March 18, 1958 A. RODER 2,827,306

FRAMES FOR MOTOR-BICYCLES AND THE LIKE

Filed Feb. 27, 1956

Fig. 1

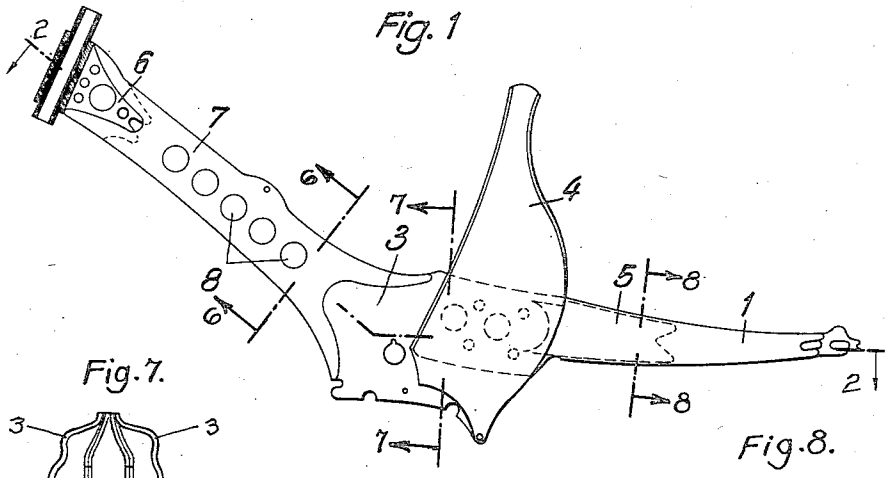


Fig. 7.

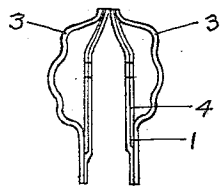


Fig. 8.

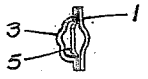


Fig. 2

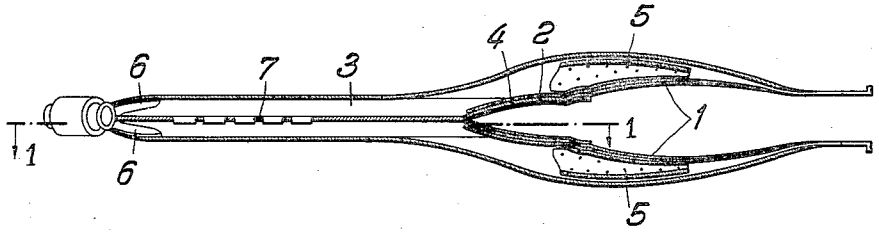


Fig. 3

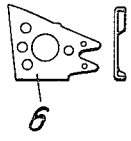


Fig. 4

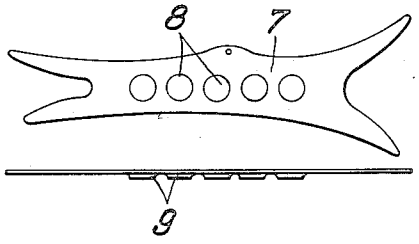


Fig. 5

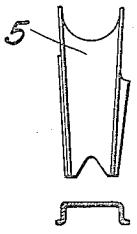
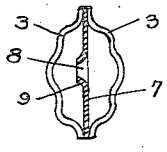


Fig. 6.



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FRAMES FOR MOTOR-BICYCLES AND THE LIKE

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Application February 27, 1956, Serial No. 567,923

Claims priority, application Germany March 8, 1955

3 Claims. (Cl. 280—281)

The instant application is a copending application with my prior applications Serial No. 521,353, filed July 11, 1955, and Serial No. 345,757, filed March 31, 1953, now United States Patent No. 2,763,496.

This invention relates generally to cycle construction, and more particularly to an improved frame arrangement for two-wheeled vehicles, such as, motorcycles, bicycles, and the like.

Although present day cycle framework has been found satisfactory in many applications, a need for improved stability and rigidity, as well as lighter frame weight has been found to be desirable in many applications.

Accordingly, a principal object of the instant invention is to provide a new and improved lightweight cycle framework.

Another object of the present invention is the provision of a new and improved reinforced frame arrangement for two-wheeled vehicles.

A further object of the present invention resides in the provision of a relatively lightweight cycle frame arrangement affording improved durability and stability characteristics.

Other objects and advantages of the present invention will be more readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawing wherein:

Figure 1 shows a section of the frame arrangement according to the invention on line 1—1 of Figure 2 with built-in reinforcing insertions;

Figure 2 shows a section through the girder of Figure 1 on line 2—2;

Figures 3, 4 and 5 show details;

Fig. 6 is a sectional view taken on line 6—6 of Fig. 1;

Fig. 7 is a sectional view taken on line 7—7 of Fig. 1; and

Fig. 8 is a sectional view taken on line 8—8 of Fig. 1.

Referring to the drawing whereon like reference numerals indicate like parts throughout the several views, the reference numeral 1 is an inner cover sheet which extends into the place of penetration 2. The term place of penetration is used, because the so-called secondary girder 4 passes through at this place. The sheet halves forming the main girder bear the reference 3.

As the heaviest stresses occur in the vicinity of the place of penetration, according to the invention an additional reinforcing sheet or a reinforcing insertion 5 is provided. This reinforcing insertion is shown more clearly in Figs. 5 and 8 of the drawing.

A further reinforcing fork-shaped insertion 6 is included for the purpose of assisting in taking up the stresses in the vicinity of the steering head. Finally, as more clearly shown in Figs. 4 and 6, a reinforcing insertion 7 is also provided for reinforcing that section of the main girder, which lies between the steering column and the zone, where the engine gearing block is mounted. The holes 8 (see Figure 4) have the purpose of reducing the weight, while not affecting their reinforcing function. The beadings 9 which are formed by stamping out the holes 8 assist the reinforcing function.

The drawing shows, that cut-away places may be provided at other places as well, as, for instance, in Figure 1 in the vicinity of the place of penetration and in the reinforcing sheet according to Figure 3.

Referring now to Fig. 6, it will be apparent that the main frame half sections 3 are affixed to either face of reinforcing insert 7. Fig. 7 more clearly illustrates the manner of securing auxiliary supporting member 4 to the main frame half sections 3 and cover plate 1, while Fig. 8 shows the arrangement of reinforcing member 5 within half section 3.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims the invention may be practiced otherwise than as hereinbefore specifically described.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A vehicle frame comprising two joined complemental frame members forming a main support extending between a steering head receiving portion and a rear wheel assembly portion and including arcuate shaped diverging arms forming a fork adapted to receive a rear wheel assembly, an auxiliary support joined at the vertex of the fork to said main support, said auxiliary support including an upper portion for supporting a seat and a lower portion for supporting a propulsion unit, an apertured reinforcing member affixed centrally of said joined frame members forwardly of said vertex, a fork-shaped reinforcing member affixed within said joined frame members adjacent the steering head receiving portion, an arcuate shaped reinforcing member affixed within each of said diverging arms, and a cover plate secured to each of said arcuate shaped diverging arms for enclosing said arcuate shaped reinforcing members therein.

2. A vehicle frame comprising a pair of complemental metallic frame members joined to form a main support extending between a steering head receiving portion and a rear wheel assembly portion and including arcuate shaped diverging arms forming a fork adapted to receive the rear wheel assembly, an auxiliary metallic support joined at the vertex of the fork to said main support for retaining a seat on the upper extremity thereof and a propulsion unit on the lower extremity thereof, a rigid plate affixed centrally of said joined frame members forwardly of said vertex, a bifurcated rigid member affixed within said joined frame members adjacent the steering head receiving portion, an arcuate shaped rigid member positioned within each of said diverging arms, and a cover plate secured to each of said arcuate shaped diverging arms for enclosing said arcuate shaped rigid members therein.

3. A vehicle frame according to claim 2 wherein said rigid plate includes a plurality of apertures formed thereon, each of said apertures being provided with a beading.

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