P. E. HOLT.

DRAW BAR FOR WAGONS.

APPLICATION FILED JAN. 4, 1910.

1,012,551.

Patented Dec. 19, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

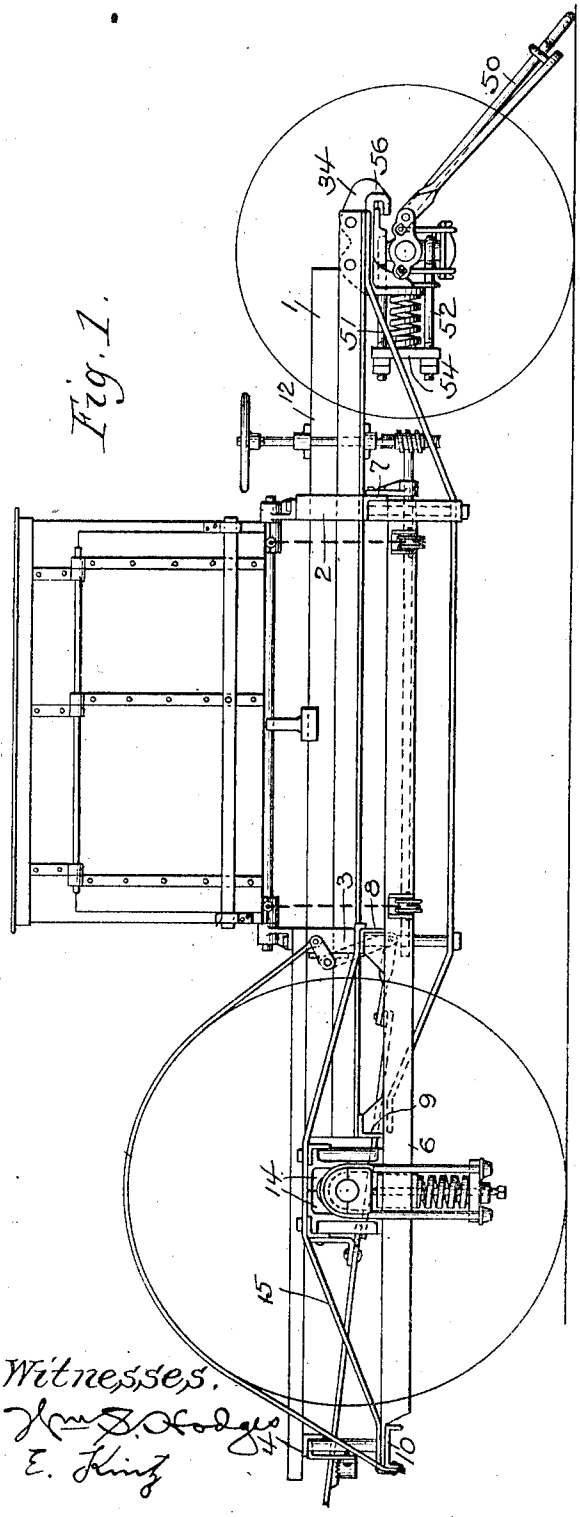
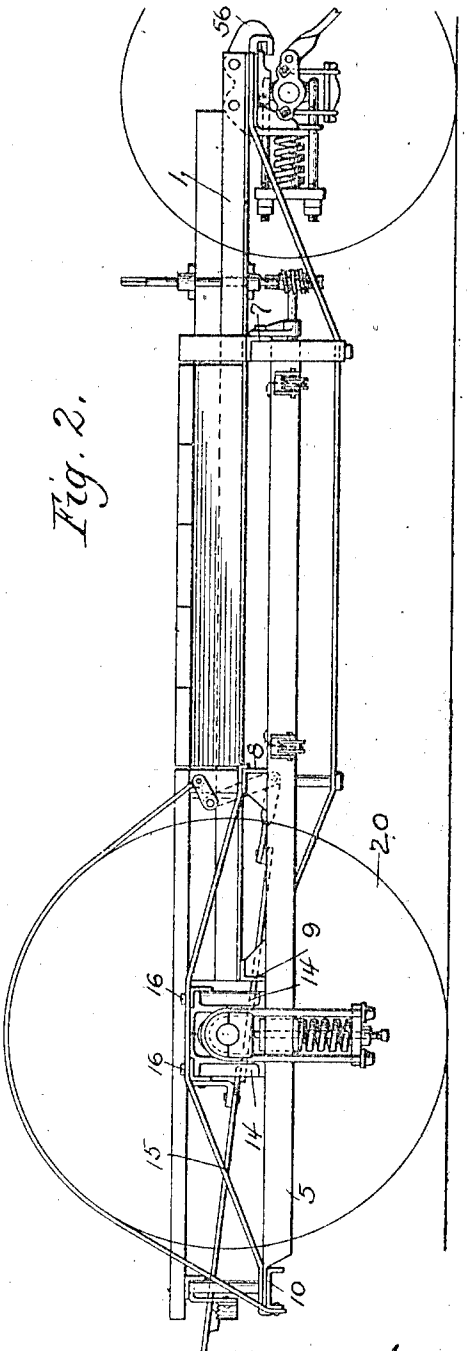


Fig. 2.



Witnesses.

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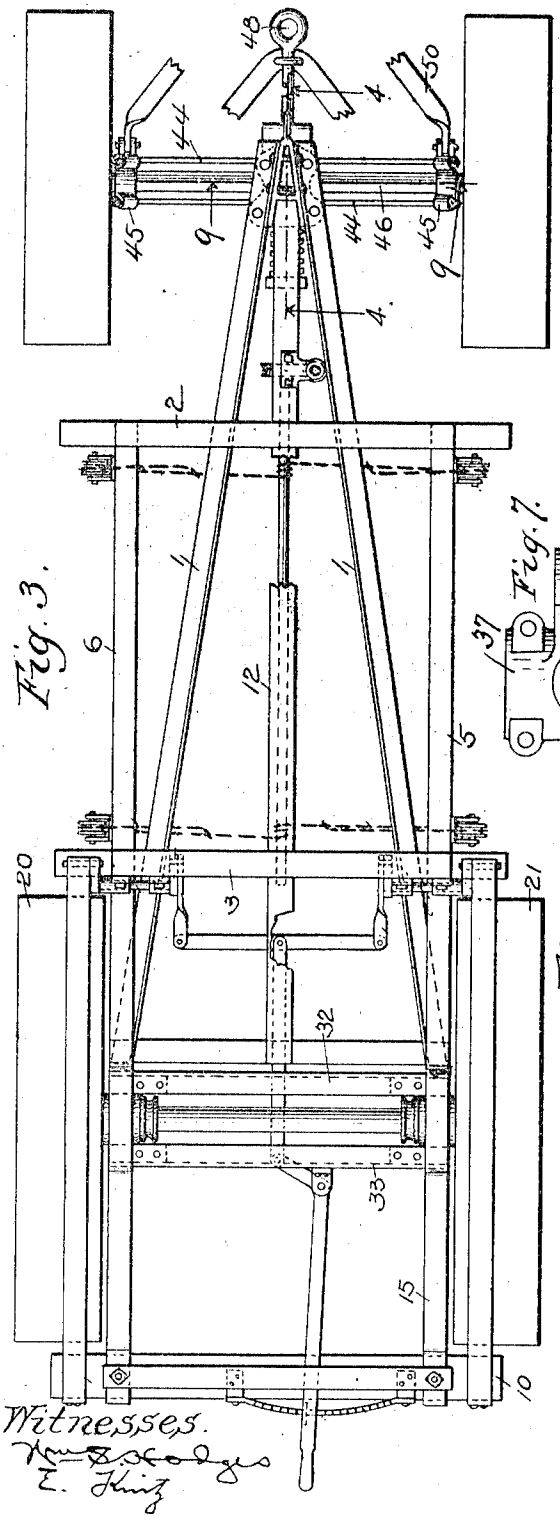

Fig. 3.

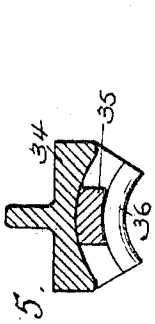

Fig. 5.

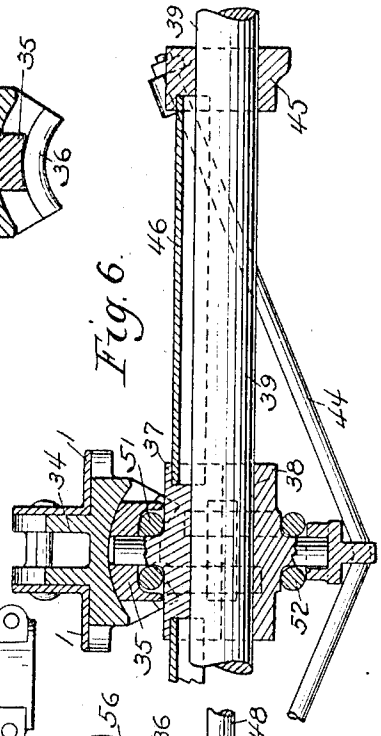

Fig. 6.

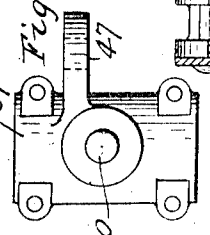

Fig. 7.

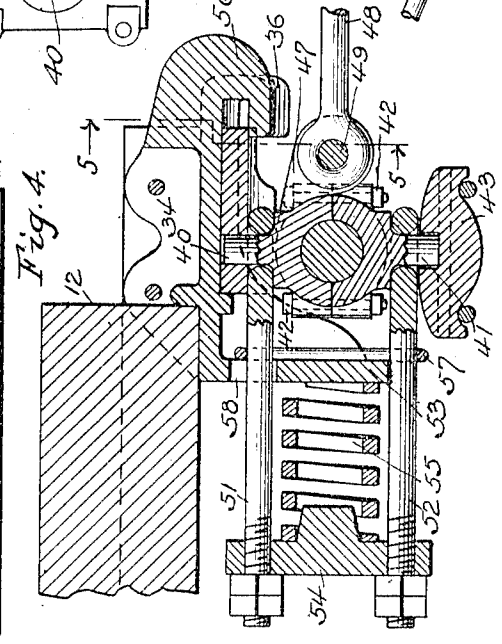

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

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DRAW-BAR FOR WAGONS.

1,012,551. Specification of Letters Patent. Patented Dec. 19, 1911.

Application filed January 4, 1910. Serial No. 536,379.

To all whom it may concern:

Be it known that I, PLINY E. HOLT, a citizen of the United States, and residing at 836 Poplar street, in the city of Stockton, county of San Joaquin, and State of California, have invented certain new and useful Improvements in Draw-Bars for Wagons; and I do hereby declare the following to be a full, clear, and exact description of the said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in wagons, and consists in a novel construction and arrangement of the parts as hereinafter described.

One of the objects of the invention is to provide a draw bar adapted for wagons constructed for heavy freighting.

A further object is to provide a draw bar that will be simple in construction, strong and durable and so arranged that the same may be readily repaired.

A further object is to provide improved means for connecting the draw bar to the wagon.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the drawings:—Figure 1— is a side elevation illustrating a wagon constructed in accordance with this invention and having a dumping body thereon. Fig. 2— is a side elevation of the same. Fig. 3— is a plan view from above of the same. Fig. 4— is a detail cross section on the line 4—4, Fig. 3, of the front axle and draw head connection of the main frame. Fig. 5— is a detail cross section on the line 5—5, Fig. 4, of a portion of the same. Fig. 6— is a detail cross section on the line 9—9, Fig. 3, of the front axle, showing the manner of pivoting the axle to the main frame. Fig. 7— is a detailed view of one of the pivot blocks.

In detail, the construction consists of the main frame comprising the triangular frame composed of the side beams, 1, and the cross bolsters, 2, 3 and the subframe composed of the side beams, 5 and 6, joined by the cross braces, 7, 8, 9 and 10, connected to the bolsters, 2, 3 and the center beam 12, extending from the apex of the triangular frame rearward to the cross brace, 9. The sub-frame is provided on either side with a superstructure composed of the guide blocks, 14, set upon the side beams, 5 and 6, and supporting the truss plates, 15, extending between the cross braces, 8 and 10, to which they are securely fixed. The guide blocks are secured by the bolts, 16, passing through the truss plates, the blocks and the side beams, 5 and 6.

The side beams, 1, at their point of conjuncture are rigidly fixed to the draw head block, 34. The under side of this block is provided with a radial bearing surface (see Figs. 4, 5 and 6). The sliding block, 35, rests within the radial bearing and is secured by the overhanging lip, 36, on the draw head. The pivot blocks, 37 and 38, are clamped around the center of the front axle, 39, so that the pins, 40 and 41, thereon stand in a vertical line transverse to the axis of the axle. These blocks, 37 and 38, are secured together by the bolts, 42, which clamp them rigidly on the axle. The pin, 40, engages a hole in the sliding block, 35, and the pin, 41, engages a recess in the truss block, 43. The truss rods, 44, extend from the collars, 45, on opposite ends of the axle thence beneath and support the truss block at the center of the axle. The tension of the truss rods is transmitted across the axle by the lengths of angle iron, 46, extending between the collars, 45, and pivot block, 37. The pivot blocks are each provided with the lug, 47, between which the draw bar, 48, is pivoted on the pin, 49. The draw-bar is guided laterally by the bail, 50, pivoted in the collars, 45, and attached to the draw-bar in the center.

The pull of the draw-bar attached to the axle is transmitted to the main frame through the eye-bolts, 51 and 52, which engage the pins, 40 and 41. The eye-bolt, 51, passes through the radial slot in the downward extension, 53, on the draw-head, and the eye-bolt, 52, passes beneath the same. These eye-bolts engage the buffer plate, 54. The buffer spring, 55, is interposed between the plate, 54, and the extension, 53. The pull of the draw-bar compresses the spring until the sliding block, 35, engages the head, 56, of the draw-head. The function of the spring is obvious. The radial play between the draw-head and the block, 35, is to accommodate the axle as the front wheels pass over any inequalities in the road. One front wheel can pass over an obstruction or drop into a depression without disturbing the level of the main frame, or straining the

front axle. To prevent the possibility of the front axle becoming disengaged from the draw-head, the eye-bolts are tied together by the loop, 57, which coöperates with the lip, 36, the opening, 58, on the draw-head, and eye-bolt, 51, to maintain the parts in close assemblage. By pivoting the front axle in the drawhead I provide means for steering the vehicle irrespective of variations in the line of draft due to changes in direction of the motor or the like to which the bail 50 is coupled. At the same time this does not interfere with the radical play between the drawhead and block 35, as above described.

Having thus described this invention, what is claimed and desired to secure by Letters Patent is:—

1. A wagon consisting of a main frame; a transverse axle mounted on said frame and having wheels thereon; a draw-head fixed to the front of the main frame; a radial block slidable in the draw-head; a transverse axle having wheels mounted on each end; pivot blocks clamped on said axle and having vertical stud pins thereon, one of said pins engaging said radial block; truss rods extending from the ends and beneath said axle and supporting a truss block engaging the lower of said stud pins; eye-bolts engaging said stud pins and extending rearward and engaging a buffer plate; a buffer spring interposed between said plate and a downward extension of the draw-head; a draw-bar pivoted between said pivot blocks, and a bail guide pivoted to said axle and attached to the draw bar.

2. A wagon comprising a main frame, a draw head connected to said main frame, an axle pivoted to said draw head, and means for permitting rocking movement of said axle pivot in said draw head.

3. A wagon comprising a main frame, a draw head connected to said main frame and having an arc shaped recess therein, a block disposed in said recess, and an axle pivoted to said block whereby said axle may have rocking motion relative to said draw head.

4. A wagon comprising a main frame, a draw head connected to said frame and having a recess in its under face, a block mounted to slide and oscillate in said recess, and an axle pivoted to said block.

5. A wagon comprising a main frame, a draw head connected thereto, and having a recess in its under face, a block disposed in said recess, an axle, pivot members clamped to said axle and carrying studs one of said studs engaging said block, truss rods connected to the ends of said axle and carrying a socket to receive the other stud, and a flexible connection between said axle and draw head.

6. A wagon comprising a main frame, a draw head connected thereto and having a recess in its under face, a block disposed in said recess and adapted to slide and oscillate therein, an axle, pivot members secured to said axle, a stud carried by each of said clamping members, one of said studs engaging said block, truss rods connected to the opposite ends of said axle and supporting the other stud, eye bolts connected to said pivot members, a buffer plate carried by the opposite ends of said eye bolts, and a spring disposed between said buffer plate and draw head.

7. A wagon comprising a main frame, a draw head connected thereto and having an arc shaped recess in its under surface, a block mounted to slide and oscillated in said recess, an axle pivoted to said block, eyebolts connected to the pivots of said axle, a buffer plate carried by the opposite ends of said bolts, and a spring disposed between said buffer plate and draw head.

8. A wagon comprising a main frame, a draw head connected thereto and having an arc shaped recess in its under face, a block mounted to slide and oscillate in said recess, a flange depending from the rear end of said draw head, an axle pivoted to said block, eye bolts connected to the pivot of said axle, a buffer plate carried by the opposite ends of said bolts, and a spring disposed between said buffer plate and flange.

9. A wagon comprising a main frame, a draw head connected to said frame and provided with an arc shaped recess in its under face, a flange depending from the rear end of said draw head, a block mounted to slide and oscillate in said recess, an axle pivoted to said block, and a flexible connection between said axle pivot and flange.

In testimony whereof, I have hereunto set my hand this 15th day of December, 1909.

PLINY E. HOLT.

Witnesses:
BALDWIN VALE,
WM. S. HODGES.