

No. 769,734.

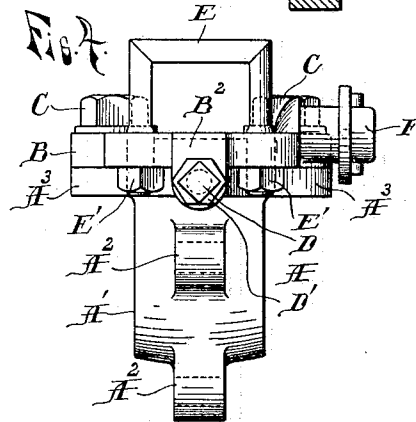
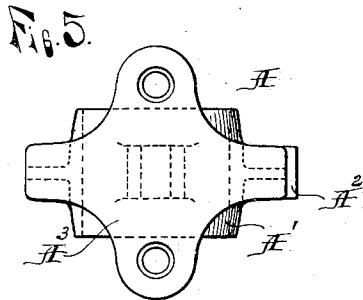
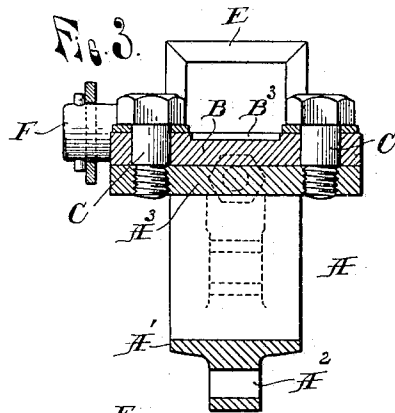
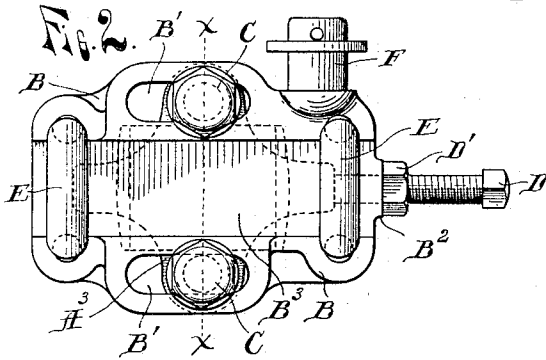
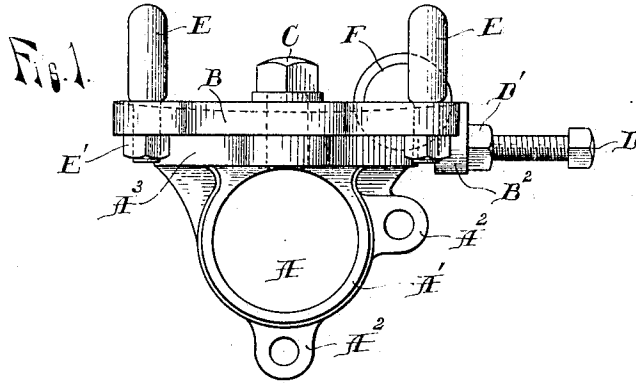
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H. FORD.

CHAIN ADJUSTMENT FOR MOTOR VEHICLES.

APPLICATION FILED JUNE 22, 1904.

NO MODEL.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

HENRY FORD, OF DETROIT, MICHIGAN.

## CHAIN ADJUSTMENT FOR MOTOR-VEHICLES.

SPECIFICATION forming part of Letters Patent No. 769,734, dated September 13, 1904.

Application filed June 22, 1904. Serial No. 213,582. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY FORD, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Chain Adjustments for Motor-Vehicles, of which the following is a specification, reference being had therein to the accompanying drawings.

In the construction of motor-vehicle running-gears it is necessary to provide means for adjusting the driving-chain, and as ordinarily constructed this consists in providing means whereby the radius-rods may be lengthened. The lengthening of said rods moves the axle rearwardly, thus tilting the springs forward; and the object of this invention is to provide simple and efficient means whereby the chain may be quickly adjusted without changing the radius-rods or affecting the springs.

To this end the invention consists in clipping each spring to a suitable clip yoke or plate which is provided with a stud for the pivotal attachment of the radius-rod and adjustably securing this plate to a suitable spring, perch on the axle, means being provided for adjusting said perch to shift the axle, and thus adjust the chain; and the invention further consists in the particular construction, arrangement, and combination of parts, all as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is an end elevation of a device embodying the invention; Fig. 2, a plan view of the same; Fig. 3, a longitudinal vertical section on the line *x x* of Fig. 2; Fig. 4, an elevation of the forward side of the same. Fig. 5 is a plan view of the perch.

A is the perch for the spring, consisting of a ring A', adapted to be sleeved on the axle and provided with laterally-extending ears A<sup>2</sup>, having openings to receive the truss-rods of the axle, and also provided with an integral flat top or plate A<sup>3</sup>. Resting upon this plate and adjustably secured thereto is the clip yoke or plate B, provided with longitudinal slots B' to receive the binding-bolts C, which are tapped into the perch, so that by loosening

these bolts the axle carrying the rear sprocket-wheel may be moved to adjust the chain, and extending downward from the forward edge of the plate B is an ear B<sup>2</sup>, provided with a screw-threaded opening to receive an adjusting-bolt D, which abuts at its inner end against the edge of the plate A<sup>3</sup> of the perch and when turned in through said ear moves the perch relative to the clip-plate to accurately adjust the chain. A binding-nut D' on the adjusting-bolt engages the outer face of the ear B<sup>2</sup> to prevent the bolt from working loose after being adjusted.

The upper surface of the clip-plate B is cut away or formed with a groove B<sup>3</sup>, the bottom of which is curved to conform to the curved lower side of the vehicle-spring and forms a seat for the spring, and at each side of said groove near each end holes are provided in said plate to receive the ends of the spring-clips E, which are adapted to embrace the spring and clamp the same firmly to the clip-plate, nuts E' being provided on the projecting screw-threaded ends of said clip to engage the under side of the plate and draw the clips firmly against the spring.

Extending laterally from one edge of the clip-plate near the forward side of the same is a stud F, to which one end of the radius-rod at that side of the machine is adapted to be pivotally attached, and as the adjustment of the chain is secured by moving the perch relative to said clip-plate and as said plate is never adjusted relative to the springs and frame no adjustment of the radius-rod is required, and it may be a solid rod pivotally attached at its forward end in the usual manner and provided with an eye on its rear end to receive the said stud.

The nuts E' on the clips may be firmly turned up and, if desired, their bolts riveted down to hold them on in the assembling of the parts and need never be loosened unless the spring should break. They are therefore much less liable to work loose than, as in the ordinary construction, where it is necessary to loosen the clips and adjust the spring therein to straighten it up after it has been tilted by the lengthening of the radius-rod.

In this construction the chain adjustment

may be made with facility and accuracy, it being only necessary to slacken the bolts C and binding-nut D', then turn the adjusting-bolt D the required amount. The bolts C  
5 and the nut are then again set up and will firmly hold the parts, insuring the retention of the adjustment.

Having thus fully described the invention, what I claim is—

10 1. In a chain adjustment for motor-vehicles, the combination with a spring-perch, a clip-plate adjustably secured to said perch and to which the vehicle-spring is adapted to be secured, and means on said plate for the attachment  
15 of a radius-rod.

2. In a chain adjustment for motor-vehicles, the combination with a spring-perch, a clip-plate mounted on said perch, means for adjustably securing the plate to the perch, a  
20 stud on said plate for the attachment of the radius-rod, and an adjusting-screw to adjust the perch and plate, relatively.

3. In a chain adjustment for motor-vehicles, the combination with a perch adapted to be  
25 secured to the axle, of a clip-plate provided with slots, bolts engaging said slots to adjustably secure the plate to the perch, spring-

clips on the plate to secure the vehicle-spring thereto, and an adjusting-screw carried by the plate and engaging the perch. 30

4. In a chain adjustment for motor-vehicles, the combination of a perch consisting of a ring to receive the axle and a supporting-plate integrally formed therewith, a clip-plate provided with longitudinal slots and a longitudinal groove forming a seat for the vehicle-spring, bolts passing through said slots and  
35 engaging screw-threaded openings in the perch, spring-clips engaging openings in the clip-plate and adapted to secure the vehicle-spring thereto, a laterally-extending stud on the clip-plate for the attachment of the radius-rod, a downwardly-extending ear on the forward side of the clip-plate having a screw-threaded opening, an adjusting-bolt engaging  
40 the opening in the ear and contacting the perch at its end, and a binding-nut on said bolt engaging the outer surface of the ear.

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

HENRY FORD.

Witnesses:

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