

(No Model.)

2 Sheets—Sheet 1.

E. E. HENDERSON.
WAGON RUNNING GEAR.

No. 529,734.

Patented Nov. 27, 1894.

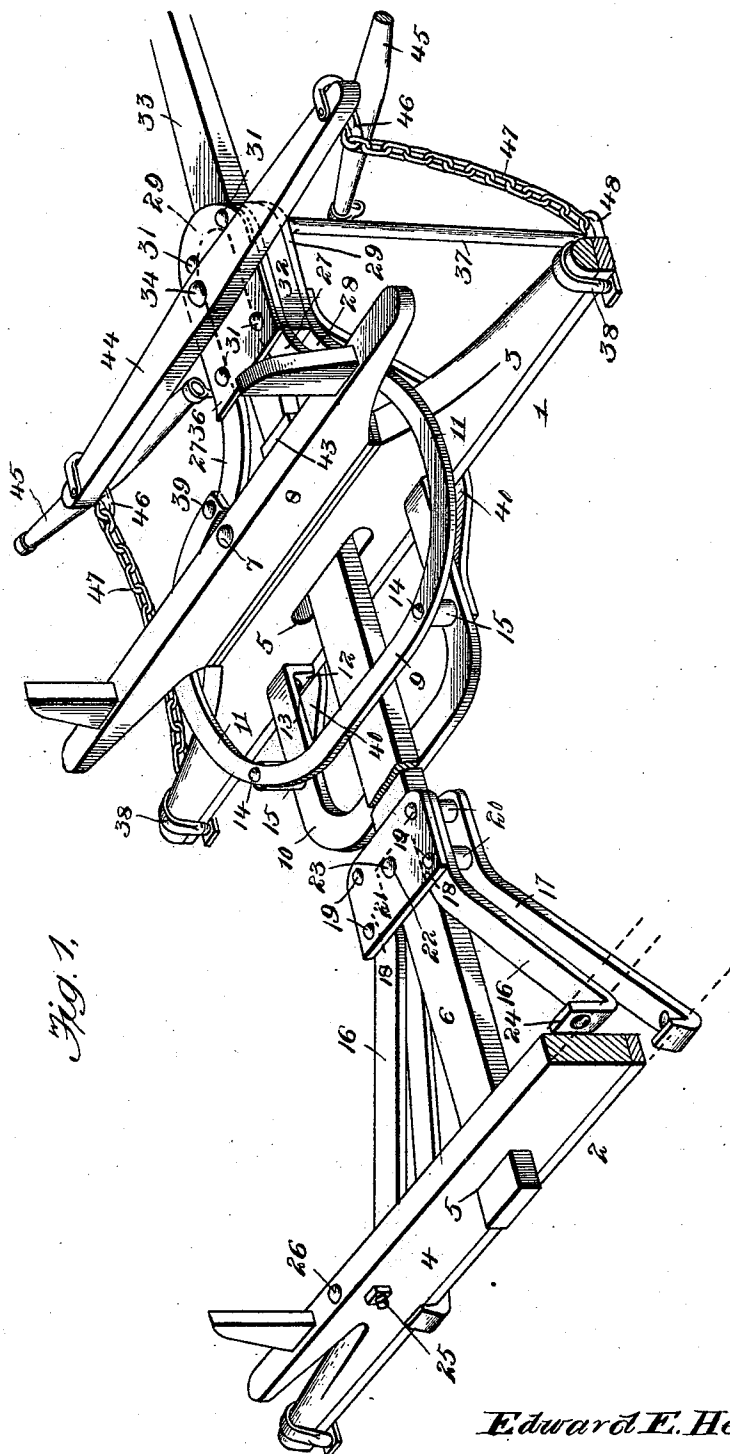


Fig. 1.

Witnesses

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Edw. H. Haupt

Inventor

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By his Attorneys.

C. A. Snow & Co.

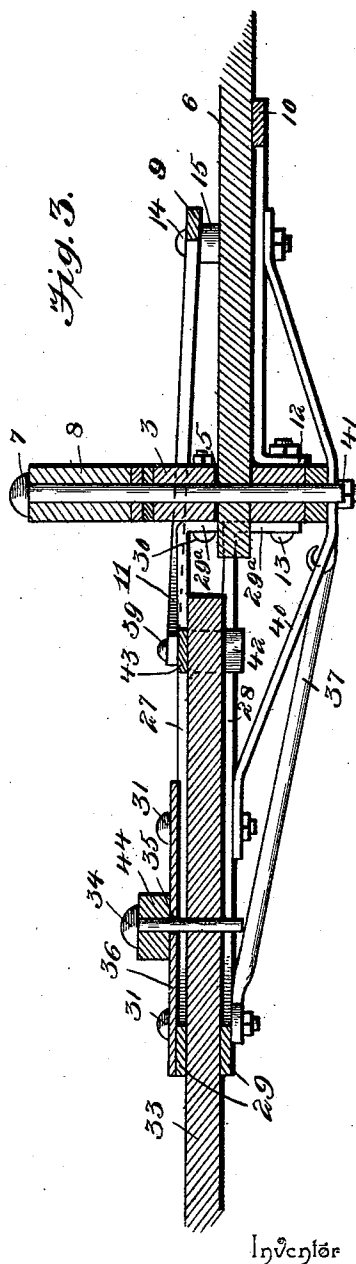
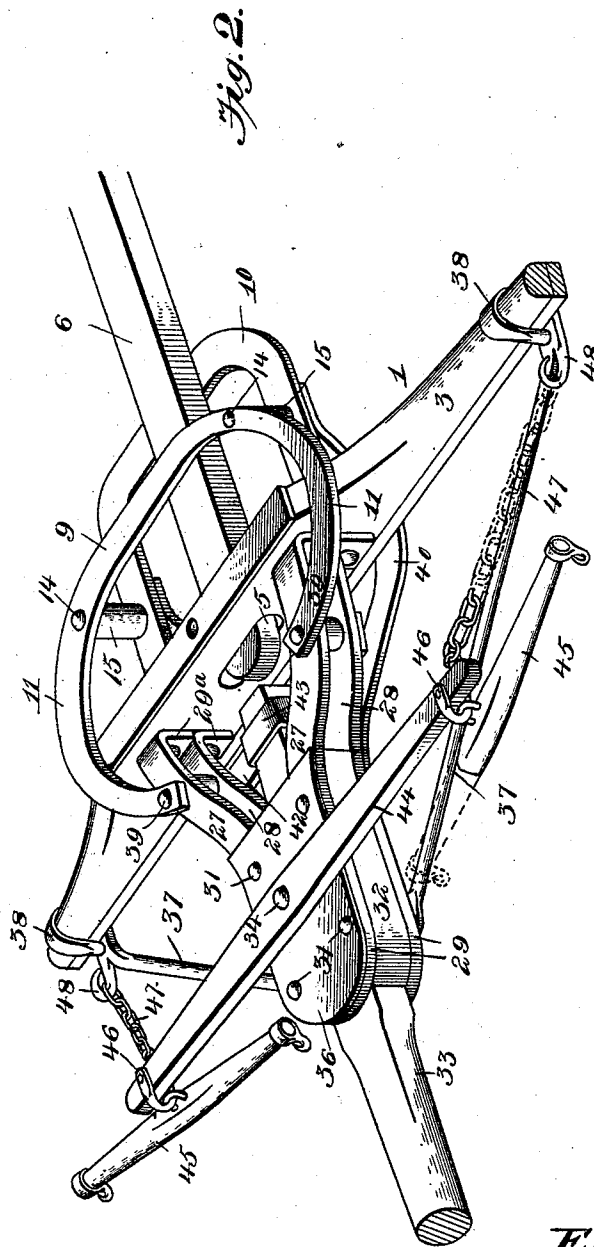
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Inventor

Edward E. Henderson

By *W. E. S.* Attorneys.

Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD E. HENDERSON, OF SANFORD, FLORIDA.

WAGON RUNNING-GEAR.

SPECIFICATION forming part of Letters Patent No. 529,734, dated November 27, 1894.

Application filed March 19, 1894. Serial No. 504,274. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. HENDERSON, a citizen of the United States, residing at Sanford, in the county of Orange and State of Florida, have invented a new and useful Wagon Running-Gear, of which the following is a specification.

This invention relates to running gear for vehicles; and it has for its object to effect certain improvements in running gears for vehicles whereby the ordinary heavy wooden hounds, both front and rear, will be entirely dispensed with.

The main and primary object of the present invention therefore is to construct a light-metal vehicle running gear which will not only displace the heavy wooden hounds, but at the same time will make an extremely light and easy running gear, and one having exceptional strength and durability.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a complete wagon running gear constructed in accordance with this invention. Fig. 2 is a similar view of the front portion of the gear showing the draft or tongue supporting frame. Fig. 3 is a detail central vertical sectional view of the front portion of the gearing.

Referring to the accompanying drawings, 1 and 2 designate the front and rear axles, respectively, of a wagon running gear, and these axles are surmounted by the front and rear axle beds 3 and 4, the rear axle bed 4, being the rear bolster of the gear, and these parts will for convenience in description, be included under the single term "axle." Both the front and rear axles of the gear, are provided at a central point with longitudinally disposed slots or openings 5, that loosely receive the front and rear ends of the longitudinal reach bar 6, connecting the front and rear axles, and the front end of said reach bar is held in position within the slot or opening of the front axle by the ordinary king-bolt 7, passed vertically through the axle and also pivotally positioning thereon the ordi-

nary front wagon bolster 8, which receives the front end of a wagon bed, while the rear bolster, included as a part of the rear axle, receives and supports the rear end of the wagon bed. Upper and lower parallel reach supporting frames 9 and 10 are extended beyond the inner side of the front axle, and are of an approximate or substantial U-shape, and are disposed in horizontal planes parallel with each other. The upper of said reach supporting frames 9, is provided with the opposite curved or bowed brace ends 11, which are curved over opposite top portions of the front axle and have their terminals extend to a point in front of the same for a purpose to be presently described, and the lower of said inwardly extending horizontal reach supporting frames 10, is provided with inner flanged ends 12, which receive the securing bolts 13 passing therethrough and the front axle. Both of the parallel supporting frames 9 and 10 are connected at opposite points by the connecting bolts 14, on which are arranged the spacing sleeves, 15, interposed between the two frames to space the same apart and also to form limiting stops for the reach bar which is supported at the front end by, and placed between, the said horizontal frames, and while the frame 9 is included as a part of the frame for supporting the front end of each bar, it will be seen that the same principally acts in the capacity of a brace, and does not project as far beyond the inner side of the front axle as the lower frame 10, but is shorter than said lower frame and extends to the connecting bolts 14 between the two frames.

The ordinary front hounds at the rear side of the front axle are substituted by the light metal upper and lower horizontal supporting frames 9 and 10 to form a support for the front end of the reach-bar, and the rear portion of the longitudinal reach bar is supported from the rear axle, in substantially the same manner as described for the front support, by the upper and lower parallel reach supporting frames 16 and 17 respectively. The upper and lower supporting frames 16 and 17, are preferably of a substantial V-shape and at their outer ends or apices are provided with the U-shaped or loop portions 18, between which passes the reach bar 6, and at their U-

shaped portions or loops, the said frames are connected by the opposite pairs of connecting bolts 19, on which are arranged the spacing sleeves 20, to space the frames apart and to
 5 confine the rear bar therebetween. The bolts 19 also clamp in position on the outer U-shaped extremity of the upper frame 16, the top plate 21, provided with a central perforation 22, to receive the reach pin 23, which
 10 engages a perforation or opening in the reach bar to provide for removably securing the same in position in the rear support therefor. The inner ends of the upper horizontal supporting frame 16 are provided with the up-
 15 turned flanges 24 which are attached to the inner side of the rear axle on the clamping bolts 25, and the inner ends of the lower frame 17 are bolted to the under side of the rear axle on the vertical bolts 26.

20 Extended from the front side of the front axle are the upper and lower parallel draft or tongue supporting frames 27 and 28. The frames 27 and 28 are of the same general construction as the rear reach supporting frames
 25 16 and 17, that is, of a substantial V-shape and provided at their outer ends or apices with the U-shaped or loop portions 29, but the inner ends of said frame 27 and 28 are provided with the flanges 29^a, the flanges of
 30 the upper frame receiving the securing bolts 30 and the flanges of the lower frame receiving the bolts 31 which secure the lower reach supporting frame 10 in position. The upper
 35 and lower draft or tongue supporting frames 27 and 28 are connected by an opposite series of connecting bolts 31, the bolts at opposite sides of the U-shaped portions or loops 29
 40 also clamping in position between the frames at their outer ends the opposite spacing blocks 32, between which is removably received the inner end of the draft tongue 33, that is held
 45 in position by the tongue pin 34 removably engaging a perforation 35 in the top plate 36, secured on the outer U-shaped extremity of
 the upper frame 27, in a similar manner to the top plate 21, and said pin 34 is adapted to engage a perforation in the inner end of the draft tongue 33.

50 The upper and lower draft or tongue supporting frames 27 and 28, are firmly braced in their forwardly extended positions by means of the opposite inclined brace rods 37, connected at their outer ends to the lower
 55 frame 28 at the outer extremity thereof, and at their inner ends secured to the opposite ends of the front axle on the clips 38. Additional bracing of the frames 27 and 28 is secured by means of bolting the front terminals
 60 of the bowed brace ends 11 of the frame 9, to the upper frame 27, as at 39, at a point in front of the front axle, and opposite brace
 65 irons or straps 40, are bolted at opposite points to the under side of the front axle on the vertical clamping bolts 41, and are inclined at both sides of the front axle and connected at their front and rear ends re-

spectively to the under side of the frame 28 and to the frame 10 by the bolts 14.

At a point in front of the front axle and bridging the space between the opposite por-
 70 tions of the frames 27 and 28 is the transverse socket bar 42, bolted at its opposite ends to the under side of the frame 28 and provided at a central point with the upwardly
 75 disposed U-shaped socket loop 43, which receives the extreme inner end of the draft tongue 33, to firmly brace the same and hold it in position, and pivotally mounted on the
 80 top plate 36, and turning on the tongue pin 34, is the double-tree 44, to the opposite ends of which are connected the ordinary single-trees 45, and the opposite moving ends of the
 85 double-tree 44 are provided with the hooks 46 to receive one end of the limiting chains 47, the other ends of which engage the hooks
 90 48, projected from the inner ends of the opposite brace rods 37 at their point of connection with the opposite ends of the front axle, thereby completing a running gear especially
 95 adapted for a two horse wagon.

The herein described improvements provide a complete running gear which shall be both light and strong and at the same time dispensing with the ordinary heavy wooden
 95 hound frames commonly used, and it will be understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.
 100

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a vehicle running gear, the combination with the front axle having an opening
 105 therein, and the reach bar pivoted at its front end in said opening, of a draft or tongue supporting frame extended from the front side of the front axle, parallel upper and lower
 110 reach supporting frames extended from the inner side of the front axle, the upper of said frames being connected to the lower frame at a point in from the outer end of the latter by the bolts 14 and being provided with integral
 115 opposite brace ends extended over opposite top portions of and to the front of the front axle and bolted to the top of said draft or tongue supporting frame, and opposite under
 120 brace irons arranged under the front axle and connected at their extremities respectively to the lower of said reach supporting frames by the bolts 14 and to the draft or tongue supporting frame, substantially as set forth.

2. In a vehicle running gear, the combination with the axle and the reach bar; of the
 125 draft or tongue supporting frame extended from the front side of the axle, upper and lower parallel U-shaped reach supporting frames extended from the inner side of the
 130 axle, and the upper of which frames is provided with opposite integral curved or bowed

brace ends curved over opposite top portions of the axle and bolted at their extremities to the draft or tongue supporting frame, spacing bolts connecting the upper and lower reach supporting frames at a point in from the outer end of the lower frame, and opposite brace irons or straps bolted at intermediate points to the under side of the axle and having opposite inclined portions connected respectively to the under side of the draft or tongue supporting frame and to the lower of said rear supporting frames, substantially as set forth.

3. In a vehicle running gear, the combination with the front axle, of the upper and lower parallel V-shaped tongue or draft supporting frame having inner flanged ends bolted to the front side of said axle, spacing connections between the two frames, a perforated top plate bolted to the outer end of the upper one of said frames, a transverse socket bar connected at its extremities to the opposite sides of the lower of said frames in front of the axle and having a central upwardly disposed socket loop, the draft tongue adapted to be arranged between said frames and received at its inner end in the socket of said socket bar, and a removable pin adapted to engage the perforation of said top plate and a similar perforation in the draft tongue, substantially as set forth.

4. In a vehicle running gear, the combina-

tion with a front axle; of the skeleton draft or tongue supporting frame extended from the front side of said axle, the opposite inclined brace rods connected at their outer ends to the outer end of said frame and at their inner ends connected to the axle near its opposite ends and provided with hooks at such inner ends, the double-tree pivotally supported on the outer end of said draft or tongue supporting frame and having hooks at its ends, the limiting chains adapted to engage the hooks of the double tree and those of the brace rods, and the tongue removably secured at one end in said draft or tongue supporting frame, substantially as set forth.

5. In a vehicle running gear, the combination with the axle; of a pair of parallel connected horizontal V-shaped reach supporting frames, the upper of which frames is provided at its inner ends with flanges bolted to one side of the axle, and the lower of which frames is provided with flanged ends bolted to the under side of the axle, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD E. HENDERSON.

Witnesses:

J. K. METTINGER,

WILLIAM HAMILTON.