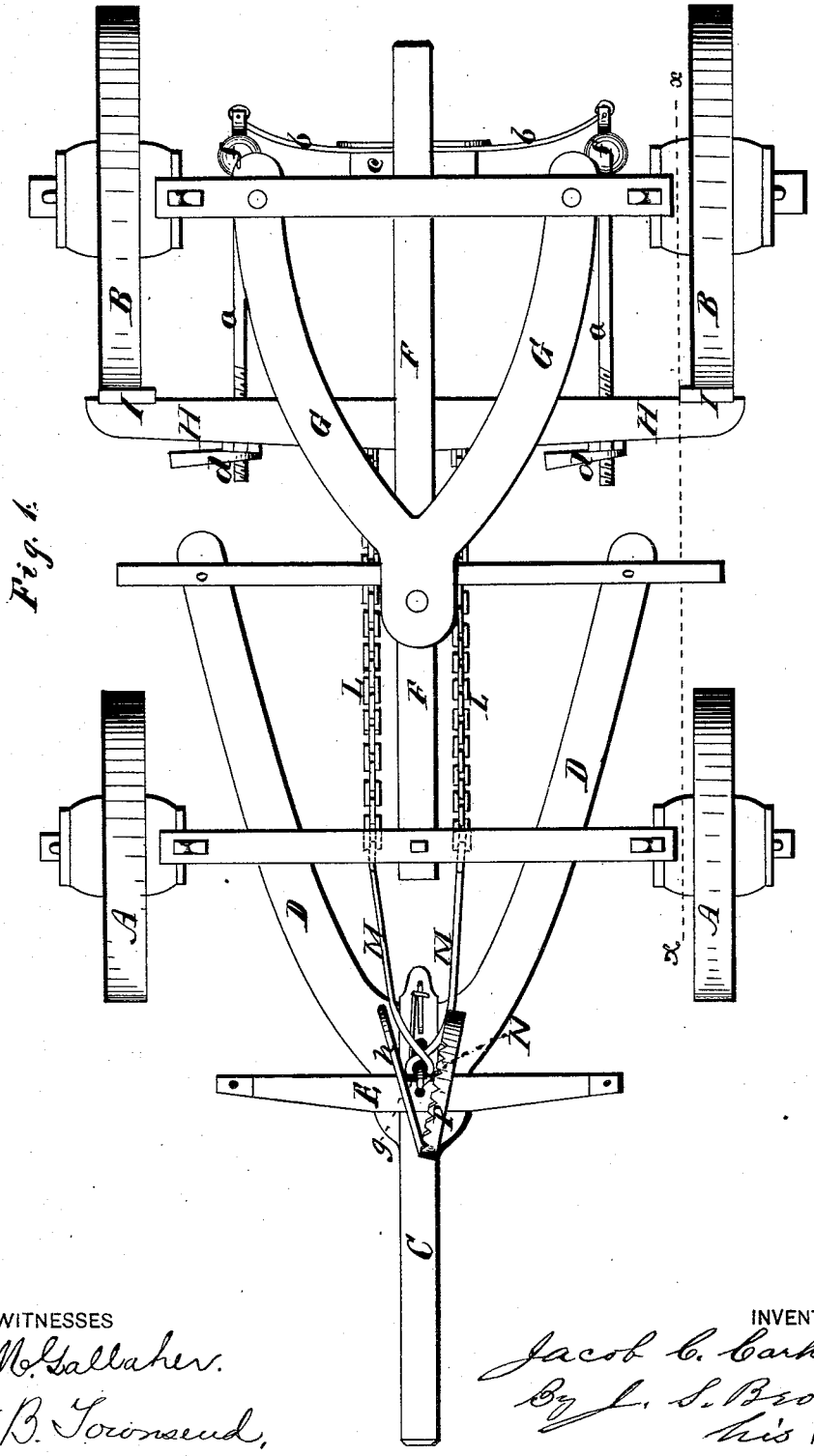
2 Sheets--Sheet 1.

# J. C. CARHART.

## Wagon-Brake.

No. 162,623. Patented April 27, 1875.

Fig. 1.




WITNESSES

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2 Sheets--Sheet 2.

# J. C. CARHART.

## Wagon-Brake.

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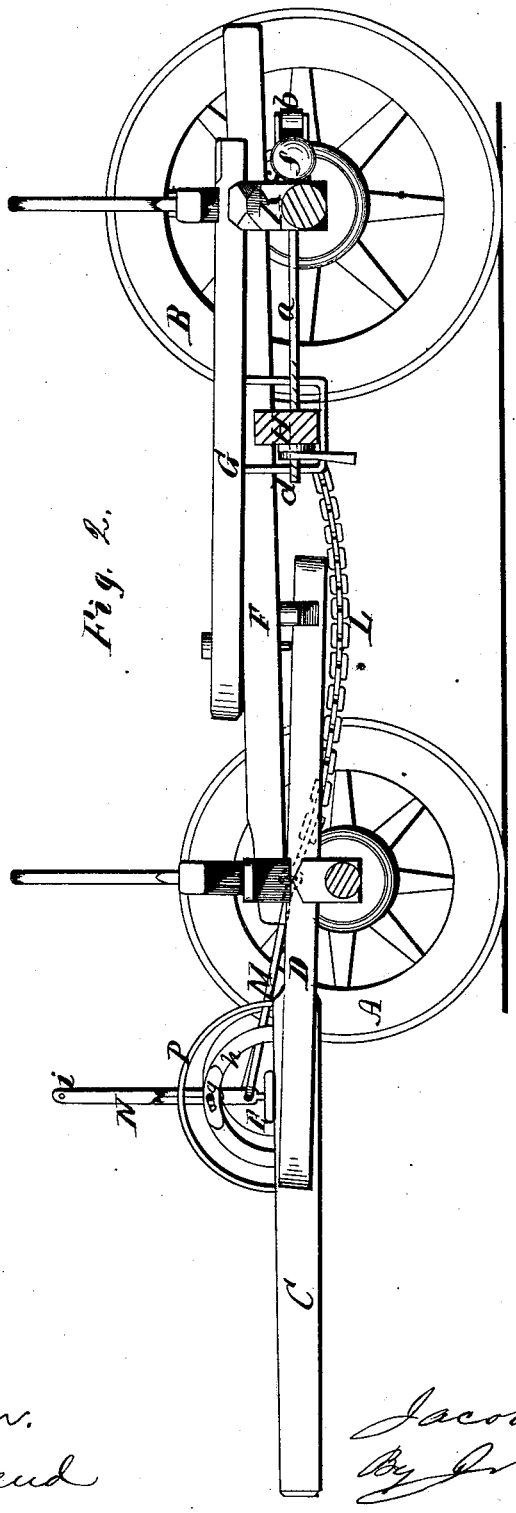


Fig. 2.

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# UNITED STATES PATENT OFFICE.

JACOB C. CARHART, OF ACKERMANVILLE, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH D. SHIMER, OF MARTIN'S CREEK, PENNSYLVANIA.

## IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **162,623**, dated April 27, 1875; application filed March 29, 1875.

*To all whom it may concern:*

Be it known that I, JACOB C. CARHART, of Ackermanville, in the county of Northampton and State of Pennsylvania, have invented an Improved Carriage and Wagon Brake; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a top view of the running-gear of a wagon provided with my improved brake; Fig. 2, a longitudinal vertical section of the same in a plane indicated by the line *x x*, Fig. 1.

Like letters designate corresponding parts in both figures.

The nature of my invention consists in an improved construction of a carriage or wagon brake, so as to be always self-acting while the carriage or wagon is moving forward; and, when it is desired to back the same, the brake can be set so as not to interfere therewith by simply moving a lever within reach of the driver, all substantially as herein specified.

In the drawings, A A represent the front wheels of the wagon-gear; B B, the hind wheels; C, the tongue or pole; D D, the front hounds; E, the whiffletree; F, the connecting pole or reach between the front and hind axles; G G, the rear hounds; H, the brake-bar, and I I the brake-rubbers acting on the hind wheels. The brake-bar H is connected, by two rods, *a a*, with the hind axle K, back through which they extend, and are secured, respectively, to the ends of a spring, *b*, that is attached in the middle to a block or projection, *c*, on the rear of the axle. This spring draws the brake-bar backward, and presses the brake-rubbers I I against the front edges of the hind wheels B B with sufficient force to produce the requisite brake power when the team is not moving forward, or when the wagon is going down hill, and presses on the team. This brake force is regulated by two screw-nuts, *d d*, turned upon the screw-threaded forward ends of the connecting-rods *a a* in front of the brake-bar, as shown. In addition to the strength of the brake-spring *b*, there are two india-rubber balls, *f f*, or equivalent kind of compression-springs, one on each rod *a*, to prevent the drawing of the brake-bar too far forward when the team is drawing the wagon, and thus also to prevent too much strain being exerted on the spring *b*. The brake-bar H is connected forward, by a chain or chains, L L, with a forked rod or clevis, M, or its equivalent; and the forward end of this clevis is connected, by an eye or other suitable means, with the whiffletree E, by which the wagon is drawn. Thus, as the team draws upon the whiffletree to draw the wagon, it also draws upon the chains L L, and consequently draws the brake-bar H forward, away from the wheels B B, and the wheels turn freely; but, when the team stops drawing, or when the wagon descends a hill by its own weight, the brake-bar is again immediately pressed against the hind wheels by the spring *b*. The whiffletree E has, by means of a connecting-pin sliding in a slot of the tongue or pole C, or pivoted thereto, a sufficient movement forward and backward to allow the brake-bar H to be drawn forward from the wheels, and again forced backward against them.

In order to provide for backing the wagon on level ground without the interference of the brake, the whiffletree E is attached to, or connected with, an upright lever, N, which is pivoted at *g* to supports *h h*, fixed above the tongue, so that as the upper end of the lever is drawn backward, the clevis and whiffletree are moved forward thereby, and vice versa. In connection with this lever a concentric ratchet-bar, P, is secured upon the wagon-tongue, as shown, so that the adjacent acute edge of the lever can catch into any one of the abrupt notches of the said ratchet-bar, and hold the whiffletree and clevis in a fixed position.

When the upper end of the lever is drawn back sufficiently to move forward the clevis, and, through the chains L L, thereby draw the brake from the wheels, the spring *b* is prevented from forcing the brake against the wheels as the team ceases to draw upon the whiffletree in backing, and thus there is nothing to interfere with the backing. This lever may be operated by hand or foot, being placed within reach of the driver; or, if the construction of the wagon or carriage is such that the

driver cannot conveniently reach the lever, he can operate it by means of a cord attached to the upper end *i* of the lever, and reaching back to him. The whole construction of the brake is simple, cheap, strong, and durable, and its operation is convenient and effective.

The use of the chains L L enables the wagon to turn without disarranging the brake; and as short a reach between the front and hind wheels as desired may be used.

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

1. The combination of the brake-bar H, adjustable connecting-rods *a a*, and springs *b f f*, substantially as and for the purpose set forth.

2. The combination of the brake-bar H, chain or chains L L, clevis M, and whiffletree E, substantially as and for the purpose set forth.

3. The combination of the lever N and ratchet-bar P with the whiffletree E, clevis M, chain or chains L L, and brake-bar H, substantially as and for the purpose set forth.

Specification of my improved wagon and carriage brake signed by me this 28th day of January, 1875.

JACOB C. CARHART.

Witnesses:

R. N. MERRILL,

J. S. BROWN,

MARSHAL KEIFER.