

No. 693,945.

Patented Feb. 25, 1902.

H. H. BOYCE.

PULLEY.

(Application filed Jan. 16, 1901.)

(No Model.)

Fig. 1.

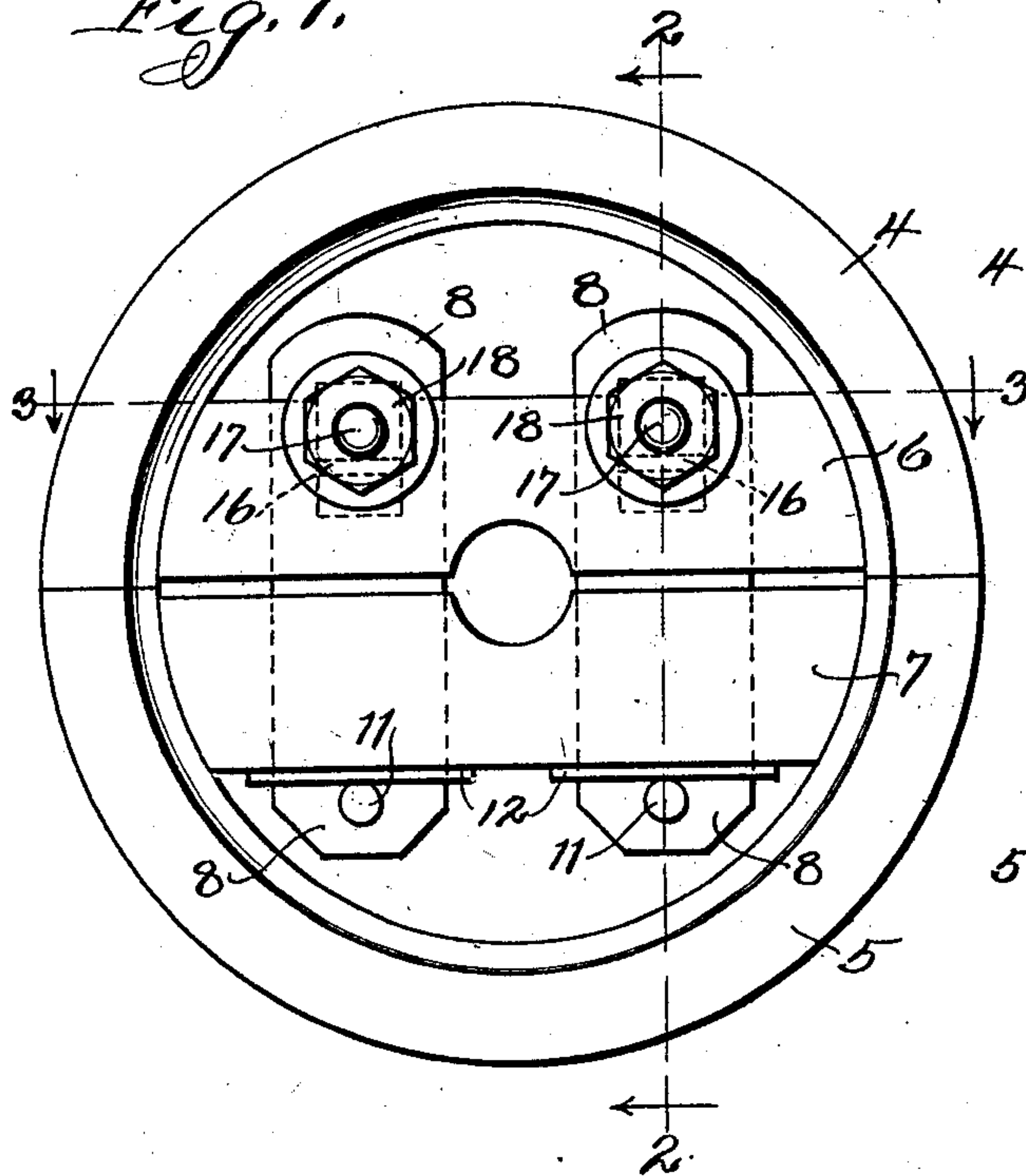


Fig. 2.

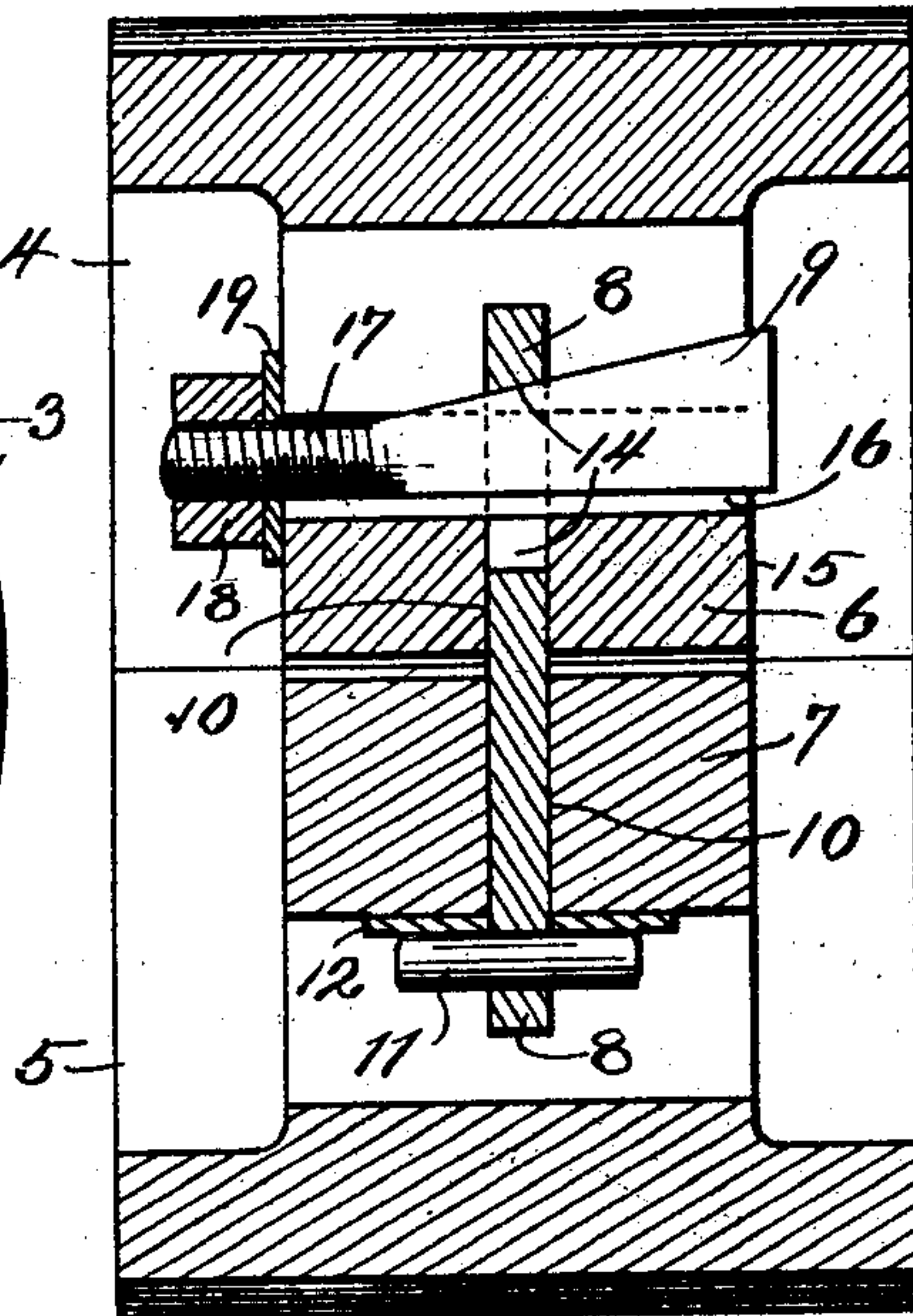


Fig. 3.

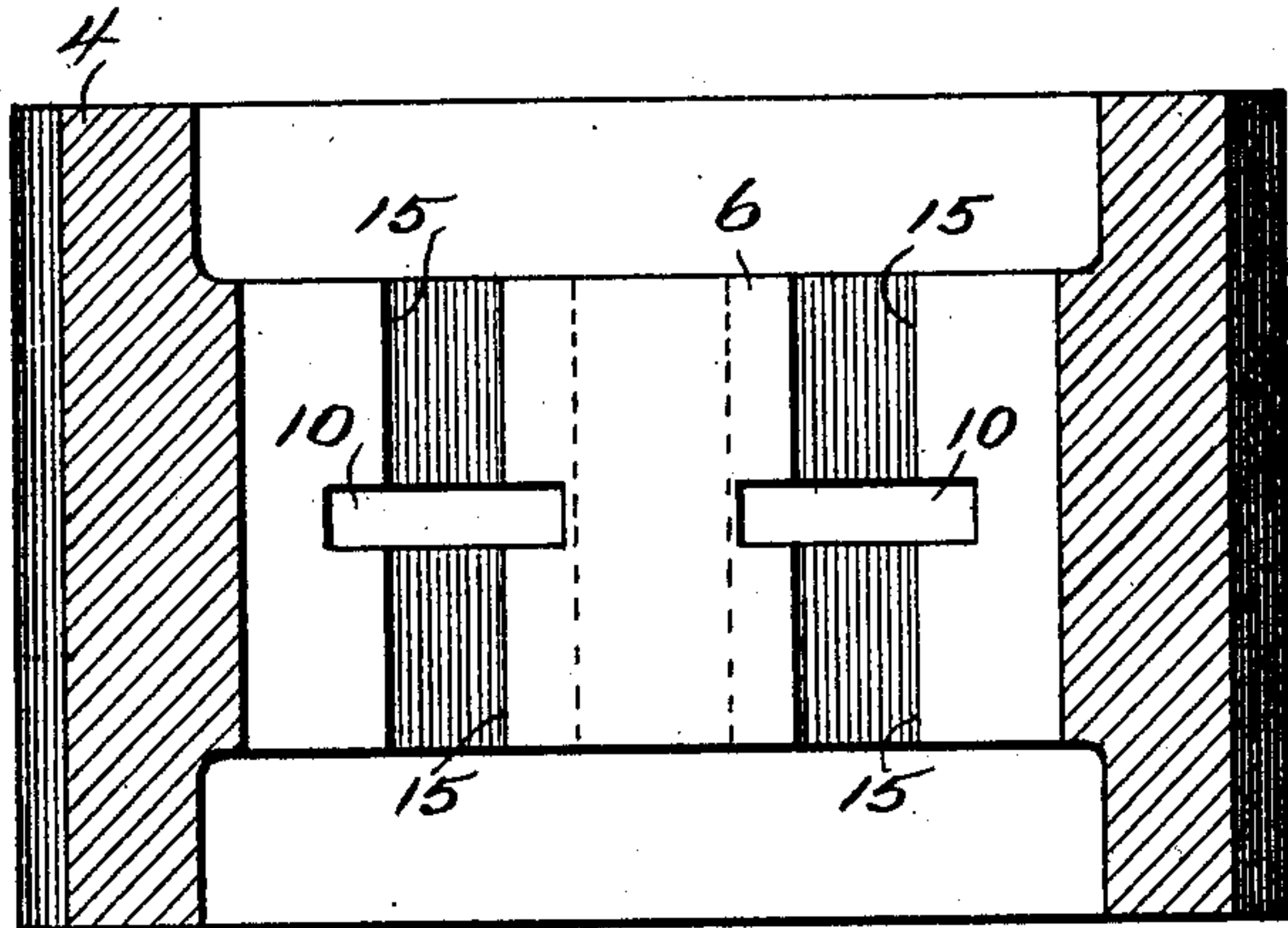
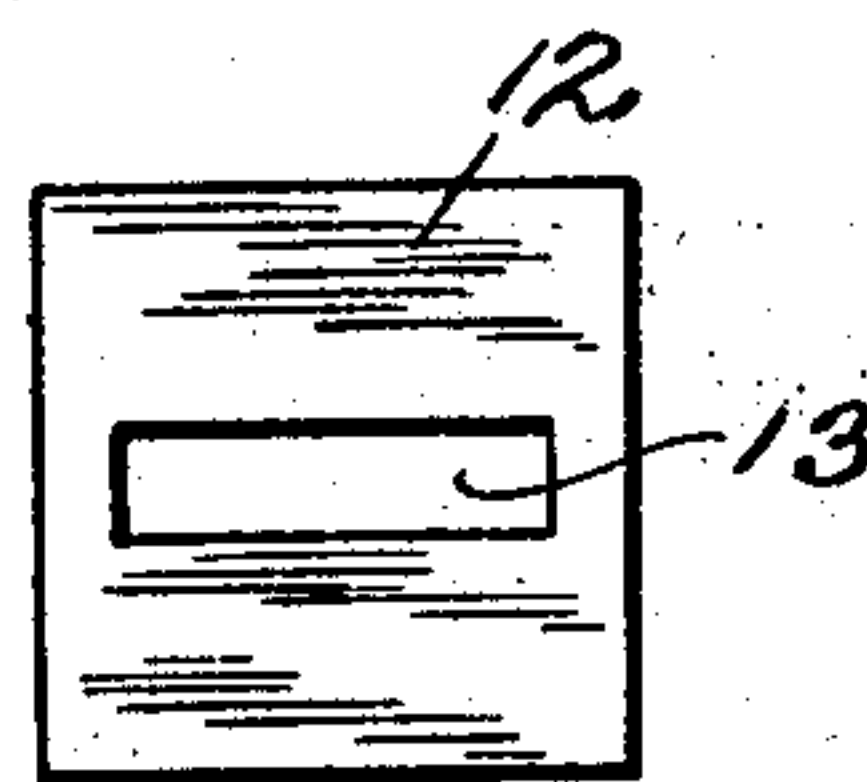


Fig. 4.



Witnesses:

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By M. R. Hummer,
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UNITED STATES PATENT OFFICE.

HIRAM H. BOYCE, OF CHICAGO, ILLINOIS.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 693,945, dated February 25, 1902.

Application filed January 16, 1901. Serial No. 43,458. (No model.)

To all whom it may concern:

Be it known that I, HIRAM H. BOYCE, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pulleys, of which the following is a specification.

The main objects of my invention are to provide improved means for clamping a split pulley and to provide for ready access to said means. I accomplish these objects by the device shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a pulley constructed according to my invention. Fig. 2 is a vertical section of same on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section on the line 3 3 of Fig. 1 with the binding members and wedges removed. Fig. 4 is a plan of one of the plates acting against the bottom of the lower gripping-block.

The form of pulley shown in the drawings is a wooden split pulley in which the rim is divided into the upper section 4 and the lower section 5. The gripping-block 6 is rigidly secured within the section 4 of the rim. The gripping-block 7 is rigidly secured within the section 5 of the rim. Said blocks are connected by binding members 8, which in connection with the wedges 9 serve to draw said blocks together.

The blocks 6 and 7 have the slots 10 extending vertically through same and in which the binding members 8 are seated. Each of the binding members has an aperture at its lower end for receiving the pin 11. A plate 12, having a slot 13 therein for receiving the binding member 8, is seated above each pin 11 and bears against the bottom of the gripping-block 7. Each binding member 8 has a slot 14 for receiving one of the wedges 9. Said slot is preferably made slightly longer than the rear end of its wedge, so that said wedge may be removed from either side of the pulley. Each of said wedges is seated in a groove 15, extending across the top of the gripping-block 6. A plate 16 rests on the bottom of each groove 15 for supporting its wedge 9. Each of the wedges 9 has a threaded shank 17 with a nut 18 thereon. The washers 19 bear against the side of the gripping-block 6.

The operation of said device is as follows:

The two sections of the pulley are placed in proper position on the shaft before the wedges 9 are attached. The binding members 8 will be seated in the slots 10 in one of the gripping-blocks at the time that the two sections of the pulley are connected upon the shaft. The plates 12 and pin 11 will then be attached in the position shown. The wedges 9 are then inserted in the slots 14 and seated in the grooves 16. The washers 19 and nuts 18 are now secured to the wedges 9. When the nuts 18 are tightened on the threaded shanks 17, the wedges will be drawn forward, so as to raise the binding members 8. If the operator wishes to remove the wedges from the side of the pulley toward the nuts 18, he will first loosen the nut 18, so as to relieve the upward pressure of its wedge against the binding member 8, and will then remove the pin 11. This will permit him to raise the binding member 8, so as to withdraw the wedge 9.

The position of the nuts 18 permits the operator to readily turn same, while in the old form of split pulleys, in which the gripping-blocks are held together by bolts passing directly through same, it is often difficult to turn the nuts with a wrench, owing to their position on the gripping-blocks and under the rim.

It will be understood that some of the details of the construction shown may be altered without departing from the spirit of my invention. I therefore do not confine myself to such details, except as hereinafter limited in the claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A pulley comprising a rim; a pair of blocks secured within the rim and having opposite gripping-surfaces for a shaft, one of the blocks having a slot extending through same on one side of its gripping-surface and having a channel for a wedge extending across the block and intersecting the slot transversely of the block; a binding member secured to the other block and extending through said slot; an adjustable wedge seated in said channel, acting between said binding member and the slotted block and having a threaded shank extending transversely of the web of the pulley; a nut on said shank acting against the slotted block and adapted

to draw said wedge between said binding member and the slotted block and thereby draw said blocks toward each other; and means connecting said blocks on the opposite
5 side of said gripping-surfaces.

2. A pulley comprising a rim; a pair of blocks secured within the rim and having opposite gripping-surfaces for a shaft, each of said blocks having a slot extending through
10 same on one side of the gripping-surfaces; a binding member extending through both of said slots, having at one end a shoulder bearing against the outside of one of said blocks, and having at the other end a seat for a
15 wedge; a wedge acting between said seat and the adjoining block and having a threaded shank extending transversely of the web of the pulley; a nut on said shank acting against the side of the adjoining block and adapted
20 to tighten said wedge in its seat and thereby draw said blocks toward each other; and means connecting said blocks on the opposite side of said gripping-surfaces.

3. A pulley comprising a rim in two sepa-

rable sections; a block secured within each
25 section, said blocks forming the web of the pulley and having opposite gripping-surfaces for a shaft, and each of said blocks having the slot for the binding member on each side
of said gripping-surfaces; the removable
30 binding members extending through said slots, each having at one end a shoulder bearing against one of the blocks, and having at the other end a seat for a wedge; the wedges
35 acting between said seats and the adjoining block and each having a threaded shank extending transversely of the web of the pulley; and a nut on each of said shanks acting against the side of the adjoining block and
40 adapted to tighten its wedge in its seat and thereby draw said blocks toward each other.

Signed at Chicago this 12th day of January, 1901.

HIRAM H. BOYCE.

Witnesses:

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