My invention relates to main connecting rods, through which the reciprocating movement of locomotive cross heads is transmitted to, and effects the rotation of crank pins connected to the main driving axles thereof, and is more particularly designed for application in the main rods of the middle cylinders of three cylinder locomotives. The object of the invention is to provide readily detachable means for taking up wear, and greater facility for manipulating the main rod when necessary to renew or replace the crank pin bearings thereof.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawing: Figure 1 is a plan or top view of the crank pin end portion of a locomotive main rod embodying my invention; Fig. 2, a side view, in elevation, of the same; and, Fig. 3, an end view, partly in section, of the same, as seen from the left.

In the practice of my invention, referring descriptively to the specific embodiment thereof which is herein exemplified, the body, 1, of the main rod, is of the ordinary form and of rectangular or I section, as preferred. The body, 1, is, at its end adjoining the crank pin bearing, deepened and widened so as to form a rectangular rear end block, 11, against the rear, the top, and the bottom of which there is fitted a two section strap, comprising an upper member, 2, and a lower member, 3, which are angularly recessed to fit against, and are secured to, the end block, 11, by bolts, 4, and nuts, 5. The upper and lower members of the strap fit, one against the other, on opposite sides of the crank pin bearing, and are secured, one to the other, at their rear ends, that is to say, their ends in rear of the crank pin bearing, by bolts, 4, and nuts, 5. They are also, preferably, as shown, secured together, on the forward side of the crank pin bearing, by a bolt, 5, and nuts, 5.

The two section strap above described, enables a worn bushing to be removed, and replaced by a new one, in shorter time and with materially greater facility than has been possible with prior designs of straps, and in view of the fact that the middle crank pin of a three cylinder locomotive is located between two adjacent crank discs, a main rod construction which will facilitate replacement of the crank pin bushing, is manifestly of substantial advantage in practice. The bolts connecting the members of the strap to the body of the rod are tightly fitted, and are driven upwardly from the bottom, and when replacing a bushing, they are driven downwardly sufficiently far to remove the upper member of the strap only, after having removed the rear end bolts, 4. When the upper member of the strap is removed, and the rod temporarily supported in place, the segments of the bushing, 7, can be removed from the crank around which they are fitted, and a new set of segments, of full thickness, be applied, after which the upper member is restored to its normal position, and connected to the lower member. As compared with the practice in existing designs in which the entire heavy strap must be removed from the rod, the operation is materially simpler, easier, and quicker.

The wear strips or liners, 6, constitute a simple and ready means for maintaining a true cylindrical surface, upon which the floating bushing may rotate, without causing any wear on the members of the strap. It will be seen that renewal of a pair of liners is much quicker and less expensive than the replacement of the strap members.

I claim as my invention and desire to secure by Letters Patent:

1. In a locomotive main connecting rod, the combination of a body; an enlarged head at one end thereof; a pair of straps, each having a recess intermediate its length, and a recess at its rear end, the intermediate recesses being of a form to provide a crank pin cavity, when the straps are assembled, and the rear recesses being of a form to provide a cavity for the head of the body, the straps having faces intermediate the crank pin and head cavities, adapted to abut when the straps are assembled, and faces forward of the crank pin cavity, adapted to abut when the straps are assembled; bolts passing vertically through the straps and head for securing the straps to the head; and a bolt passing
vertically through the straps forward of the crank pin cavity.

2. In a locomotive main connecting rod, the combination of a body; an enlarged head at one end thereof; a pair of straps, each having a recess intermediate its length and a recess at its rear end, the intermediate recesses being of a form to provide a crank pin cavity when the straps are assembled, and the rear recesses being of a form to provide a cavity for the head of the rod, the straps having faces intermediate the crank pin and head, cavities adapted to abut when the straps are assembled, and faces forward of the crank pin cavity, adapted to abut when the straps are assembled; a liner, secured in the crank pin cavity; a renewable bushing, mounted on the liner; bolts passing vertically through the straps and head, for securing the straps to the head; and a bolt, passing vertically through the straps forward of the crank pin cavity.

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