

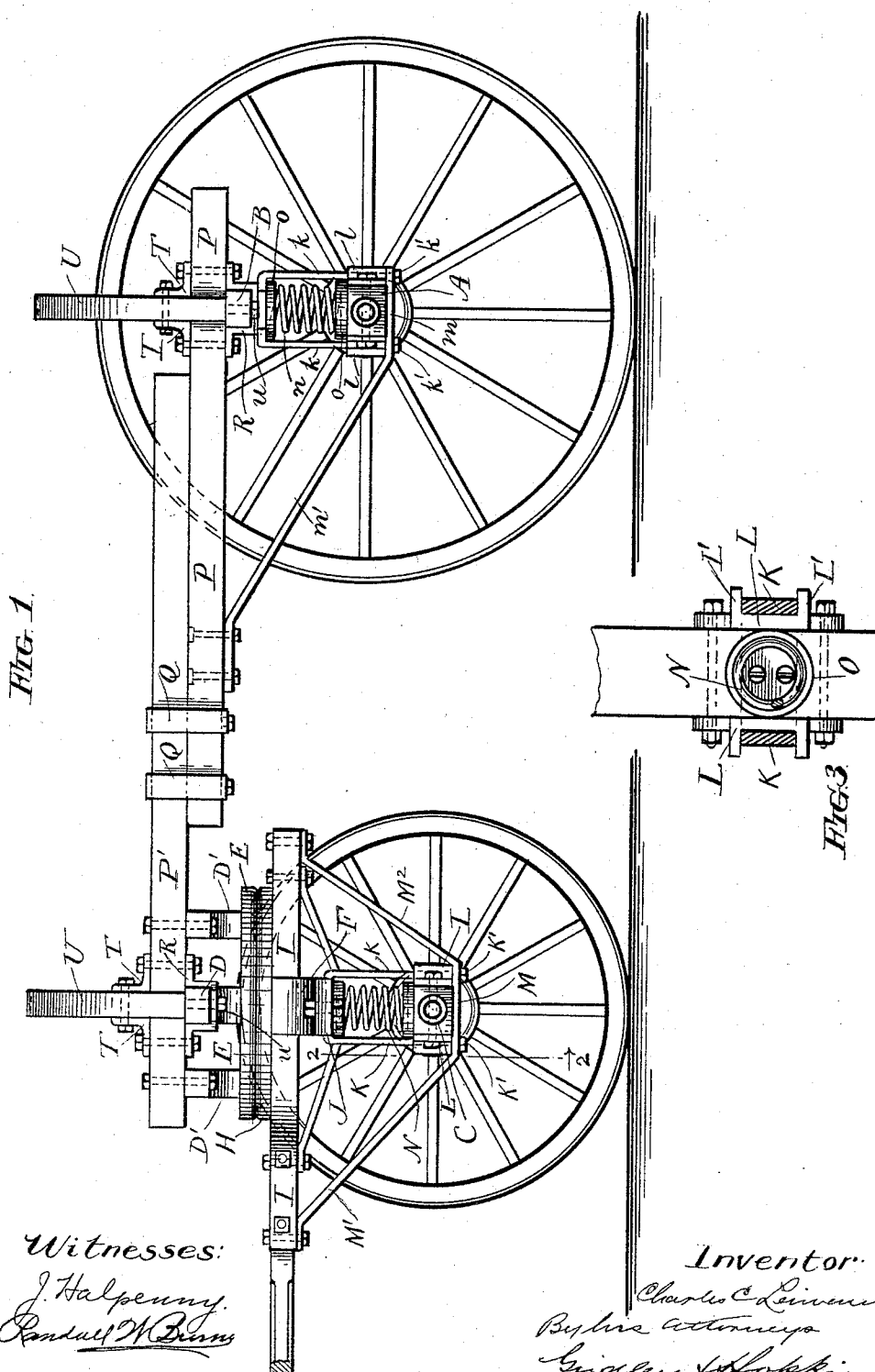
(No Model.)

2 Sheets—Sheet 1.

C. C. LEIWENICH.
VEHICLE.

No. 495,743.

Patented Apr. 18, 1893.



(No Model.)

2 Sheets—Sheet 2.

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FIG 2.

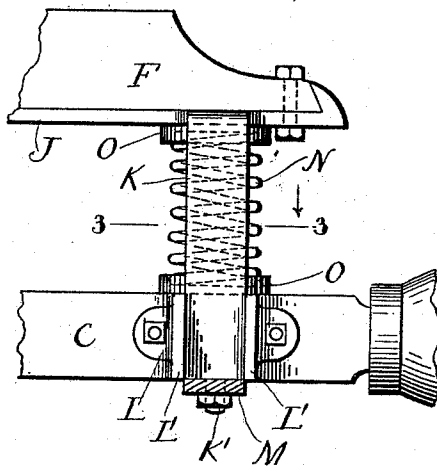
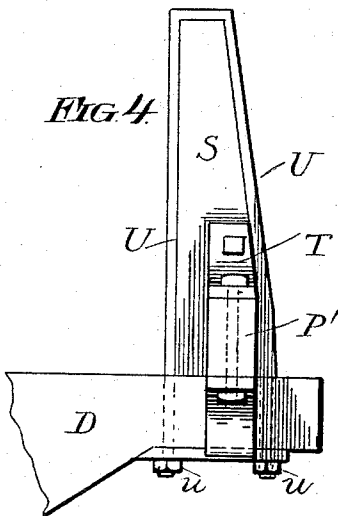


FIG 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES C. LEIWENICH, OF CHICAGO, ILLINOIS.

VEHICLE.

SPECIFICATION forming part of Letters Patent No. 495,743, dated April 18, 1893.

Application filed April 29, 1892. Serial No. 431,164. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. LEIWENICH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vehicles, of which the following is a specification.

The object of the present invention is to provide a wagon of improved construction, and to this end the invention consists in certain features of novelty that are particularly pointed out in the claims.

In the accompanying drawings, which are made a part hereof, Figure 1 is a side elevation of the running gear and frame of a wagon embodying the invention, the rear wheels being omitted. Fig. 2 is an elevation of a portion of one of the bolsters, a portion of one of the axles, and the spring mechanism by which they are connected and held at the proper distance apart, one of the braces being shown in section on the line 2—2, Fig. 1. Fig. 3 is a horizontal section thereof on the line 3—3, Fig. 2. Fig. 4 is an elevation of a portion of one of the bolsters, an end of one of the side sills and one of the stakes.

A represents the rear axle. B the rear body-bolster; C the front axle; D, D', D', the front body-bolsters; E the upper wear-plate, secured to the under sides of the bolsters D, D', D'; F a bolster swiveled upon the kingbolt, and carrying the lower wear-plate H, and I the hounds mortised into the top side of the bolster F.

Upon the bottom side of the bolster F is secured a stout iron or steel plate J, extending its entire length, and from this plate extend downward four heavy straps K arranged in pairs; one pair being located near each end of the bolster, and the straps of each pair being far enough apart to admit the axle between them. The axle is provided with a guide for each of the straps, each guide consisting of a plate L having ears perforated for the passage of screws or bolts whereby it is secured to the axle, and two parallel vertical flanges or lugs L' located far enough apart to receive and permit the easy movement of the strap. The lower end of each strap is reduced, rounded, and threaded, so that it may pass through a perforation in a plate M and receive a nut K' for retaining it in place.

Interposed between the axle and bolster are a number of springs N that are preferably of the helical variety, but metallic springs of other variety, or blocks of rubber may be used if desired. I have shown but two springs but the number may be varied without departing from my invention. In order to keep their ends from displacement, metal sockets O are secured to the axle and bolster in any suitable manner—as by screws as shown. The plates M are provided with forward extensions M' and rearward extensions M², which extensions are secured to the hounds I and serve as braces for sustaining the straps K against lateral strains.

Many parts accessory to the rear axle are similar to those just described, and similar parts wherever found are indicated by similar letters of reference, but for the sake of distinctness small letters will be used for designating parts accessory to the rear axle. These parts are alike with the exception that in one case they are secured to the swiveled bolster F, while in the other they are secured to the fixed body-bolster B, and with the further exception that there are no braces corresponding to the braces M² and the braces m' are secured to the rear sections P of the side sills. The side sills are made in two sections, P and P', secured to the bolsters B and D respectively, and overlapping each other as shown in Fig. 1, their overlapping portions being secured together by clips Q, or other means that may be loosened to enable the two parts to be adjusted lengthwise with respect to each other and then tightened to hold said parts securely in place. By this means the distance between the axles, or the length of the wagon may be changed at will.

The sills may be secured to the bolsters by any desired means, but I prefer to secure them by means of clips R bolted to the under sides of the sills and embracing the bolsters.

S S are the stakes mortised to receive the sills so that they bear upon the sills and also upon the bolsters. They are sustained in one direction by angle irons T bolted to the top of the sills and in the other direction by straps U that extend clear over them and down their sides and have their lower ends reduced, rounded and threaded, so that they can be passed through perforations through

the bolster and provided with nuts *u* for holding them in place. Each casting has two sockets *O'*, for receiving the two springs *N'*, and lugs *L''* which form the guides between
5 which the straps *K* fit and work as already described.

W is a rubber buffer interposed between the axle and bolster for acting as an additional spring and limiting their approach.

10 What I claim as new is—

1. The combination with the swiveled bolster *F*, and the axle, of metallic straps *K*, *K*, secured to one, and having sliding connection with the other, the hounds secured to the bolster, braces extending from the hounds to the
15 lower extremities of the straps, and springs interposed between the bolster and axle, substantially as set forth.

2. The combination with the swiveled bolster *F* and the hounds secured thereto, of the
20 metallic straps *K* *K* secured to the bolster and extending downward therefrom, the axle *C*, embraced by said straps and having the plates *L* provided with lugs *L'* between which the
25 straps fit, the springs *N*, *N*, interposed between said bolster and axle, the plates *M*, *M*

secured to the ends of said straps, beneath the axle and the braces *M'*, *M'*, and *M²*, *M²*, forming continuations of said plates *M*, *M*, and secured to the hounds, substantially as
30 set forth.

3. The combination with the bolster *B* and sill *P* of the stake *S* mortised to receive the sill and resting upon both the sill and bolster, and a metallic band *U* extending over and
35 down the sides of the stake, said band having its ends reduced, threaded, and passed through the bolster, and nuts *u* screwed onto the reduced ends, substantially as set forth.

4. The combination with the bolster *B*, and
40 sill *P*, of the stake *S* mortised to receive the sill and resting upon both the sill and bolster, the angle pieces *T* bearing against the front and back of the stake, and the band *U* extending over the stake and down its sides and
45 secured to the bolster, substantially as set forth.

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Witnesses:

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