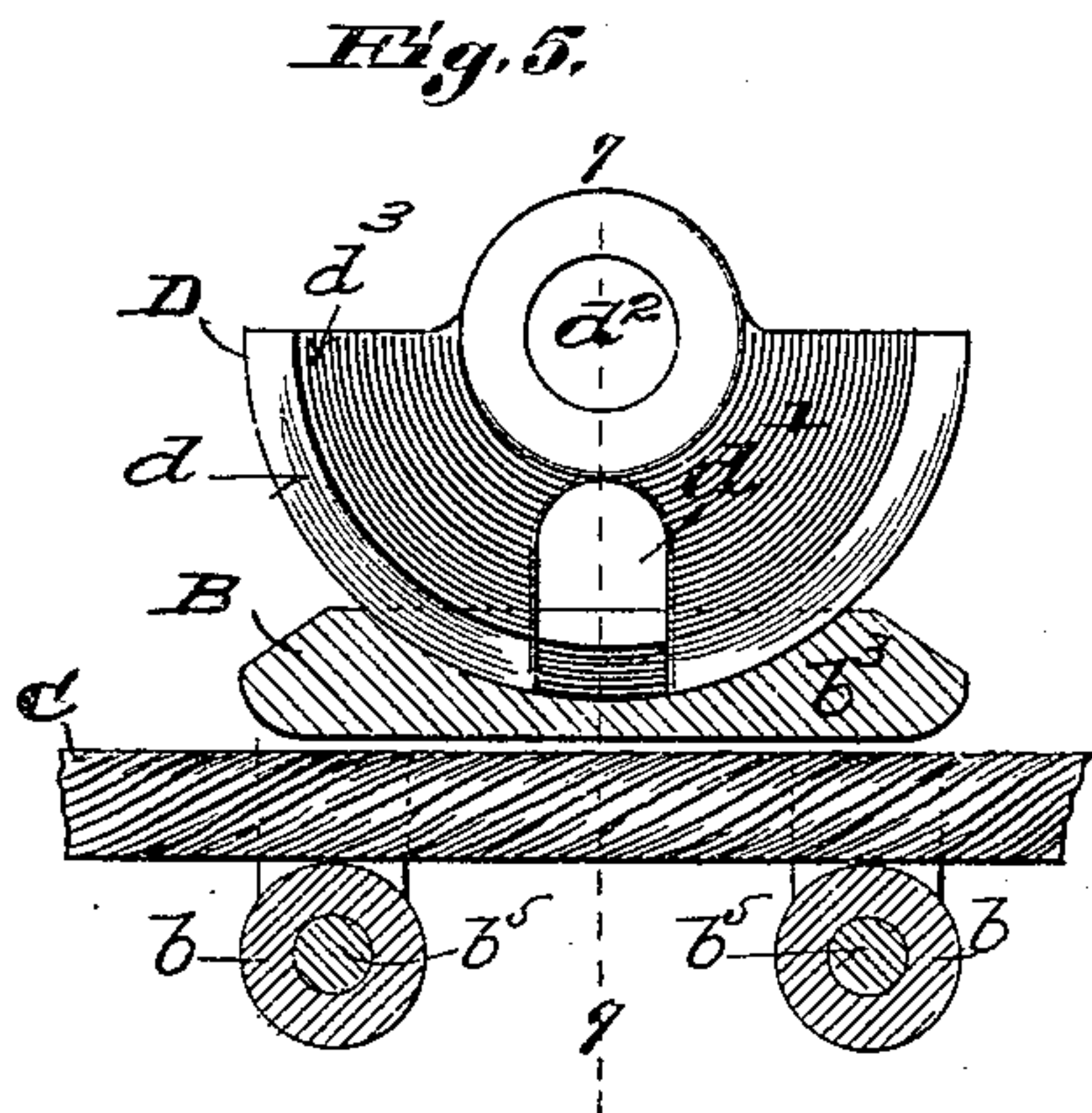


(No Model.)

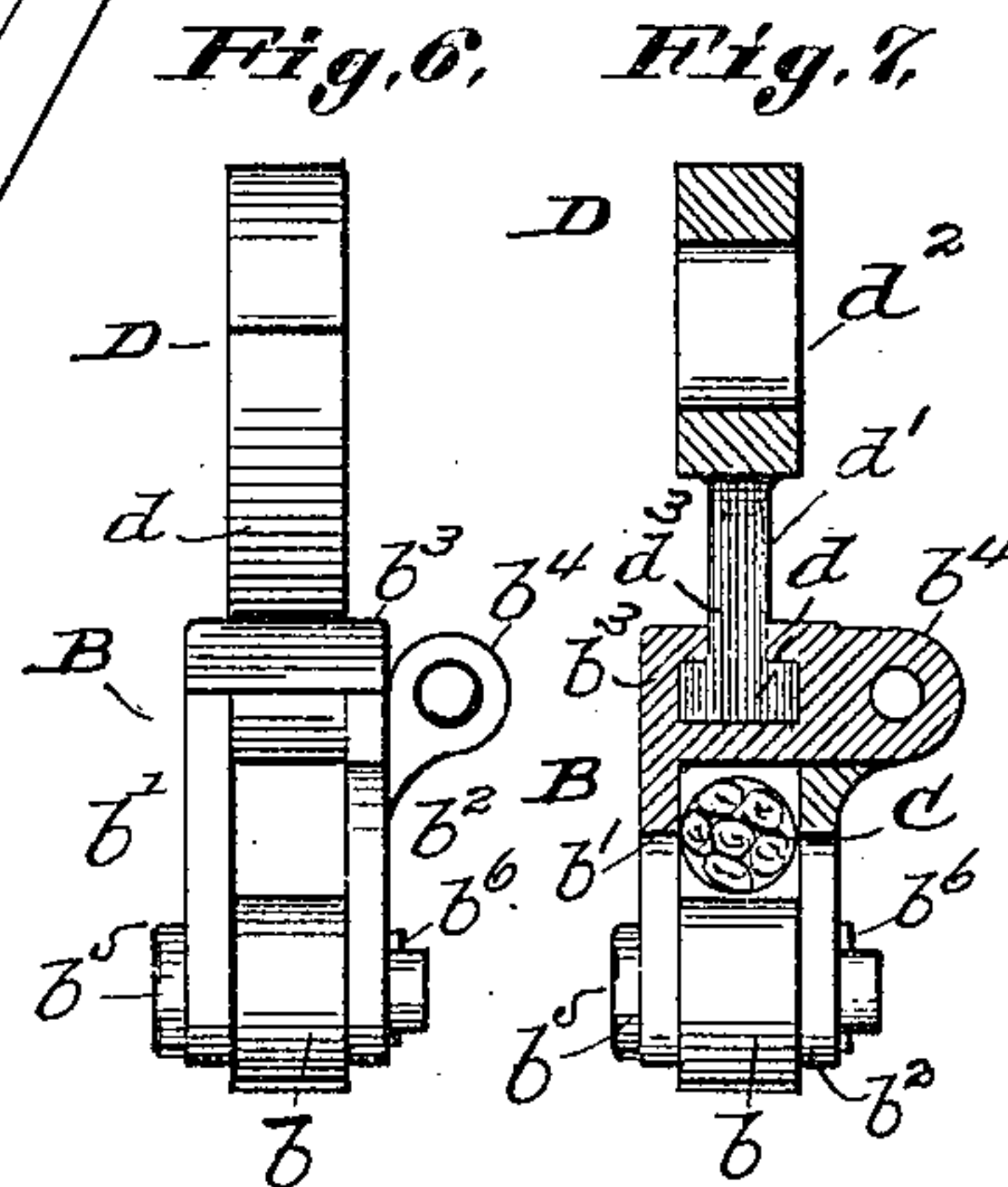
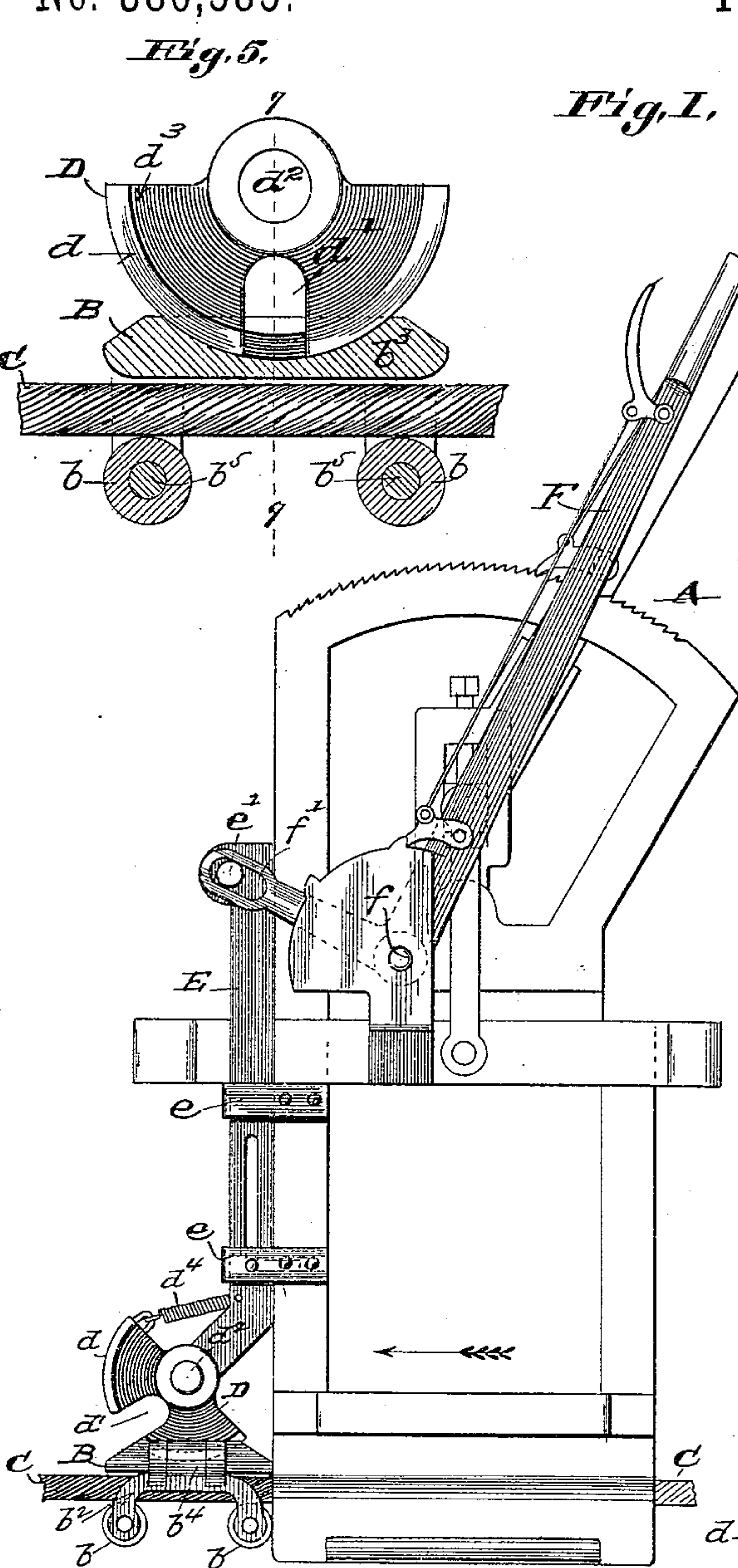
J. T. HODGINS.  
CABLE GRIP DEVICE.

No. 386,585.

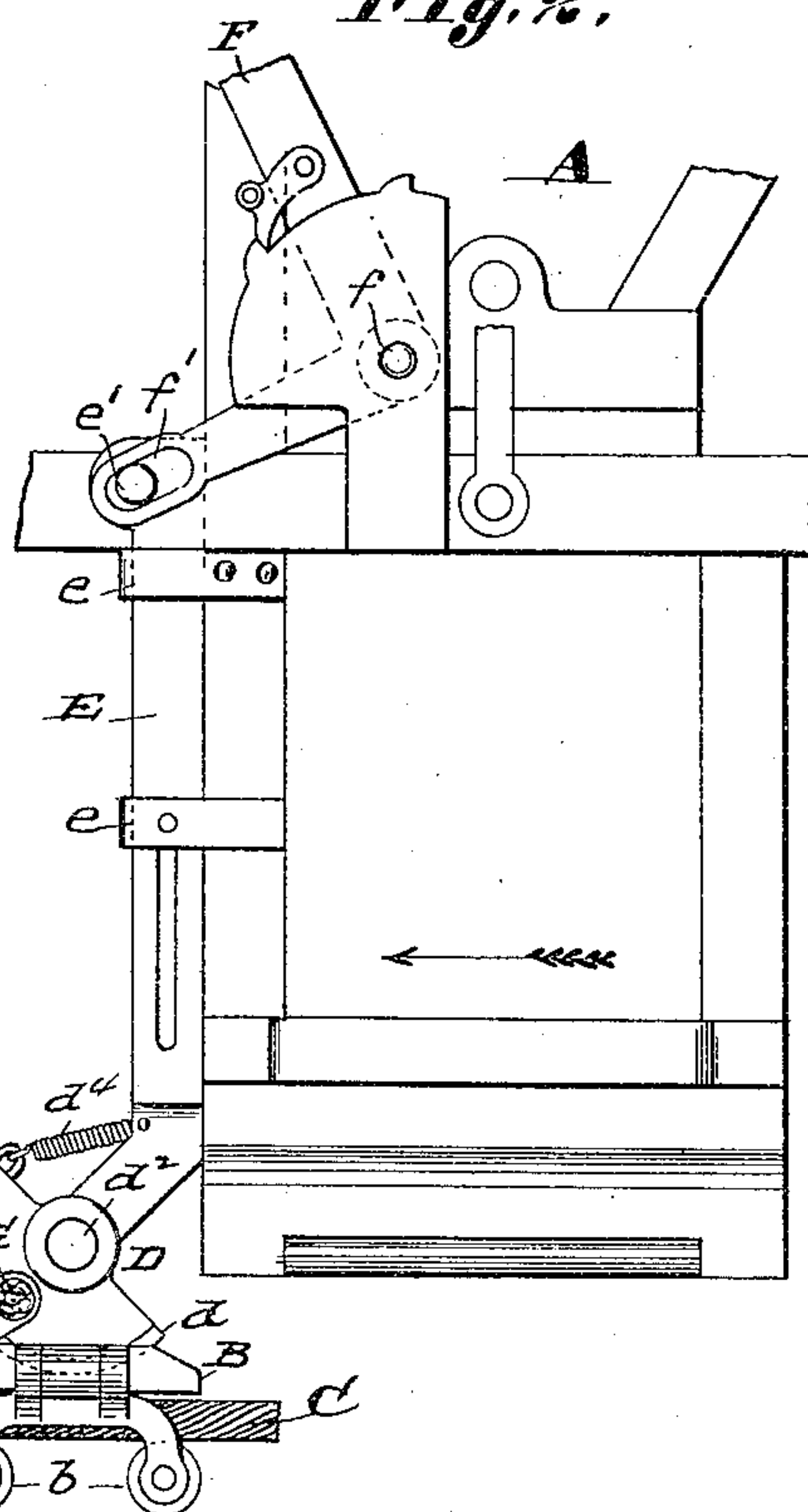
Patented July 24, 1888.



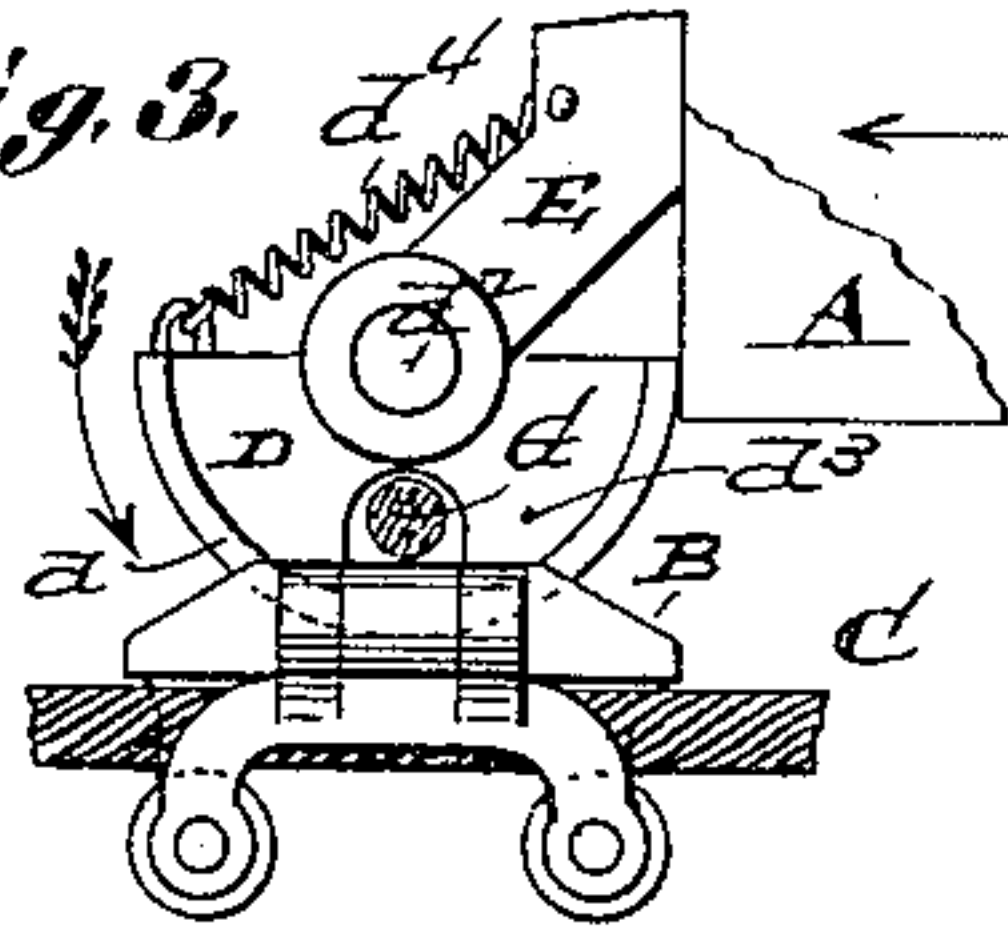
*Fig. 1.*



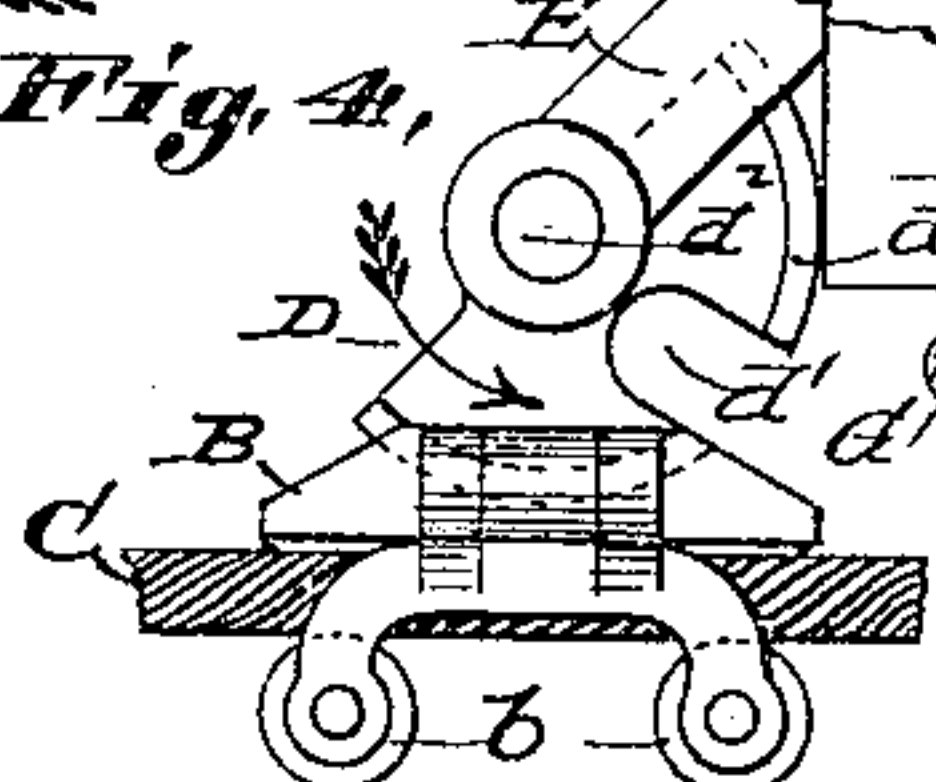
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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John T. Hodgins  
by C. D. Moody atty



# UNITED STATES PATENT OFFICE.

JOHN T. HODGINS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD TO  
SAMUEL G. HODGINS, OF SAME PLACE.

## CABLE-GRIP DEVICE.

SPECIFICATION forming part of Letters Patent No. 386,585, dated July 24, 1888.

Application filed May 9, 1888. Serial No. 273,289. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. HODGINS, of St. Louis, Missouri, have made a new and useful Improvement in Cable-Grip Devices, of which the following is a full, clear, and exact description.

By means of the present improvement a cable-car upon one line of railway, and using a lower cable, can cross another (upper) cable without letting go of its own cable.

The leading feature of the improvement is the following combination: a holder for the (lower) cable and a part above said holder and attached directly or indirectly to the car, said upper part being so connected with said holder that the upper cable can pass between them without having to disconnect said holder from said part above, substantially as shown in the annexed drawings, making part of this specification, in which a desirable mode of carrying out the improvement is exhibited, and in which drawings—

Figure 1 is a side elevation showing an ordinary cable-grip having the improvement, the improvement being shown as an attachment to the grip, and being shaded in the drawings to more readily distinguish it, and the parts being as when the grip has hold of the cable; Fig. 2, a view similar to that of Fig. 1, but showing the parts as when the grip has released the cable; Fig. 3, a side elevation of the attachment, its parts being as when passing the upper cable; Fig. 4, a view similar to that of Fig. 3, but showing the parts as when the upper cable has been passed; Fig. 5, a view showing the cable-holder in vertical longitudinal section, and the part to which the holder is immediately attached in side elevation; Fig. 6, an end elevation of the cable-holder and part above, and Fig. 7 a vertical cross-section on the line 7 7 of Fig. 5.

The views are upon different scales, and the same letters of reference denote the same parts.

The grip A shown, being of a familiar form and designed to be operated in the usual manner, does not require detailed description.

B represents the part termed the "holder." It is constructed so that the (lower) cable C can pass longitudinally through it, and so as to come beneath and at the sides of the cable C.

To relieve the friction the portion underneath the cable is in the form of rollers *b*, which are journaled in the sides *b' b''*. Said sides are united with the top *b''* of the holder, and to enable the holder to be readily applied to the cable C the holder is made to open, and a desirable mode of accomplishing this is by hinging one side, *b''*, as at *b''*, to the side *b'*, and using the roller-shafts *b''* and the pins *b''* to fasten the sides detachably together, as shown.

The part D above the holder, and to which the holder is immediately attached, is constructed and connected with the holder substantially as follows: It is segmental or substantially segmental in its general form, and at its periphery it is flanged substantially as shown at *d*, and notched substantially as shown at *d'*. The part D, by means of the eye *d''*, or any equivalent construction, is adapted to be pivoted so that the part can be turned as indicated by its different positions shown.

The holder B is grooved to receive the peripheral portion of the part D—that is, the flange *d* and a portion of the web *d''* of the part D, as shown more distinctly in Figs. 5 and 7. The part D can thus be made to turn in the holder B, and also to uphold it. The part D at *d''* is journaled upon a bar, E, which is adapted to be raised and lowered, as indicated, and to this end the bar works in guides *e* upon the grip A, and by means of the lever F, that is pivoted at *f* and slotted at *f''* to engage with the stud *e'* upon the bar, the bar E and the part D and holder B can be raised and lowered.

The operation is as follows: On approaching the (upper) cable G, which it is desired to cross, the grip A is operated to loosen the hold upon the cable C, and the improvement is also operated, or is left free, so that the junction between the holder B and part D is presented to the cable G—that is, the parts are substantially in the position shown in Fig. 2. The cable G is then received into the notch *d'* of the part D, and then, by reason of the part D being pressed against the cable G, the part D turns on its pivot *d''*, and as it thus turns the notch *d'*, containing the cable G, is made to assume the positions shown successively in Figs. 3 and 4, until finally the cable G is discharged to the rear of the part D, as shown in



Fig. 4. Then, by means of the parts E F, the holder B and cable C are raised to be brought again into the field of the grip, which is then, and in the usual way, made to grasp it.

5 I desire not to be restricted to the precise construction here shown. There may be a similar attachment at each end of the grip. The spring  $d^t$  acts to restore the part D to its original position after the cable G has been  
10 passed. The holder B keeps in engagement with the part D in whatever position of the part D, for when the part D is in the position of Fig. 2 that portion of the flange  $d$  which is to the rear of the notch  $d'$  is in engagement in  
15 the slot in the holder B, and subsequently the opposite portion of the flange  $d$  is in engagement in the slot.

I claim—

20 1. The combination of the cable-holder B, the pivoted, notched, and flanged part D, the grip, and means for raising and lowering said holder B, substantially as described.

2. The combination of the holder B, having its sides hinged together and made to open, substantially as described, with the part D, 25 said part D in turn, and by being journaled upon the bar E, being connected with a car, substantially as described.

3. The combination of the holder B, the part D, the bar E, and the spring  $d^t$ , substan- 30 tially as described.

4. The combination of the grip A, the holder B, made to open as described, the part D, constructed and engaging with said holder as described, the spring  $d^t$ , and the means for rais- 35 ing and lowering said holder and part D, as described.

Witness my hand this 7th of May, 1888.

JOHN T. HODGINS.

Witnesses:

C. D. MOODY,  
WILLIAM F. DAVIS.