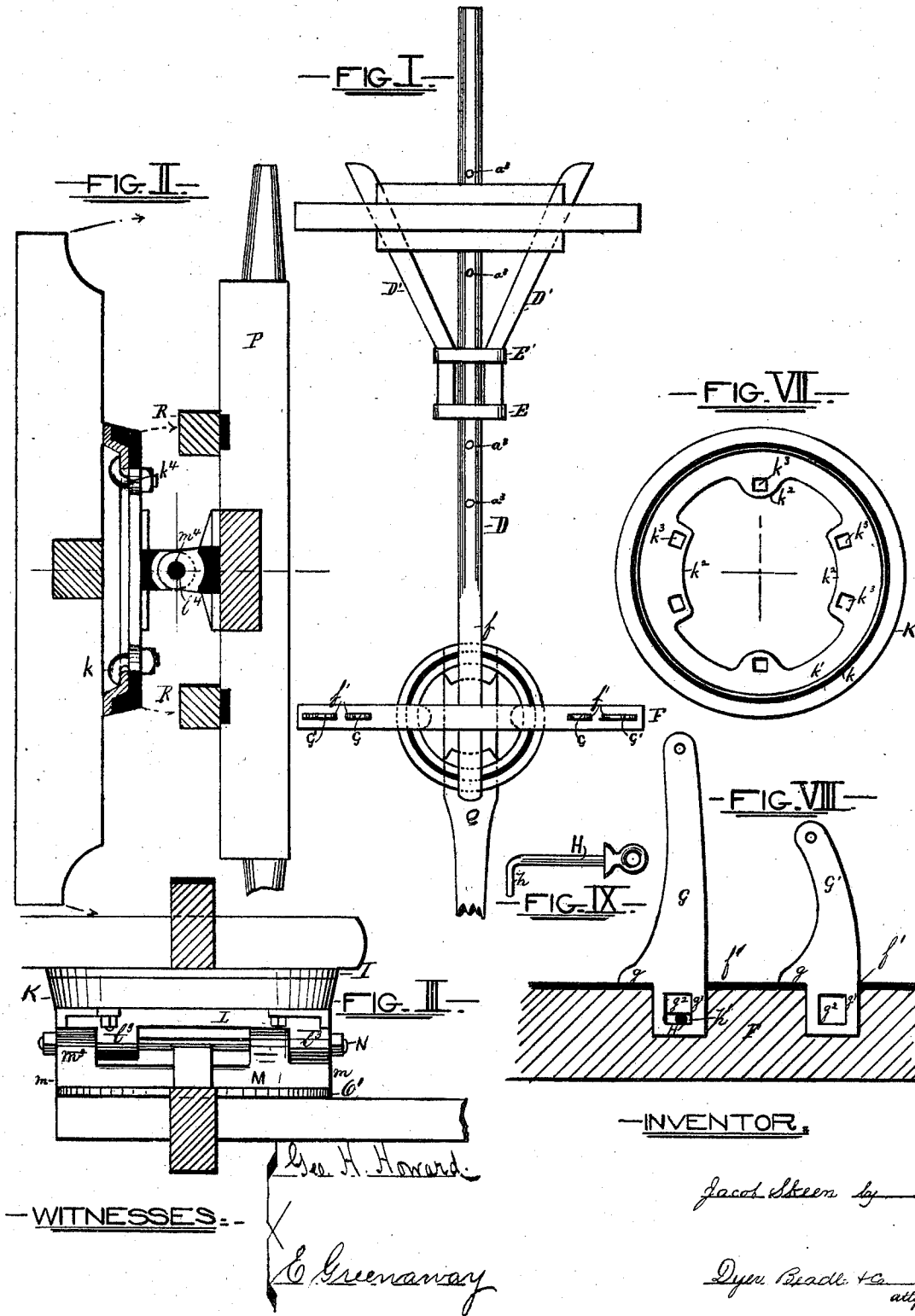


J. SKEEN.

Improvement in Lumber-Wagons.

No. 128,667.

Patented July 2, 1872.

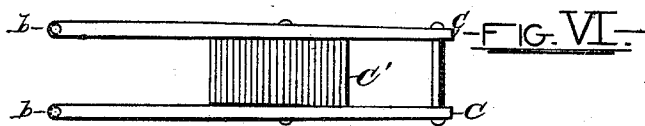
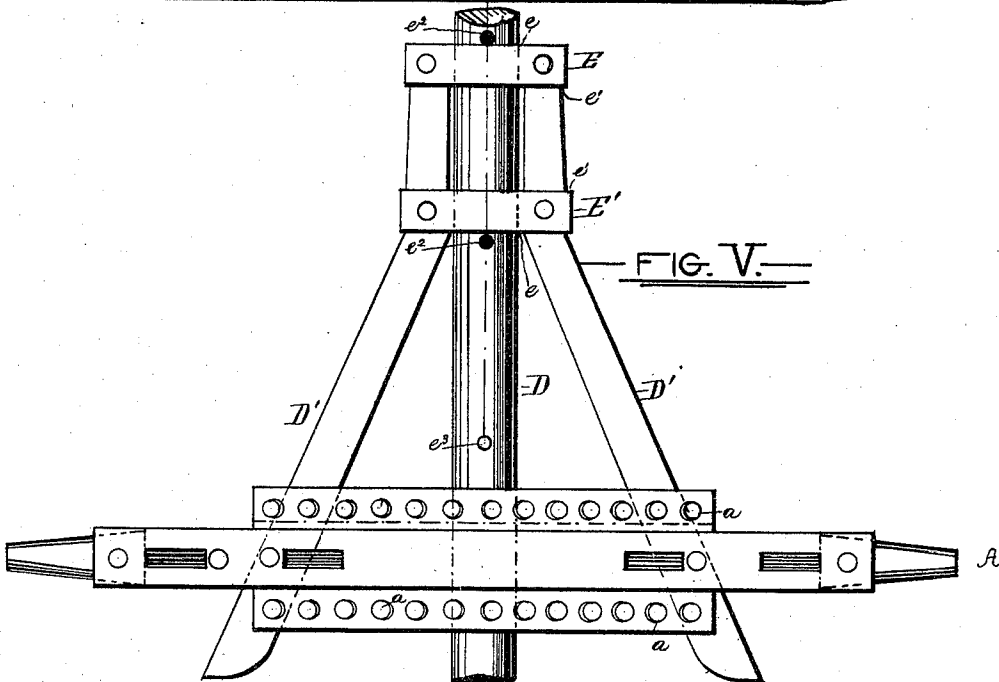
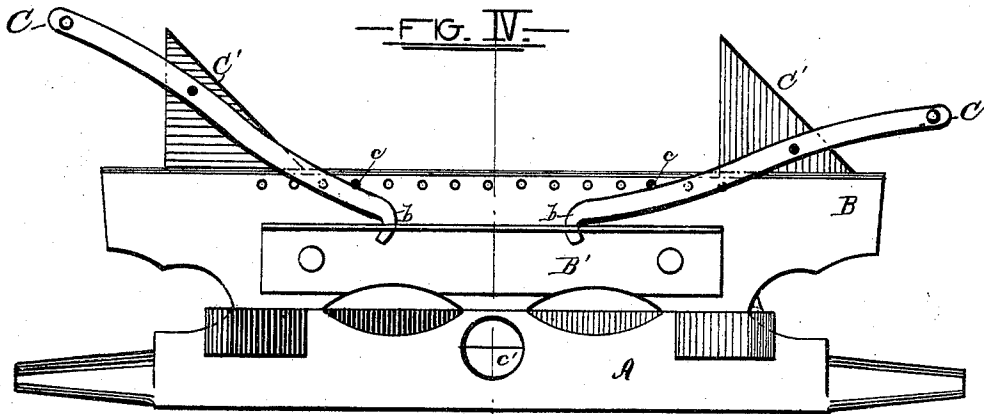


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—WITNESSES:—

Geo. H. Howard.

Emma Greenaway

—INVENTOR:—

Jacob Skeen by

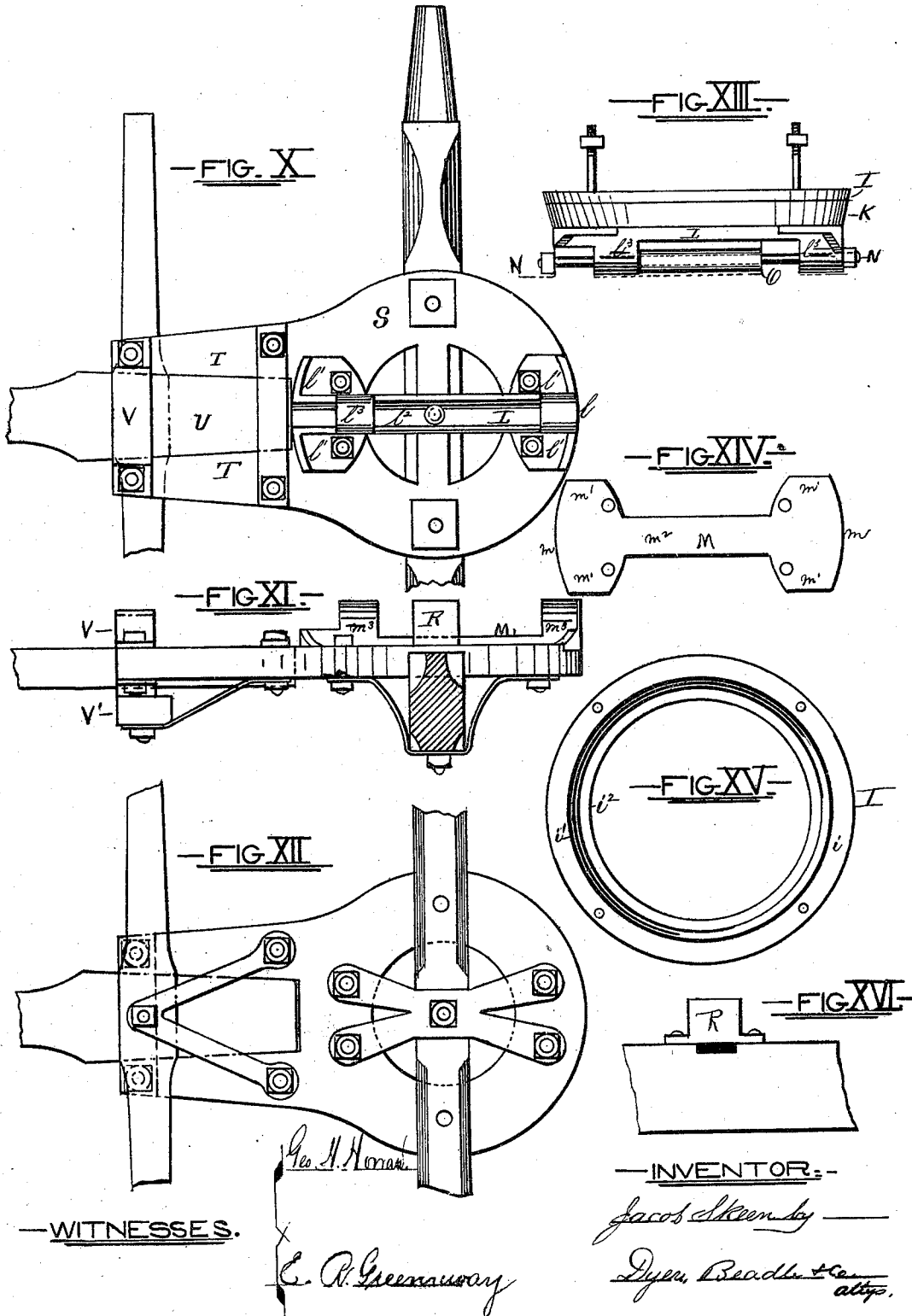
Dyer Beadles & Co.
attys.

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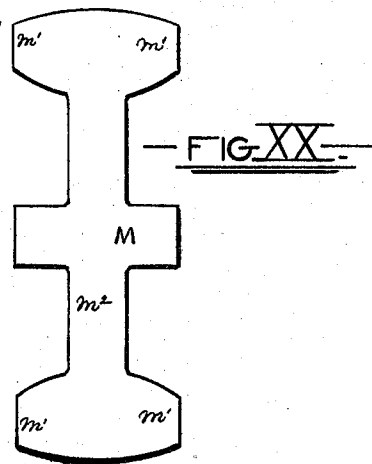
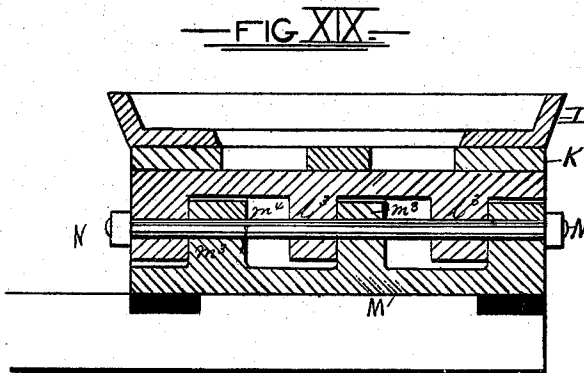
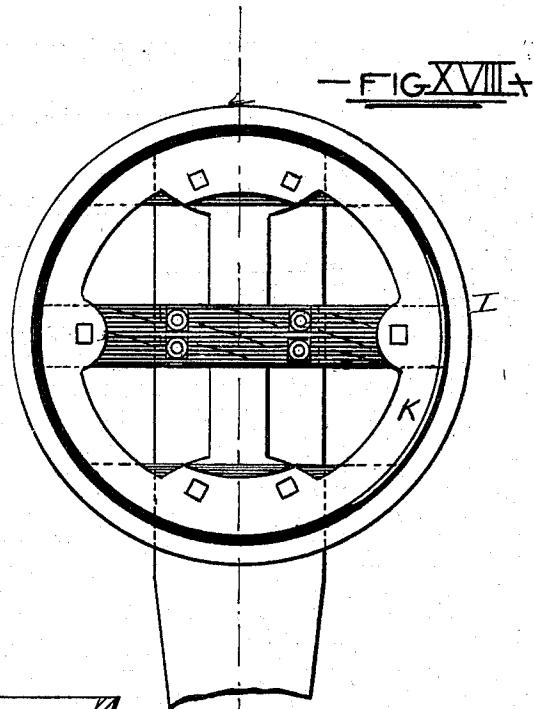
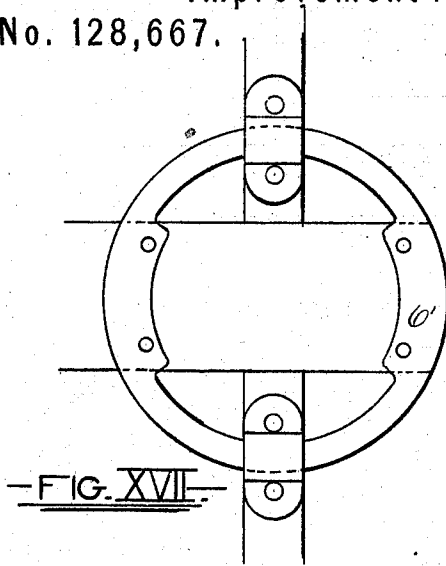


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UNITED STATES PATENT OFFICE.

JACOB SKEEN, OF MOUND CITY, ILLINOIS.

IMPROVEMENT IN LUMBER-WAGONS.

Specification forming part of Letters Patent No. 128,667, dated July 2, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JACOB SKEEN, of Mound City, in the county of Pulaski and State of Illinois, have invented a new and useful Improvement in Lumber-Wagons; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

In the drawing, Figure 1 is a plan view of the top of my wagon, which is shown in all the views without wheels; Fig. 2, a front elevation of the same; Fig. 3, a vertical section on the line *x x* of Fig. 1; Fig. 4, a rear elevation of my wagon; Fig. 5, a top plan view of the rear part of the same; Fig. 6, a separate view of one of the stakes with its pivoted block; Fig. 7, a top plan of the lower ring of the fifth-wheel; Fig. 8, a vertical longitudinal section of one of the bolsters on the line *y y* of Fig. 5, showing the two kinds of cast-metal stakes in position; Fig. 9, a separate view of one of the keys, which hold such stakes in position; Fig. 10, a top view of a modification of hounds and lower rocker adapted for a limber tongue; Fig. 11, a side elevation of Fig. 10; Fig. 12, an under view of the bottom of the same; Fig. 13, an elevation of the fifth-wheel and upper rocker, shows an intermediate sleeve in position; Fig. 14, a top view of one of the rockers; Fig. 15, a similar view of the fifth-wheel detached; Fig. 16, a side elevation, showing a modification of the rubber rocker-spring; Fig. 17, a plan view of the supporting circle, rubber springs, and stiff tongue; Fig. 18, a top view of the fifth-wheel, and modification of the rocker; Fig. 19, a central vertical section on the line *z z* of Fig. 18; Fig. 20, a top plan view of the modified rocker.

Like letters of like kind denote similar parts in each figure.

The object which I have in view is the production of a wagon which shall be very convenient for the transportation of logs and lumber, and yet capable of general use upon farms, in which shall be combined great strength of parts without excessive weight, and which may be furnished at a low price; and the invention consists in a novel fifth-wheel capable of an entire revolution; in the means employed by

which said fifth-wheel is capable of a rocking motion; in the means employed by which the wagon may be lengthened and the hind axle have a free lateral motion; in a peculiar bolster and adjustable stakes provided with reversible pivoted blocks; in the cast-metal stakes and the means employed to hold them in position; in the means employed for securing the tongue to the wagon without the use of hounds; and in the means employed for securing the front bolster directly to the top of the fifth-wheel.

In the drawing, A represents the hind axle of the wagon, upon which the bolster B is placed and fastened with screw-bolts, or in any other manner convenient for removal. Upon each side of the bolster is secured, longitudinally, a plate, B', the top of which is below the upper surface of said bolster, which plate has a flange, *a*, turned outwardly, and perforated with holes *a'*. Metal stakes C, of the form shown in Fig. 4, arranged in pairs, have their lower ends *b* curved, so as to fit into the holes *a'* and be incapable of withdrawal by pressure toward the sides of the wagon while their weight will prevent displacement vertically. Between each pair of stakes is pivoted a triangular block, C', and the stakes are held from extraordinary displacement by pins *c* passing through the bolster from side to side. The top of the bolster may be provided with suitable openings for the reception of the stakes, hereinafter described, in connection with the front bolster. The hind axle has also a circular opening, *c'*, through which the coupling-pole D passes, which coupling-pole is round, except at its front end. Hounds D' pass through the hind axle, and at their front ends *d* are bent so as to coincide with the line of the coupling-pole, and are fitted into cast-metal couplings E E', each having a central circular opening, *e*, for the passage of the coupling-pole, and rectangular side openings *e'*, in which the forward ends of the hounds are secured. Suitable pins *e''*, fitting into holes *e''* in the coupling-pole, hold said pole in position in said couplings. The front end *f* of the coupling-pole is squared and passes through the front bolster F, to which it is secured, and is, in turn, secured to the top ring of the fifth-wheel, hereinafter more fully described. This

bolster has rectangular openings f' upon its top plate fitted to receive the cast-metal stakes G G' , the first standing perpendicularly and the second curved outwardly, shown more particularly in Fig. 7. These stakes are made with a shoulder, g , which rests upon the top plate of the bolster, and with a rectangular foot, g^1 , provided with a rectangular opening, g^2 , and are held in place by a key, H , shown particularly in Fig. 9, which key has a point, h , bent nearly at right angles, and passes through a longitudinal slot, h' , in said bolster, and through the opening g^2 , and the weight of the point turning downward locks the key in position. The bolster F rests upon the top ring I of the fifth-wheel, and may be fastened thereto in the same manner that the front end of the coupling is secured. This ring I is made of cast metal, preferably of steel, of the form shown particularly in Fig. 15, with an outward-projecting flange, i , a body, i^1 , nearly vertical, and an inward-projecting flange, i^2 . This top ring fits upon and into the lower ring K , constructed of metal similar to the ring I , and shown particularly in Fig. 7, with a vertical body, k , an inward-projecting flange, k^1 , and ears k^2 provided with rectangular openings k^3 . When the two rings are placed in position the upper one projects slightly over the lower one on the outside, and the outer lines of the two together show a regular inward curve from the top to the bottom, while the inner lines of the inner flanges of both should coincide. In the openings k^3 hook-bolts k^4 are placed with their heads projecting over the flange i^2 of the ring I and holding both rings together, while the lower ends of said bolts are threaded, and two of them are secured by nuts on the under sides of the ears k^2 , and four others by nuts on the under sides of the upper rocker L , by means of which the two rings are held together, and also to said rocker. A wood packing, shown by letter k^4 in Figs. 18 and 19, may be interposed between the fifth-wheel and the rocker to give elasticity. This rocker is of cast metal, of the form shown particularly in Fig. 10, and has heads l , lateral rings l^1 , a body, l^2 , and ears l^3 provided with openings l^4 . The under side of the body is grooved a little, as is also the space between the wings on its hind end. This rocker is of a length equal to the diameter of the lower ring K , and, when in position, the outside of its head agrees in outline with the outsides of the ring K . A lower rocker, M , of similar material with the upper one, and having similar heads m , lateral wings m^1 , a body, m^2 , ears m^3 provided with openings m^4 is pivoted to the upper rocker by means of a bolt, N , properly secured by a nut at one end. An intermediate sleeve, O , upon said bolt serves to bring the pressure in backing the wagon against the ears l^3 and m^3 . A modification of these rockers, adapted particularly to the heaviest wagons, is shown in Figs 18, 19, and 20, and consists in employing in each rocker an intermediate ear, through which the bolt N

passes. The lower rocker M is secured upon a cast-metal supporting-ring, O' , which in turn is secured upon the front axle P and the tongue Q in such a manner as to hold said tongue secure against lateral flexure. The tongue, it is to be observed, is mortised into the axle, so as to bring the upper surfaces of both upon the same plane, and extends a sufficient distance to the rear to be covered by said supporting-ring. Upon each side of the supporting-ring are India-rubber springs R , secured upon the axle by suitable fastenings through their flanges r , as shown in Fig. 16, and in such position as to receive the impact of the fifth-wheel on either side.

A modification of this supporting-ring arranged for a limber tongue is found displayed in Figs. 10, 11, and 12, in which, instead of the said ring, a wooden circle, S , with hounds T is used, the limber tongue U being pivoted between said hounds, and playing up and down between cast-metal yokes V and V' , one above and one below, secured to the front end of said hounds.

In the operation of my device it will be noticed that the forward wheels turn under as far as the coupling-pole, so that the tongue will stand nearly at right angles with the body, thus enabling the wagon not only to be turned around within a very small compass, but to occupy, when the team stands at right angles, only a small space, both of which are essential features in lumber-wagons, particularly when used in the main streets of cities, and that this result is due to the peculiar construction of the fifth-wheel, which, by its use of entire circles, enables the most complete revolution of parts, and by its employment of rockers not only gives it great ease of movement and security against the injury of the wagon over the roughest roads, but enables it to be driven with the wheels upon one side in the gutter of the street. This result is due also to the method of connecting the forward and hind parts of the wagon by the coupling-pole, secured at its front end upon the fifth-wheel.

The use and advantage of the different kind of stakes, changeable and adjustable for different purposes, and the modification of rockers, and stiff and limber tongues, and the devices for lengthening the wagon, require no explanation, as it is apparent upon inspection that they have a peculiar fitness for this description of wagon.

Having thus described my wagon, what I claim as new therein, and my invention, is—

1. The rocker fifth-wheel, wherein are combined the rings I and K and the rockers L and M , substantially as set forth.

2. The combination of the coupling-pole D and the fifth-wheel I K , substantially as described and shown.

3. The combination of the bolster F , the fifth-wheel I K , and the coupling-pole D , substantially as described and shown.

4. The combination of the rockers L M , the

axle P, the tongue Q, and the supporting-ring O, substantially as described and shown.

5. The combination of the bolster F, the cast-metal stakes G G, and the key N, constructed, arranged, and operating substantially as described and shown.

6. The combination of the coupling-pole D, hounds D', and cast-metal couplings E E', severally constructed and operating substantially as described.

7. The bolster B, provided with the plates B', constructed and arranged substantially as described and shown.

8. The stakes C, provided with the pivoted blocks C', in combination with the plate B', substantially as described and shown.

JACOB SKEEN.

Witnesses:

H. CARLIN CLARK,

G. H. GREELEY.