

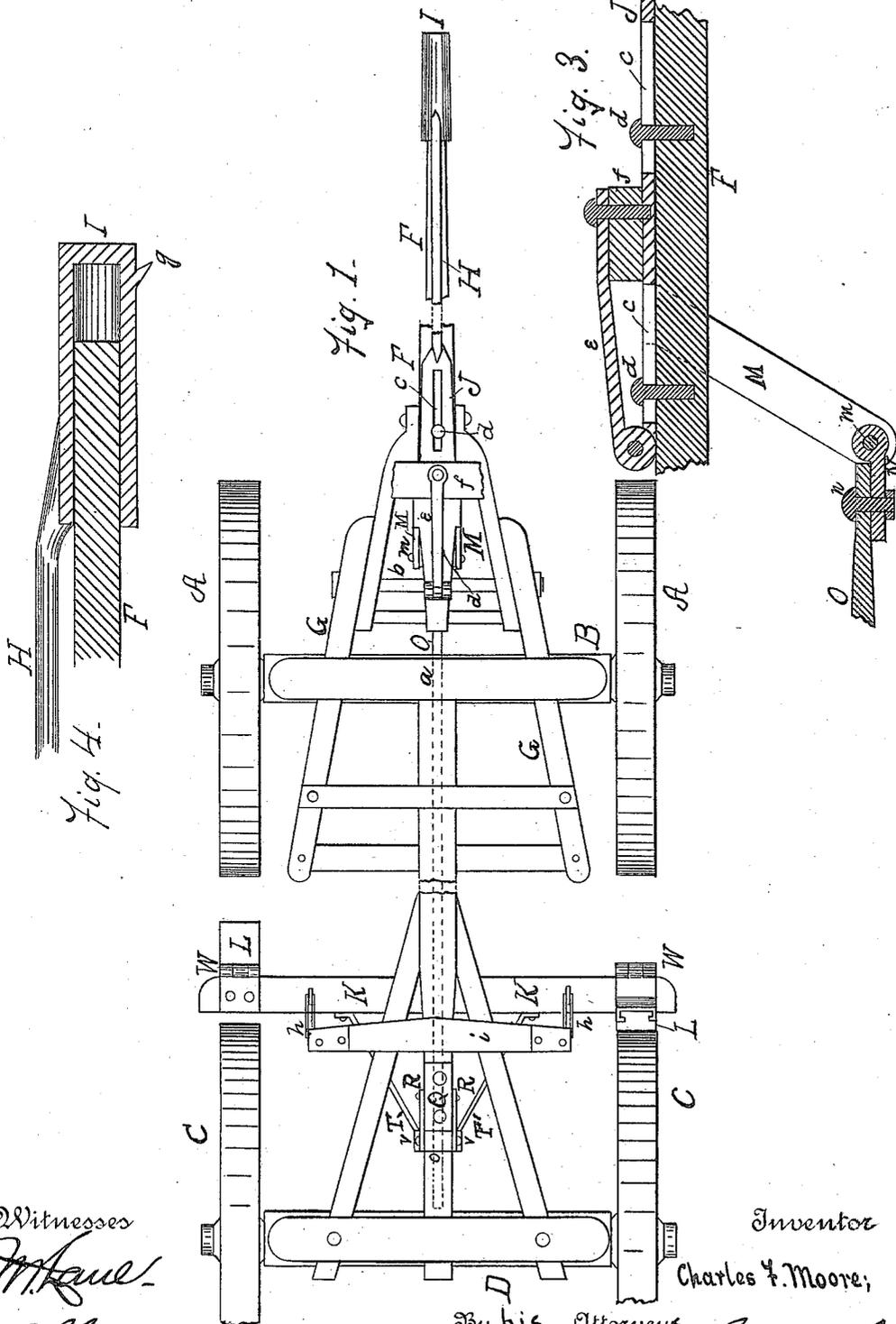
(No Model.)

2 Sheets—Sheet 1.

C. F. MOORE.
AUTOMATIC BRAKE.

No. 363,251.

Patented May 17, 1887.



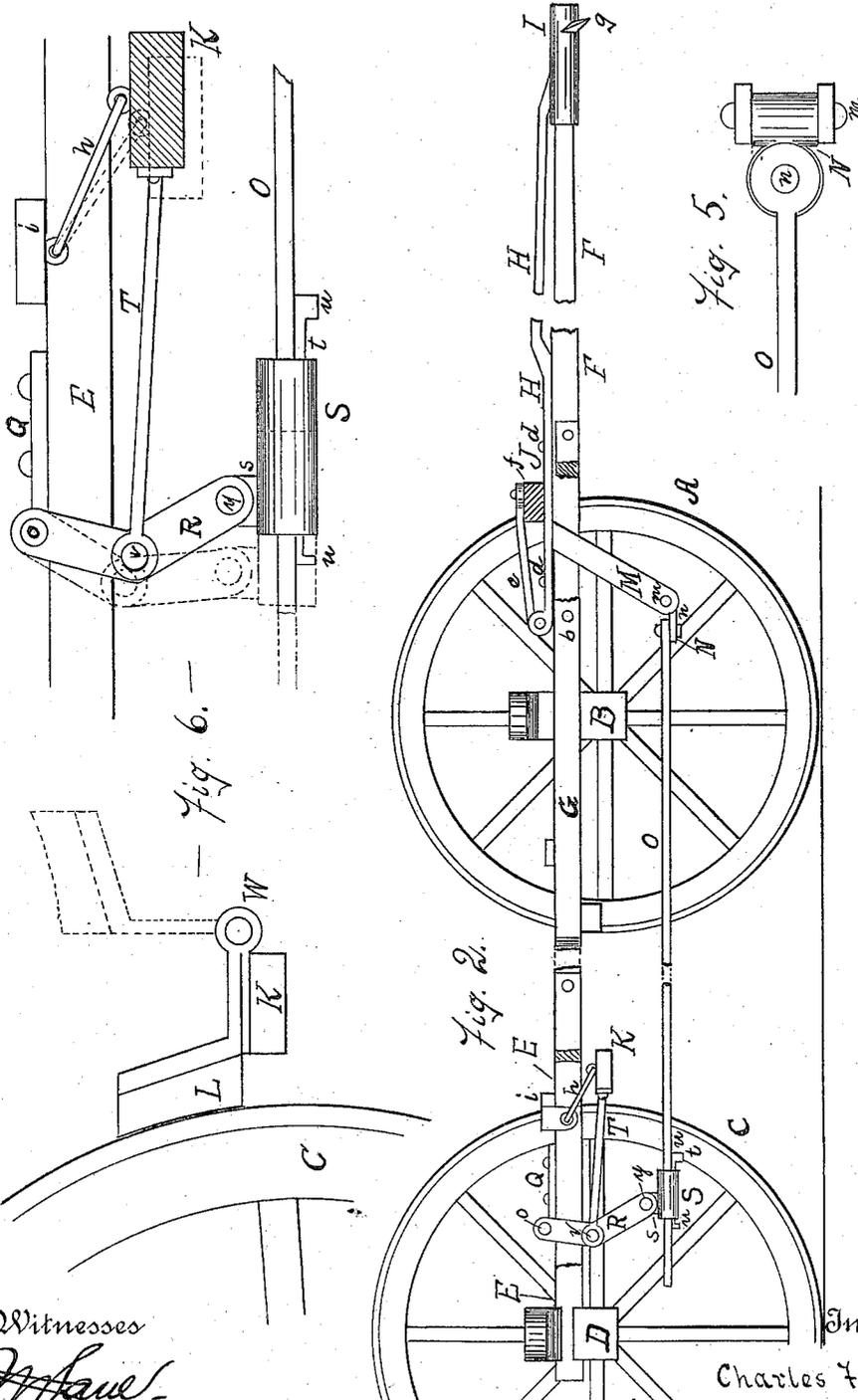
Witnesses
M. Faul
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Inventor
 Charles F. Moore;
 By his Attorneys,
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Witnesses
F. H. [Signature]
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Inventor
 Charles F. Moore;
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UNITED STATES PATENT OFFICE.

CHARLES F. MOORE, OF GILLETT, PENNSYLVANIA.

AUTOMATIC BRAKE.

SPECIFICATION forming part of Letters Patent No. 363,251, dated May 17, 1887.

Application filed January 8, 1887. Serial No. 223,785. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. MOORE, of Gillett, in the county of Bradford and State of Pennsylvania, have invented a new and Improved Automatic Vehicle-Brake, of which the following is a specification.

This brake belongs to that class of vehicle-brakes in which the brake is automatically applied to the rear wheels by the holding back of the horses in descending a hill or in stopping, and in which the brakes are also disconnected automatically when it is desired to back the vehicle; and, more particularly, this invention belongs to that class of automatic brakes which are used with vehicles having a pole which supports a sliding rod, the rod being connected to the yoke or holdback straps at its forward end and to the brake-operating mechanism at its rear end.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the running-gear of a vehicle provided with the brakes. Fig. 2 is a side elevation, partly in section; and Figs. 3, 4, 5, and 6 are views of parts in detail.

A A are the front wheels; B, the front axle; C C, the rear wheels; D, the rear axle; E, the reach, fixed to the rear axle and pivotally connected to the front axle at *a*; and F, the pole, pivotally connected by bolt *b* to the hound-frame G.

H is the sliding rod, which is carried on top of the pole F. This rod has on its front end a cap, I, which fits over and slides upon the end of the pole, and on its rear end a plate, J, having longitudinal slots *c c*, which embrace headed guide-bolts *d d*, secured to the pole, which hold the plate J in position on the pole and permit a limited sliding movement there-
to.

To the rear end of the pole-plate J is hinged a short bar, *e*, between which and the pole-plate is pivoted the whiffletree *f*, which slides back and forth with the sliding rod.

The cap I of the sliding rod is adapted to be connected with the yoke or holdback straps of the harness, it being shown with a depending lip, *g*, for that purpose. When the horses hold back, the cap I will be moved backward, and with it the sliding rod and whiffletree, and

when the horses again pull forward on the whiffletree the sliding rod and cap will be moved forward. This backward movement of the sliding rod is utilized to apply the brakes, and the forward movement releases them.

The brakes employed may be of any usual or desired kind. In the drawings a brake-bar, K, is shown extending beneath the reach in front of the rear wheels. This bar is pivotally suspended by links *h h* from a cross-arm, *i*, secured to the reach. On the outer ends of the brake-bar are carried the brake-blocks L L—one for each wheel. The rearward movement of the brake-bar applies the brakes, and its forward movement releases the same. The connection between the brake-bar and the sliding rod H is as follows: Rigidly secured to the pole-plate J are two downwardly and outwardly projecting arms, M M, which embrace the pole F on either side. These arms are pivoted by bolt *m* to a coupling, N. To this coupling is pivoted at *n* a rod, *o*, extending beneath the reach and parallel therewith. The pivotal connection between the extensions M M, the rod O, and coupling N, which turn in planes at right angles to each other, constituting a universal joint, permit the brake to be always applied without interfering with the rise and fall of the pole or the turning of the front wheels.

Hinged at *o* to a plate, Q, on the top of the reach, near the rear axle, is a yoke lever or strap, R, embracing the reach and extending below the same. The lower end of this yoke-lever is pivoted at *y* to an ear, *s*, on a tubular sleeve, S, which embraces and is keyed to the rod O by a key, *t*. By this means the sleeve S can be secured to any part of the rod O, so that the same mechanism can be applied to any size of vehicle. The key has projections *u u* at each end, so that if accidentally loosened when in use it cannot become lost, the rod O projecting far enough behind the sleeve so that it cannot be disconnected therefrom when the parts are once secured to the vehicle.

Between the pivots *o* and *y* of the yoke-lever, one pivoted on either side thereof, at *v*, are rods T T, which at their other ends are rigidly connected to the brake-bar K. It will be seen

that backward movement of the sliding rod H moves backward the extensions M M, the rod O, the yoke-lever R, and the brake-bar K, thus applying the brakes, and that a forward movement of the whiffletree disengages the brakes.

In order that the brakes need not be applied when it is desired to back the vehicle, the brake-blocks L L are hinged to the upper side of the bar K by hinges W. When the wheels are moving forward, the brakes will act upon them; but when the wheels are moving backward their friction on the brake-blocks will swing the latter upward on their hinges, thus disengaging them.

I claim as my invention—

1. The turning front wheels of a vehicle, the pole pivotally connected thereto, a sliding brake-operating rod carried by said pole, and brakes which co-operate with the rear wheels of the vehicle, in combination with downward extensions M M, rigidly secured to the said sliding rod, longitudinal rod O, extending beneath the vehicle and connected with the brake mechanism, and coupling N, pivoted to said extensions M M and rod O, the pivots being such that the planes in which they turn are at right angles to each other, substantially as set forth.

2. The pole of a vehicle, a sliding brake-operating rod carried thereby, said rod having

a cap which fits over and slides upon the end of the pole, and having also a slotted plate, by which it is connected to the pole so as to slide thereon, and the whiffletree carried by and sliding with said sliding plate, in combination with the swinging brake-bar K, brake-blocks L L, carried by said brake-bar, downward extensions M M, rigidly secured to the said sliding rod on the pole, longitudinal rod O, connected to said extensions and extending beneath the body of the vehicle, the yoke-lever R, pivoted at opposite ends to the reach and to said longitudinal rod O; and the rods T T, attached at opposite ends to the brake-bar K and to the yoke-lever between the pivoted points thereof, substantially as herein set forth.

3. The yoke-lever R and the longitudinal rod O, in combination with the coupling-sleeve S, connected to the yoke-lever, and through which the rod O passes, and the key *t*, having projections *u u* at each end, said key connecting said sleeve and rod, substantially as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES F. MOORE.

Witnesses:

C. O. PITT,
A. H. SEAFUSE.