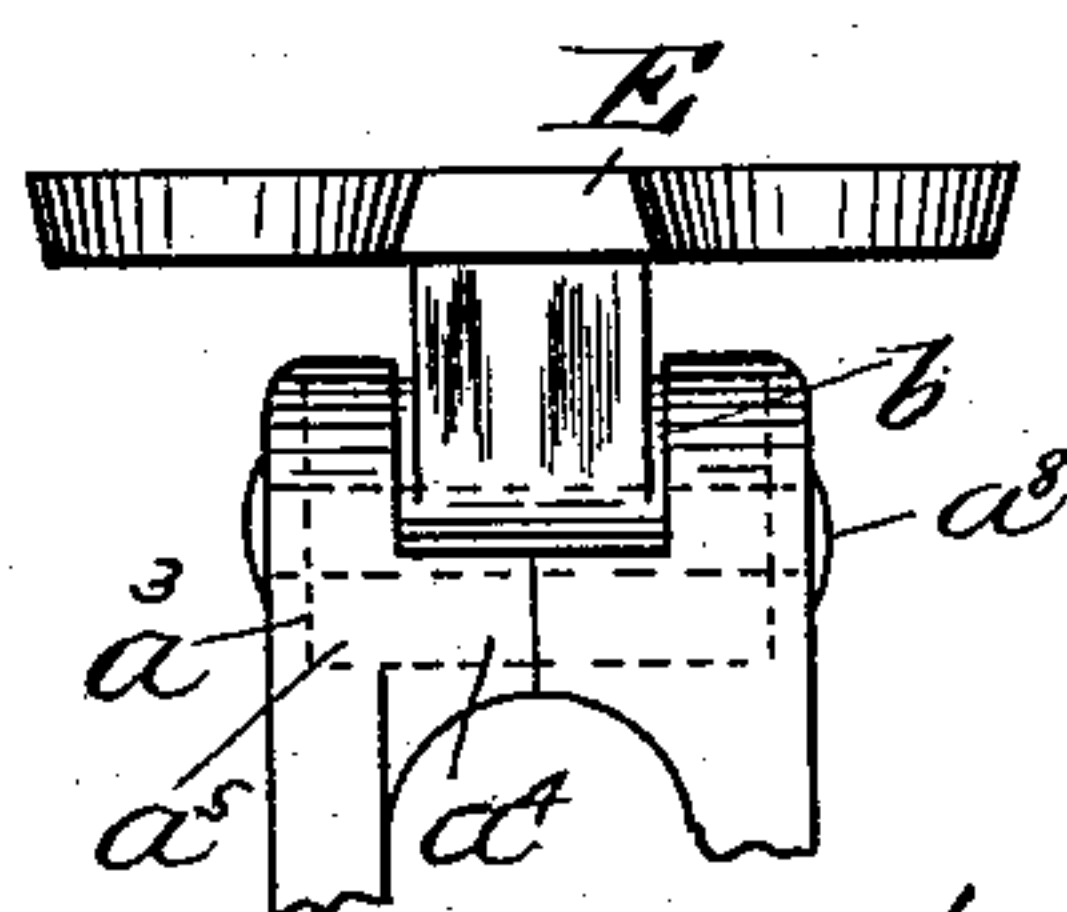


Fig. 6.

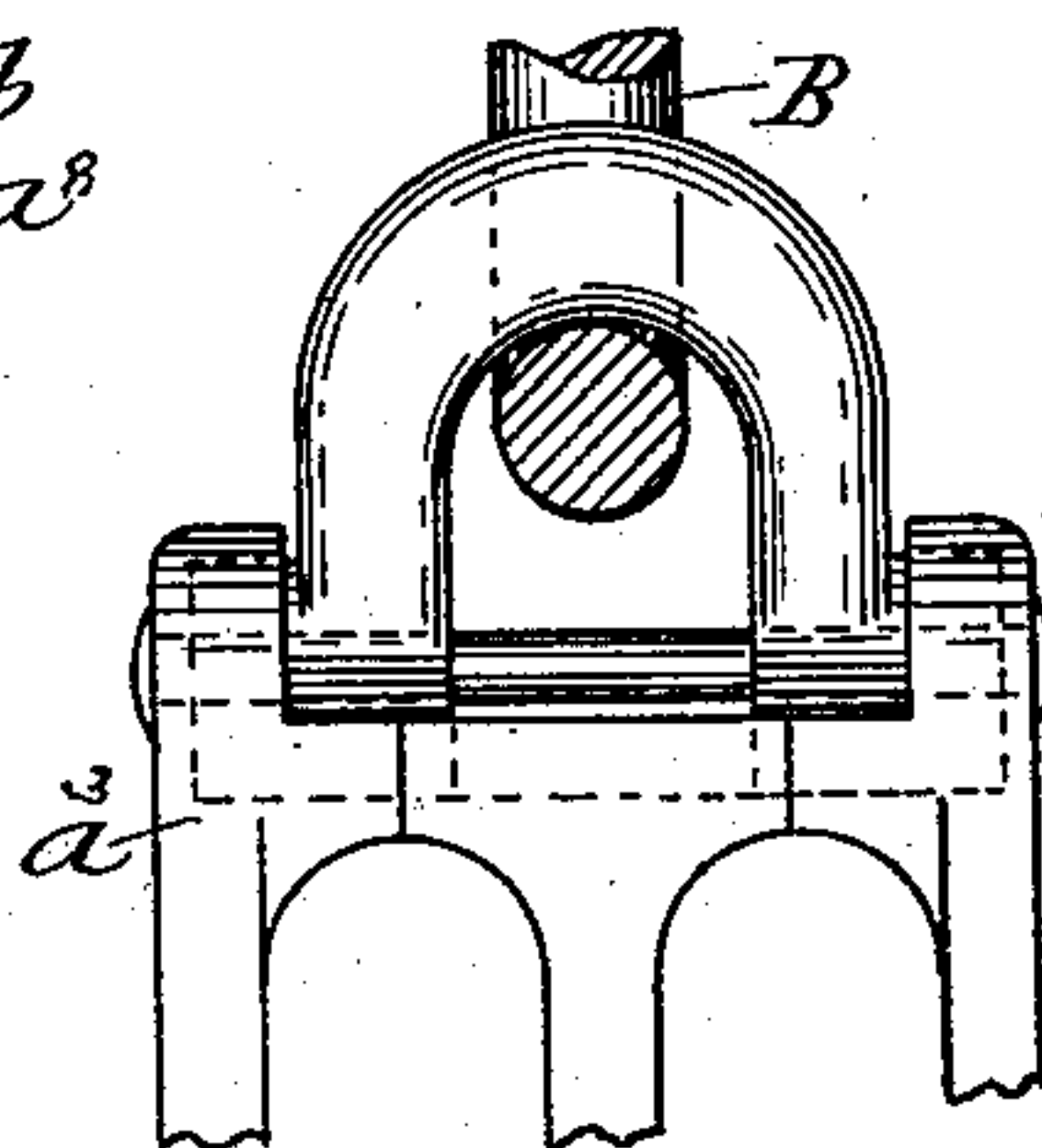


Fig. 7.

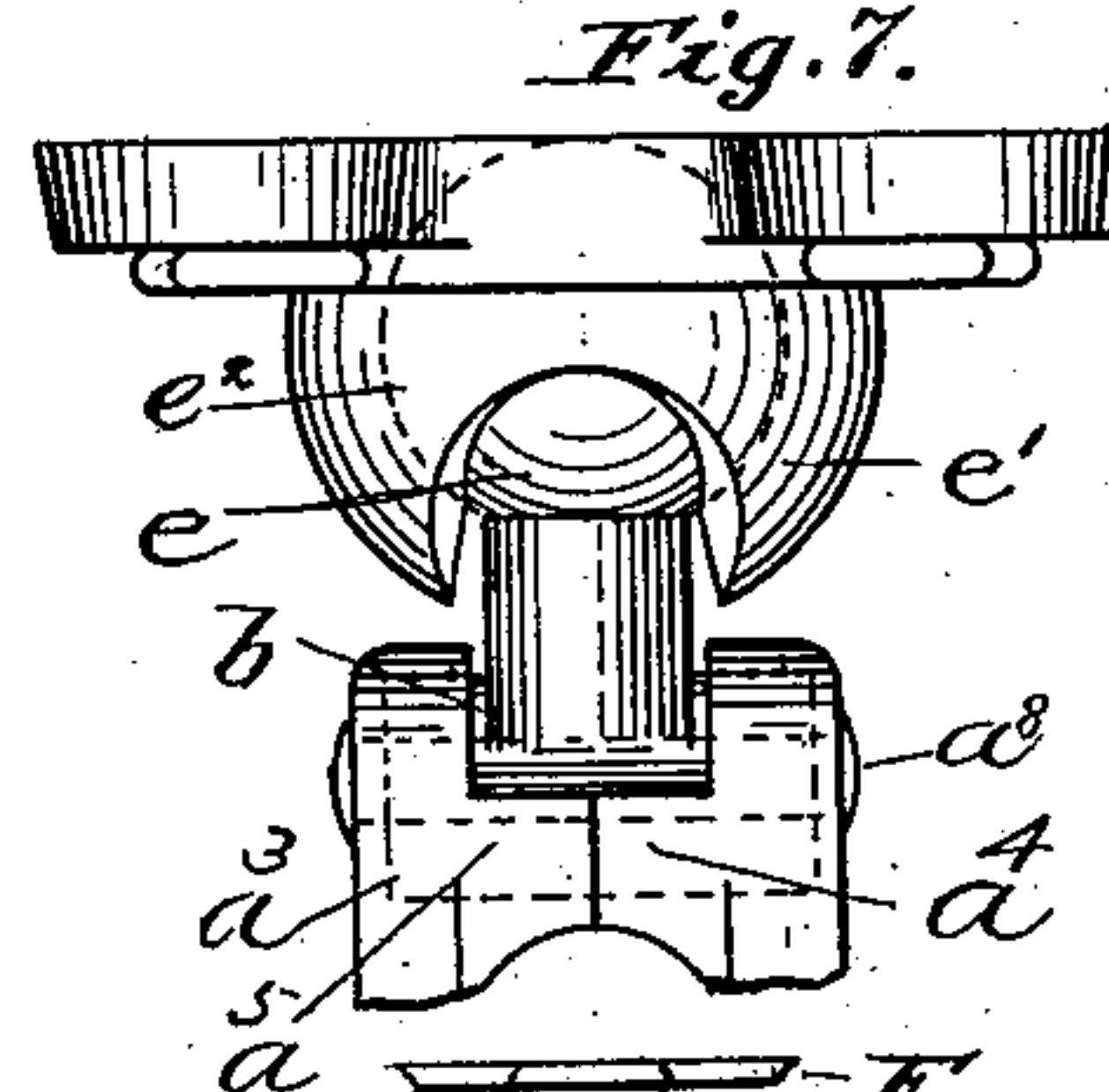


Fig. 8.

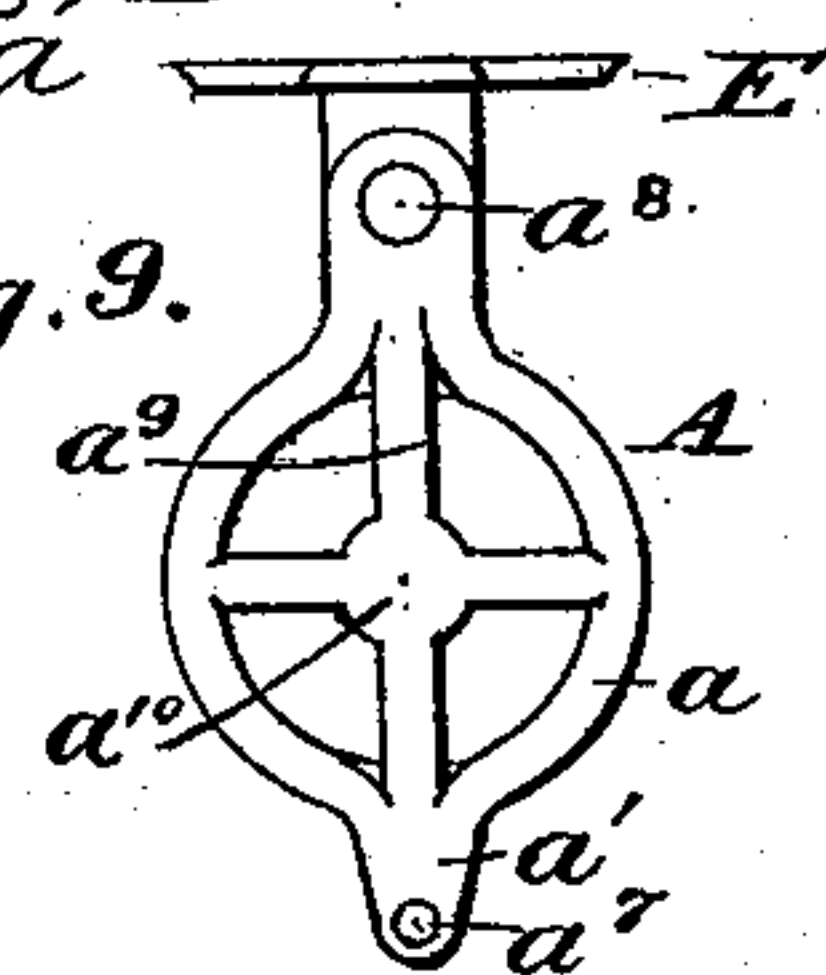


Fig. 9.

WITNESSES.

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BLOCK.

SPECIFICATION forming part of Letters Patent No. 712,862, dated November 4, 1902.

Application filed May 9, 1902. Serial No. 106,622. (No model.)

To all whom it may concern:

Be it known that I, ALFRED B. TARBOX, a citizen of the United States, residing at Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Blocks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention especially relates to blocks of small size; and it consists in various details of construction to which reference is hereinafter made. It is adapted to be combined with any of the usual varieties of blocks, such as hook, sister-hook, shackle, and reversible-shackle blocks.

I will now describe the invention in conjunction with the drawings, forming a part of this specification, wherein—

Figure 1 is a view in side elevation of a hook-block. Fig. 2 is a view largely in vertical central section thereof. Fig. 3 represents the invention as applied to a double block equipped with a reversible shackle. Fig. 4 is a view representing the invention as applied to a single block with a reversible shackle. Fig. 5 shows the invention combined with sister hooks. Fig. 6 shows the block when combined with a floor or fastening plate or bracket. Fig. 7 represents a similar construction having increased flexibility or range. Fig. 8 represents another modification in which a double block is used with a hook. Fig. 9 is a side elevation of the block, showing especially the skeleton sides.

The essential part of the invention is the way in which the sides of the block are made to receive and hold the hook, shackle, or other connection.

Referring to the drawings, A A' represent the sides of the block. They preferably are of skeleton form, each side having a continuous outer ring a , at one end of which is the extension a' , which has a laterally-extending boss a^2 , and at the other end of which is an extension a^3 , which has a laterally-extending boss a^4 , provided with an inward-curved seat a^5 and also with a cylindrical recess a^6 upon its inner face, which forms a bearing for the trunnion b of the hook or other attachment B. The sides are made alike, and

the lower bosses a^2 and the upper bosses a^4 abut. The sides are held together by rivets a^7 a^8 , the first of which passes through holes in the end bosses a^2 and is riveted upon the outer surfaces of the bosses and the second of which passes through the extensions a^3 and the trunnion b and is riveted upon the outer surfaces of the extensions. The sides also have the integral cross-bars a^9 , which preferably are slightly rounded outwardly and which intersect at a^{10} at about the center of the sides, and from the centers extend inward bosses a^{11} , in each of which is a hole a^{12} , opening from its inner face, and these holes support the ends of the sheave-pin c , which passes through the hub c' of the sheave C. The sides of the sheave-hub c' bear against the inner faces of the bosses a^{11} .

The hook B or other attachment carried by the block—such as a shackle (see Fig. 8) or a reversing-shackle connection (see Figs. 3 and 4) or sister hooks (see Fig. 5) or a connection with a floor plate or bracket, either directly, as represented in Fig. 6, or indirectly, as shown in Fig. 7—is connected with the block by a trunnion b , which extends from each side of the inner end of the hook and enters the recesses or bearings in the extensions a^3 of the sides and is seated in the grooved cavities a^5 of the bosses a^4 . Not only is the hook thus connected or jointed with the sides, but it is also secured thereto by the pin a^8 , which extends through the extensions and the trunnion and acts to support the trunnion as well as to fasten the sides together.

In Fig. 3 a double block is shown; but the construction differs from that of Figs. 1 and 2 only in having an extra sheave and a center piece between the two sides, separating the trunnions of the connection which carries the shackle and by means of which the shackle is made reversible with respect to the block.

Fig. 4 follows the construction of Fig. 2, with the exception that a shackle is used instead of a hook and a connection which permits of the reversal of the shackle.

In Fig. 5 the block has the construction of Fig. 2, but instead of one hook what is known as "sister" hooks are used, D representing one hook and D' the other. Each of these

hooks has a trunnion, the two trunnions together being like the single trunnion of Fig. 1 and being held to the sides of the block in the manner described. The outer end of
 5 each hook has a curved and flat face, with the flat faces upon the inside. The two hooks may each be turned upon the pin in opposite directions to be separated from each other and to afford means for attaching the
 10 block to a ring or link, and when both hooks have made engagement therewith they are held in closed position by the shackle or link. Such engagement can only be had by a peculiar twisting or turning movement of the eye
 15 or link with regard to the hooks, and when once engaged disengagement cannot accidentally occur. It will be understood, of course, that the trunnion and the pin afford means by which the hooks or connections may
 20 be turned laterally with respect to the block.

In Fig. 6 a trunnion connection directly with a floor-plate E is represented, and in Fig. 7 a trunnion connection with a ball-and-socket joint, comprising the parts *e*, *e'*, and
 25 *e''*, is represented, the ball being at the end of the trunnion connection and the socket being held in place by the plate.

In Fig. 8 a shackle is shown having a trunnion connection with a double block and carrying a hook or other connections.
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The advantages of the invention lie in the simplicity and cheapness of the construction, the employment of the smallest possible metal for securing the greatest strength combined
 35 with lightness, and the manner in which the sides of the block are connected with the hook, shackle, floor-plate, or other analogous device forming a part of it.

Having thus fully described my invention,
 40 I claim and desire to secure by Letters Patent of the United States—

1. A block having skeleton sides formed by an outer ring, integral cross-bars intersecting at the center and providing bearings for the
 45 sheave, the said skeleton sides also having extensions at each end provided with lateral bosses, the faces of which abut and being fastened together by pins which extend through the said extensions.

50 2. A block having sides provided with end

extensions and lateral bosses and also provided with central bosses having holes extending inward from their faces, but not through the bosses, for receiving and holding
 55 and preventing endwise movement of the sheave, its pin, and pins extending through the ends for fastening the sides together and the sheave and its pin in position.

3. The block herein described having at one end extensions each provided with a lateral boss having a grooved seat and a cylindrical bearing extending from its inner face
 60 with the hook or other block appurtenances having a trunnion held in said seat and the outer ends of which are contained in said bearings.

4. A block having sides provided at one end with circular bearings extending from their inner face and also with bosses within the
 70 line of the bearings and with pin-holes in line with the bearings, and a block-hook or other appurtenance having a trunnion provided with a longitudinal hole extending through it and the ends of which are contained within
 75 said bearings, and a pin extending through the ends and the trunnion.

5. A block having sides provided at one end with circular bearings extending from the inner faces and also with bosses within the
 80 line of the bearings and with pin-holes in line with the bearings, and a block or other appurtenance having a trunnion provided with a longitudinal hole extending through it and the ends of which are contained within said
 85 bearings, and a pin extending through the ends and the trunnion, the said pin serving as an additional means for attaching the trunnion to the sides and also as a means for fastening the sides at that end of the block together.
 90

6. A block having sides, extensions of which at one end face each other and having bearings extending outward from their opposing
 95 faces and sister hooks connected with said sides by a trunnion connection contained in said bearings.

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Witnesses:

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