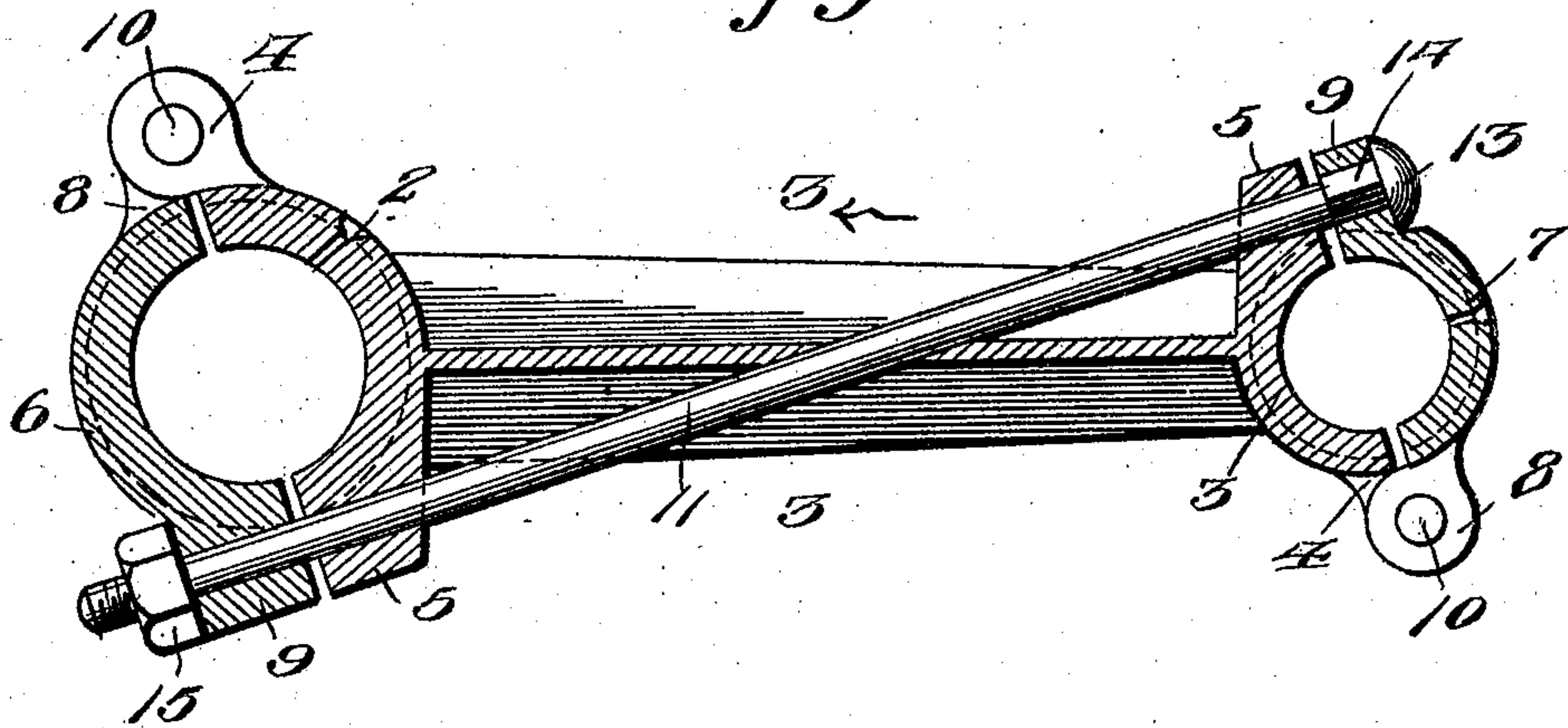


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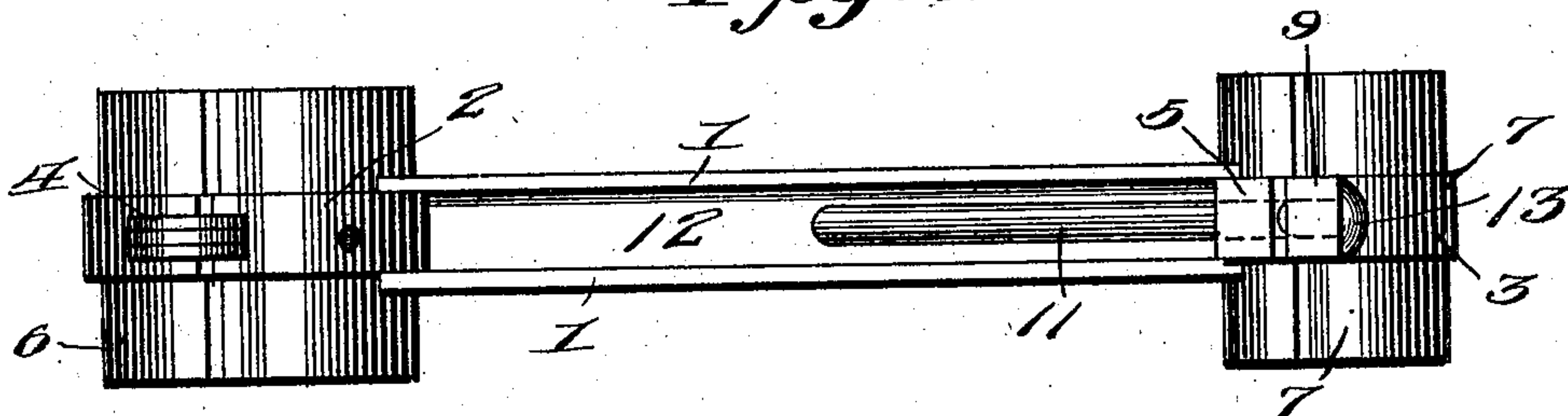
PATENTED MAR. 13, 1906.

J. F. COOK.  
CONNECTING ROD.  
APPLICATION FILED JULY 19, 1905.

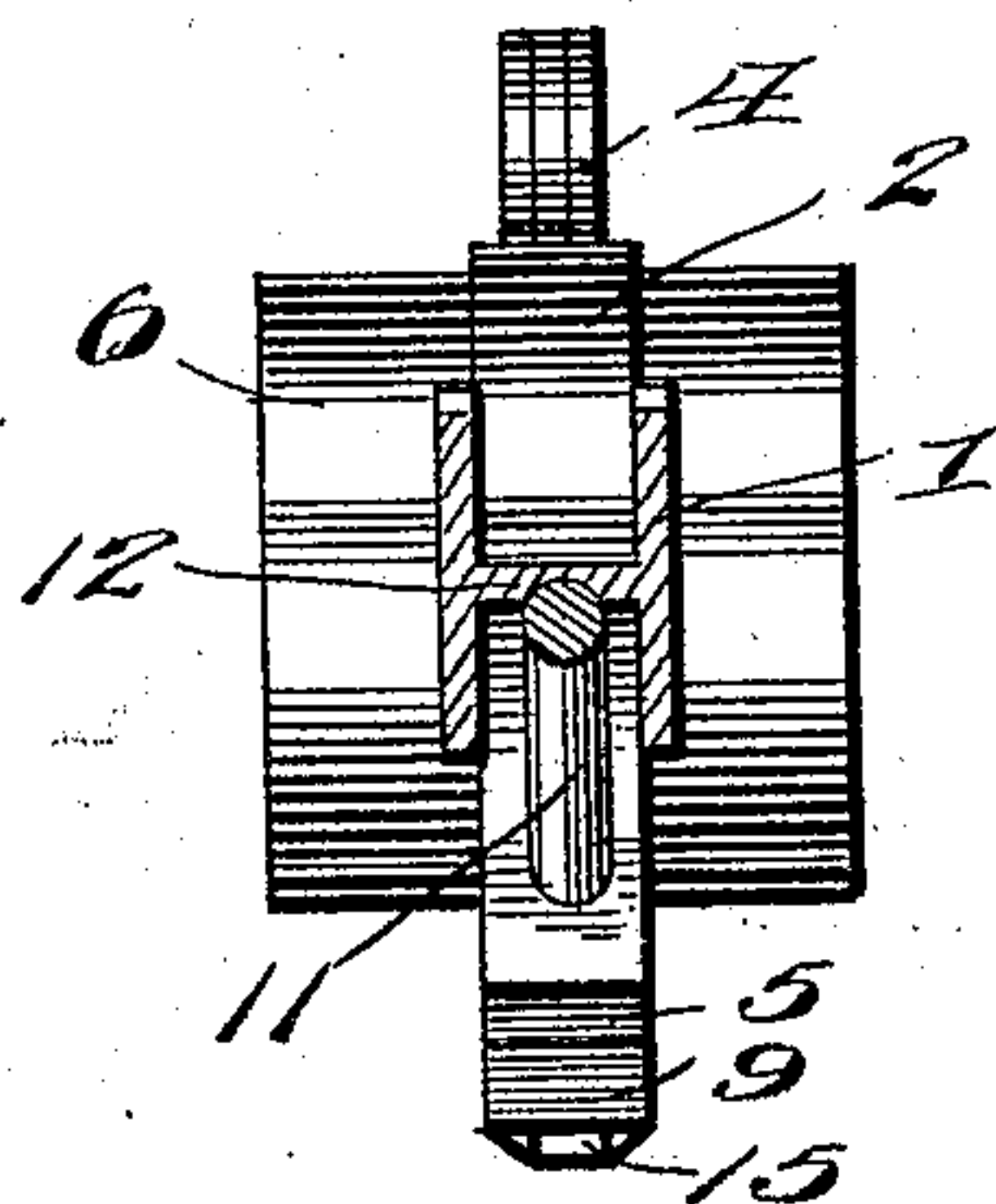
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES FRED COOK, OF CAMBRIDGE, ILLINOIS.

## CONNECTING-ROD.

No. 815,068.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed July 19, 1905. Serial No. 270,413.

*To all whom it may concern:*

Be it known that I, JAMES FRED COOK, a citizen of the United States of America, residing at Cambridge, in the county of Henry and State of Illinois, have invented new and useful Improvements in Connecting-Rods, of which the following is a specification.

This invention relates to improvements in connecting-rods for internal-combustion engines, its object being to provide a rod of maximum strength to withstand the strain to which rods of this character are subjected and in which provision is made for the effective adjustment of the hinged caps of the coupling-bearings to compensate for wear.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the connecting-rod. Fig. 2 is a top plan view thereof, and Fig. 3 is a central vertical transverse section.

Referring now more particularly to the drawings, the numeral 1 represents the body portion of the rod, which comprises a channeled bar of substantially H form in cross-section and which is formed at its opposite ends with the stationary bearing members 2 and 3, each of which is provided at one side with an ear 4 and at the opposite side with a projecting lug or jaw 5.

Coöperating with the respective stationary bearing members 2 and 3 are adjustable bearing members or caps 6 and 7, which form therewith couplings for engagement with the piston and crank-shaft. Each of these caps is formed at one side with an ear 8 and at the opposite side with a projecting lug or jaw 9, the said ear 8 being pivotally connected with the ear 4 of the coacting stationary bearing member by a pintle or pivot-pin 10. It will be observed that the pivotal connections of the two caps 6 and 7 are disposed on opposite sides of the bar 1 or respectively above and below said bar.

A stay-bolt 11 passes diagonally through the web 12 of the bar 1 and passes at one end through the lugs or jaws 5 and 9 of the coupling members 3 and 7, the said end of the bolt being formed with a head 13, bearing against the outer face of the lug 9 and with an adjacent polygonal portion 14, which fits within a corresponding opening in said lug and holds the bolt from turning. The opposite end of the bolt passes through openings in the lugs 5 and 9 of the coupling members 2 and 6 and is

threaded for the reception of a nut 15, bearing against the lug 9 and serving to hold the bolt in adjusted position. The bolt is thus adapted to be adjusted in a diagonal direction relatively to the bar 1 to move the hinged caps 6 and 7 toward and from the coöperating stationary coupling members 2 and 3 to adjust the same for engagement with piston-connection pins and shafts varying in size and to compensate for wear. As the bolt extends diagonally through the web or central connecting portion of the bar 1 and lies between the side plates or flanges of the latter, it will be apparent that these parts will be mutually stayed and braced and that the peculiar arrangement of the bolt prevents the strain falling upon one coupling member from being transferred directly to the other coupling member, such strain being taken up by the body of the rod, which is best adapted to sustain it. The bolt itself is also stayed centrally by the web and held from flexion, a great advantage in devices of this kind. A connecting-rod is thus provided which is of maximum strength to withstand the strain to which the connecting-rods of internal-combustion engines are subjected and which embodies means for securing an effective adjustment of the hinged caps of the coupling-bearings.

Having thus described the invention, what is claimed as new is—

A connecting-rod comprising a body portion formed of parallel longitudinal plates arranged edgewise in a vertical plane and free from connection between their edges so as to prevent the transmission of strain above the center line from one plate to the other, whereby said body portion is relieved from excessive stiffness, said body portion being provided with stationary bearing members integral with the ends of the plates and forming the sole connections therebetween, caps coöperating with the bearing members to form couplings, said caps being hinged to the stationary members on opposite sides of said body portion, and a stay-bolt extending diagonally between the body-plates and terminally connected with the hinged members of the coupling-bearings to adjust the caps toward and from the coacting stationary bearing members, one end of the bolt having a connection with one of the stationary bearing members to hold said bolt from rotation, the body portion also being provided with a bracing-web extending horizontally and longitudinally between the body-plates and con-



5 nected at its ends with the stationary bearing  
members and its side edges with said body-  
plates at a point substantially midway of the  
upper and lower edges thereof, said web hav-  
ing an opening for the passage of the bolt and  
bearing at all points about the opening  
against the intermediate portion of the bolt,  
whereby the bolt is braced between its ends  
and all the intermediate connections between  
10 the bearings mutually tied and intimately re-

inforced at the center of the rod to stay the  
same against both vertical and transverse  
strain.

In testimony whereof I affix my signature  
in presence of two witnesses.

JAMES FRED COOK.

Witnesses:

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