Aug. 16, 1932. F. L. SAGE 1,872,506

VEHICLE CHASSIS FRAME

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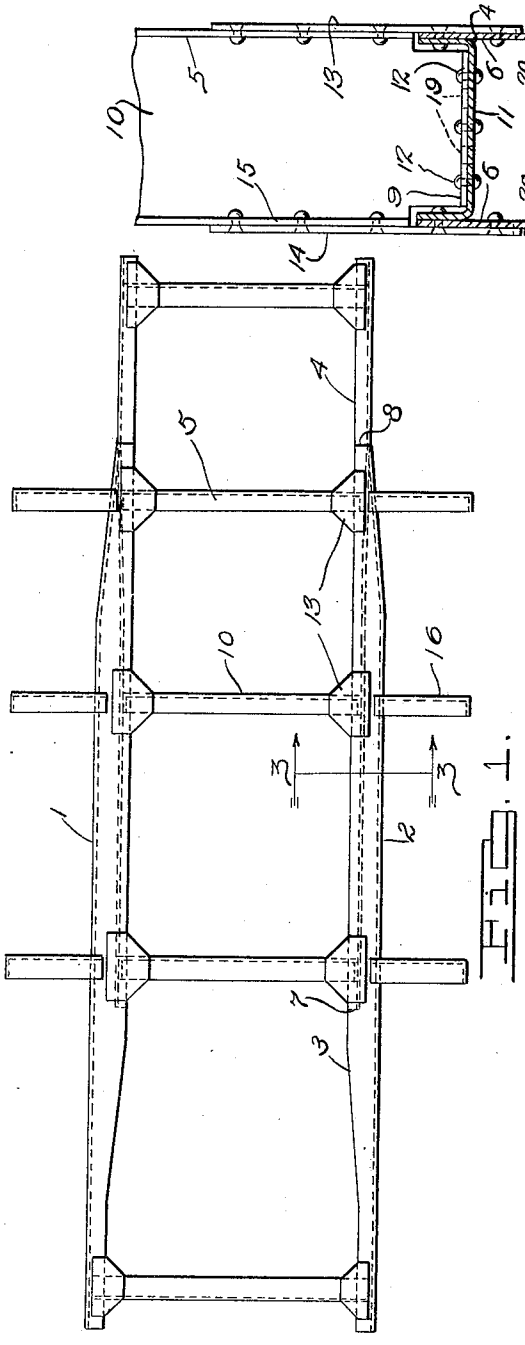


FIG. 1.

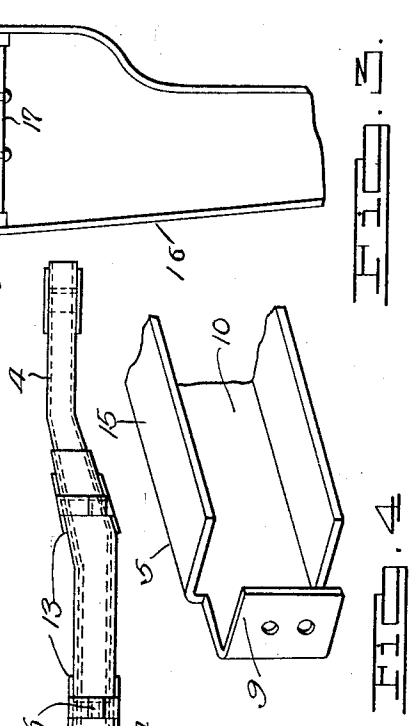


FIG. 4.



FIG. 3.



FIG. 2.

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# UNITED STATES PATENT OFFICE

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## VEHICLE CHASSIS FRAME

Application filed November 9, 1929. Serial No. 405,889.

The main objects of this invention are to provide an improved chassis frame for vehicles; to provide an improved construction in frames of this kind for reinforcing those portions of the structure which are subjected to torsional forces and which require rigidity, without substantially affecting the parts of the frame which normally are sufficiently yieldable to absorb shock and vibration; to provide improved joints between the various members of the chassis frame; and to provide an improved arrangement of channel members for forming channel columns intermediate the end portions of the side members of a chassis frame where rigid support is required.

An illustrative embodiment of my invention is shown in the accompanying drawing, in which:

Fig. 1 is a plan view of a chassis frame embodying my invention.

Fig. 2 is a side elevation of the frame shown in Fig. 1.

Fig. 3 is a transverse section taken on line 3—3 of Fig. 1.

Fig. 4 is a fragmentary perspective view showing the end of a cross member of a frame in detail.

In the form shown, the chassis frame comprises spaced longitudinal side members 1 and 2, each comprising a pair of channel bars 3 and 4, and transverse channel members 5. The channel bar 4 is seated between the sides 6 of the channel bar 3 at the intermediate portions of the chassis frame and the sides of the two bars are riveted together. The bar 3 extends rearwardly beyond the extremity 7 of the bar 4 which protrudes in advance of the extremity 8 of the bar 3. This construction provides channel columns in the side members at their intermediate portions where rigidity is desired, and single channel bars at the front and rear portions of the side members for absorbing the shock and vibration which is received from the front and rear wheels respectively, over which these parts of the frame are located.

The webs 10 of the transverse bars 5 have flanges 9 on their respectively opposite ends which extend into the channel-ways of the inner channel bars 4 and abut the webs 11 of the same. These flanges are secured to the webs 11 by rivets 12. Mounted on the upper and lower sides of the frame are gusset plates 13 and 14 respectively which are secured by rivets, or other suitable means, to the sides 15 of the channel members 5, and to the sides 6 of the channel bar 3.

Mounted on the outer edges of the side members 1 and 2, in alignment with the members 5, are channel-shaped outriggers 16 which have a flange 17 adjacent the exterior surface of the web of the channel bar 3 to which they are secured by rivets 18. The rivets 18 are staggered relative to the rivets 12 and the adjacent web and flange 11 and 9 respectively are provided with registering apertures 19 through which the heads of the rivets 18 may be held by a suitable tool while their opposite ends are peened over. The sides of the outriggers 16 are also rigidly secured to the sides 6 of the channel bar 3 by rivets 20.

In the above construction, the sides of the chassis frame are reinforced at their intermediate portions without excessively increasing the weight of the structure.

Although but one specific embodiment of this invention has herein been shown and described, it will be understood that various changes including the size, shape and arrangement of parts, may be made without departing from the spirit of my invention and it is not my intention to limit its scope other than by the terms of the appended claims.

I claim:

1. In a chassis frame, side members each including a pair of overlapped channel bars, one seated between the respectively opposite side flanges of the other, the webs of said channel bars being spaced apart so as to form a tubular structure in the intermediate part of each side member, and cross members connecting said side members, and outriggers mounted on the outermost channel bars of said side members comprising channel-shaped members each having an inwardly disposed web extension secured to the web of said outermost channel bars and over-

hanging side flanges secured to the side flanges of the latter channel bars.

2. In a chassis frame, a side member including a channel bar having a vertical web and a pair of inwardly extending horizontal flanges, an outrigger on said channel bar comprising a channel shaped arm having a pair of horizontal flanges and a vertical web, the joining portions of the flanges and web of said arm being severed at the inner end portion thereof, and a flange formed on the inner end portion of the web of said arm extending substantially parallel to the web of said side member and secured thereto, said side member being received between and secured to the severed portions of the flanges of said arm.

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