

J. C. ZWEIDINGER.
Vehicle-Brake.

No. 216,076.

Patented June 3, 1879.

Fig. 1.

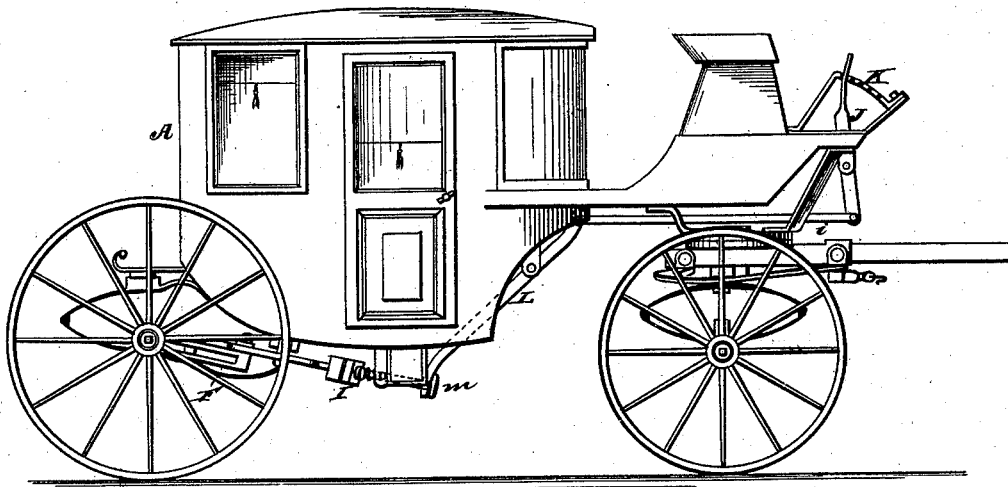


Fig. 2.

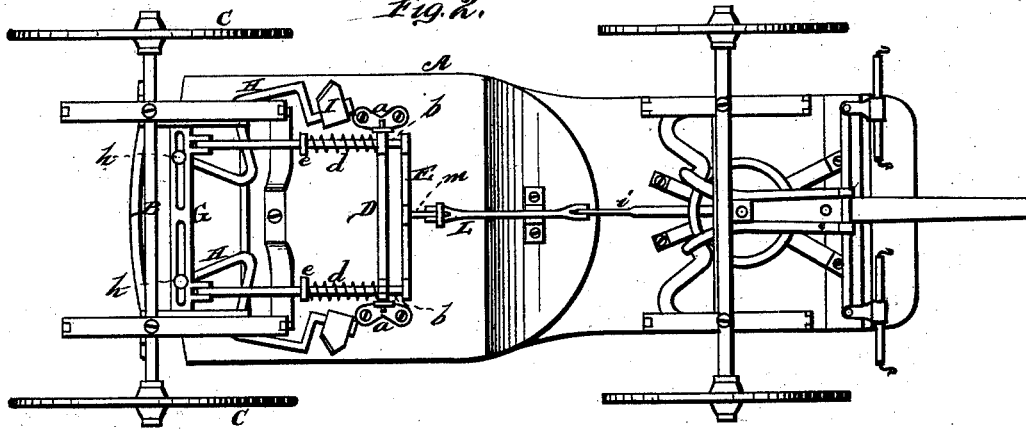
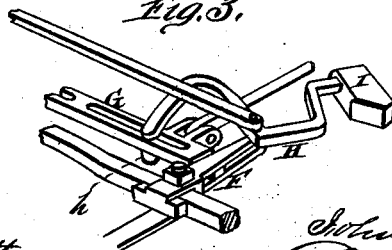


Fig. 3.



WITNESSES

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IMPROVEMENT IN VEHICLE-BRAKES.

Specification forming part of Letters Patent No. **216,076**, dated June 3, 1879; application filed May 7, 1879.

To all whom it may concern:

Be it known that I, JOHN C. ZWEIDINGER, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and valuable Improvement in Carriage-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of a carriage with my carriage-brake applied. Fig. 2 is a bottom-plan view, and Fig. 3 is a perspective detail thereof.

The nature of my invention consists in the construction and arrangement of a brake for carriages and wagons, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the body of a carriage, supported at the rear end by the axle B, with wheels C C and suitable interposed springs. At the front end the carriage-body A is supported upon the usual fifth-wheel, springs, axle, and wheels.

On the under side of the carriage-body are secured two hangers, *a a*, in which is pivoted or journaled a bar, D, having at or near each end an eye or hole for the passage of two parallel rods, *b b*, the front ends of which are connected by a cross-bar, E. Around each rod *b*, in rear of the journal D, is placed a spiral spring, *d*, the rear end of which bears against a collar, *e*, on the rod.

To the hind axle, B, are secured two slotted arms, F F, one at each side, and in said arms is placed a sliding bar, G, capable of moving backward and forward. This sliding bar has on its front side suitable ears, between which the rear ends of the rods *b b* are pivoted.

At the front end, on top of each arm F, is pivoted an angular lever, H, of the form shown in the drawings. The front end of each lever H has attached to it a brake-shoe, I, and from the rear end projects a stud, *h*, down through an elongated slot in the sliding bar G.

At the front of the carriage is pivoted the brake-lever J, having a suitable ratchet, K, arranged at the side of it for holding the same locked. The lower end of this lever is by a rod, *i*, connected with the upper end of a pivoted arm, L, the lower end of which is forked, and straddles a headed pin, *m*, attached to the cross-bar E of the brake apparatus.

The normal position of the levers H is such that the brake-shoes will be entirely under the carriage; and when the brake-lever J is pushed forward the bar G is moved forward, so that the studs *h* passing through the slots therein will cause the levers H to turn upon their pivots and throw the brakes outward on a circle against the hind wheels. As soon as the brake-lever is released the springs *d* return the parts to their former positions.

It will be noticed that the entire mechanical part of the brake is attached to the hind running-gear of the carriage, with the exception of the movable journal D and the brake-lever, which are attached to the carriage-body. The slotted or forked arm connected to the brake-lever and attached loosely to the brake apparatus prevents any jamming in the action of the brake.

The movable journal D accomplishes the following results, viz: No matter in what position the carriage-body or running-gear may be, be such position caused either by too much weight or obstructions, the brake-action will always remain plumb, and can be operated at any time without any difficulty or fear of jamming in any of its parts. Further, by the mode of the brake throwing out from under the carriage-body in a circle to the face of the wheels a sure, strong, and instantaneous brake is obtained; and then by means of the springs the brake is thrown back under the body of the carriage, thereby preventing the accumulation of mud and dirt, which would be annoying to parties alighting from the carriage.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the levers H, with shoes I and studs *h*, and the slotted sliding bar G, said bar sliding in and the levers piv-

oted on arms F, attached to the hind axle of a carriage, as herein set forth.

2. In combination with the sliding bar G, pivoted levers H, and shoes I, the rods *b* and movable journals D, suspended from the carriage-body, as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name.

JOHN C. ZWEIDINGER.

Witnesses:

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