C. M. HAYNES.

WAGON.

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1,108,169. Patented Aug. 25, 1914.

Fig. 1.

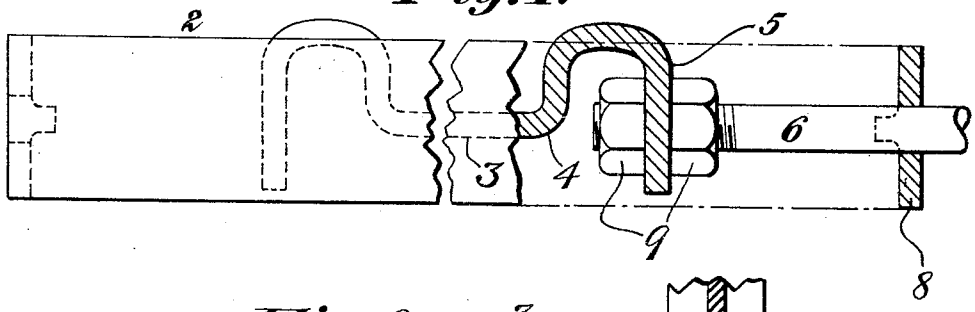


Fig. 2.

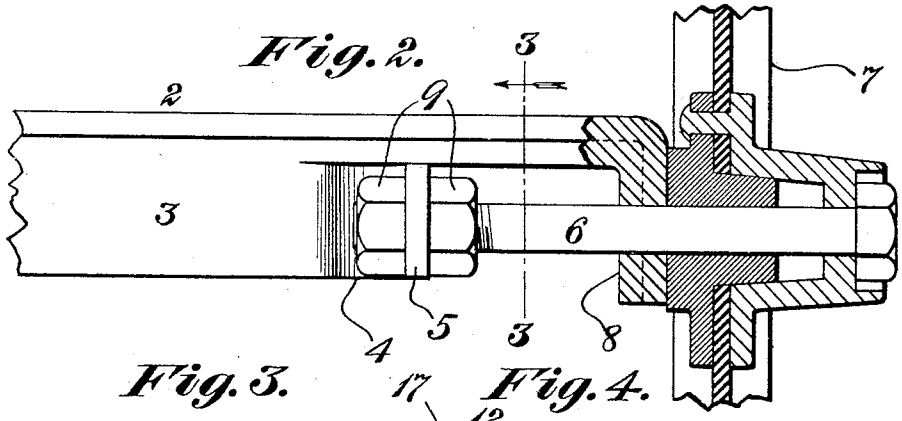


Fig. 3.

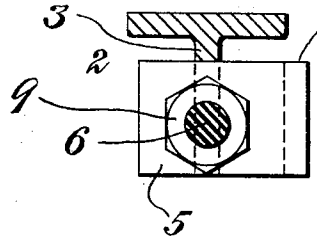


Fig. 4.

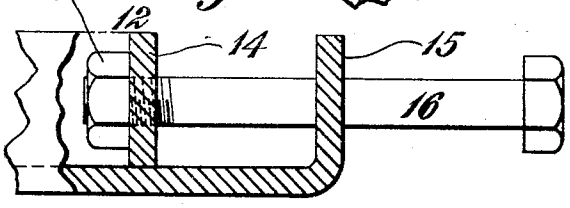


Fig. 5.

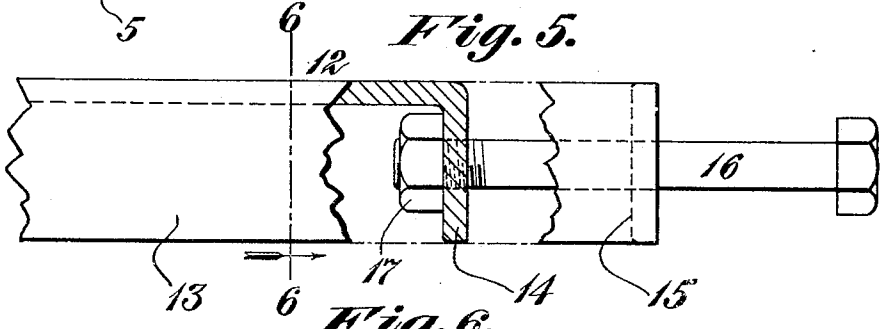
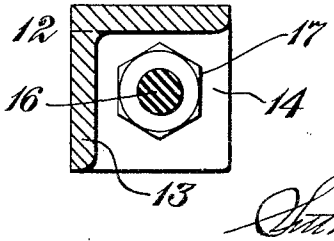


Fig. 6.



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UNITED STATES PATENT OFFICE.

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WAGON.

1,108,169. Specification of Letters Patent. Patented Aug. 25, 1914.

Application filed December 13, 1912. Serial No. 736,580.

To all whom it may concern:

Be it known that I, CHARLES M. HAYNES, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Wagons, of which the following is a specification.

This invention relates to axles, the object of the invention being the provision of an article of this character which is simple in construction, which can be readily and inexpensively made and which is strong.

In the drawings accompanying and forming part of the present specification I have shown in detail two of the several forms of embodiment of the invention, which to enable those skilled in the art to practice the same will be set forth fully in the following description. I do not restrict myself to this showing; I may depart therefrom in several respects within the scope of the invention defined by the claims following said description.

Referring to said drawings: Figure 1 is a top plan view partly in section, of an axle involving my invention, the intermediate portion of the axle being removed. Fig. 2 is a front elevation partly in section, of one end of said axle, and also shows in section the central or hub portion of a wheel. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a view corresponding to the right portion of Fig. 1, of a different form of axle. Fig. 5 is a view on the order of Fig. 2 of the axle shown in Fig. 4. Fig. 6 is a transverse section on the line 6—6 of Fig. 5.

Like characters refer to like parts throughout the several figures.

The axle is preferably but not essentially angular in cross section. By this I do not mean to say that I restrict myself to the use of "angle irons", as they are ordinarily known, in the production of said axle, as in one of the forms thereof the cross section is of T-shape; this in fact is the preferred form, being stronger than when of L-form.

The axle of Figs. 1, 2 and 3 is denoted in a general way by 2, and as already observed is made from a T-iron, in which event the vertically-disposed web 3 is slit on itself, to produce tongues 4. Said tongues, slit or free portions are bent on themselves to produce bearings as 5 which as shown, are of U-shape, the outer branch of each U being longer than the other for the purpose of strength, and preferably but not necessarily extending entirely across the axle, to constitute a direct support for a spindle as 6, the outer projecting end of which is provided with a wheel as 7 partially shown in Fig. 2. Each end of the body of the axle 2 is bent downward as at 8 to present a second support or bearing for the respective spindles 6, the downwardly-bent portions 8 and the longer branches of the two bearings 5 being in parallelism and perforated or bored to freely receive the spindles 6, the perforations being in register for such purpose. This provides a substantial, solid support for said spindles which can be held in place in any desirable manner for instance by projections as 9 on the spindles, said projections being shown as nuts in threaded engagement with the spindles and situated at opposite sides of the longer branches of the bearings 5. The spindles 6 may as shown consist of ordinary bolts.

In Figs. 4, 5 and 6 the axle 12 is shown as being of L-form in cross section, its web 13 being cut away and bent on itself as at 14 to produce a bearing. The end of the axle or the body thereof is bent as at 15 to present a second bearing in parallelism with the bearing 14. Said bearing 15 may have a bore or opening to freely receive the spindle 16, the inner end of which is tapped into the bearing 14 and is provided with a check nut 17 to securely retain the same in position. The wheels are connected with the projecting ends of the spindles 16.

What I claim is:

1. An axle having a part slit therefrom and bent to constitute a support, and also having a second part bent therefrom to constitute a second support, the two supports having portions approximately in parallelism which portions have registering spindle receiving perforations.

2. An axle having a portion cut therefrom and bent to constitute a support and a wheel supporting spindle connected with the body of the axle and also with the support, the spindle having projections thereon engaging opposite sides of said support.

3. An axle of T-form in cross section, a portion of the web thereof being cut therefrom and bent to constitute a support, the

body of the axle being bent to constitute a second support, the two supports having approximately registering perforations.

4. An axle of T-form in cross section, the web of the T being bent in substantially U-shape, the head of the T being downturned, the downturned portion and the outer branch of the U-shape bent portion having perforations which are in approximate registration.

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

CHARLES M. HAYNES.

Witnesses:

HEATH SUTHERLAND,

F. E. ANDERSON.

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