

(No Model.)

E. S. PARMELEE.

CARRIAGE GEAR.

No. 348,770.

Patented Sept. 7, 1886.

Fig. 1.

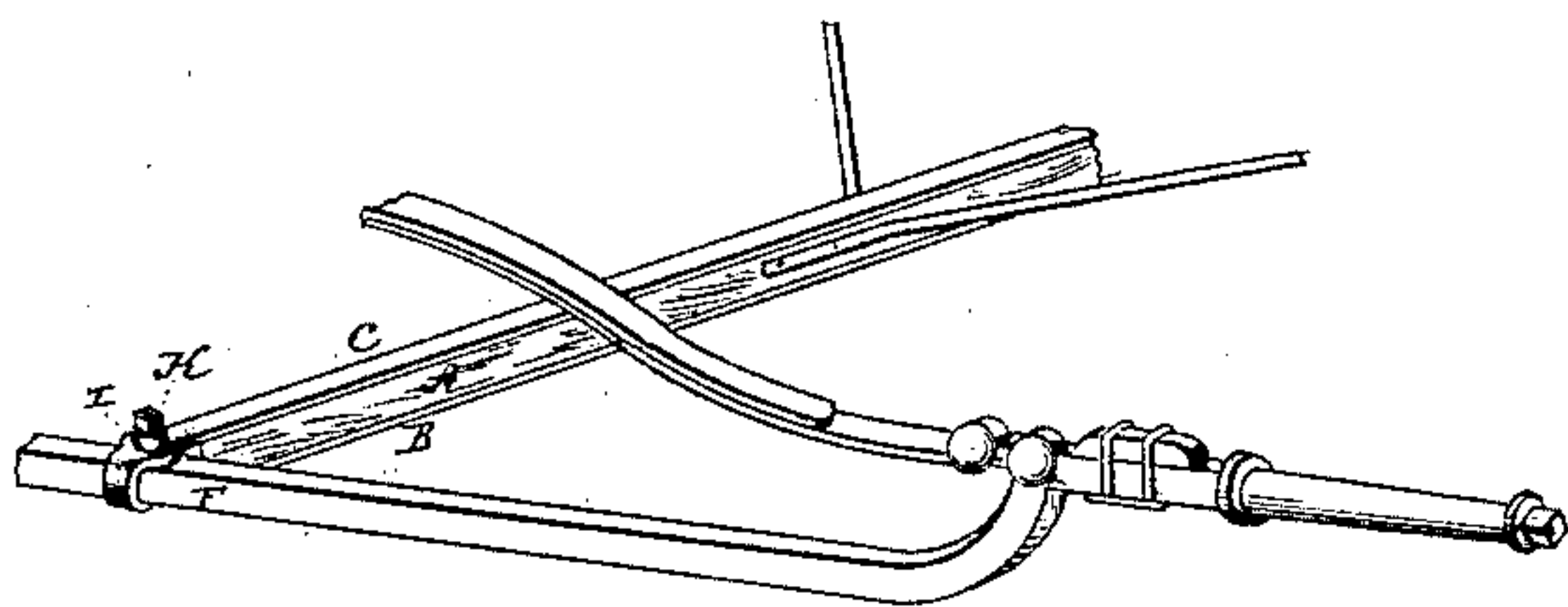
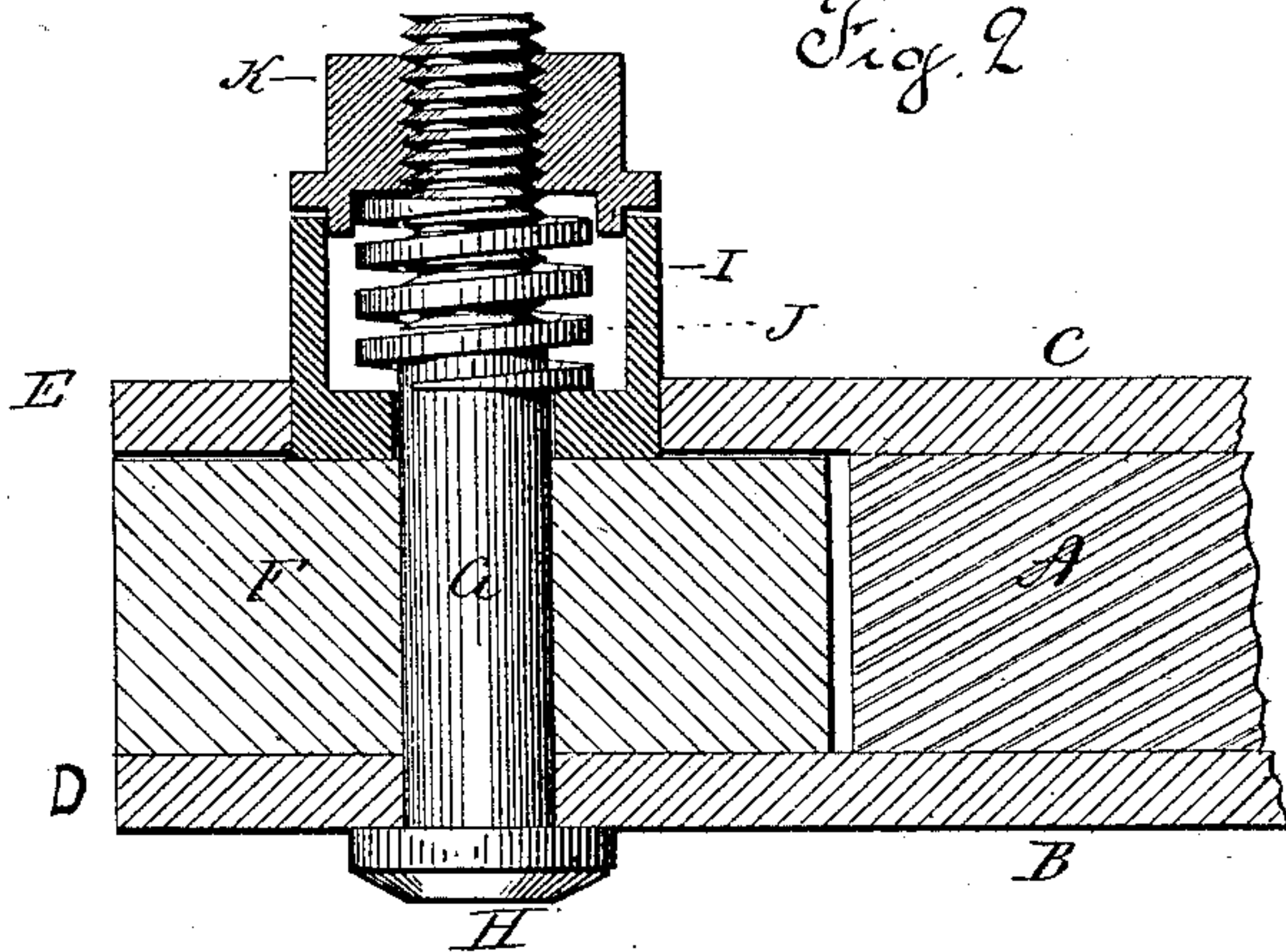


Fig. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## CARRIAGE-GEAR.

SPECIFICATION forming part of Letters Patent No. 348,770, dated September 7, 1886.

Application filed January 25, 1886. Serial No. 189,584. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN S. PARMELEE, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new  
5 Improvement in Carriage-Gear; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,  
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, so much of a carriage-gear as is necessary to illustrate the invention; Fig. 2, a vertical central section through the axle at  
15 the king-bolt, and showing the forward portion of the perch.

This invention relates to an improvement in that class of carriage-gear in which the perch extends from the rear axle to the forward axle,  
20 and is hung directly thereto, and as represented in Fig. 1. The perch is usually forked at its forward end, one leg of the fork extending below the other above the axle, and the king-pin extending through both branches of  
25 the fork and the axle, to make the joint upon which the axle may turn in its connection with the perch. However nicely the joint may be made between the perch and the axle, the slightest wear produces a looseness and a  
30 consequent rattle, so that a frequent taking up—as by the introduction of collars—is necessary, and this does not always prevent the disagreeable rattle.

The object of my invention is to construct  
35 the connection between the perch and the axle in such a manner that its take-up will be automatic, and a constant bearing always attained, whereby rattling is impossible; and it consists in the construction of the joint as  
40 hereinafter described, and more particularly recited in the claim.

A represents the perch-bar, which is usually made from wood, with a plate, B, of iron below, and a like plate, C, of iron above, which  
45 serve to stiffen the perch. At the forward end the two plates terminate, respectively, in ears D E, and so that the ear D will extend below the axle, while the ear E extends above the axle, F representing the axle.

50 G is the king-bolt, having a head, H, at one end, adapted to bear against one of the ears—say D—and extends through that ear, the axle,

and the other ear, E. Around the bolt at its opposite or screw-threaded end a cup-shaped collar, I, is arranged, the ear E having a con- 55 centric opening through it corresponding to the diameter of the collar I. This cup-shaped collar forms a spring-chamber around the bolt, into which the spring J is arranged. This spring J is preferably steel, but may be of any 60 suitable material. Onto the screw-threaded end of the bolt above the sleeve a nut, K, is applied, so as to compress the spring in the cup, the lower end of the spring bearing upon the bottom of the cup, while the upper end 65 takes a bearing or thrust in the opposite direction against the under side of the nut K, and so that the tendency of the spring is to force the collar toward the head of the bolt. The collar bears directly upon one side of the 70 axle, while the head of the bolt draws the ear of the perch against the opposite side; hence a firm and constant grasp is maintained between the collar I and the ear upon the opposite side, the spring serving to hold the bolt 75 firm in its position, and also to hold the axle and perch in firm connection, and in ease of any wear between the axle and perch it will be automatically taken up by the spring forcing the collar I according to the wear. Un- 80 der this construction rattle between the perch and axle is impossible. The spring may be adjusted to make the pressure between the head of the bolt and axle to any desirable extent. The nut substantially covers the open 85 end of the collar sufficiently to prevent dirt or any foreign substance from entering therein to interfere with the working of the spring.

I am aware that the king-bolt making the connection with the forward axle has been 90 provided with a spring around it, upon which the nut will bear so as to make a yielding or elastic support, and therefore do not wish to be understood as claiming, broadly, such an arrangement, the essential feature of my in- 95 vention being the construction of the perch with an ear above and below the axle, so that the axle will be embraced by the said ears, and with a bolt through the said ears and axle, the head of the bolt taking a bearing upon one 100 of the ears on one side of the axle and a concentric cup on the opposite side of the axle standing through a concentric opening in the ear on that side of the axle, so that the cup

rests directly upon the axle through said ear, with the spring in said cup, and the nut to bear upon said spring.

I claim—

5 The herein-described improvement in carriage-gear, in which the forward end of the perch is hung directly to the forward axle, the combination of the perch and axle, the perch constructed with an ear upon its upper and  
10 its lower sides, the said ears extending forward and adapted to embrace the forward axle, with a king-bolt extending through said ears and axle, with a head upon one side to bear upon one of said ears, a cup-shaped col-

lar around the bolt upon the side of the axle 15 opposite the head of the bolt, the said collar extending through a concentric opening in the ear on that side, a spring in said cup-shaped collar around the bolt, and a nut on said bolt adapted to bear upon said spring, substan- 20 tially as described, and whereby the said axle is grasped between the ear on one side of the perch and the said cup-shaped collar upon the opposite side.

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Witnesses:

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