

(No Model.)

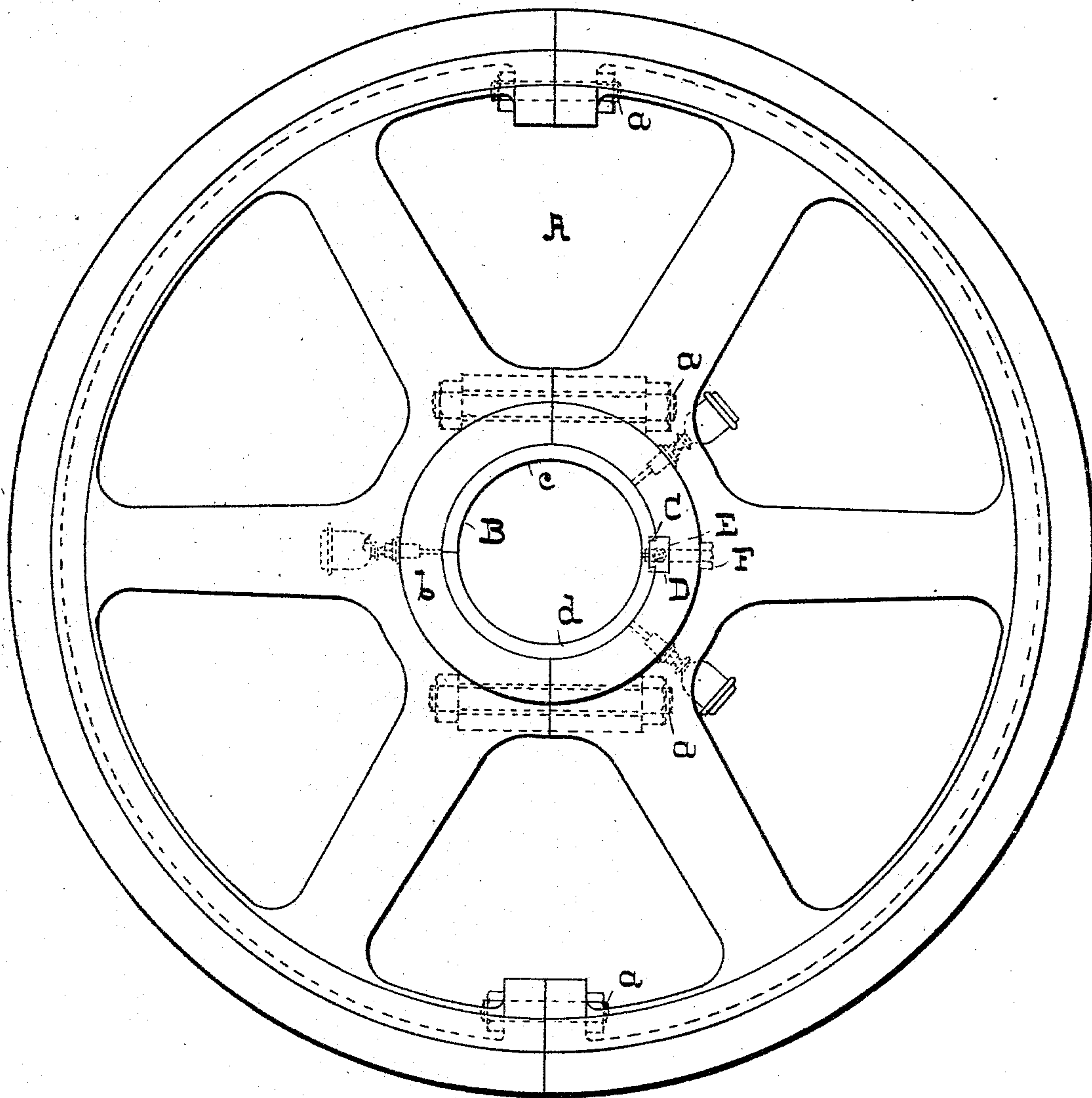
3 Sheets—Sheet 1.

J. WALKER.
BUSHING FOR DRUMS OR PULLEYS.

No. 515,563.

Patented Feb. 27, 1894.

Fig 1.



-WITNESSES-

Dan'l Fisher
Howard S. Kroh

-INVENTOR-

John Walker
by L. H. T. H. H. H.
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(No Model.)

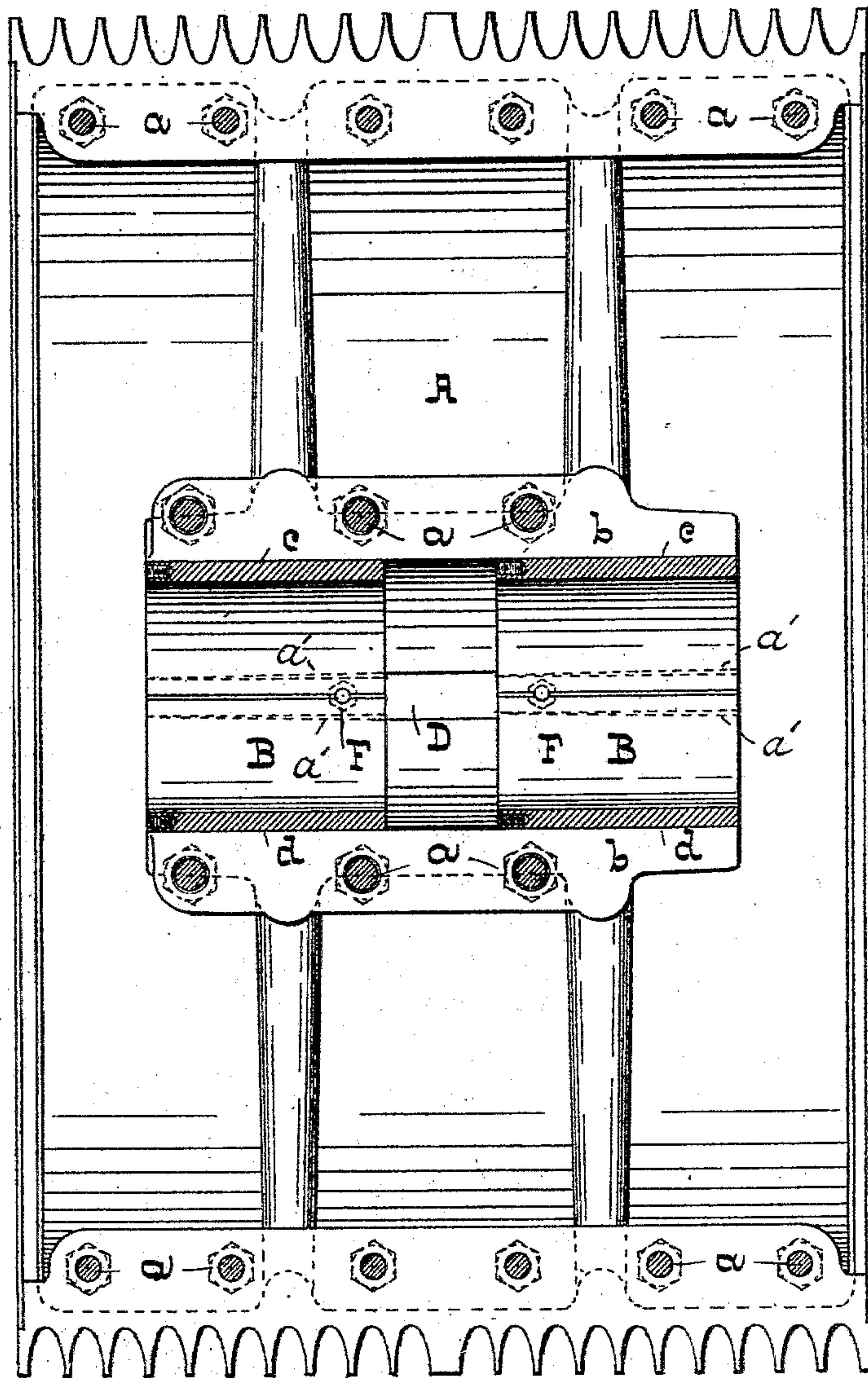
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Fig 2.



-WITNESSES-

David Fisher
Howard L. Cook

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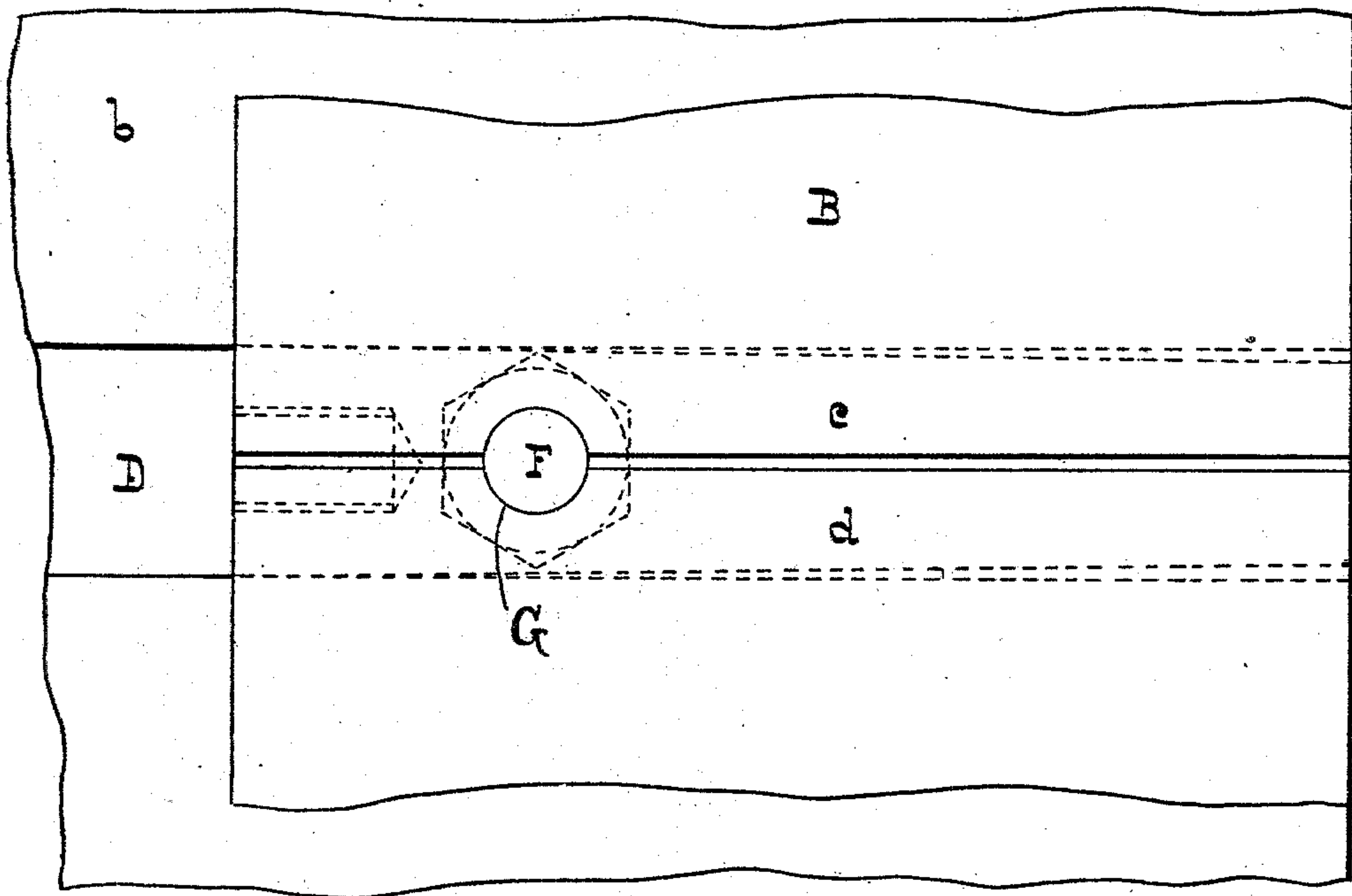
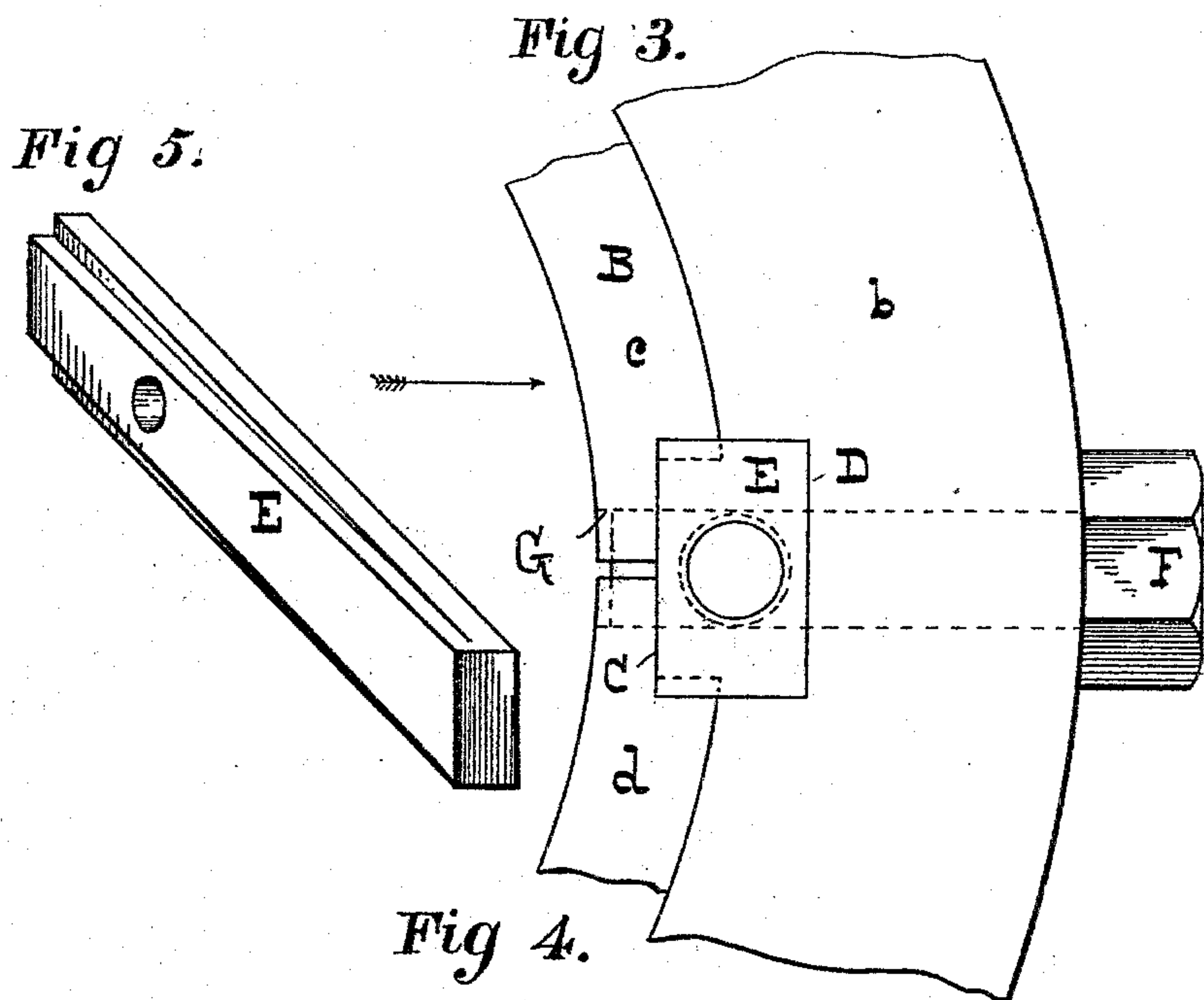
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Howard L. Kish

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UNITED STATES PATENT OFFICE.

JOHN WALKER, OF CLEVELAND, OHIO.

BUSHING FOR DRUMS OR PULLEYS.

SPECIFICATION forming part of Letters Patent No. 515,563, dated February 27, 1894.

Application filed November 11, 1892. Serial No. 451,623. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALKER, of the city of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain Improvements in Bushings for Drums or Pulleys, of which the following is a specification.

This invention relates to certain improvements in drums and analogous devices which are adapted to rotate on a stationary shaft, in contradistinction to those which are secured to a revoluble one, and to this end are provided with hub linings or bushes which may be removed when worn, and others substituted for them.

My improvement consists in making the bush in two pieces or halves the edges of which at one side are in contact, and those at the other left slightly apart. The separated edges are rabbeted out at the outer circumference to form a tapering key seat, and the adjoining portion of the hub has a key seat of uniform width; and into these key seats is inserted a key which when driven, further separates the edges of the bush and expands the same tightly within the hub, or, in other words, sets the bush out tightly against the wall of the hub. The key is secured after driving by means of a tap bolt.

In the further description of the said invention which follows, reference is made to the accompanying drawings, forming a part hereof and in which—

Figures 1 and 2, are respectively, an exterior side view of the drum, and an inner view of one-half of the drum. Fig. 3 is an enlarged face view of a portion of the separated bush, the key, and the hub of the drum. Fig. 4 is a view of Fig. 3 looking in the direction indicated by the arrow. Fig. 5 is a perspective view of the key.

Referring to the drawings, A is the drum which in the present case is one of the description used in rope drives in cable railways. This drum is in two halves secured together by bolts *a*.

B B are bushes situated in the hub *b* of the drum. As both bushes are alike, reference will be made to one only in the description which follows.

The bush B consists of two semi-circular parts *c* and *d*, which are first in one cylindrical piece, which is bored to suit the shaft, and turned to fit the interior of the hub *b*.

After the bush is bored and turned, it is provided with a key seat C of a depth less than the thickness of the bush, and tapered longitudinally of the same, as shown by the dotted lines marked *a'* in Fig. 2. The hub *b* is also provided with a seat D of a depth preferably a little greater than that of the seat C, and of a uniform width throughout its length, the width being equal to the greatest width of the seat in the bush. The bush is then cut into halves, when it presents the appearance indicated in the drawings.

To apply this bush, either at first, or to replace a worn one which has been taken out, the two halves are slid in place, and the key E which corresponds in shape with the two seats combined, inserted and driven. The shape of this key is well illustrated in Fig. 5, in which it is shown in perspective. As the key is driven, the two parts of the bush are expanded, while the key is not tightened in its seat in the hub.

F is a tap bolt, before referred to, which serves to hold the key in place when driven. Its end enters a hole G in the bush, see particularly Figs. 3 and 4.

When the bush has become worn, the bolt F is unscrewed until its end leaves the key, when the said key is backed out and the worn sections of the bush removed. New sections are then inserted in the hub, and the key re-driven and secured by the bolt. All this is done without interfering in any manner with the shaft, which remains in its bearings undisturbed.

I claim as my invention—

1. In combination with the hub of a drum having a key seat therein of uniform width, a bush in halves or sections having at the point where two sections come together, a tapering key seat, and a key adapted to fit both seats, substantially as specified.

2. In combination with the hub of a drum having a key seat therein of uniform width through its length, a bush in sections having a key seat situated where the edges of two sections come together, a key adapted to fit both seats, and a bolt which is inserted through the wall of the hub into the said key to hold it in place, substantially as specified.

JOHN WALKER.

Witnesses:

Z. M. HUBBELL,
SAMUEL GROVES.