

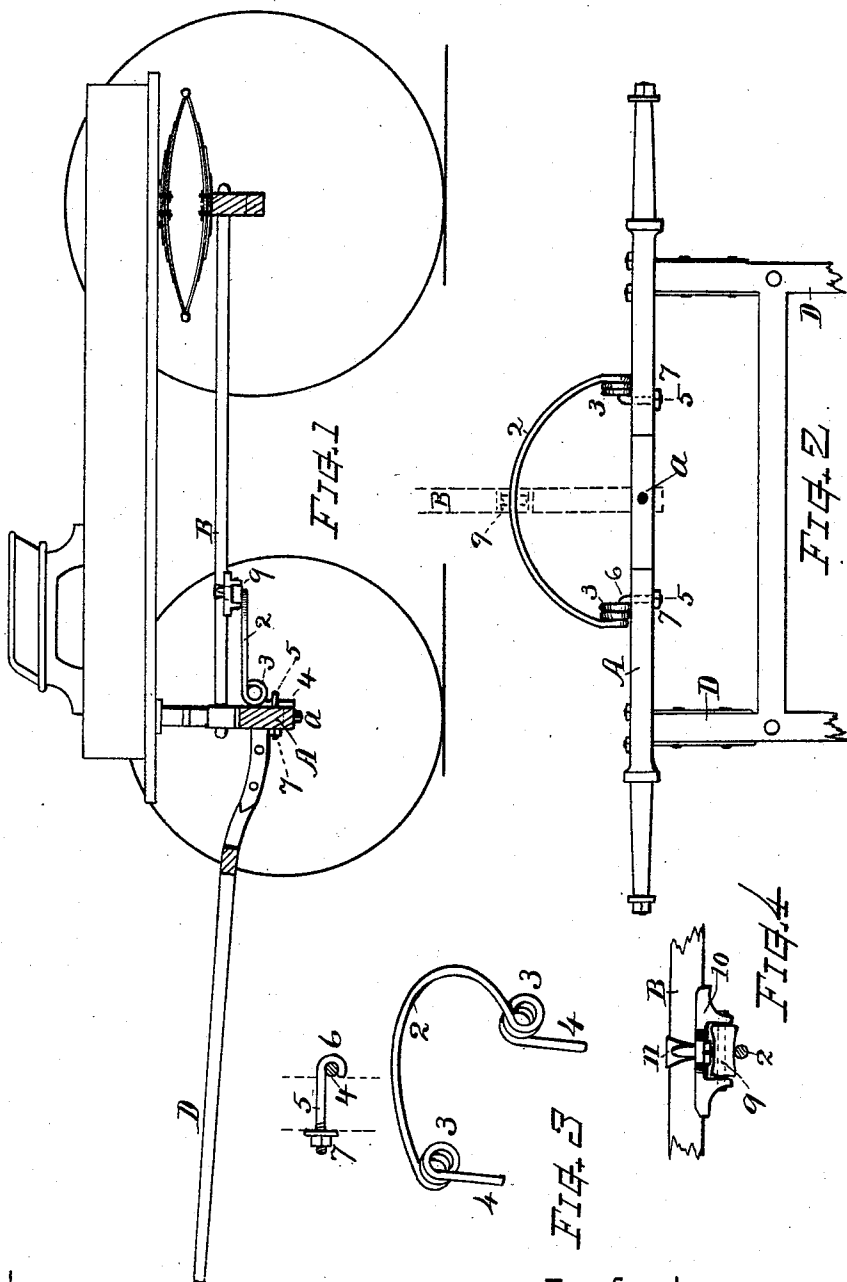
(No Model.)

E. J. PARKER.

SPRING CIRCLE FOR STIFF SHAFT WAGONS.

No. 539,640.

Patented May 21, 1895.



Witnesses.

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EUGENE J. PARKER, OF WORCESTER, MASSACHUSETTS.

SPRING-CIRCLE FOR STIFF-SHAFT WAGONS.

SPECIFICATION forming part of Letters Patent No. 539,640, dated May 21, 1895.

Application filed April 6, 1895. Serial No. 544,697. (No model.)

To all whom it may concern:

Be it known that I, EUGENE J. PARKER, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Spring-Circle for Stiff-Shaft Wagons, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide a simple, efficient and desirable means for supporting or imparting elevating pressure to the shafts, in that class of wagons in which the shafts are stiff or rigidly secured in the axle; as for instance such wagons as are generally employed for market and grocery delivery, or wagons for light express and carrying purposes; said means being adapted for affording a yielding support and relieving the horse from the weight of the shafts. These objects I attain by the spring-circle constructed and combined with the wagon as illustrated in the drawings, wherein—

Figure 1 shows a side view of my invention as applied to a wagon. Fig. 2 is a top plan view of the spring-circle and front axle of a wagon. Fig. 3 shows a detached perspective view of my spring-circle and the attaching-bolt, and Fig. 4 is a side view of the bearing device upon the reach-bar.

My spring-circle consists of a steel rod, about five-eighths of an inch in diameter, more or less; the central portion of which is shaped to the form of a semicircle 2, at the respective ends of which are formed a series of circular helical coils 3 each terminating in a dependent straight portion or attaching end 4; the semicircle 2 being approximately horizontal or with slight upward inclination, while the coils 3 stand in vertical planes, as shown in Figs. 1 and 3, so as to give expanding resilience between the ends 4 and the semicircle 2. This device is arranged upon the rear side of the front axle A of the wagon with the attaching ends 4 resting against the side of the axle at equal distance right and left from the swing center or pintle *a*, and is rigidly fixed thereto by suitable fastenings or clamp-bolts 5 having eyes or hooked ends

6 that embrace the ends 4. (See Figs. 1 and 3.) Said bolts pass through the axle with nuts 7 upon their opposite ends for tightening and clamping the attaching ends 4 rigidly and firmly against the axle. These ends 4 can rest directly against the axle, or have bearing plates between the ends and axle face if desired; leaving the coils 3 free for affording upward and downward flexure to the semicircle 2, which latter rests against and bears upward on the under side of the reach-bar B. A chafe-iron or preferably a roller 9 is arranged upon the reach-bar B as a bearing for the circle 2, as indicated in Figs. 1 and 4. The roller is best journaled in a plate 10 that may be attached to the reach by a clip 11 or in other suitable manner. The semicircle 2 is disposed concentric with the pintle *a* so as to swing around laterally with the swing of the axle, while maintaining its bearing in proper relation against the under side of the roller or reach-bar at all positions in the turning of the wagon.

The spring-tension of the circle and its coils 3, acting through the fixed ends 4 against the axle, and its circle 2 against the reach, is such as to give a yielding upward tendency and support to the shafts D, which are rigidly fixed in the axle A; the spring-circle, in combination with the reach and axle, serving to normally sustain the weight of the shafts and keep them elevated, thus relieving the horse from the burden thereof while affording sufficient yielding action, as may be desired, for raising and lowering the shafts in the various uses of the wagon.

What I claim, and desire to secure by Letters Patent, is—

1. The within described spring-circle for wagons, consisting of a resilient rod bent to form the semicircle 2, having the vertical coils 3 at its respective ends, said coils terminating with the attaching ends or straight portions 4, substantially as set forth.

2. The combination with the wagon-axle, the shafts rigidly secured therein, and the wagon reach, of the spring-circle consisting of the resilient rod formed with a semicircle disposed concentric to the axle-pintle and sustained against the reach, the respective ends of said semicircle provided with verti-

cally disposed spring coils having their terminal extremities rigidly attached to the axle, substantially as and for the purpose set forth.

3. The combination with the wagon-axle
5 and shafts, of the spring-rod bent to form the semicircle with integral spiral coils at its respective ends, said coils terminating with depending portions or attaching ends that support said circle, the clamp-bolts or means for

rigidly securing said ends to the axle, the wagon reach, and the roller attached to said reach as a bearing for said semicircle, all substantially as set forth.

Witness my hand this 2d day of April, 1895.

EUGENE J. PARKER.

Witnesses:

CHAS. H. BURLEIGH,

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