

No. 750,910.

PATENTED FEB. 2, 1904.

R. S. TOWNSEND.
SPLIT HUB AND SPROCKET.
APPLICATION FILED NOV. 16, 1903.

NO MODEL.

Fig. 3.

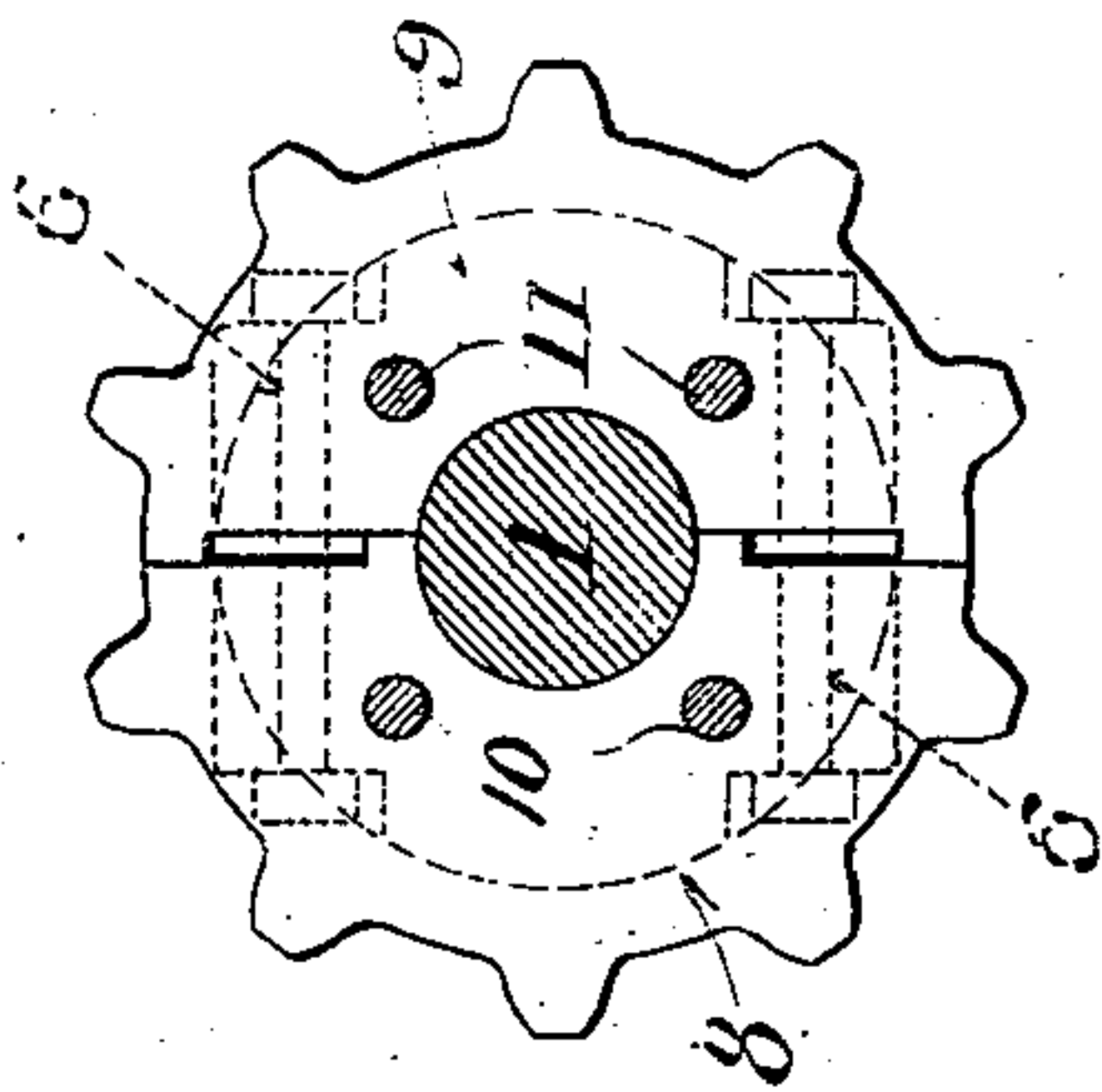


Fig. 2.

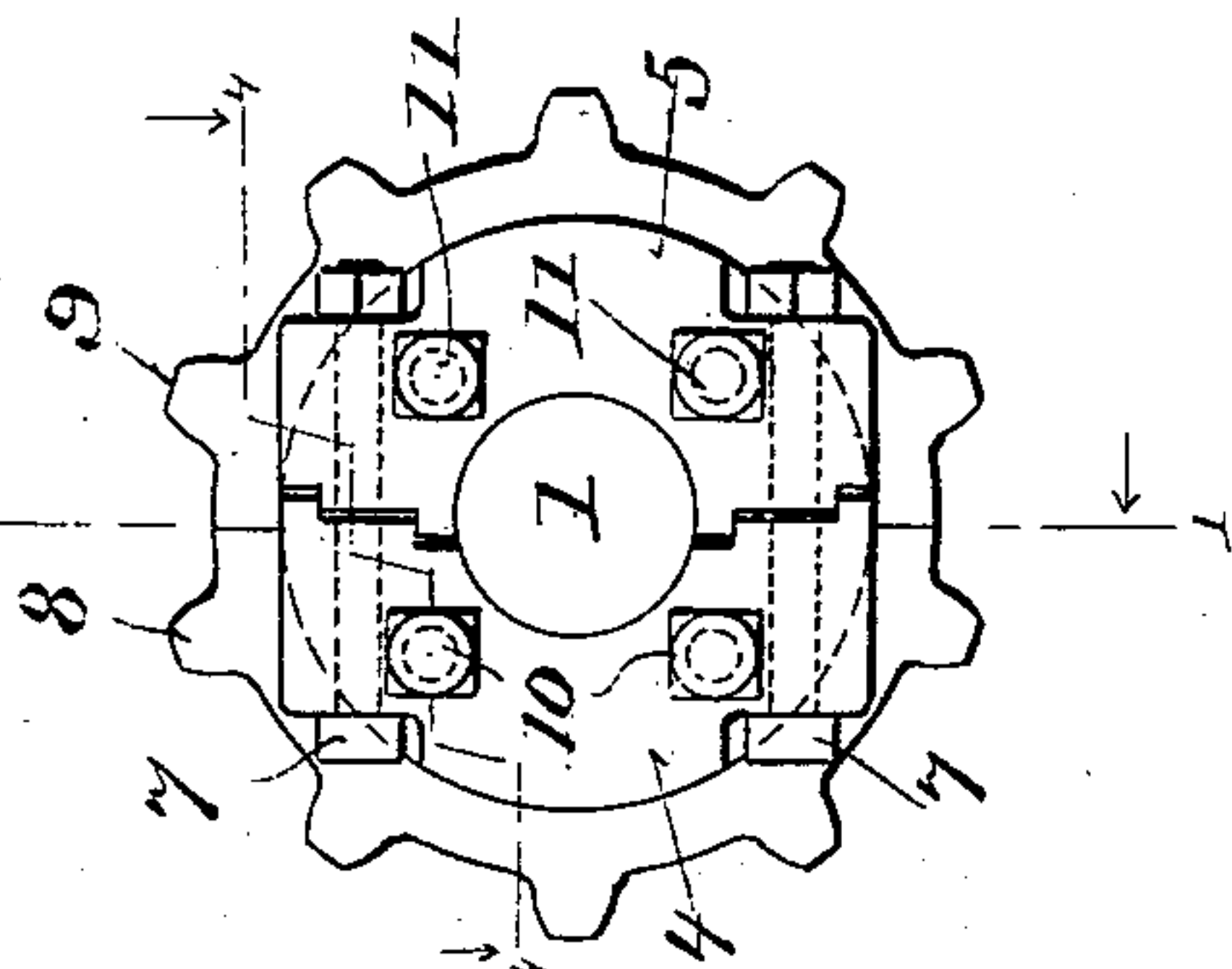


Fig. 1.

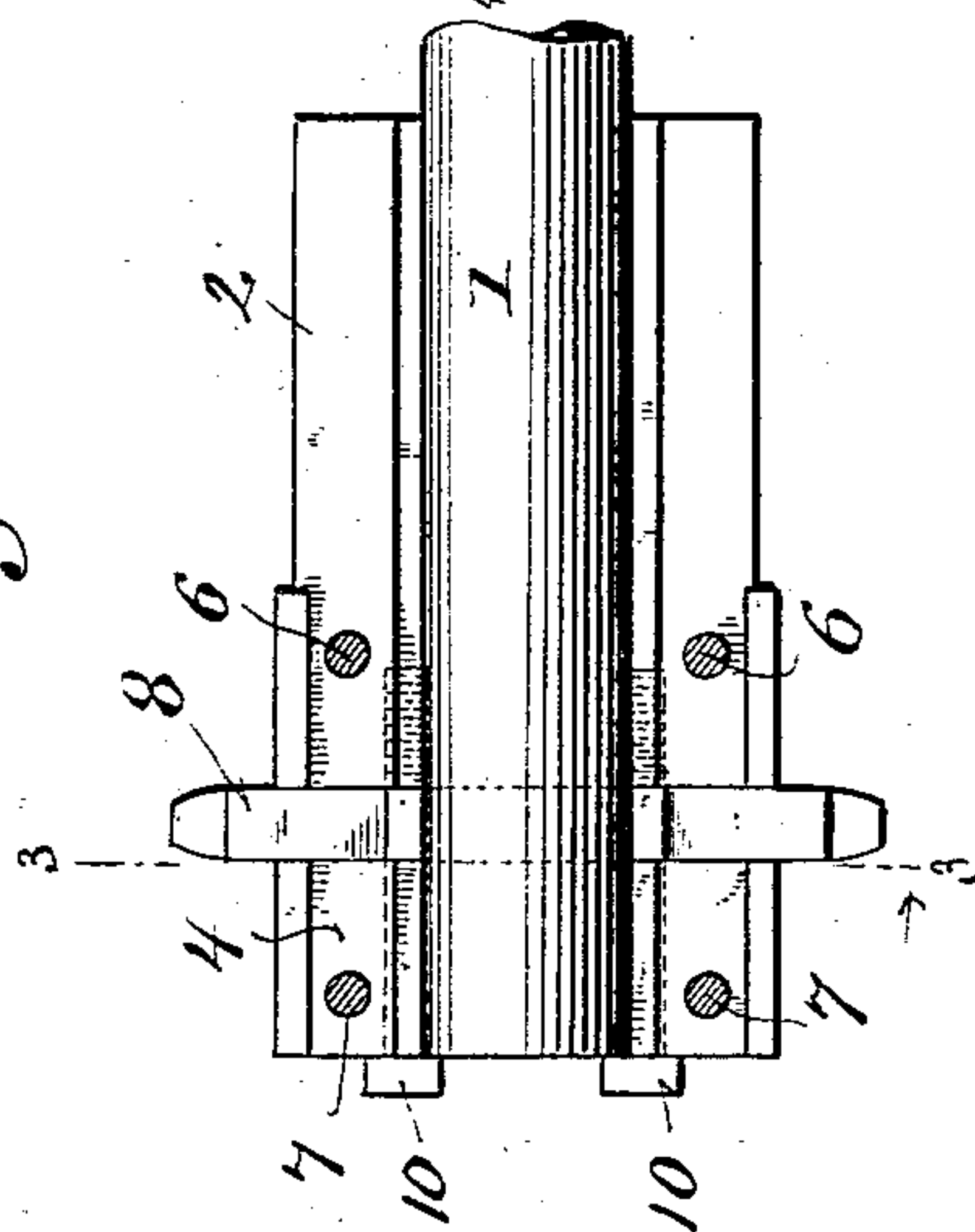


Fig. 5.

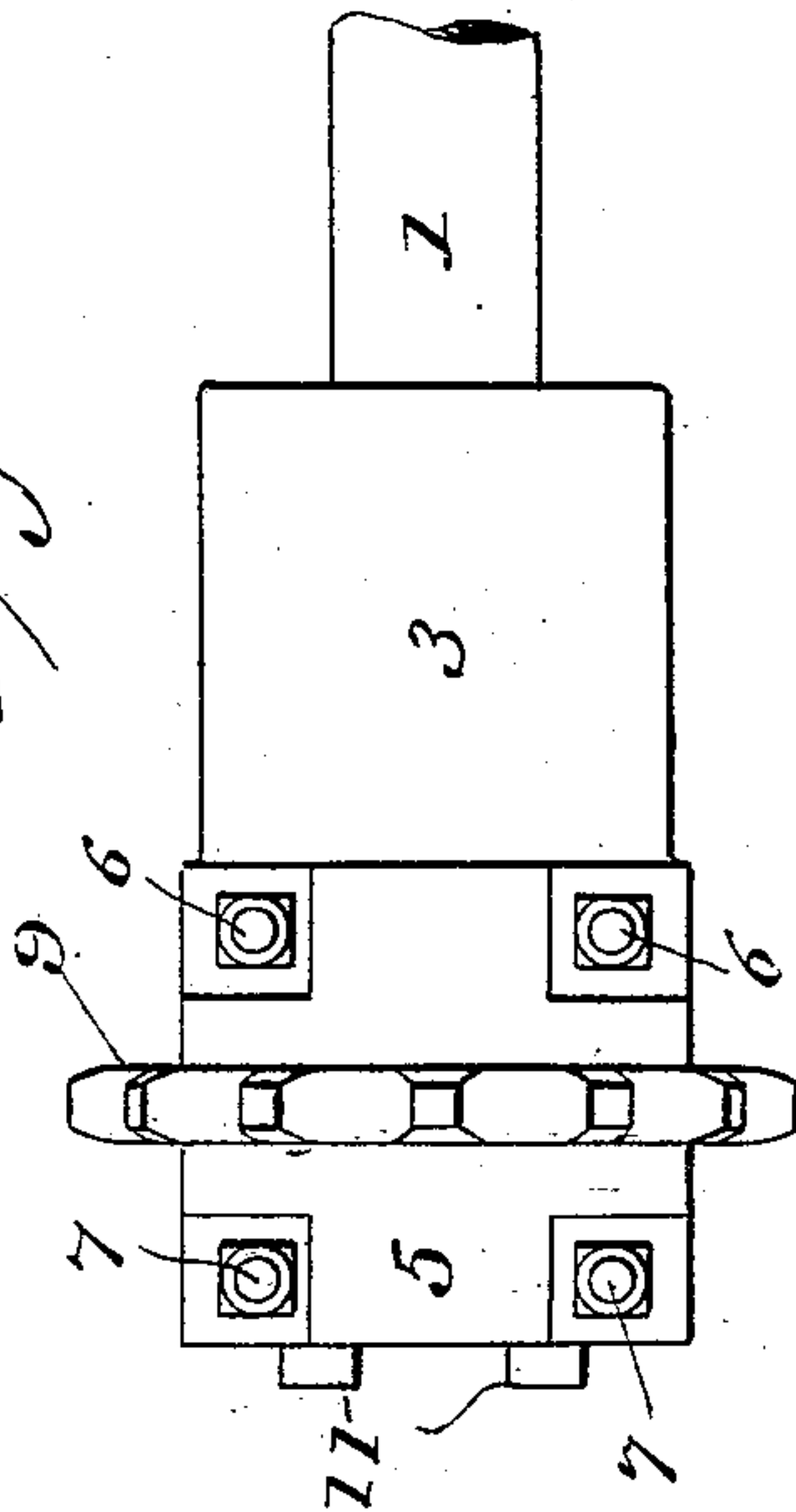
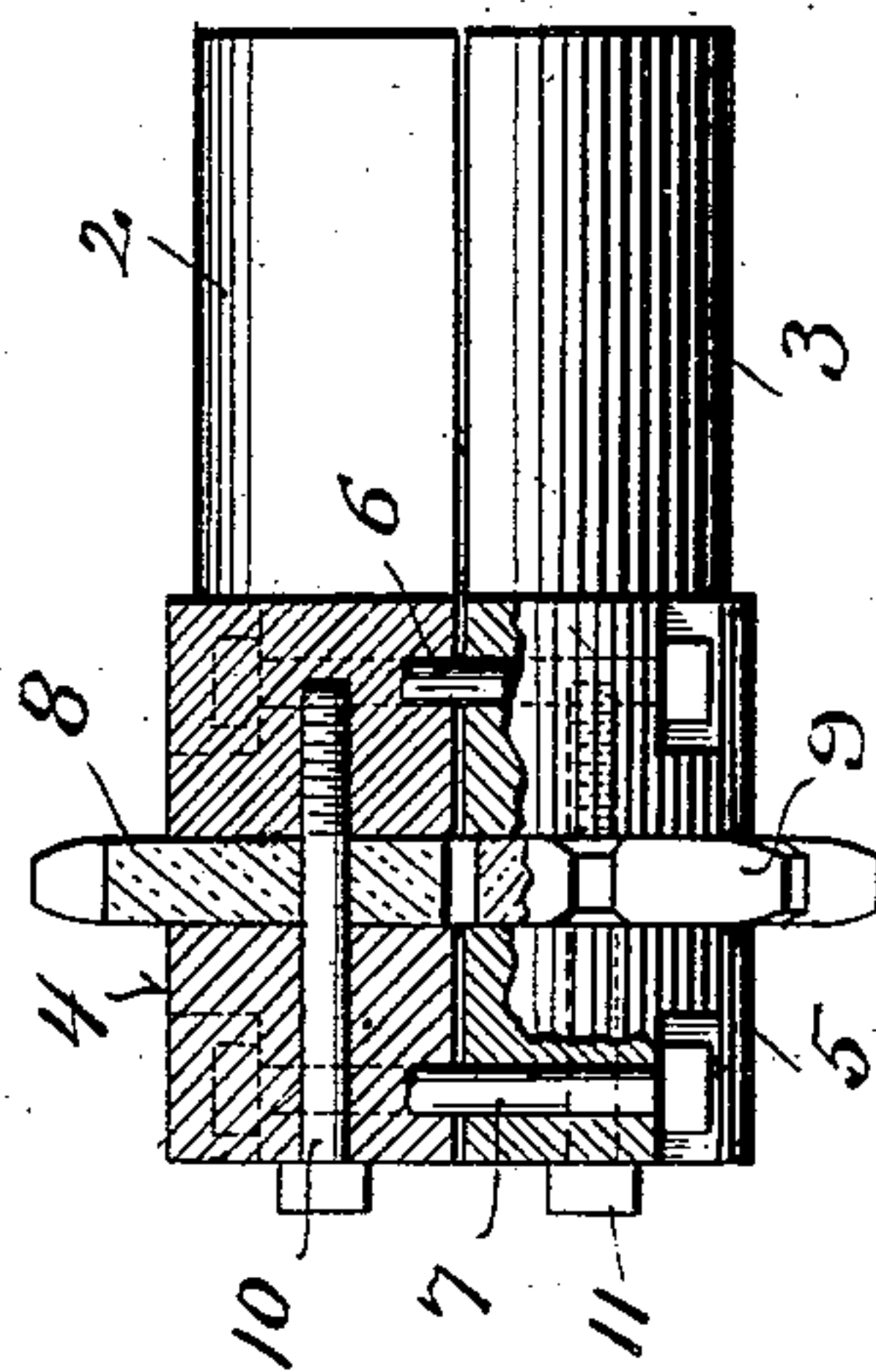


Fig. 4.



Witnesses.

Geo. W. Young.

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By H. G. Underwood

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UNITED STATES PATENT OFFICE.

RICHARD S. TOWNSEND, OF UNION CITY, MICHIGAN.

SPLIT HUB AND SPROCKET.

SPECIFICATION forming part of Letters Patent No. 750,910, dated February 2, 1904.

Application filed November 16, 1903. Serial No. 181,306. (No model.)

To all whom it may concern:

Be it known that I, RICHARD S. TOWNSEND, a citizen of the United States, and a resident of Union City, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Split Hubs and Sprockets; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to split hubs and split sprockets; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter, in connection with the accompanying drawings, and subsequently claimed.

In the said drawings, Figure 1 is a vertical longitudinal sectional view of my improved sprocket and its hub, taken on the plane indicated by the line 1 1 in Fig. 2. Fig. 2 is an end elevation. Fig. 3 is a vertical cross-sectional view taken on the plane indicated by the line 3 3 in Fig. 1. Fig. 4 is a sectional view on the line 4 4 of Fig. 2, and Fig. 5 is a side elevation of said parts.

The split sprockets in ordinary use are cast solidly with their hubs, and when the sprocket becomes worn it gets out of pitch, which shortens the life of the sprocket-chain, and to obviate this it is necessary to replace the worn sprockets, which is a matter of very considerable expense, the greater part of which is the cost of the hub. Hence I have devised a construction whereby the same split hub may be continually used and only the sprocket portion proper renewed or replaced, thereby effecting a saving of about ninety per cent., and as in many mills employing split sprockets the sprockets wear out in a month's use my invention results in an immense saving in cost not only in the sprockets, but in the chains, as the sprockets can be quickly and cheaply replaced before the chain begins to wear.

Referring by numerals to the drawings, 1 represents a portion of the shaft on which the split-sprocket hub is clamped. 2 3 designate the inner parts of said hub, and 4 5 the corresponding outer parts. The inner end of each

inner part 2 and 3 is semicylindrical, and the outer ends of said parts are increased in diameter and made practically square, and the outer parts 4 and 5 are of corresponding form, said squared ends being transversely bored to receive the fastening-bolts 6 6 and 7 7, which respectively unite the parts 2 3 and the parts 4 5. The sprocket is formed in two halves 8 9, which are slipped together on the shaft 1, between the inner parts 2 3 and the outer parts 4 5 of the hub, the said parts (and the sprocket-halves) being further transversely bored to receive the screw-bolts 10 10, which unite the parts 4 and 2 of the hub and the interposed sprocket-half 8, and the screw-bolts 11 11, which similarly unite the parts 5 and 3 of the hub and the interposed sprocket-half 9, all as clearly shown in the said drawings.

Whenever the sprockets begin to show evidence of wear, the described bolts are loosened and withdrawn and new sprocket-halves 8 9 substituted for the worn ones and the whole quickly reassembled, the cost of the separate sprockets being, as stated, only about one-tenth that of the parts with the hubs and sprockets cast solidly together, as there is no machine-work required on the sprocket-halves beyond the drilling of four holes.

While particularly designed for split sprockets, my split hubs may be used with solid sprockets, the same being slipped on the ends of the shafts 1 against the inner hub parts 2 3 and then the outer hub parts 4 5 applied as before, all of the parts being bored just as described for the uniting-bolts, the only difference being that the sprockets would be made in one piece instead of two.

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

1. The combination with the split hub, having two inner and two outer pieces, formed with series of longitudinal and transverse bores, of an interposed sprocket, having transverse bores in line with said longitudinal bores, and bolts in said bores for uniting the parts together.

2. The combination with the split hub, having two inner pieces and two outer pieces of an interposed splitsprocket and bolts for uniting all the parts together, and clamping the
5 same upon a shaft.

In testimony that I claim the foregoing I have hereunto set my hand, at Union City, in

the county of Branch and State of Michigan, in the presence of two witnesses.

RICHARD S. TOWNSEND.

Witnesses:

J. R. PATTERSON,

A. LUNDTEIGEN.