

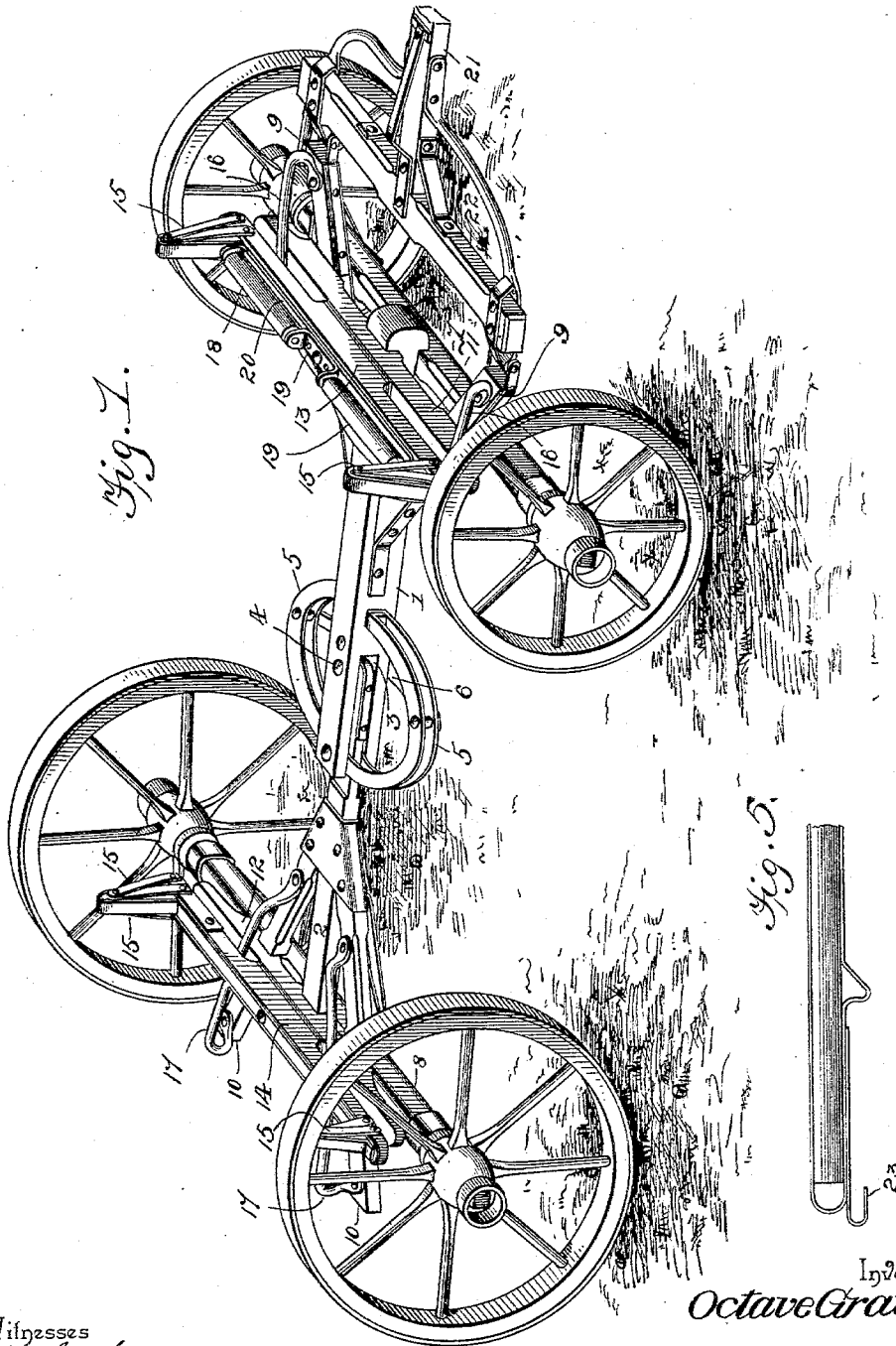
(No Model.)

2 Sheets—Sheet 1.

O. GRAVEL.
RUNNING GEAR FOR VEHICLES.

No. 571,856.

Patented Nov. 24, 1896.



Witnesses

E. H. Monroe.

J. F. Riley

By his Attorneys,

C. A. Snow & Co.

Inventor
Octave Gravel.

(No Model.)

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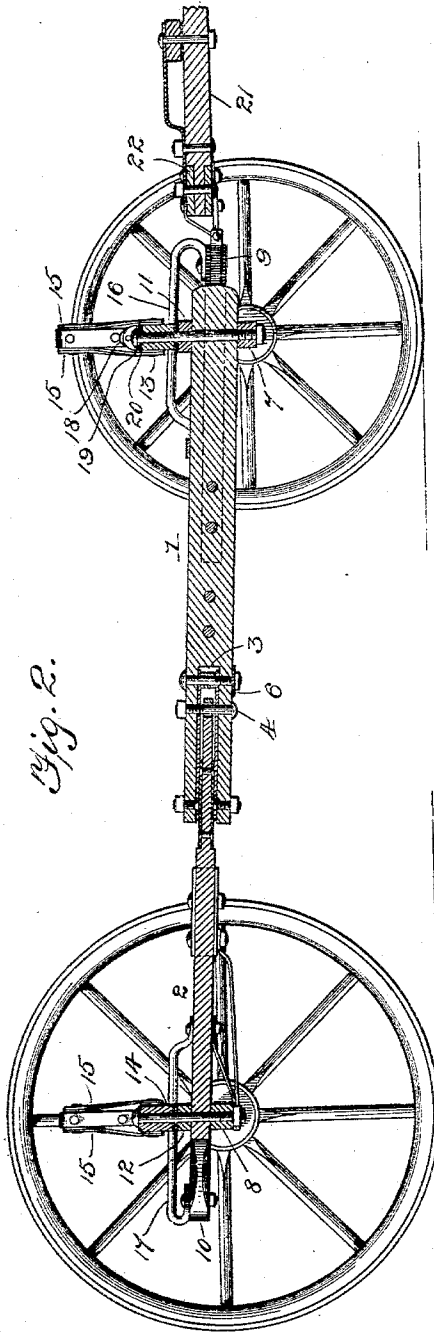


Fig. 2.

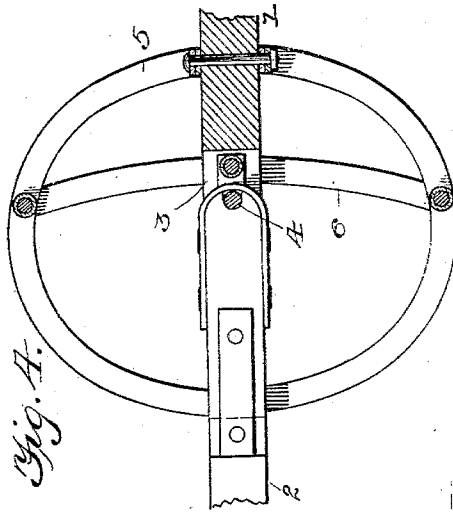


Fig. 4.

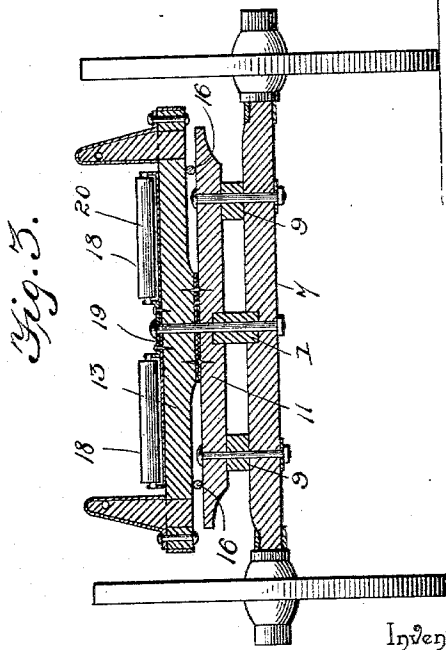


Fig. 5.

Inventor
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UNITED STATES PATENT OFFICE.

OCTAVE GRAVEL, OF INGALLS, MICHIGAN, ASSIGNOR OF ONE-HALF TO
JOHN J. GERONDALE, OF SAME PLACE.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 571,856, dated November 24, 1896.

Application filed November 6, 1895. Serial No. 568,130. (No model.)

To all whom it may concern:

Be it known that I, OCTAVE GRAVEL, a citizen of the United States, residing at Ingalls, in the county of Menominee and State of Michigan, have invented a new and useful Running-Gear for Vehicles, of which the following is a specification.

This invention relates to improvements in running-gear.

The object of the present invention is to improve the construction of running-gear, and to provide a simple and inexpensive and efficient one, which will possess great strength and durability, and which will be capable of turning very short with perfect safety.

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 claim hereto appended.

In the drawings, Figure 1 is a perspective view of a running-gear constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view. Fig. 3 is a transverse sectional view of the front portion of the running-gear. Fig. 4 is an enlarged detail sectional view illustrating the manner of connecting and supporting the front and rear reach-sections. Fig. 5 is a detail view of the front end of the tongue.

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

1 and 2 designate front and rear reach-sections of a running-gear. The front reach-section 1 has its rear end bifurcated at 3, and the front end of the rear reach-section is reduced and is pivoted within the bifurcation 3 by a vertical bolt 4 or other suitable fastening device. Within the bifurcation 3 are arranged suitable wear-plates, and the rear reach-section, which is located between the wear-plates, is supported, when the reach-sections are arranged at an angle in turning or cramping the running-gear by upper and lower circular bracket-bars 5, extending on opposite sides of the rear portion of the front reach-section, and having their terminals bent vertically, overlapped, and secured to opposite sides of the same. The circular bracket-bars are connected intermediate of their ends

by bolts, and are spaced by sleeves, and the lower one is connected with the front reach-section by a transverse brace 6, which is centrally secured to the front reach-section, and which has its ends secured to the sides of the lower circular bracket-bar by the bolts which connect the bracket-bars at those points. The back portions of the upper and lower bracket-bars are arranged within the bifurcation 3 of the front reach-section and are secured to the upper and lower portions of the bifurcation by bolts or other suitable fastening devices. The circular bracket-bars form an efficient support for the reach-sections at any angle which they may assume in the use of the running-gear.

The front and rear axles 7 and 8 are rigidly secured to their respective reach-sections, and are supported by suitable braces and may be constructed in any suitable manner. Front and rear hounds 9 and 10 are employed and are arranged in the usual manner between the axles and sand boards or bolsters 11 and 12.

The body-supporting bolsters 13 and 14 are pivotally mounted on the running-gear and are provided at their standards with braces 15, and curved supporting-bars 16 and 17 are secured to the front and rear hounds, and are located beneath the end portions of the bolsters 13 and 14 to form supports for the bolsters when the running-gear is turned or cramped.

The front bolster is provided at its upper face with a pair of horizontal rolls 18, journaled in bearings 19 and 20, and located at opposite sides of the pivot of the bolster. These rolls enable a load to be conveniently shifted backward or forward in adjusting the running-gear to the proper length, and prevent friction in turning the vehicle.

A pole 21 is connected with the vehicle by means of suitable couplings attached to the front terminals of the hounds 9, and to the ends of a cross-bar 22, which is secured to the rear end of the pole. The pole is provided with suitable braces, and the whiffletrees are mounted on it in the ordinary manner, and it has at its front end a hook 23, arranged at the lower face of the pole, and adapted to prevent the neck-yoke from slipping off the

pole and becoming separated therefrom. By confining the neck-yoke to the pole, run-aways, to a great extent, are prevented.

It will be seen that the running-gear is 5 simple and comparatively inexpensive in construction, that it is strong and durable, and that it is adapted to turn in a very small space with perfect safety.

Changes in the form, proportion, and minor 10 details of construction may be resorted to without departing from the principle or sacrificing any advantages of the invention.

What I claim is—

In a running-gear, the combination of the 15 front reach-section provided at its rear end with a horizontal bifurcation, the rear reach-section pivoted at its front end within the said bifurcation and the parallel upper and

lower horizontally-disposed circular bracket-bars passing through the bifurcations of the front reach-section, secured to the top and bottom of the same and extending forward at opposite sides of the front reach-section, and having its terminals secured to the same, said bracket-bars being arranged above and 25 below the rear reach-section and supporting the same, substantially as described.

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

OCTAVE ^{his} + GRAVEL.
mark

Witnesses:

W. O. MATTISON,
J. E. RINGER.