

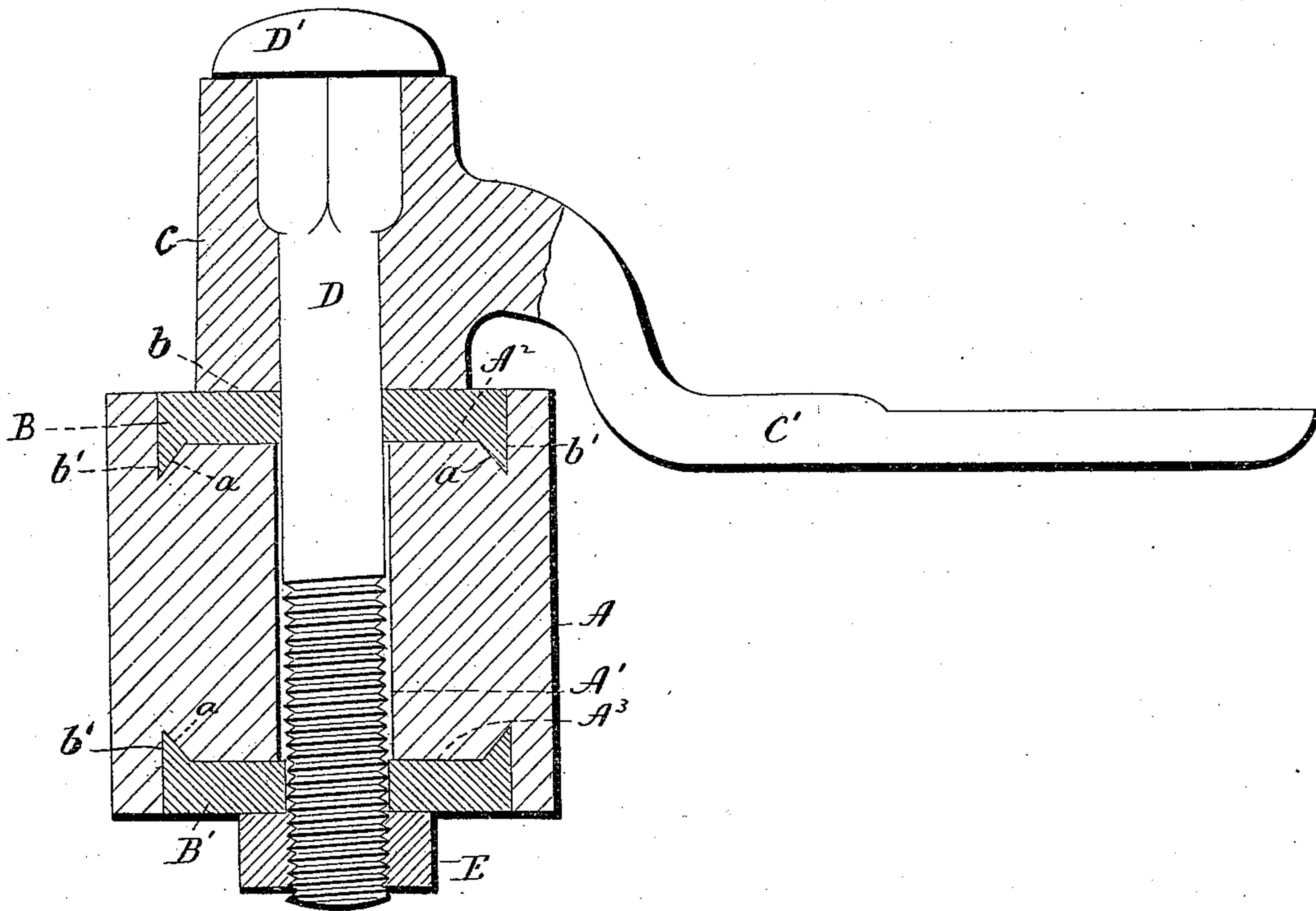
(No Model.)

W. F. MORTON.

BODY LOOP BEARING FOR SPRING VEHICLES.

No. 543,698.

Patented July 30, 1895.



Witnesses
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WILLIAM F. MORTON, OF NEW HAVEN, CONNECTICUT.

BODY-LOOP BEARING FOR SPRING-VEHICLES.

SPECIFICATION forming part of Letters Patent No. 543,698, dated July 30, 1895.

Application filed October 15, 1894. Serial No. 525,911. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. MORTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Fastening Devices for the Loops of Spring-Bar Vehicles; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a
10 full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents a view, partly in elevation and partly in vertical section, of a spring-bar having a loop fastened to it in
15 accordance with my invention.

My invention relates to improved means for fastening the loops of spring-bar vehicles to the spring-bars thereof. Heretofore this has generally been done by means of a bolt passed
20 directly downward through the eye of the loop and through the bar, the said bolt having its upper end headed to rest upon the upper end of the eye of the loop and having its lower end threaded to receive a nut, which impinges
25 against the lower face of the bar. The construction described has been found to be very objectionable, because under the severe twisting strain to which the loop and bar are subjected the bar is very liable to split out around
30 the bolt. To overcome that objection it has been found necessary to reinforce the bar to resist its tendency to split by means of a horizontally-arranged rivet, passing through the bar at a point near the bolt; but that rivet necessarily increases the expense and detracts
35 from the appearance of the job, and also weakens the bar, which has to be formed with an extra bolt-hole to receive it. The construction above referred to has also employed a washer interposed between the lower end of the eye
40 and the upper face of the bar, and between the lower face of the bar and the nut, the said washer preventing the eye and nut from chafing the upper and lower faces of the bar and
45 wearing into the same.

The object of my invention is to overcome the objections above mentioned and to provide for attaching the loops of spring-bar vehicles to the spring-bars thereof by simple,
50 durable, and effective means, constructed with particular reference to avoiding the

splitting of the bar and to elegance and finish of appearance in the completed job.

With these ends in view my invention consists in certain details of construction and
55 combinations of parts, as will be hereinafter described, and recited in the claim.

In carrying out my invention the bar A is constructed with a vertical bolt-hole A' and with two shallow concentric recesses A² and
60 A³ respectively entering the upper and lower faces of the bar and arranged concentric with the upper and lower ends of the bolt-hole. Each of these recesses, it will be noted, has a concentric groove *a* located in the outer
65 edge of its bottom wall, the said groove having a straight outer and a beveled inner wall. It will be understood that the said recesses and their grooves may be readily formed by the spur of a suitable bit. In these recesses
70 I locate anchored bearing-heads B and B', circular in form, corresponding in thickness to the depth of the said recesses A² and A³, and constructed with central bolt-openings *b* and with annular anchoring-flanges *b'* ex-
75 tending radially inward from the edges of their inner faces and having straight outer and beveled inner faces and pointed edges. I may here remark that these flanges *b'* of the bearing-heads correspond in cross-section to
80 the grooves *a* of the circular recesses into which the flanges take, as clearly shown in the drawing. If desired, the said flanges, which are sharp, may be relied upon to form their receiving-grooves, or the same may be
85 formed when the recesses are formed. When the said heads are in place in the said recesses their outer faces will be flush with the upper and lower faces of the bar respectively. The lower face of the eye C of the loop C' is
90 placed upon the outer face of the upper bearing-head B, which has the secondary function of a washer for preventing the eye of the loop from chafing and wearing into the bar. A bolt
95 D, having a head D' at its upper end, is passed downwardly through the said eye, through the bearing-head B, through the bolt-hole A', and through the bearing-head B', below which it projects for the reception of the retaining-nut
100 E, which bears against the outer face of the bearing-head B', which also has the second-

ing into and chafing the bar. The loop C' is of any approved construction and fastened to the carriage-body in any suitable manner.

I would call attention to the fact that the bolt-hole A' is considerably larger in diameter than the diameter of the bolt and that the bolt-openings b in the bearing-heads B B' are only just large enough to permit the bolt to pass through them. The strain of the loop upon the bolt is not therefore exerted directly or indirectly upon the walls of the bolt-hole, as heretofore, but is entirely borne by the said bearing-heads, in which the bolt has bearing and which are anchored in the bar, so as to secure a concentric grip upon those portions of the same around the fibers thereof cut for the formation of the bolt-hole therein. It is to be noted, too, that the surfaces covered by the said heads are large, so that the strain imposed by the bolt upon them, and hence upon the bar, is distributed to such an extent that it is relatively small at any one point. When my improvement is used, the bar will not therefore split under the most severe strains imposed upon it in any ordinary use of the vehicle. Besides being highly effective, my improved construction is also simple, durable, convenient to apply, and of exceptionally elegant and finished appearance.

It is apparent that in carrying out my invention some changes in the construction herein shown and described may be resorted to, and I would therefore have it understood that I do not limit myself thereto, but hold myself at liberty to make such alterations as fairly fall within the spirit and scope of my invention. I am aware, however, that coupling-heads having inwardly-extending anchoring-flanges and central bolt-holes have

been employed for securing the ends of two pieces of wood in abutment, the said heads being drawn together and into the opposite faces of the wood by means of a bolt passing through their bolt-holes.

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

In a fastening device for the loops of spring-bar vehicles, the combination with a spring-bar having a vertically arranged bolt-hole formed in it, and also having formed in it two shallow recesses located in its upper and lower faces, and concentric with the upper and lower ends of the said bolt-hole, of two circular bearing-heads respectively adapted to be located in the said recesses, having their outer faces flush with the upper and lower faces of the bar and constructed with central openings, and with annular anchoring flanges projecting inwardly from the edges of their inner faces, a loop, the inner end of the eye of which has bearing upon the outer face of the bearing head in the upper recess in the bar, a bolt passing through the eye of the loop, through both of the said heads, through the bolt-hole of the bar, and projecting through the bearing head located in the recess formed in the lower face of the bar, and a nut applied to the projecting lower end of the bolt, and bearing against the outer face of the bearing head last mentioned, substantially as set forth.

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

WILLIAM F. MORTON.

Witnesses:

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