(No Model.)

T. POLING.

RUNNING GEAR FOR WAGONS.

No. 273,599. Patented Mar. 6, 1883.

Fig. 1

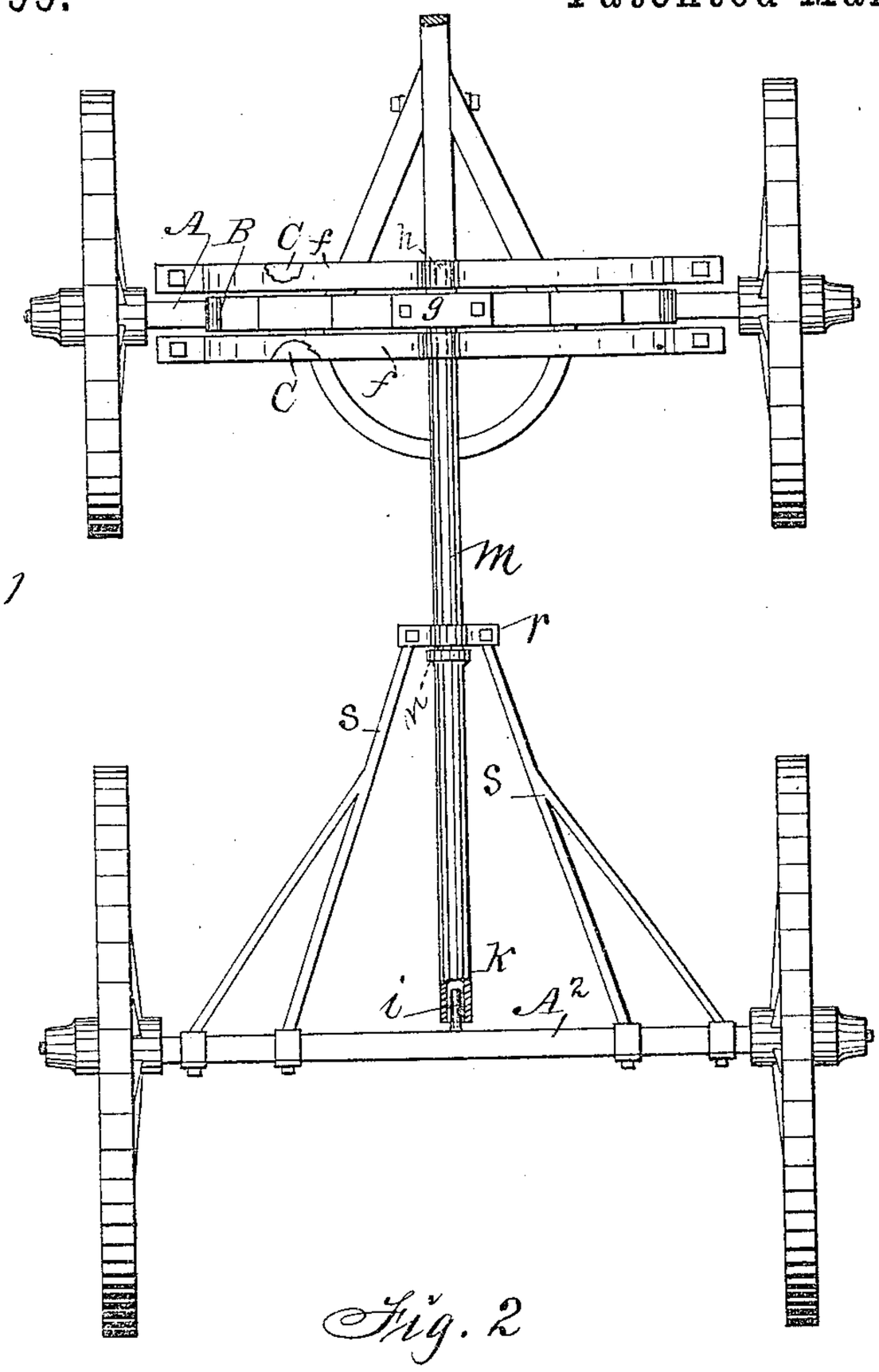
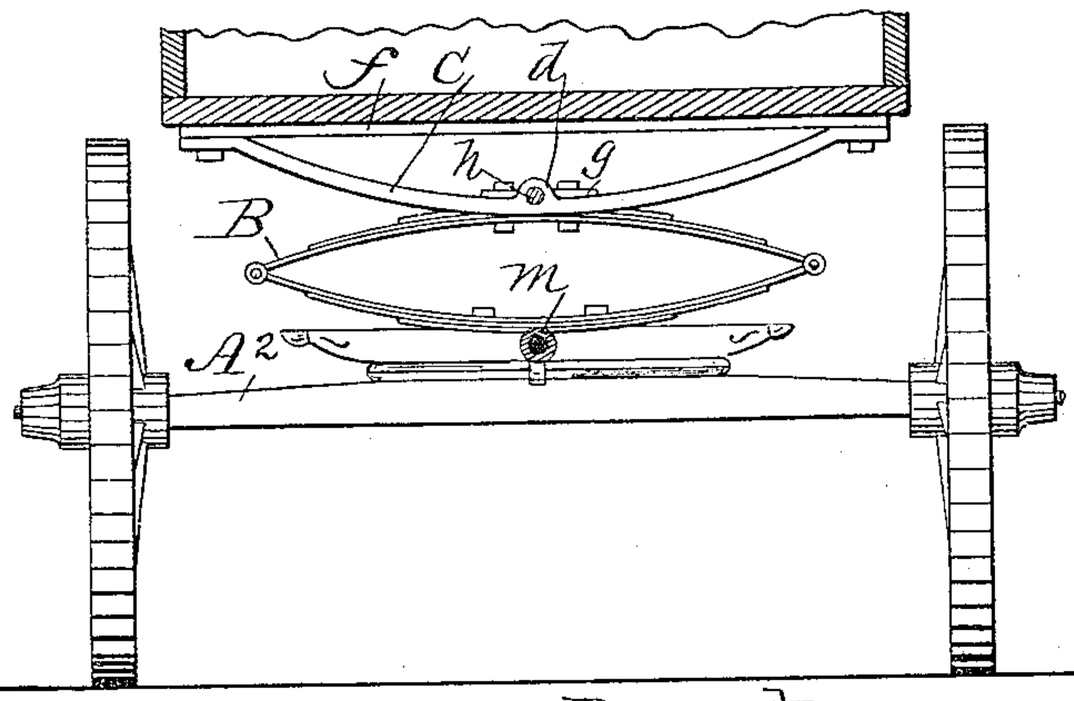


Fig. 2



Witnesses:
H. A. Stoltenberg.
G. W. Crank

Inventor:
Totten Poling.
By Thomas G. Orwig, Atty.

UNITED STATES PATENT OFFICE.

TOTTEN POLING, OF MENLO, IOWA, ASSIGNOR OF ONE-HALF TO H. N. ROSS, OF SAME PLACE.

RUNNING-GEAR FOR WAGONS.

SPECIFICATION forming part of Letters Patent No. 273,599, dated March 6, 1883.

Application filed November 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, TOTTEN POLING, of Menlo, in the county of Guthrie and State of Iowa, have invented an Improved Wagon-Gear, of which the following is a specification.

The object of my invention is to save time and labor in the construction of a wagon or carriage, and to form a flexible gear that will allow its wheels to successively rise and fall in passing over obstructions or advancing over a rough, uneven, or laterally-inclined surface without disturbing the level and balanced position of the box or body of the wagon or carriage or subjecting the persons or freight thereon to jars and concussions and displacement.

It consists, first, in forming and combining a duplex spring-bar with an elliptic spring at the front part of the gear in such a manner that the spring-bar and box or body thereon will have a vibrating motion relative to the spring and front axle; second, in the manner of combining the hind end of the wagon with a reach by means of a swivel-coupling in such a manner that the rear axle will have a vibratory motion relative to the reach and the box or body, all as hereinafter fully set forth.

Figure 1 is a top view of my improved gear. Fig. 2 is a transverse section of the front part of the gear. Together they clearly illustrate the construction and operation of my complete invention.

A represents the front axle of a vehicle.

B is an elliptic spring of common form.

C C are curved and rigid metal bars, having eyes *d* formed in or fixed to their centers, as clearly shown in Fig. 2.

f f are straight bars and struts that serve as chords to connect the ends of the curved bars C. They are fixed to the bars C by means of screw-bolts, or in any suitable way as required to support a box or body.

g is a metal plate that has gudgeons *h* extending laterally in opposite directions from its center. To combine the bars C with the spring B, and to produce a complete duplex and vibrating spring-bar, I bolt the plate *g* upon the top and center of the spring, and then hang the bars upon the gudgeons *h* by means of the eyes or bearings *d*, and connect them in parallel position with the under side of a box or body by means of bolts, or in any suitable way.

A^2 is the rear axle.

i is a pin projecting forward from the center of the axle into the tubular end or socket *k* of the reach *m*, which reach is preferably made of tubular wrought-iron, and pivoted to the front part of the carriage by means of a bolt, fifth-wheel, or in any suitable way.

n is a collar formed or fixed to the central portion of the reach *m*.

r is a swivel-coupling device, consisting of two plates having semicircular bends in their centers and perforations in their ends, combined with the front ends of the hounds and braces *s* by means of screw-bolts, to encircle the reach *m* in front of its collar *n* in such a manner as to restrict the rear carriage from longitudinal or backward and forward movement relative to the reach and front carriage, and also in such a manner as to allow the rear axle and carriage vibratory motion relative to the reach and the box or body mounted upon the complete gear.

I am aware that a jointed or divided reach has been used to allow the rear axle to vibrate relative to the front axle and box or body. I am also aware that braces extending from the rear axle have had a swivel-connection with a continuous solid reach that extended through a box fixed to the rear axle in such a manner as to allow a vibratory motion to the rear axle relative to the continuous reach; but my manner of pivoting a continuous reach to the rear axle by means of a pin and socket is novel and advantageous.

I claim as my invention—

1. In a carriage-gear, the combination of the duplex spring-bar consisting of the curved bars C, having eyes *d*, and the straight bars *f*, the plate *g*, having gudgeons *h*, and a spring, B, substantially as shown and described, for the purposes specified.

2. In a running-gear for wagons and carriages, the combination of a front axle, a spring, two curved spring-bars, each having an eye, a plate having gudgeons to engage the eyes of the spring-bars, a rear axle having a fixed pin projecting forward from its center, braces having a divided collar or coupling at their front ends, and a continuous reach having a socket at its rear end, substantially as shown and described, for the purposes specified.

Witnesses: TOTTEN POLING.

CHARLES W. MCDADE,

CHARLIE MCCONNELL.