C. TRAMEL.

WAGON BOLSTER.

APPLICATION FILED FEB. 5, 1912.

1,081,346.

Patented Dec. 16, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

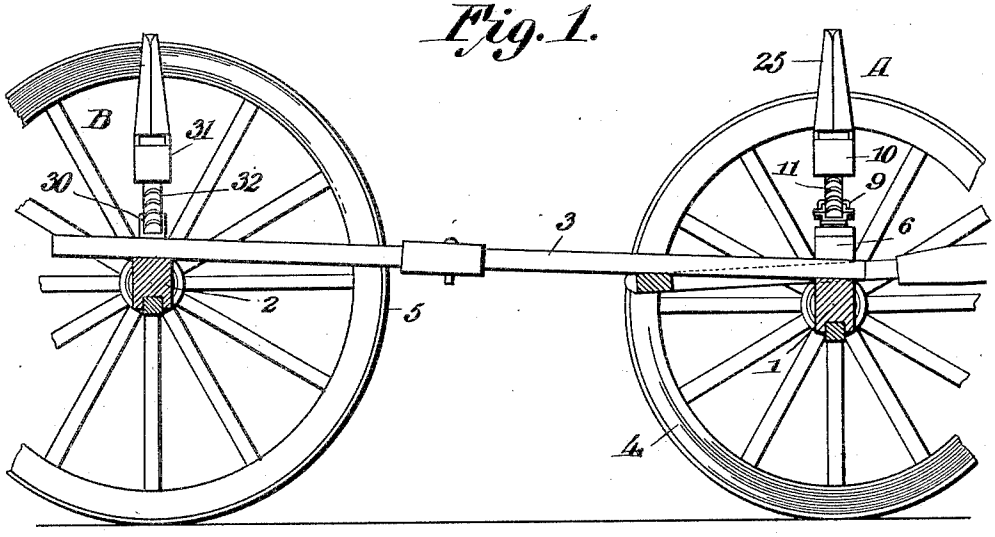
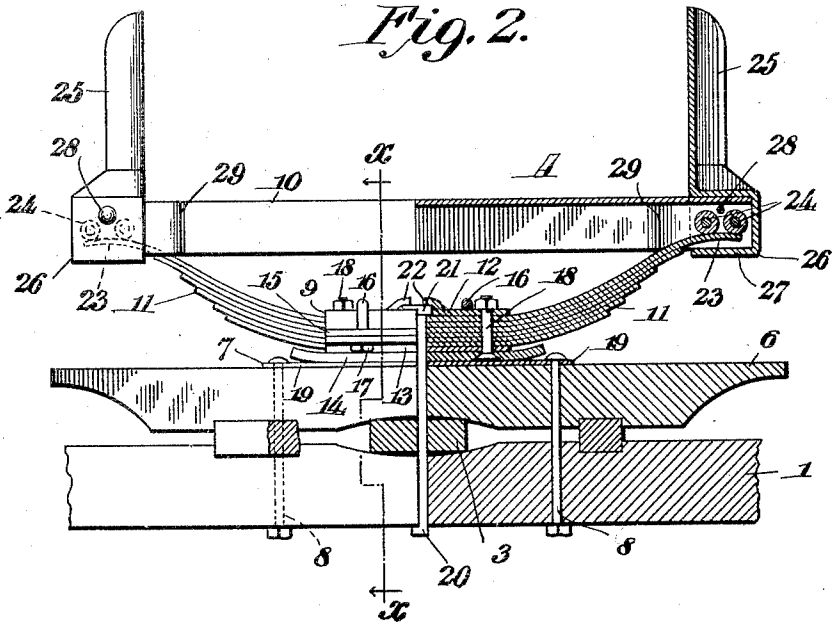


Fig. 2.



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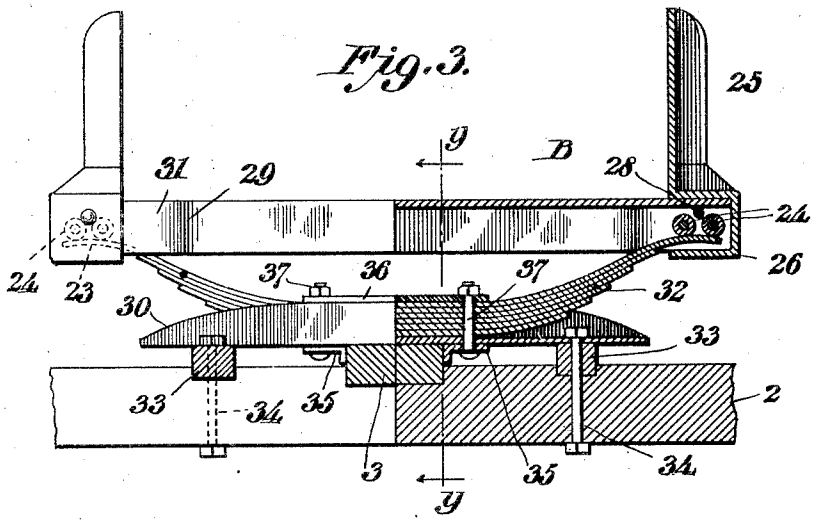
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2 SHEETS—SHEET 2.

Fig. 3.



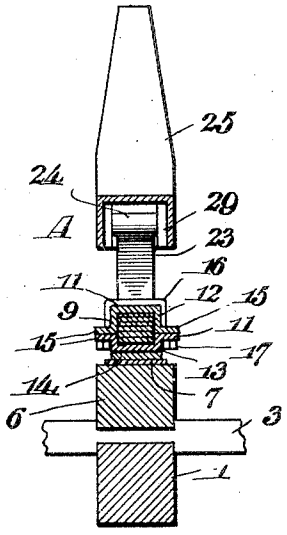
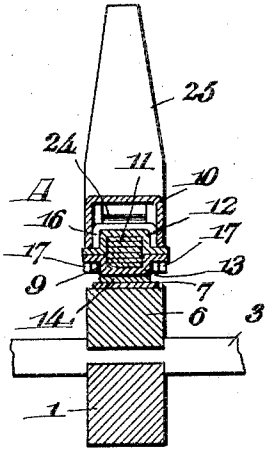


Fig. 4.

Fig. 5.



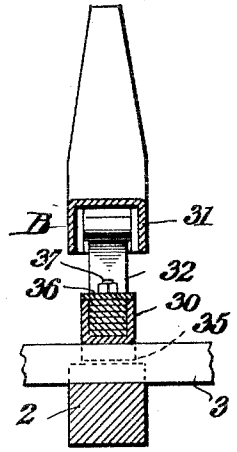


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

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WAGON-BOLSTER.

1,081,346. Specification of Letters Patent. Patented Dec. 16, 1913.

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To all whom it may concern:

Be it known that I, CHARLES TRAMEL, a citizen of the United States, residing at Hotchkiss, county of Delta, and State of Colorado, have invented certain new and useful Improvements in Wagon-Bolsters, of which the following is a specification.

My invention relates to wagons and more particularly to spring bolsters for wagons, or similar vehicles.

The object of my invention is to provide improved spring bolsters for wagons or similar vehicles which may be readily placed upon the ordinary wagons to replace the usual springless or other bolsters.

A further object of my invention is to provide a bolster as mentioned in which the wagon body supporting section shall rest upon springs and be equipped with removable means for retaining the section in position.

A further object of my invention is to provide in a bolster secured to the axle by fastening devices, means for relieving the fastening devices of lateral or transverse strain.

A further object is to provide an improved construction in bolsters of the class under consideration whereby suitable stops are arranged to limit the downward movement of the spring supported bolster sections.

Other objects will appear hereinafter.

With these objects in view my invention consists generally in a wagon bolster and in the various details of construction and arrangements of parts as fully described hereinafter and as particularly set forth in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a vertical longitudinal section of a wagon equipped with bolsters embodying my invention in its preferred form, Fig. 2 is a view of the front axle and bolster illustrating the same partially in elevation and partially in section, Fig. 3 is a similar view of the rear axle and bolster, Fig. 4 is a section taken on substantially the line *x*—*x* of Fig. 2, Fig. 5 is a similar view illustrating the upper bolster section depressed and engaging the limiting stops, and Fig. 6 is a section on substantially the line *y*—*y* of Fig. 3.

Referring now to the drawings 1 indicates the front axle of a wagon, 2 the rear axle and 3 the pole or longitudinal members connecting the same, the front and rear axles being provided with the usual wheels 4 and 5 respectively. These portions of a wagon form no portion of my invention and I have therefore illustrated the same conventionally, it being understood that my invention is applicable to practically any ordinary form of wagon frame construction.

A indicates the front bolster and B the rear bolster embodying my invention, and which are adapted to be arranged upon the wagon frame or axles to replace the ordinary bolsters.

At the front, the ordinary stationary bolster 6 is retained and upon this is secured a steel plate 7 as by bolts 8 which preferably extend through both the bolster 6 and axle 1. Resting upon the plate 7 is the pivotally mounted front bolster A. This comprises a lower section 9 and an upper section 10 spaced apart by springs 11. The lower section 9 is formed of upper and lower channel members 12 and 13 respectively, the upper member being inverted, and a plate 14 secured to the bottom of the member 13. The members 12 and 13 are adapted to receive and snugly hold the springs 11, and the adjacent edges of said members are formed with outwardly projecting flanges 15 which are perforated to receive the ends of strap bolts 16 which span the member 12. 17 indicates nuts threaded upon the ends of the bolts 16. It is obvious that by this construction the members are firmly clamped together. The flanges 15 also serve another purpose which will appear hereinafter. The plate 14 is secured to the under face of the member 13 by bolts 18 and the ends of said plates extend somewhat beyond the ends of the members 12 and 13 and are slightly curved upwardly to facilitate the turning of the member 14 on the plate 7.

20 indicates the king-bolt, the head 21 of which rests in an aperture formed in the center of the upper portion of the member 12 and upon the top of the upper leaf of the spring 11.

22 indicates ears struck up from the member 12 and bent down over the head 21 to retain the king-bolt.

The springs 11 are of elliptical type and have their ends 23 recurved to support the upper bolster member 10 which rests thereon. The member 10 comprises an inverted channel member in each end of which is mounted a pair of rollers 24 which rest directly upon the ends 23 of the spring.

25—25 indicates the stakes or standards of the wagon which are provided at their lower ends with sockets 26 to receive the ends of the member 10, thereby incasing the rollers and holding the member 10 on the springs, the lower wall 27 of the socket forming a stop which engages the springs and prevents the raising of the member 10 therefrom. The sockets 26 also limit the lateral movement of the member 10 with relation to the member 9.

28—28 indicate bolts for securing the stakes and their sockets in position. The ends of the member 10 are substantially the same width internally as the width of the springs 11, but said members are increased in width throughout the greater portion of their length as indicated at 29 in order to prevent friction between the vertical walls of said member and the edges of the spring, and also to permit the same to pass down freely over the member 12, the flanges 15 forming stops to limit the downward movement of the member 10. It should be noted that the bolt 16, by being arranged as described, assists in supporting the flanges 15 when the member 10 rests thereon.

The rear bolster B comprises a lower member 30 and an upper member 31 together with the interposed springs 32. The lower member 30 is formed of a channel iron secured upon the hounds 33 and pole 3 as by bolts 34 extending through said member, said hounds and the rear axle 2.

35 indicates angle irons secured to the under face of the member 30 having depending flanges engaging the lateral faces of the pole 3 whereby lateral strain on the bolts 34 is in a large measure avoided. The spring 32 is retained in the member 30 by a cap plate 36 and bolts 37, which bolts may also serve to hold the members 35 in position. The member 31 is of identical construction with that of the member 10 of the front bolt and is provided with the supporting rollers 24, stakes 25 and sockets 26 for the same purpose. Therefore, these parts will not be described in detail as it would be merely a repetition of a portion of the foregoing description.

The bolsters above described may be readily secured to substantially any wagon frame to replace the ordinary bolsters. The manner of securing them in position is obvious and has been described in the detailed description of the device. If a wagon body is used it rests upon the members 10 and 31 and is preferably secured thereto. If it is desired to remove the body, or the members mentioned in case the body is not used, it is but necessary to remove the bolts 28 and the stakes 25 after which they may be readily lifted from the frames.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A wagon bolster comprising an upper section and a lower section, stops on said lower section, and a spring interposed between said sections, said upper section comprising an inverted channel member of sufficient width to pass down over said lower section and engage said stops, and having its ends contracted to substantially fit the ends of said springs, substantially as described.

2. A wagon bolster comprising a lower section and an upper section, and a spring interposed between said sections, said upper section comprising an inverted channel member, socket members detachably secured over the ends of said upper section, said springs being secured to said lower section and having its ends bent upwardly to extend within the ends of said upper section and within said socket member, rollers in the ends of said upper section resting upon said spring ends, and the lower ends of said socket members limiting the upward movement of said upper section, substantially as described.

3. A wagon bolster comprising a lower section, an upper section and a spring interposed between said sections, said lower section comprising a pair of detachably connected reversely arranged channel members adapted to receive the central portion of said spring between them, and the edges of said members being extended outwardly to form stops for said upper section, and means for securing said lower section to the axle, substantially as described.

4. A wagon bolster comprising a lower section, consisting of a pair of detachably connected members, a spring clamped between said members and having its ends curved upwardly, an upper section resting on said spring ends, a plate secured to the bottom of said lower section the ends of said plate extending beyond the ends of said section and curved upwardly, a plate adapted to be secured to the wagon frame to support the first mentioned plate and a king-bolt extending through said lower section and said plates, substantially as described.

5. A wagon bolster comprising a bottom section, consisting of a pair of superimposed channel members, the uppermost of which is inverted, outwardly extending flanges on the adjacent edges of said members, strap bolts spanning the upper member and ex-

tending through said flanges, nuts threaded upon the ends of said bolts and impinging under said flanges, a spring secured between said members and having its ends curved upwardly and an upper bolster section resting upon the ends of said spring and adapted to pass down into engagement with said flanges, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES TRAMEL.

Witnesses:
FLETCHER B. TRUNK,
W. C. COPELAND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."