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REINFORCING MEMBER FOR THE SPRINGS OF MOTOR DRIVEN VEHICLES

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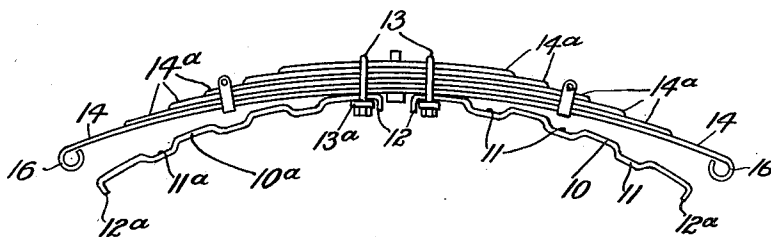


Fig. 1.

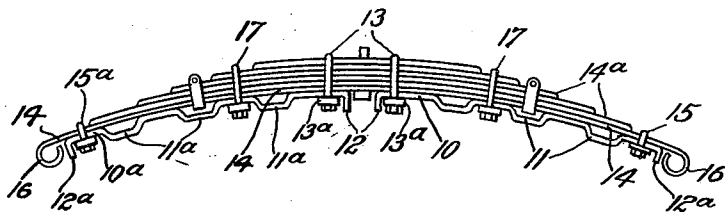


Fig. 2.

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REINFORCING MEMBER FOR THE SPRINGS
OF MOTOR DRIVEN VEHICLESAlbert Philip Charles Dell, Chippendale, New
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2 Claims. (Cl. 267—48)

This invention relates to vehicle springs and more particularly to the springs of the latest model of a well known make of motor car. The springs of this motor car are secured to their anchorages at each end by the use of a spreading tool by which the curved spring is partly flattened and thus lengthened to enable it to be slipped onto the shackles that form an anchorage at each end.

In practical use it has been found that many breakages occur and from observation it has been noticed that when a spring is submitted to shock the curves of the supporting leaves do not conform to that of the main leaf, that is to say they do not flatten out with it. The result of this lack of uniformity of movement is that the main leaf takes the major portion of the shock, the ends of the leaf next to it pressing against the convex surface of the main leaf. The result of this absence of uniform movements is that when an additional load is suddenly placed upon the spring the main leaf is submitted to a jar which in many cases results in a fracture or the breakage of the main leaf.

The main object of this invention is to provide a pair of adjustable reinforcing springs which may be applied to the under or concave side of the main leaf to assist the main leaf to resist the load by absorbing some of the shock. The construction and arrangement of these reinforcing springs is such that should a breakage occur it will still be possible to safely drive the car for a considerable distance, because not only does the reinforcing spring take or assist in taking the load which the broken spring ordinarily takes, but its fixings hold the leaves of the spring together.

The invention consists of preferably a pair of curved springs having U shaped bends or corrugations formed therein, and a means for securing them in such a manner that the tension may be adjusted as required.

In order that the invention may be thoroughly understood a detailed description will now be given and reference made therein to the accompanying drawing in which:

Figure 1 is a side elevation showing the reinforcing springs constructed according to this invention secured at one end by the respective central clamps in readiness for the other ends to be secured and the necessary amount of tension applied thereto.

Figure 2 is a similar view to Figure 1 but the outer end has been forced inwardly towards the main leaf of the spring to the required position

and the reinforcing spring secured in that position by U shaped clamps of a known type.

The invention consists preferably of a pair of curved springs 10—10a wherein are formed a plurality of spaced U shaped bends or corrugations 11—11a which project inwardly from the concave curve of the spring. Short portions 12—12a of each end of the springs 10—10a are also turned in the same direction, one turned in end 12 forming a stop to maintain it in position under the plate 13a of one of the ordinary central U shaped clamps 13 by which the leaves 14—14a of the spring are held together, the turned in portion 12a at the other extremity of the reinforcing spring 10—10a acting as stops to maintain additional U shaped clamps 15—15a in position near the respective anchoring eyes 16 on the main leaf 14. One or more U shaped clamps 17 may also be used and these will be prevented from slipping out of position by placing them so that they lie between two adjacent U shaped bends or corrugations 11 or 11a in the reinforcing springs 10—10a. The additional U shaped clamps 15—15a near the anchoring eyes 16 on the main leaf 14 are used for adjusting the tension on the reinforcing spring. At Figure 2 the reinforcing springs 10—10a are shown with their full tension applied to the respective ends of the main leaf 14.

In applying the invention the springs are made of spring steel and may be stamped or otherwise fabricated by any known means adopted in the manufacture of analogous articles. One end of each of the springs 10—10a is then secured in position by the respective existing central U shaped clamps 13 as shown at Figure 1. The outer ends of the reinforcing springs 10—10a are then forced inwardly towards the main leaf 14 by a jack or other suitable means until the U shaped clamps 15, 15a and 17 can be positioned and secured by the respective nuts which may then be tightened until the required tension is obtained.

Whilst it is possible to make these reinforcing springs 10—10a in one piece it is preferred to make them as described because among other reasons they are easier to manipulate in two parts than they would be if constructed in one piece.

I claim:

1. In a motor vehicle spring of the inverted transverse type, reinforcing members characterized in that they comprise a pair of like curved spring members having substantially flat surfaces connected by transverse open mouthed U shaped bends or corrugations that project in-

wardly from the concave side of each curved reinforcing member, the bends or corrugations in said reinforcing spring members being substantially the length of the flat portions of the reinforcing members, with a clamp at each end of the reinforcing member and intermediate thereof between adjacent curved U shaped bends of the reinforcing members tying the reinforcing members to the vehicle spring.

10 2. A motor vehicle spring of the inverted type, comprising curved spring leaves of different length the main spring leaf being on the bottom, means connecting adjacent spring leaves to hold the leaves together, and a pair of curved reinforcing

members under the main leaf each member extending from the connecting means holding the leaves together in the middle of the main leaf to the anchoring eye at each end of the main leaf, said reinforcing members comprising a pair of curved spring members having substantially flat surfaces connected by transverse open mouthed U shaped bends or corrugations that project inwardly from the concave side of each curved reinforcing member, the bends or corrugations in the spring reinforcing member being substantially the length of the flat portions of the reinforcing member.

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