

No. 702,504.

Patented June 17, 1902.

F. STRATTON.
VEHICLE.

(Application filed July 3, 1900.)

(No Model.)

3 Sheets—Sheet 1.

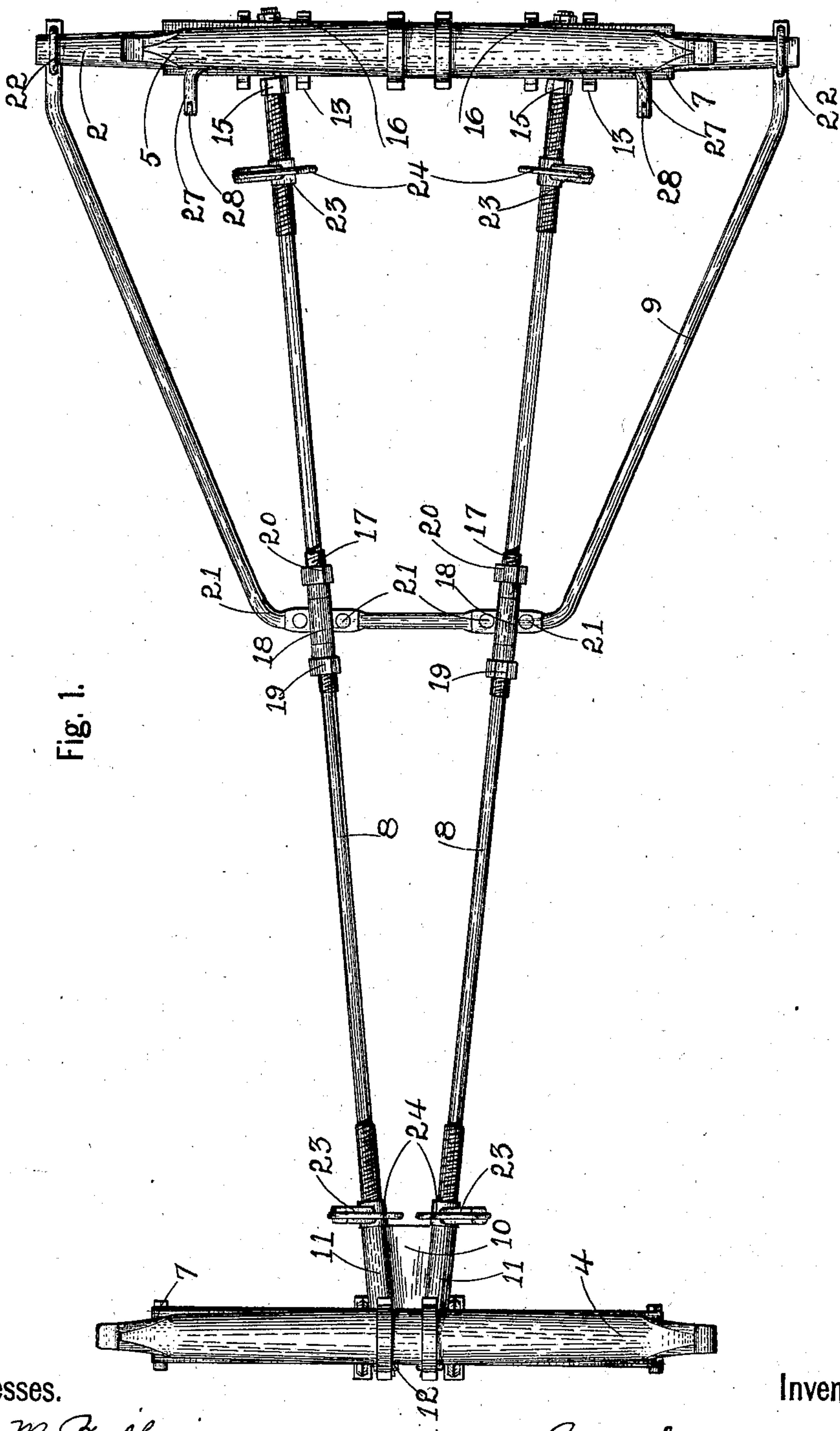


Fig. 1.

Witnesses.

L. M. Billings.

G. A. Neubauer.

Inventor.

By Franklin Stratton.
A. Langston Attorney.

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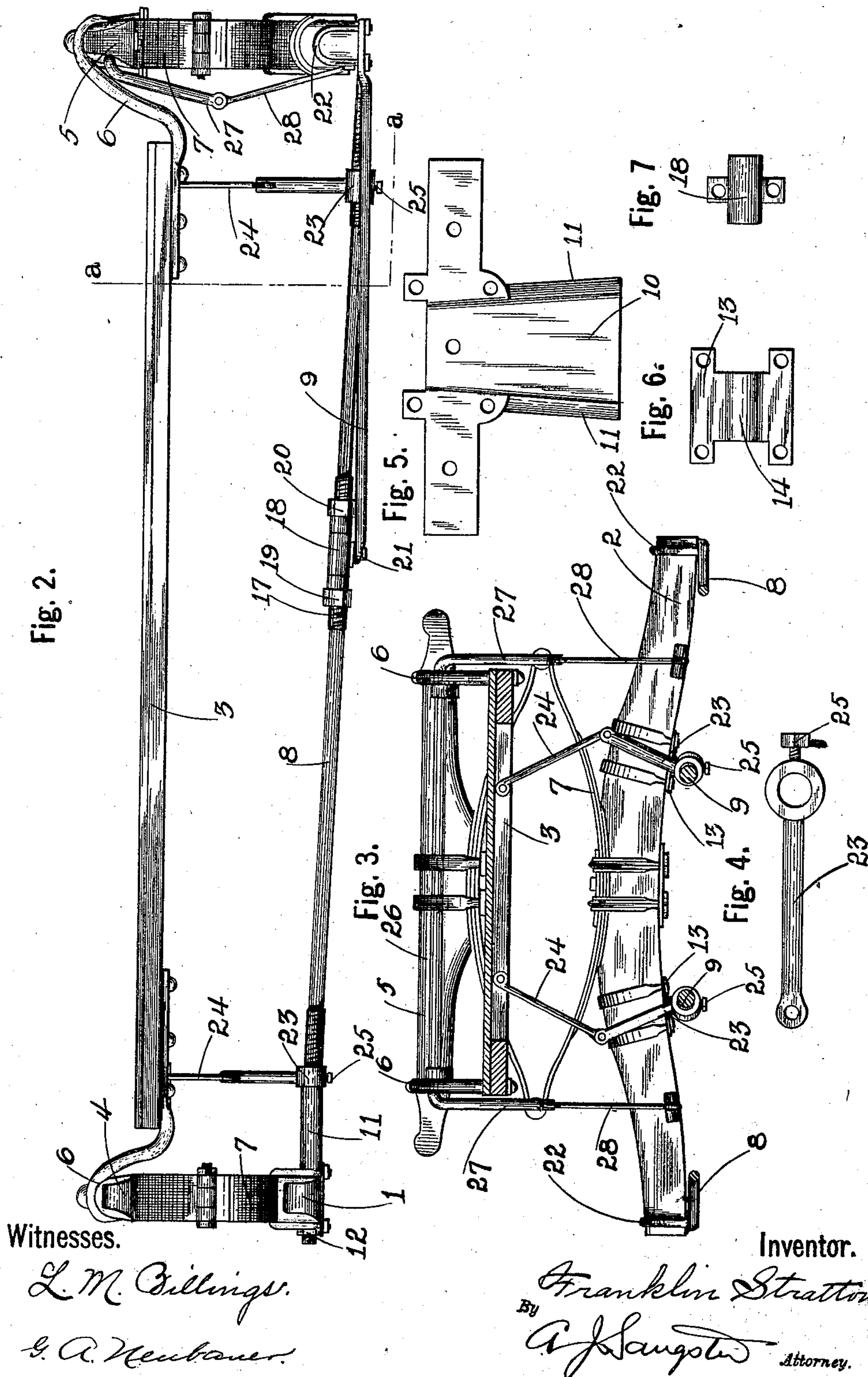
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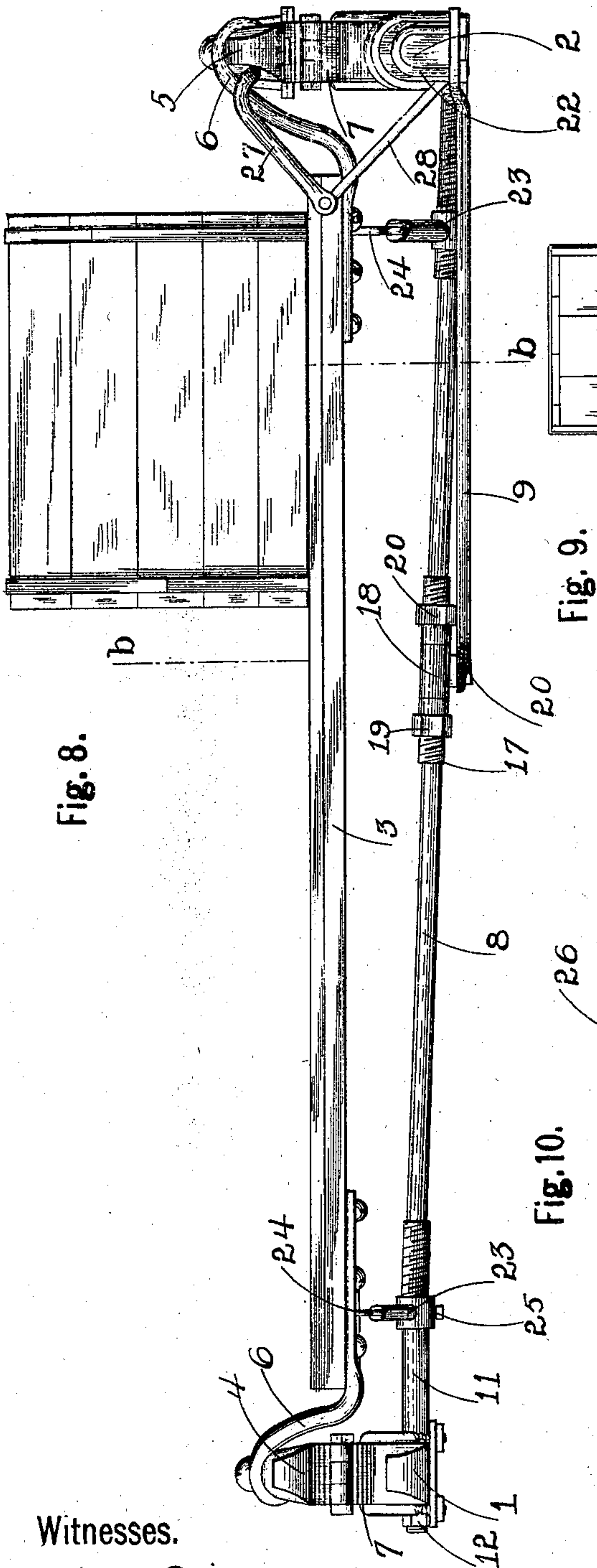
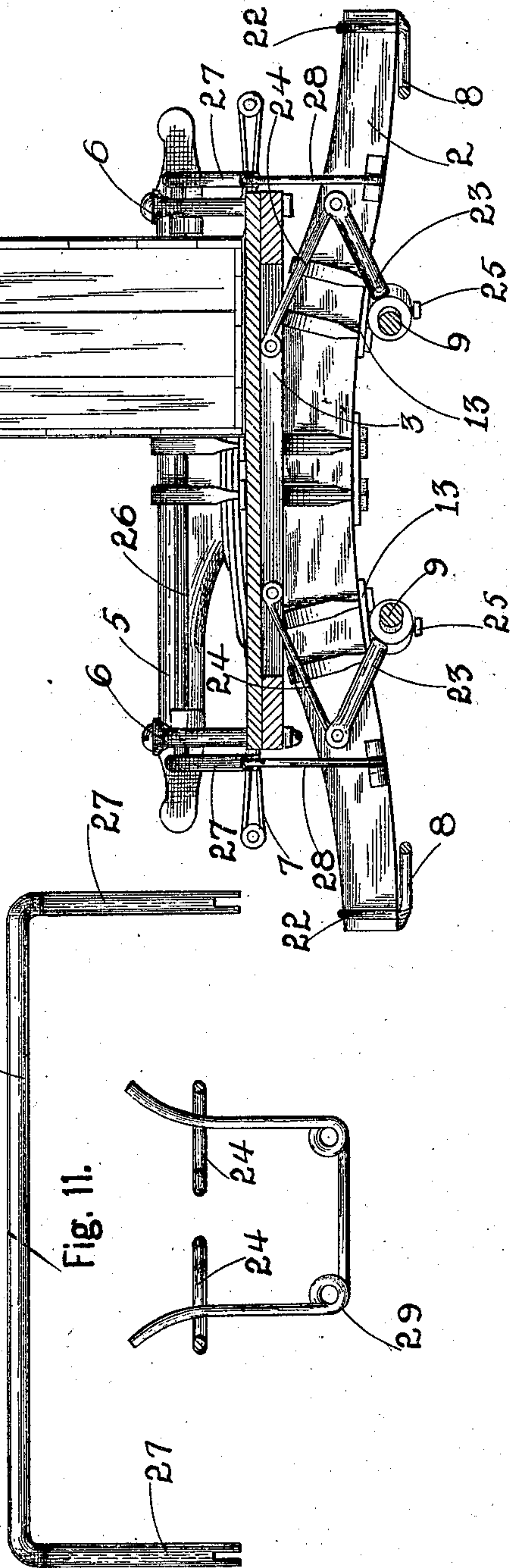


Fig. 8.

Fig. 9.

Fig. 10.



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L. M. Billings.

G. A. Neubauer.

Inventor.

By *Franklin Stratton*
A. Langdon Attorney.

UNITED STATES PATENT OFFICE.

FRANKLIN STRATTON, OF BUFFALO, NEW YORK.

VEHICLE.

SPECIFICATION forming part of Letters Patent No. 702,504, dated June 17, 1902.

Application filed July 3, 1900. Serial No. 22,399. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN STRATTON, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Vehicles, of which the following is a specification.

In vehicles, wagons, and the like as at present constructed the weight has to be placed upon a central point in order to exert equal pressure upon the springs and maintain the body level, as each spring acts independent of the others and weight placed upon or near one end acts upon the spring or springs supporting that end only. Another disadvantage with some classes of vehicles at present is that in traveling over a rough road the vehicles receive a sort of teetering motion, bouncing up and down alternately at each end and rendering the riding very disagreeable and dangerous.

My invention is designed to obviate the above by maintaining an even pressure upon the springs and sustaining the vehicle-body approximately level and each end of said body at substantially the same distance from the axle and running-gear, no matter where the load may be placed or how rough the road may be. To accomplish this, I connect the body and running-gear of my improved vehicle to each other by equalizing devices, which cause the ends of the body to rise and fall equally, and thus distribute the pressure of the load equally upon the springs and maintain the body practically level.

It also relates to certain details of construction, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a top plan view of the preferred construction of the running-gear of my improved wagon. Fig. 2 is a side elevation of the running-gear and the bottom of the body, showing the body in its elevated unloaded position. Fig. 3 is a section on line *a a*, Fig. 2. Fig. 4 is a detached view of one of the crank-arms. Fig. 5 is a detached view of the plate securing the reach-rods to the front axle. Fig. 6 is an enlarged detached view of one of the socketed plates for se-

curing the rear ends of the reach-rods to the rear axle. Fig. 7 is a detached view of one of the socketed plates for securing the substantially V-shaped rod to the reach-rods. Fig. 8 is a side elevation of the running-gear and body-bottom in a depressed position with a load placed at one end thereof. Fig. 9 is a transverse section on line *b b*, Fig. 8. Fig. 10 is an enlarged detached view of one of the cranked equalizing-rods. Fig. 11 is an enlarged detached view of the bent stop, also showing fragments of the rods connecting the crank-arms to the body.

In referring to the drawings for the details of construction like numerals designate like parts.

1 and 2 designate the front head-block and rear axle, which are formed in the usual and well-known way.

The body 3 is fastened to the front and rear bolsters 4 and 5 by means of the angular rods 6, one end of each rod being bolted to the body and the other secured to one of the bolsters. Elliptic springs 7 are interposed between the axles and bed-pieces and fastened in place in any well-known manner.

The front block 1 and rear axle 2 are connected by a reach, which in the adaptation of my invention shown in the accompanying drawings consists of the straight rods 8 and the V-shaped rods 9. The rods 8 are rotatably secured at their forward ends to the front axle-block by means of a plate 10, which is rigidly fastened to the under surface of the block and has two socketed portions 11, through the openings in which the forward ends of the rods are passed, being secured against longitudinal movement by the outer lock-nuts 12. The rods 8 gradually diverge from each other from the front axle-block to the rear axle, (see Fig. 1,) and are rotatably secured to the rear axle by independent plates 13, the rear ends of the rods being passed through the openings in the sockets 14 of the plates and secured in place by the inner and outer lock-nuts 15 and 16. The forward and rear ends of the rods 8 are screw-threaded to receive these lock-nuts 12, 15, and 16, and an intermediate portion of each rod is screw-threaded at 17 to receive a socketed portion 18, which is rigidly clamped to

the rod between the front and rear lock-nuts 19 and 20. The V-shaped rod 9 has a truncated end, and the transverse forward portion of said rod is securely fastened to each 5 of the socketed portions 18 by the bolts 21. The stems of the rod 9 extend rearwardly from the transverse portion and diverge from each other at a greater angle than the angle of divergence of the straight rods 8 and are 10 each fastened to the rear axle near the ends thereof by the clips 22. The rods 8 are mounted in the several sockets 11, 14, and 18, so as to be capable of a rotatable movement therein, and connections are provided between the 15 rods and the body, so that the depression of one end of said body will partially rotate the rods and by means of similar connections draw the other end down an equal distance. These connections preferably consist in rigidly 20 fastening crank-arms 23 at or near each end of each rod 8 and pivotally connecting each of said crank-arms to the lower end of a rod 24, which is pivoted at its upper end to the body. These crank-arms 23 are preferably 25 constructed in the form shown in Fig. 4 and are locked against independent rotation on the rods 8 by the screws 25.

A transverse equalizing device is also employed to prevent a load placed upon one side 30 of the body, as shown in Fig. 9, from depressing that side only. This preferably consists in rotatably mounting a rod 26 on the rear bolster, said rod having crank ends 27, which are pivoted to the upper ends of rods 28, having their lower ends pivoted to the rear axle. 35 While these transverse equalizing devices may be attached to both ends of the vehicle, it is hardly necessary to employ more than one with the ordinary light vehicle, such as a 40 buggy or trap.

A stop is utilized to prevent the crank-arms getting over the center and is preferably in the form shown in Fig. 11, having a main portion 29 fastened to the body and arms which 45 extend between the rods connecting the crank-

arms to the body and limit the inward movement of said arms toward each other.

The operation of the invention will be clearly understood from the foregoing description and the accompanying drawings. 50

The rods 8 act not only as parts of the reach, but also as connecting-rods for the equalizing device, and thereby lessen the number of parts required in my improved wagon. As the 55 springs act together and not independently, each carrying an equal portion of the weight or load or receiving an equal amount of the jolt or shock, they can be made lighter and more elastic.

I claim as my invention— 60

1. A vehicle or the like having a front block and a rear axle, a reach having rotatable rods connecting said front block and rear axle, front and rear crank-arms extending from 65 said rods, a body, springs between said body and the front block and rear axle, connections between the front and rear crank-arms and the respective extremes of the body, a rotatable transverse rod supported by the 70 body, crank-arms extending from said rod and connections between the crank-arms and one of the axles, substantially as set forth.

2. In a vehicle or the like, the combination with the body, front block and rear axle and 75 springs between said block and axle and the body, of a reach connecting said front block and rear axle and having two rods rotatably supported from the block and axle, crank-arms rigidly mounted on said rods and rods 80 pivoted at their ends to the body and the ends of the crank-arms, a transverse rod rotatably supported by the body above the axle or block and two-part pivotally-joined connections between the transverse rod and the ends of the 85 axle or block, substantially as set forth.

FRANKLIN STRATTON.

Witnesses:

L. M. BILLINGS,
G. A. NEUBAUER.