(No Model.)

J. P. HOVEY.

CONNECTING ROD.

No. 307,651. Patented Nov. 4, 1884.

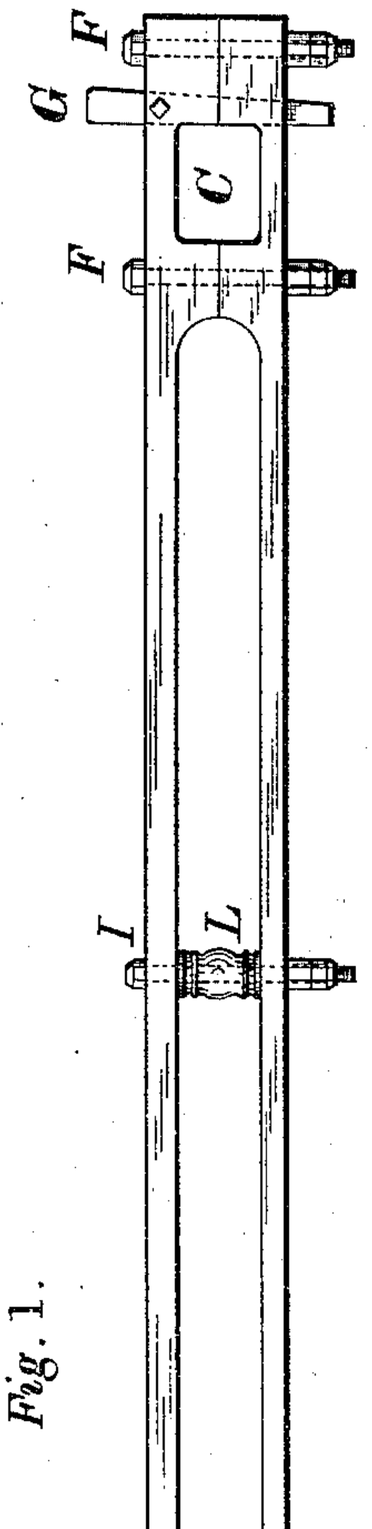

Fig. 1.

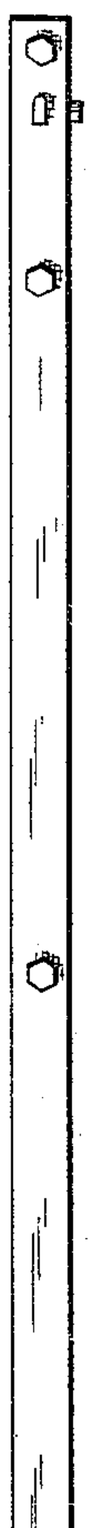

Fig. 2.

Fig. 3.

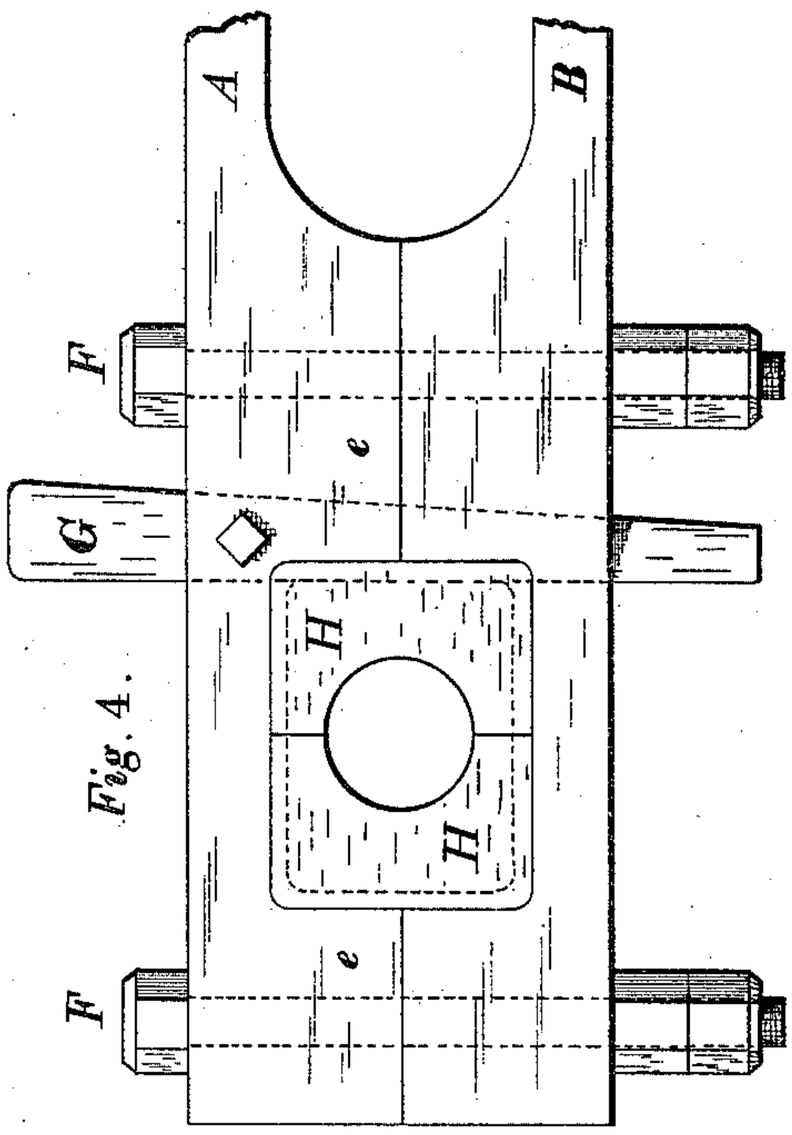

Fig. 4.

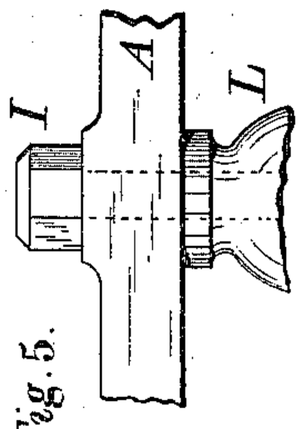

Fig. 5.

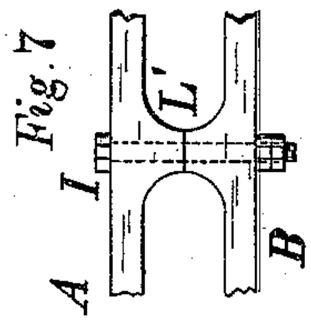

Fig. 7

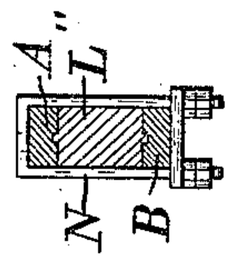

Fig. 6.

WITNESSES=

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UNITED STATES PATENT OFFICE.

JACOB P. HOVEY, OF ROCHESTER, NEW YORK.

CONNECTING-ROD.

SPECIFICATION forming part of Letters Patent No. 307,651, dated November 4, 1884.

Application filed May 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB P. HOVEY, of Rochester, in the county of Monroe, in the State of New York, have invented certain Improvements in Connecting-Rods for Steam-Engines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in the construction of the connecting-rods of steam-engines, which improvements are designed more particularly for use on the side or coupling rods of railway-locomotives, but are capable of being applied to other purposes.

My improvements are fully described in the following specification, and the novel features thereof specified in the claims annexed thereto.

My improved connecting-rod is represented in the accompanying drawings, in which Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 represents one of the longitudinal bars of my improved connecting-rod. Fig. 4 is a view of one end of my improved connecting-rod on an enlarged scale. Fig. 5 is a partial side view of one of the bars on an enlarged scale. Fig. 6 is a cross-section representing a modification of the stays. Fig. 7 represents another modification of the same.

My improved connecting-rod is formed of two separate bars, A and B, each provided at the ends with two lugs, *e e*, the inclosed space or recess C between the lugs being fitted with the usual boxes or brasses, H H, Fig. 4. These boxes are secured in place by flanges projecting over the edges of the recess, and provision is made for taking up wear by means of the gib G held by a set-screw or any other ordinary or preferred means.

The ends of my connecting-rod are secured together by the bolts F F provided with jam-nuts. To prevent springing or bending, the rod may be stiffened by stays or struts I I, one or more being used according to the length and material of the connecting-rod. These stays are composed of the block or collar L held in place by the bolt I passing through it and both the bars.

In place of the strut L the device represented in Fig. 7 may be used. A lug, L′, on one or both bars of such height that when the bars are put together the edges will meet a bolt, I, passing through the bars and securing them firmly together. If it is desired to avoid weakening the connecting-rod by the bolt-holes at these points, a stirrup or band, N, Fig. 6, may be passed around the bar, its ends passing through a clamping-plate on the under side of the rod, and being threaded and provided with jam-nuts. In this case the block or strut L″ is placed between the two bars, being provided with pins or other devices for holding it in place. The sides of the block L″ may be grooved to receive the stirrup.

In the practical construction of my improved connecting-rod the bars are forged all in one piece with enlarged ends and recesses therein between the lugs *e e*, after which they are finished to shape and size by any suitable machinery. If it be desired to increase the section of the bar through the holes which receive the stays I, this may be accomplished by thickening the bar at this point, as represented in Fig. 5.

The obvious combination of lightness, strength, and stiffness in my improved bar will at once commend it to those acquainted with the state of the art as heretofore practiced, while the ease of removing and replacing the worn-out boxes is immediately evident. It is also clear that a great saving in metal, and consequently in cost, is effected by my improved construction.

I claim—

1. The herein-described longitudinally-divided connecting-rod, consisting of the parallel bars A and B, having enlarged ends integral with the bars provided with recesses for the journal-bearings H H, and secured together by bolts F F, substantially as and for the purposes described.

2. The herein-described longitudinally-divided connecting-rod, consisting of the parallel bars A and B, having enlarged ends integral with the bars, provided with recesses for the journal-bearings H H, secured together by bolts F F, and one or more intermediate

stays, I, and struts L between the bars, substantially as described.

3. The herein-described longitudinally-divided connecting-rod, consisting of the parallel bars A and B, having enlarged ends integral with the bars provided with recesses for the journal-bearings H H, secured together by bolts F F at their enlarged ends and at or near the center of length by the stirrup N and strut L, substantially as described.

JACOB P. HOVEY.

Witnesses:
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