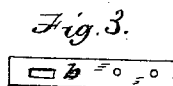
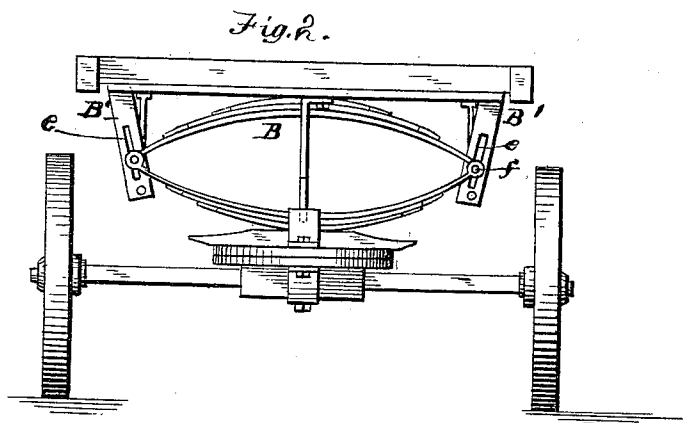
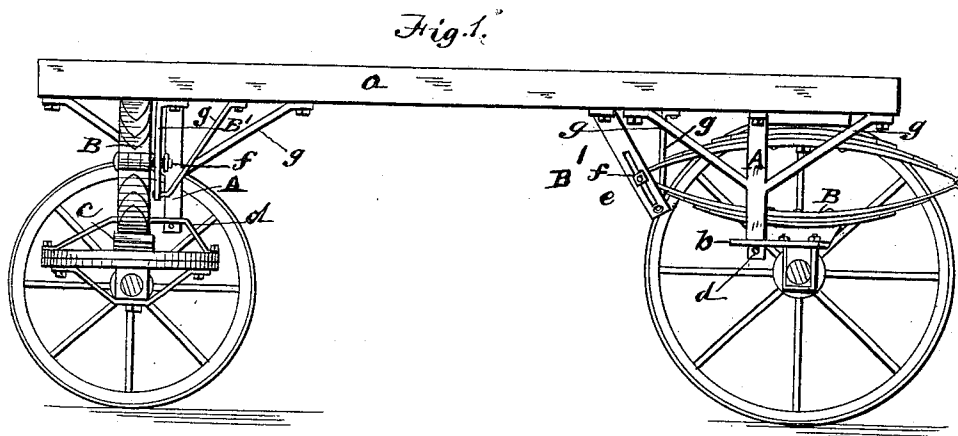


(No Model.)

J. W. ROBERTS.
RUNNING GEAR FOR VEHICLES.

No. 266,723.

Patented Oct. 31, 1882.



WITNESSES:
F. H. Knight
Harry Burkhard.

INVENTOR
John William Roberts
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his Attorneys

UNITED STATES PATENT OFFICE.

JOHN W. ROBERTS, OF DALLAS, TEXAS, ASSIGNOR OF TWO-THIRDS TO JOHN M. SHACKLEFORD AND SANFORD F. ROBERTS, OF SAME PLACE.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 266,723, dated October 31, 1882.

Application filed June 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. ROBERTS, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have
5 invented certain new and useful Improvements in Running-Gear for Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in
15 running-gear for vehicles, and has for its object, in common with others, to dispense with the reach or pole, and while doing this to provide for or avoid interference with the normal action of the springs, and to render it applic-
20 cable to vehicles already in use.

To these ends my invention consists in the employment of braces adapted to be connected to and permit the springs to have the required movement, and also of additional braces ar-
25 ranged between the body support or frame and axles, having the one a slotted plate and the other a slotted bridge, substantially as herein- after more fully set forth and claimed.

In the accompanying drawings, Figure 1 is
30 a side elevation, with the axles in section, of a vehicle running-gear embodying my improvements. Fig. 2 is a front elevation of the same, and Fig. 3 is a detailed view thereof.

In order to dispense with the reach or pole,
35 provision must be made to hold the axles and springs as against movement out of horizontal plane. To accomplish this I employ braces, (two or more,) disposed at each end of the run-
40 ning-gear. The braces A are pendants fastened to the body support or frame *a* at their upper ends, and having their lower ends passed the rear one through a slot in a plate, *b*, clipped

to and upon the upper side of the axle, and the front one through a slotted bridge, *c*, bolt-
ed to the upper plate of the fifth-wheel. The
45 bridge *c* crosses the lower half of the front spring. The lower ends of the braces A have passed transversely through them, be-
low the slotted plate and bridge, pins *d*, to pre-
vent the withdrawal of said ends by the move-
50 ment of the body. The braces A, at each end of the vehicle, keep the axles from rocking or going backward or forward.

To keep the springs B horizontal and at the same time not interfere with their normal ac-
55 tion, I secure to the body support or frame *a*, contiguously to the springs, braces B', inclined as shown, and having slots *e*, which receive bolts *f*, nutted and cushioned on opposite sides
60 of the braces. The braces A are suitably braced in position, as at *g g*, Fig. 1.

The bars or pendants B' may each be con-
nected to the bottom of the body by one or more braces, as shown.

When the body of the vehicle is depressed
65 the springs are elongated, and the slot of each bar B' being inclined outwardly from bottom to top, the distance from the slot of one bar to that of the opposite bar is increased in exact
70 proportion as the springs are elongated.

I claim and desire to secure by Letters Pat-
ent—

In a vehicle running-gear, the combination,
with the springs and laterally projecting and
75 nutted bolts, of the inclined braces B', having slots *e*, which receive said bolts, as and for the purpose specified.

In testimony whereof I affix my signature in
presence of two witnesses.

JOHN WILLIAM ROBERTS.

Witnesses:

F. S. ROBERTS,

J. M. SHACKLEFORD.