

No. 765,137.

PATENTED JULY 12, 1904.

C. G. HARTMAN.
TROLLEY FORK.

APPLICATION FILED DEC. 21, 1903.

NO MODEL.

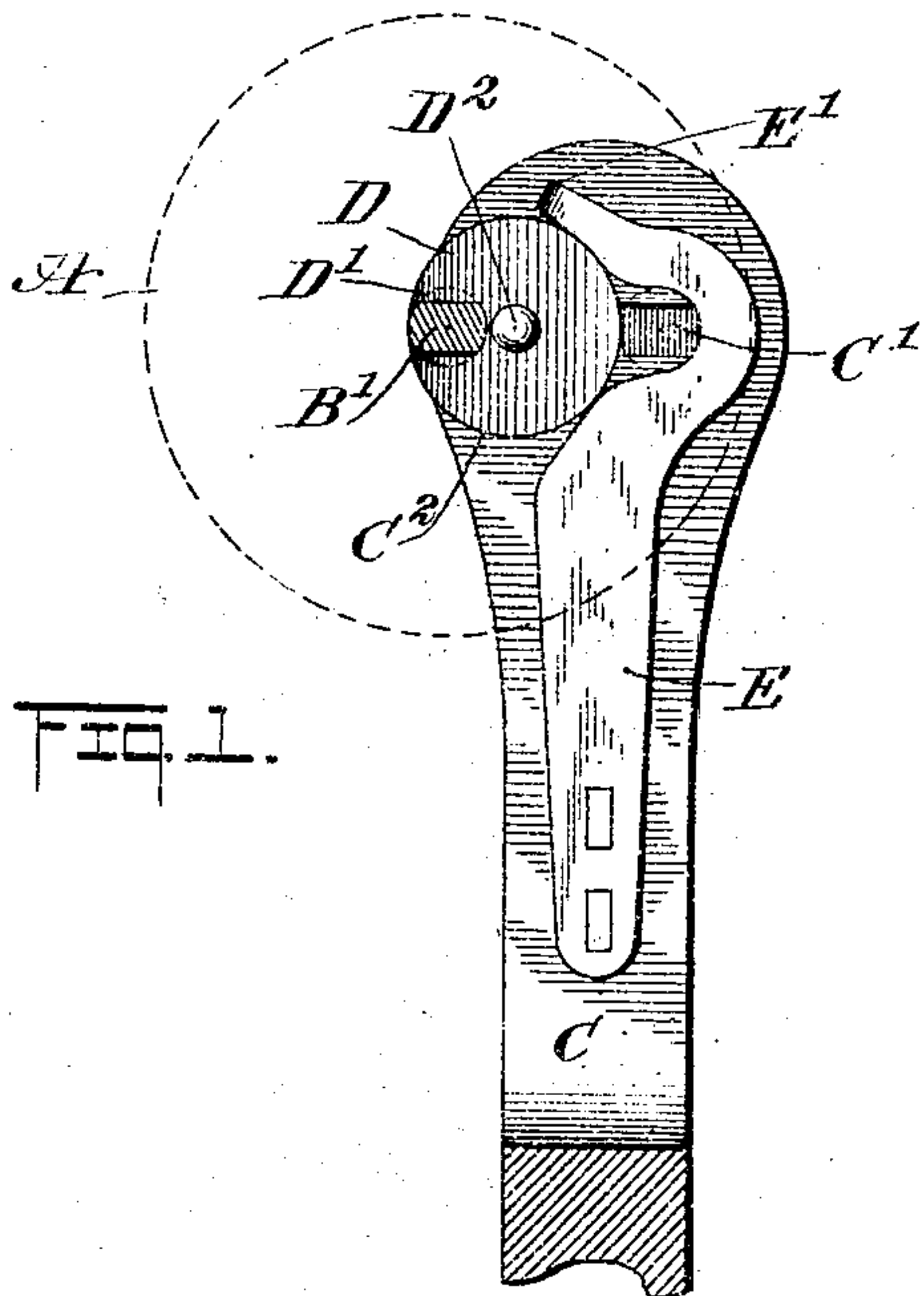


FIG. 1.

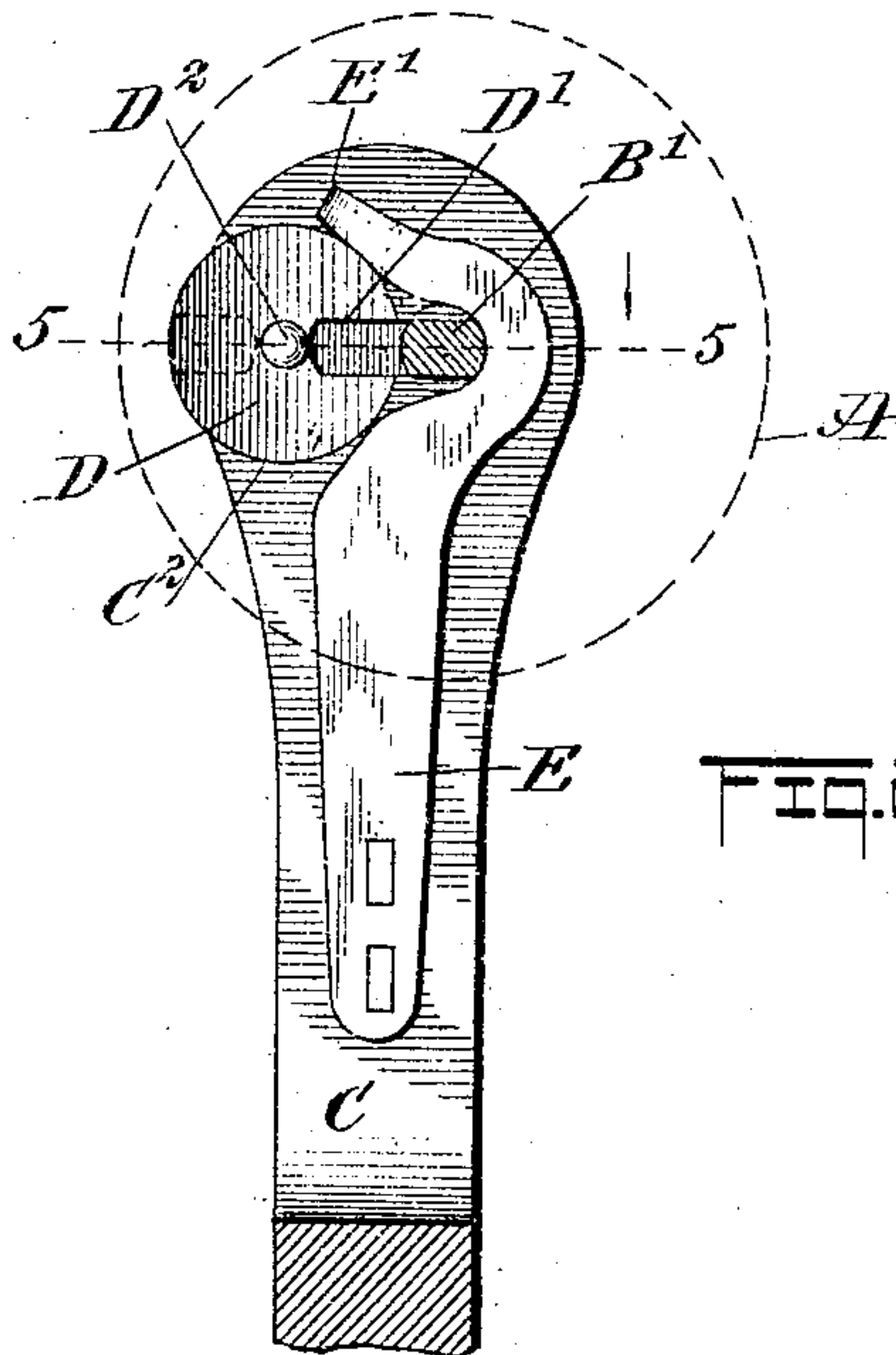


FIG. 2.

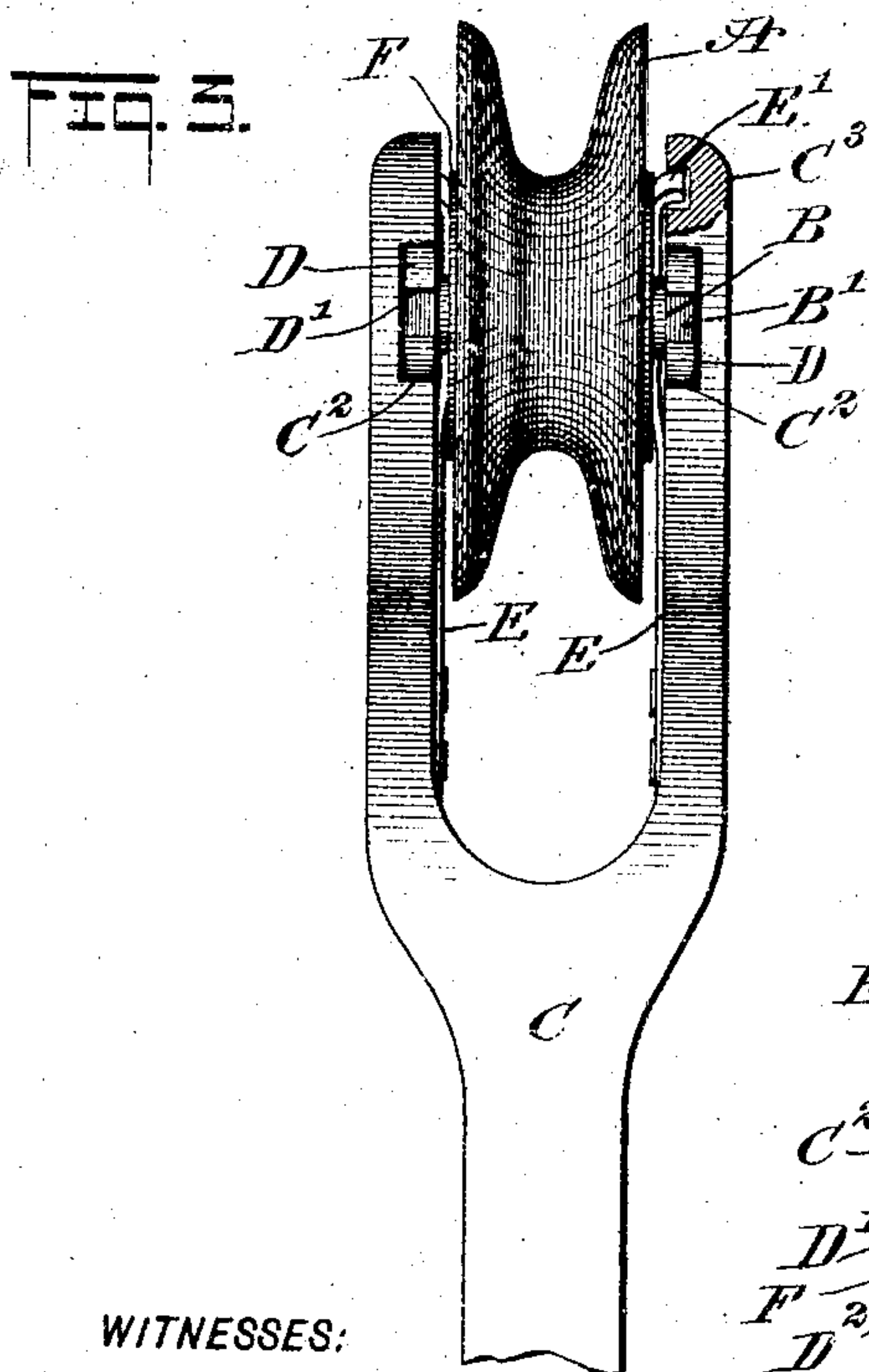


FIG. 3.

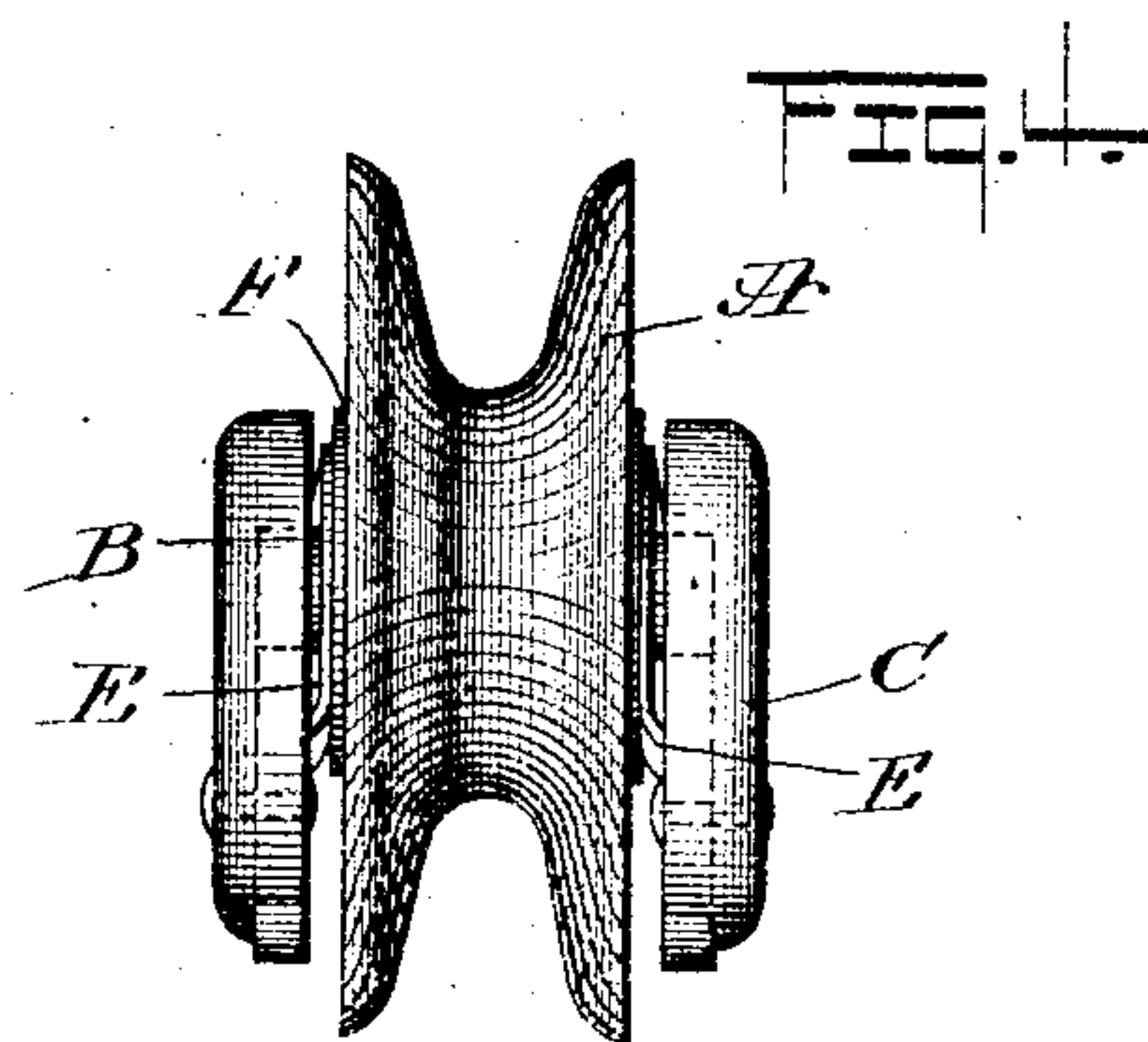


FIG. 4.

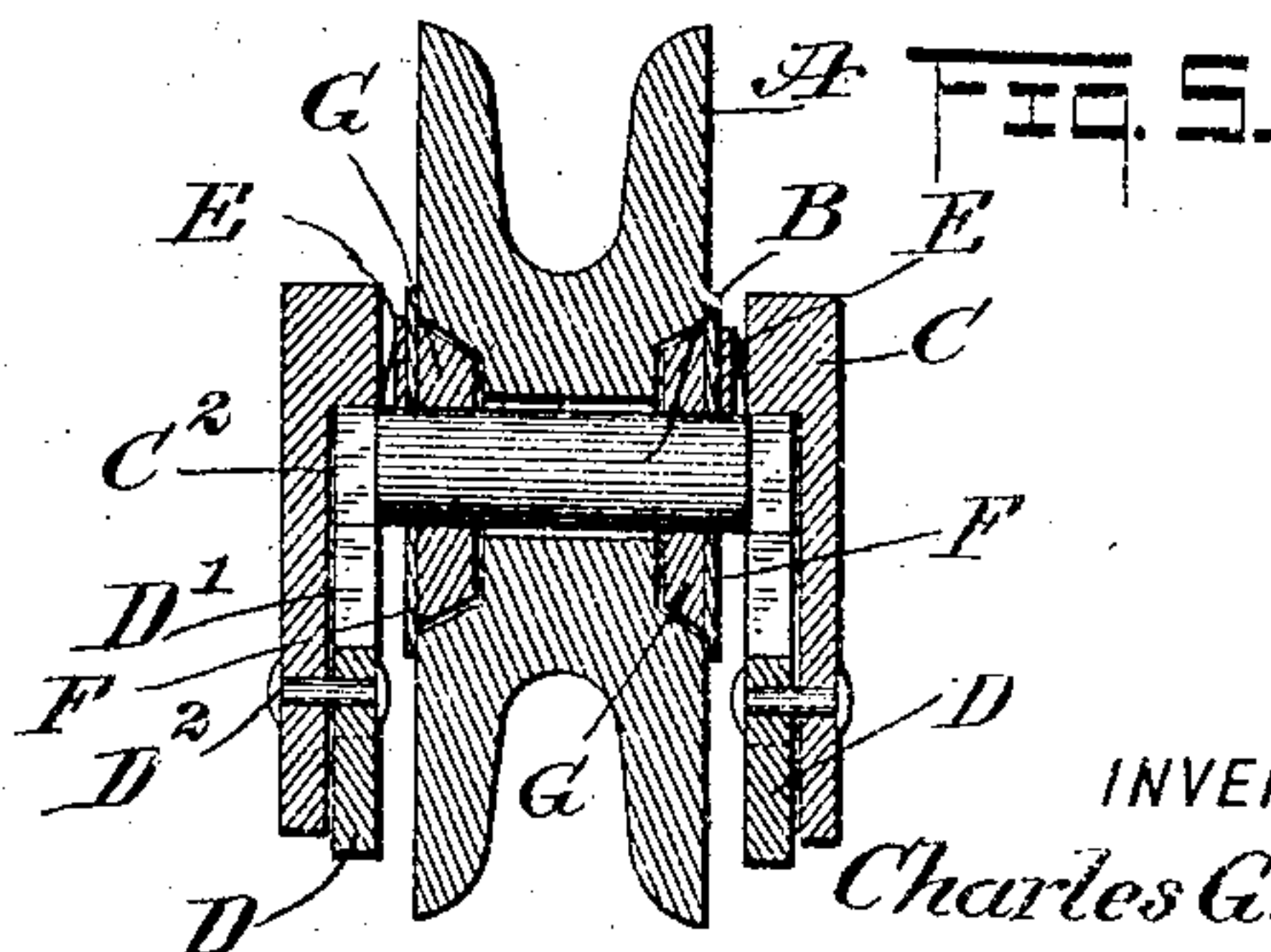


FIG. 5.

WITNESSES:

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BY

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UNITED STATES PATENT OFFICE.

CHARLES G. HARTMAN, OF GLENS FALLS, NEW YORK, ASSIGNOR OF
ONE-HALF TO EDWARD BALL, OF GLENS FALLS, NEW YORK.

TROLLEY-FORK.

SPECIFICATION forming part of Letters Patent No. 765,137, dated July 12, 1904.

Application filed December 21, 1903. Serial No. 186,029. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. HARTMAN, a citizen of the United States, and a resident of Glens Falls, in the county of Warren and State of New York, have invented a new and Improved Trolley-Fork, of which the following is a full, clear, and exact description.

My invention relates to trolley forks or harps for electric railways, and its objects are to render them more efficient, and especially to so construct them as to prevent the working loose or falling out of the pin and doing away with the consequent troublesome and expensive loss of time involved in changing and resetting the trolley-wheels. In the constructions now in use the pins are fastened with cotters or set-screws which require the use of tools in resetting them. In my invention these objectionable features are avoided, and the pin can be set and adjusted without the use of tools, set-screws, cotters, or the like in fifteen or twenty seconds, and the men handling a car do not have to depend upon keeping a supply of tools and the small articles mentioned on the car.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional view of one form of my trolley-fork, showing the inside of one-half in elevation and the pin in position to be placed in the fork. Fig. 2 is a like view showing the parts after the pin has been put in place. Fig. 3 is a side elevation of the complete fork with the parts in the position shown in Fig. 1. Fig. 4 is an end view of the fork with the parts in the position shown in Fig. 2, and Fig. 5 is a sectional view through the center of the trolley-wheel on the line 5 5 in Fig. 2.

The trolley-wheel A (indicated in Figs. 1 and 2 by dotted lines) is of the usual form and is provided with a pin B, passing through its center. The fork C is provided with a square depression C' for the pin B on the inner side of each of its arms, and the pin B has flat-

tened ends B' of the same size and shape as these depressions, which serve to hold the pin in place.

D D are a pair of disks mounted in depressions C² in the inner faces of the two arms of the fork C. These disks are journaled to the fork-arms at D² and have a portion cut away, forming the slots D' D', in which fit the flattened ends B' B' of the pin B.

E E are springs mounted on the inner faces of the arms of the fork and having outwardly-turned ends E' E', as shown, and the curved shape clearly shown in Figs. 1 and 2. The ends of the springs are turned outwardly, as shown, to prevent the washer or other parts of the wheel from catching on them when the wheel is put in. The inner sides of the arms are provided with recesses C³, into which enter these ends of the springs when the wheel is forced to either side in operation. These springs are used to hold the wheel in the center and yet give it a chance to yield slightly.

F is a washer, preferably of copper, and G G are bearings for journaling the wheel on the pin B.

To set the wheel in the fork, it is of course first mounted on the pin in the manner shown in Fig. 5 or in any convenient way and is taken to the car in this condition. The disks D are then turned to the position shown in Figs. 1 and 3 and the flat ends of the pin B placed in the slots D' D', as shown. Then the disks are revolved one hundred and eighty degrees on their centers, which brings them to the position shown in Figs. 2 and 4, with the slots D' and depressions C' registering. The wheel is then pushed to the right, the pin ends B' leaving the slots D' and entering the depressions C', and all the parts then taking the positions shown in Figs. 2 and 4. The disks D D are then turned to their original positions, and it is obvious that the wheel is securely fastened in place and is not liable to become loose or be displaced in any way. It will be seen that in this way a much more secure, simple, and economical device is produced than any heretofore known, that the

wheel will be fixed very securely, and that when it does need to be changed it can be done by the car-crew without the use of a single tool, and that there is not a single part that
5 can become loose and lost unless actually breaking. None of these advantages are present in any form of trolley-fork heretofore known.

It will be understood that while I have illustrated only one form of my invention such is
10 for the purpose of showing the principle thereof merely, and various changes may be made in the details without departing from the spirit of my invention, as I do not limit myself to the exact details herein shown and described.
15

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A trolley-fork provided with means for
20 temporarily holding the trolley-wheel pin, and means for permanently holding said pin.

2. A trolley-fork provided with means for temporarily holding the trolley-wheel pin, means for permanently holding said pin, and
25 means for bringing one of said two means into a registering position with the other.

3. In a trolley-fork, the combination of a disk mounted thereon, means upon the disk for temporarily holding the pin of the trolley-wheel, means upon the fork for permanently holding the pin, and means for bringing
30 said two means into a registering position.

4. In a trolley-fork, the combination of a
35 disk journaled upon the arm of the fork, a slot in said disk, and a depression in the arm of the fork adapted to register with the slot in the disk.

5. A trolley-fork having a disk mounted on
40 each arm, means in the edge of said disks for holding the ends of the trolley-wheel pin, a trolley-wheel pin fitting said means, and a depression in each arm for permanently holding the ends of said pin.

6. In a trolley-fork, the combination of a
45 pin, a trolley-wheel mounted on said pin, a spring mounted on the fork, adapted to press against said wheel and having an outwardly-turned free end, and a recess in the fork adapted
50 to receive the free end of said spring.

7. In a trolley-fork, the combination of a pin, a trolley-wheel mounted on said pin, means for setting said pin in the fork, a spring mounted on the fork, adapted to press against said
55 wheel and having an outwardly-turned free

end, and a recess in the fork adapted to receive the free end of said spring.

8. In a trolley-fork, the combination of a circular depression in the inner face of each arm of the fork, a disk in each of said depressions, a pin passing freely through each disk
60 and fastening it to the arms, to permit the rotation of the disks upon their centers, a slot through the edge of each disk, a trolley-wheel pin having its ends shaped to fit said slots, and
65 a second depression in the inner face of each arm, of the same shape and size as the said ends of the trolley-wheel pin, adapted to hold the pin permanently.

9. A trolley-fork provided with means for
70 temporarily holding the trolley-wheel pin, means for permanently holding said pin, means for bringing one of said two means into a registering position with the other, and a spring mounted on the fork for yieldingly holding
75 the wheel in place, said spring having outwardly-turned ends.

10. In a trolley-fork, the combination of the trolley-wheel pin, means for holding it in the fork, and a spring adapted to come into yield-
80 ing contact with the trolley-wheel, said spring having its ends curved, and a washer on the trolley-wheel pin on each side of the trolley-wheel.

11. In a trolley-wheel fork having two arms,
85 each having a circular depression in its inner face, the combination of a disk in each of said depressions, a pin passing freely through each disk and fastening it to the arms to permit the rotation of the disks upon their centers, a
90 slot through the edge of each disk, a trolley-wheel pin having its ends shaped to fit said slots, a second depression in the inner face of each arm, of the same shape and size as the said ends of the trolley-wheel pin, adapted to
95 hold the pin permanently, a spring on the inner face of each arm, adapted to come into yielding contact with the trolley-wheel, said springs having their ends curved around the second depressions and turned outwardly, and
100 a washer on the trolley-wheel pin on each side of the trolley-wheel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES G. HARTMAN.

Witnesses:

CHAS. H. CARSON,
GLENCORA BEAUDOIN.