

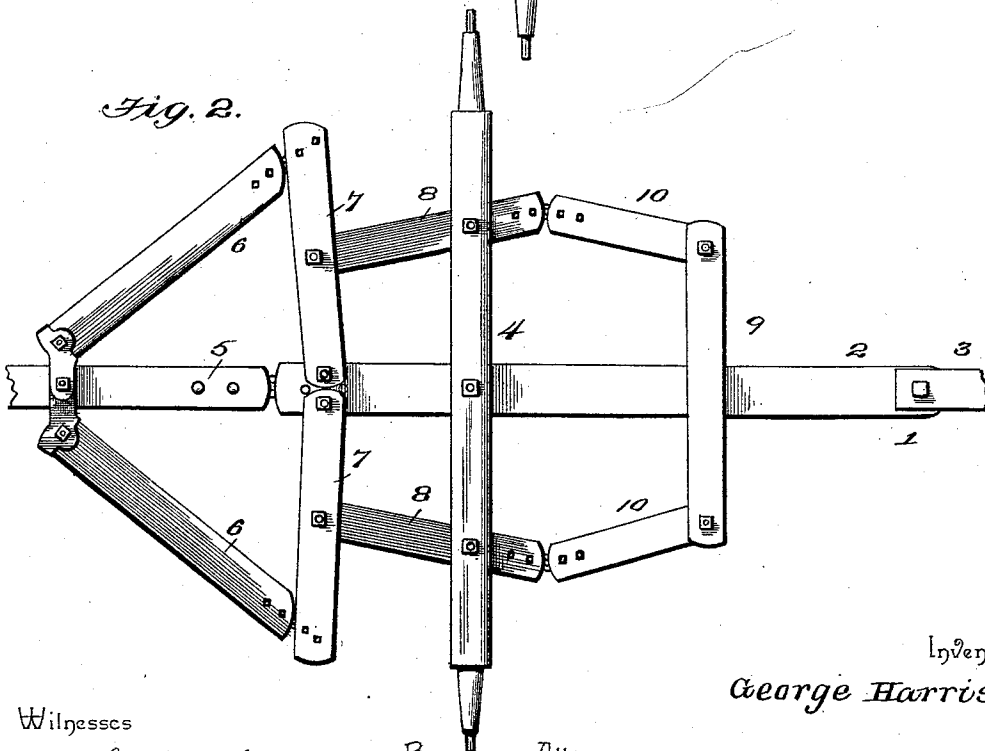
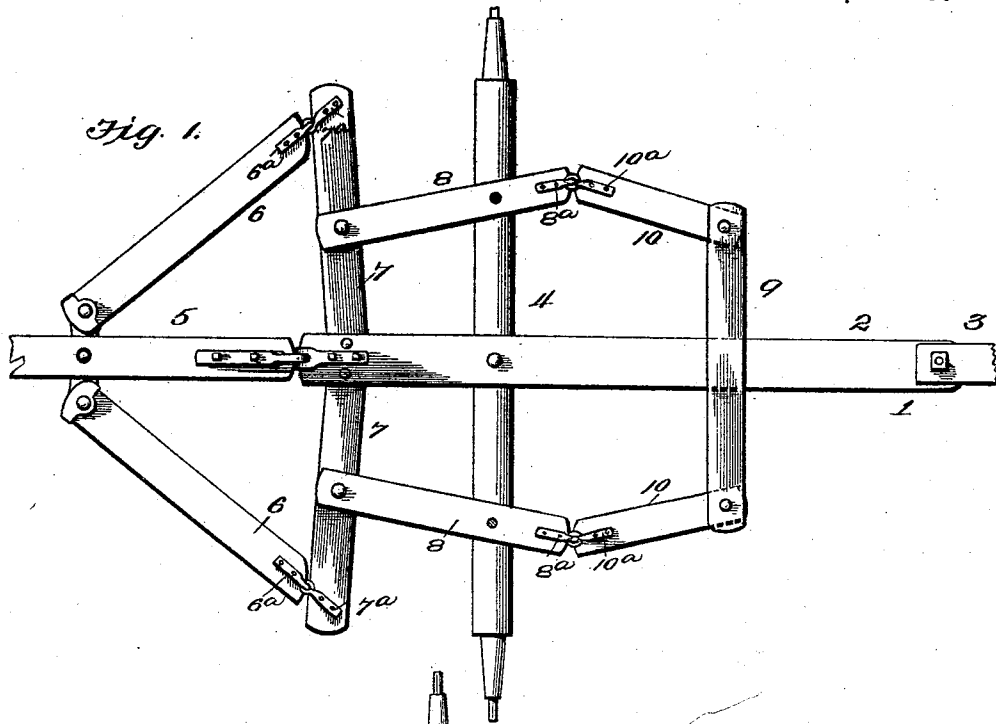
(No Model.)

2 Sheets—Sheet 1.

G. HARRIS.
RUNNING GEAR FOR VEHICLES.

No. 535,987.

Patented Mar. 19, 1895.



Witnesses

Jos. L. Stack
J. H. Riley

By *his* Attorneys.

Inventor
George Harris

C. A. Snow & Co.

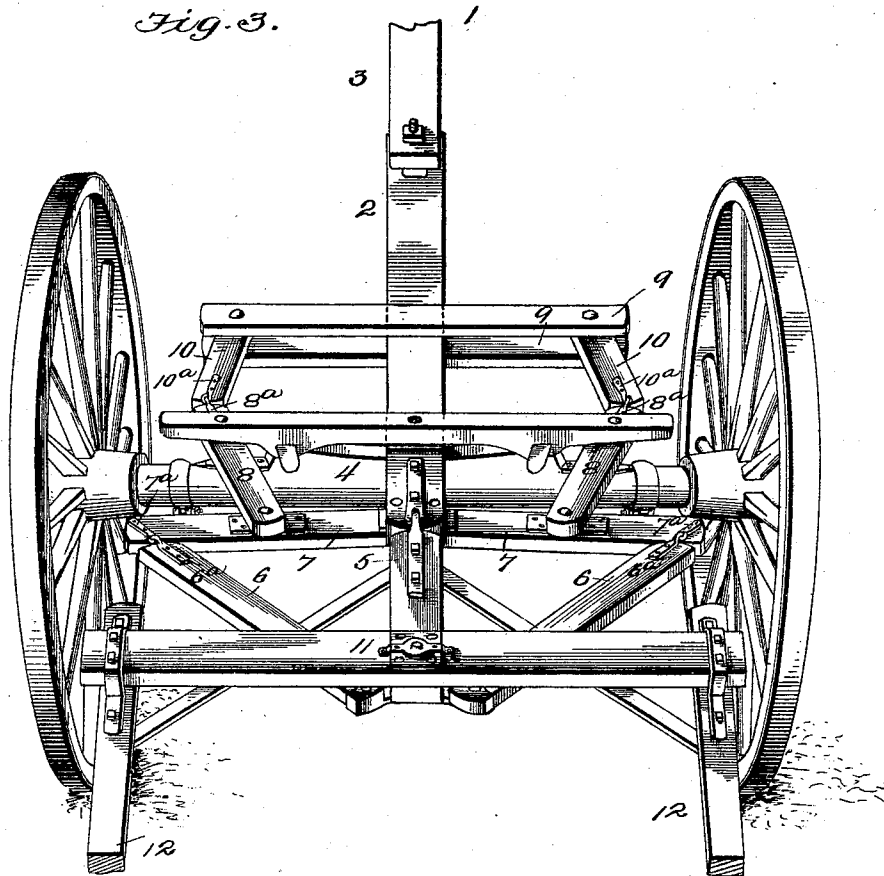
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UNITED STATES PATENT OFFICE.

GEORGE HARRIS, OF BELMONT, NEW YORK.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 535,987, dated March 19, 1895.

Application filed July 27, 1894. Serial No. 518,760. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HARRIS, a citizen of the United States, residing at Belmont, in the county of Allegany and State of New York, have invented a new and useful Running-Gear, of which the following is a specification.

The invention relates to improvements in running gears.

The object of the present invention is to improve the construction of running gears, by facilitating turning the front axle, and to distribute the strain more evenly, and thereby enable a load to be drawn over rough roads with greater ease, and with less jolting and wrenching.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a plan view of a portion of a running gear showing my improvement. Fig. 2 is a reverse plan view of the same. Fig. 3 is a perspective view showing shafts connected with the running gear.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a reach, composed of front and rear sections 2 and 3, hingedly connected at their adjacent ends, which are slightly separated, to prevent friction. The reach is pivoted to the front axle 4, and extends in advance of the same; and its front end is hingedly connected to the rear end of a pole 5. The pole 5 is connected by oppositely disposed rearwardly inclined hounds or bars 6 with laterally disposed levers 7, which have their outer ends hingedly attached to the bars 6, by metal straps 6^a and 7^a, having eyes linked into each other and permitting a pivotal movement, and these levers are fulcrumed at their inner ends on the reach. The laterally disposed levers 7 are pivotally connected intermediate of their ends to the front terminals of forwardly converging longitudinally disposed levers 8, which are fulcrumed near their rear ends on the front axle 4 or the bed thereof. The rear ends of the converging levers 8 are connected with parallel transverse sway bars 9 by longitudinal link bars 10, which are

hingedly attached at their front ends to the levers 8, by straps 8^a and 10^a, which have eyes linked together. The transverse sway bars 9 are located above and below the reach, and are pivoted to the upper and lower faces of the rear ends of the bars 8. By this arrangement of connecting bars and levers a vehicle may be turned, and the wheels thereof cramped with greater ease than the ordinary connection usually employed will permit; the strain is more evenly distributed; and there is less jolting and wrenching in passing over rough roads with heavy loads. The pole or shafts may be turned a much greater distance before the wheels are cramped, and this greatly facilitates turning the vehicle in a small space. The additional swing of the tongue in excess of the swing of the front axle is directed through the arrangement of levers, to enable the axle to be turned with greater ease.

The levers 7 are connected with the axle 4 and the front end of the reach, and greatly assist the movements of such parts, and it will be seen that the front axle may be turned more readily by the interposition of these levers, than would be the case were the tongue directly connected with the front axle.

Any suitable castings or hinges may be employed for connecting the levers and the bars, and instead of employing a tongue or pole, as illustrated in Figs. 1 and 2 of the accompanying drawings, the pole may be shortened, as illustrated in Fig. 3 of the drawings, and have connected with it the cross-bar 11 of shafts 12. The shafts are held rigidly with the pole by braces 14, converging rearward and having the front ends secured to the lower face of the shafts, and their rear ends to the lower face of the pole.

It will thus be apparent that the improvements may be applied to vehicles having either poles or shafts.

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.

What I claim is—

1. The combination of a front axle, a reach pivotally connected to the axle and extending in advance of the same, a pole hingedly connected with the front end of the reach, the lat-

erally disposed levers 7 fulcrumed at their inner ends on the reach, and extending outward therefrom, the converging bars 6 extending from the outer ends of the levers 7 to the pole, and movably connected with them, and connections between the levers 7 and the front axle, said connections being attached to the levers at points intermediate of the ends thereof, substantially as described.

- 10 2. The combination of a front axle, a reach pivotally connected to the axle and extending in advance of the same, a pole hingedly connected with the front end of the reach, the laterally disposed levers 7 located in advance of
15 the axle and fulcrumed at their inner ends on the reach and extending outward therefrom, the converging bars extending from the outer

ends of the levers 7 to the pole, the longitudinally disposed levers fulcrumed intermediate of their ends on the axle, and having their front ends pivotally connected to the levers 7 intermediate of the ends of the latter, the transverse bars 9 located in rear of the axle and extending across the reach, and the link bars 10 connected to the ends of the transverse
25 bars, and to the rear ends of the longitudinally disposed levers, substantially as described.

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

GEORGE HARRIS.

Witnesses:

W. R. FUERNER,
B. B. ACKERMAN.