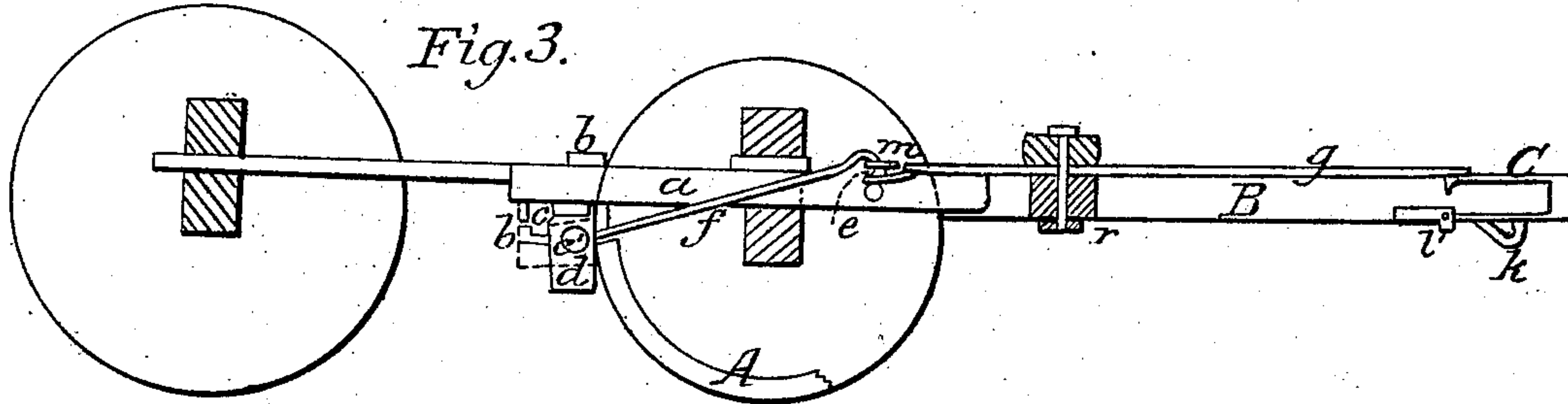
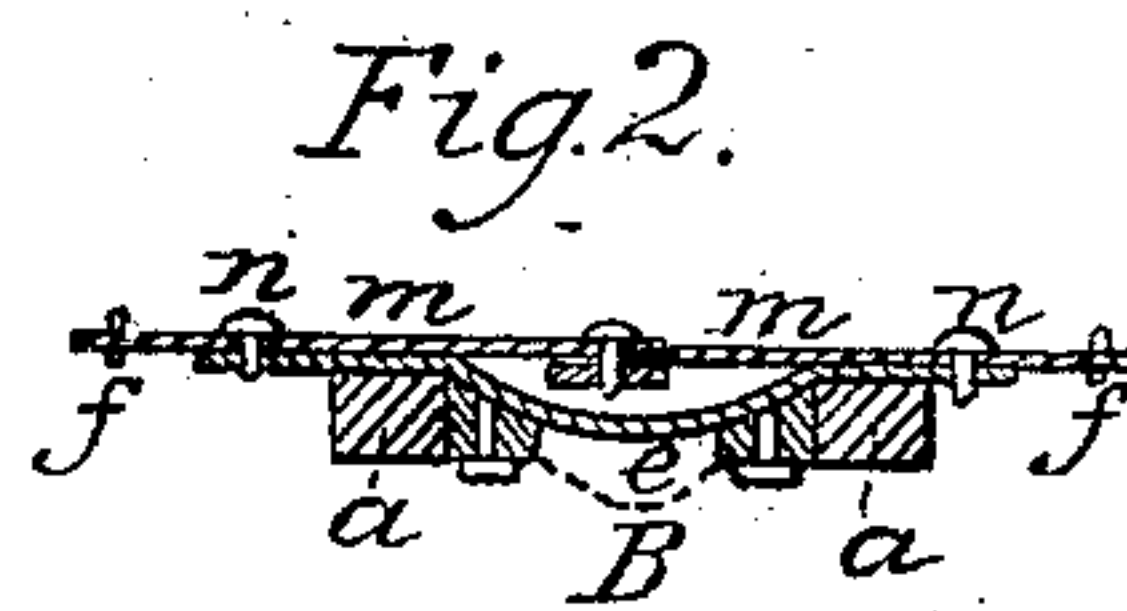
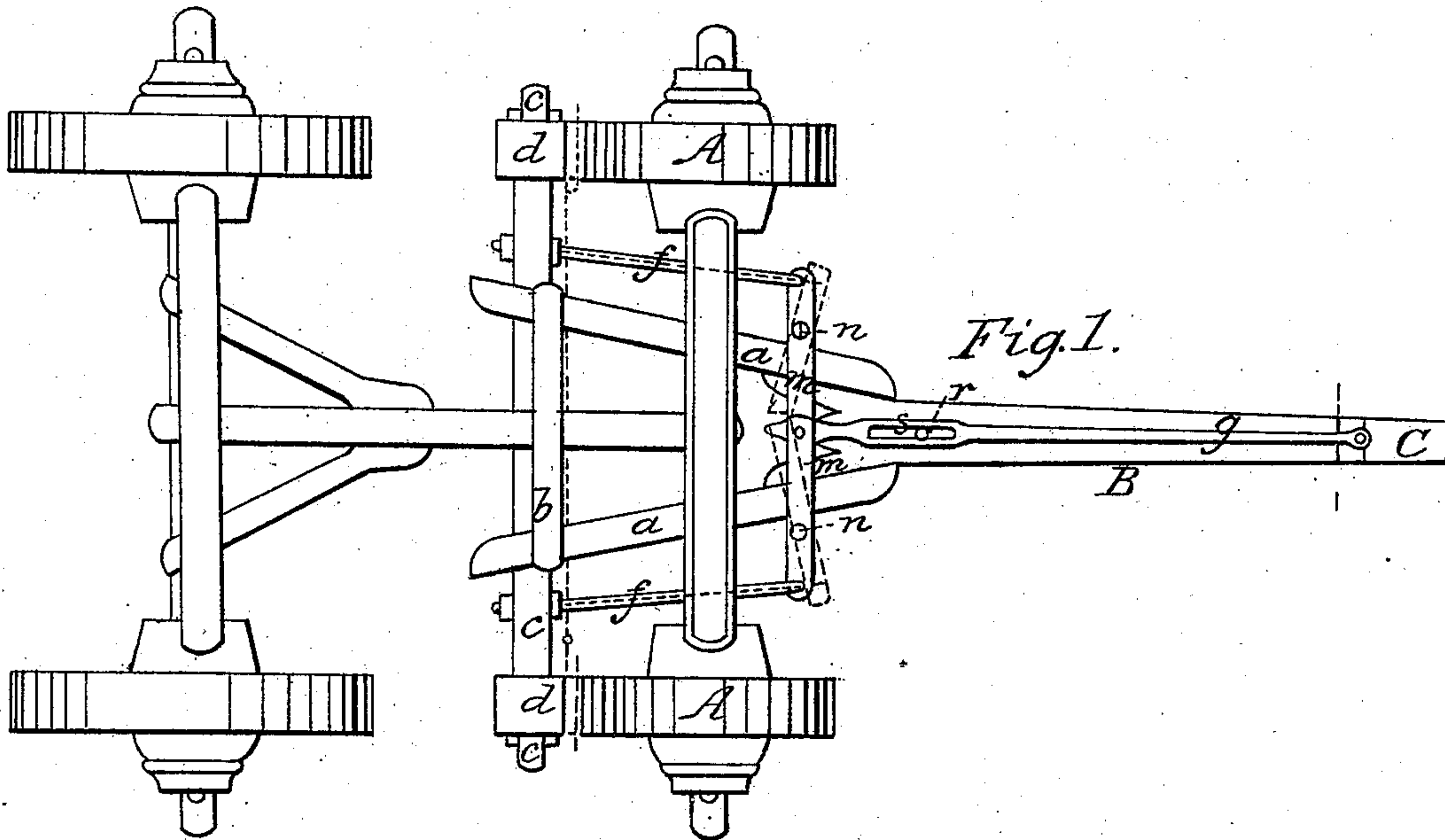


C. J. CROUNSE.

Wagon Brake.

No. 93,682.

Patented Aug. 17, 1869.



Witnesses

Alex. Seibert.

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CONRAD J. CROUNSE, OF CLARKSVILLE, NEW YORK.

Letters Patent No. 93,682, dated August 17, 1869.

IMPROVED WAGON-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CONRAD J. CROUNSE, of Clarksville, in the county of Albany, State of New York, have invented a new and useful Improvement in the Mode of Constructing and Operating Brakes for Wagons; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a vertical view, from above, of a wagon with improvement attached.

Figure 2 is a lateral cross-section through the brake-levers.

Figure 3 is a longitudinal cross-section of wagon with the improvement.

The nature of my invention consists in operating, from the end of the pole or tongue of the wagon, a pair of levers, and by them a pair of draw-rods, to effect the braking of the wheels of the vehicle by means of the usual brakes.

This is effected by furnishing the end of the pole of the wagon with a sliding socket, to which socket is connected a bar, (which I term the braking-bar,) communicating with the operating-levers.

The sliding socket is furnished with the usual hold-back-staple, against which the usual ring of the neck-yoke acts. The backing-bar is provided with an oblong slot, in which the double-tree bolt works. The operating-levers have their fulcrum made to a bar bolted or otherwise secured to the rear end of the pole. When the parts are thus constructed and arranged, in descending a hill, the holding back of the neck-yoke, by the animals, against the staple or sliding socket on the end of the pole, will cause the backing-bar to operate the levers, and draw the brake-shoes against the face of the wheels. The pressure of the said brake-shoes against the face of the wheels will always be in proportion to the descent of hill, or the weight of the load carried, or both.

To enable others skilled in the art to make and use my invention, I will proceed to describe it, in reference to the accompanying drawings, and the letters of reference marked thereon, the same letters indicating like parts.

In the drawings—

A A represent the fore wheels of a wagon.

a a represent the usual hounds which receive the rear end of the tongue in front, and steady and support in the rear, with the bars b, the usual reach which connects the front axle with the back axle of the carriage.

Placed below the rear end of the hound a a, figs. 1 and 3, is the brake-bar c, which brake-bar is held in place by oblong staples, b, shown in fig. 3. The said brake-bar c thus placed and held, is free to slide toward and from the wheels A A.

Attached to the arms c' c' of the brake-bar c are the brake-shoes d d, which brake-shoes are to act against the face of the wheels A A when thrown in action.

B is the usual pole of the wagon, the rear end of which works between the hounds a a, and is pivoted in the usual way thereto.

Bolted, or otherwise firmly secured to the rear end of the pole, is the fulcrum-bar e, fig. 2, to which a pair of levers, m m, is pivoted by the pivots n, figs. 1 and 2.

To the outer ends of the said levers m m are attached the draw-rods f f, which connect with the brake-bar c, figs. 1 and 3, and operate it.

By this attachment of the fulcrum-bar e to the pole B instead of to the hounds a, the end of the said pole can be raised up or thrown down, without disturbing or weakening in the least the attachment of the said fulcrum-bar e to the said part of the wagon.

The pole B is furnished, on its extreme end, with a sliding socket or sleeve, C, to which is attached a holdback-staple, h, fig. 3.

The said sliding socket C is so fitted to the pole as to be free to move.

A stop, i, is also provided on the pole, back of the socket C, to limit the extent of the backward movement of the said socket.

Attached to the socket C is the backing-bar g, which, connects with the lapping ends of the levers m m at a point on a line with the centre line of the pole.

When the sliding socket C is thrown back to the shoulder V, the backing-bar h will be crowded back, and will carry with it the long arms of the levers m m, to the position shown by red lines, fig. 1.

The long arms of the said levers being thus thrown back, the short arms of the same will be thrown forward, and will draw upon the draw-rods f f, and pull the brake-bar c forward, so that the brake-shoes d d will impinge against the face of the wheels, as shown by red lines in fig. 1, and in full in fig. 3.

In backing up a wagon with this invention attached, the said backing would throw the brake-shoe d d against the wheels; but as the said brake-shoes are hung from near their upper ends, as shown in fig. 3, the reverse movement of the wheels would cause the said brake-shoes to throw out from full contact with the wheels, as shown by red lines in fig. 3, while the stop i, back of the sliding socket, would prevent a further throw of the shoes, as they would stand against the wheels A A.

The backing-bar g is provided with a slot, S, fig. 1, which is to receive the evener-bolt, which bolt works into a slotted hole, r, made in the pole, as shown in fig. 3; which slotted hole gives permission for the evener-bolt to work back or forward, as may be required.

When the animals attached to the wagon draw

forward, the evener, carrying its bolt with it, carries the backing-bar forward, and throws back, by means of the levers *m m*, and rods *f f*, the brake-bar *c*, and releases the wheels *A A* from contact with the shoes *d d*.

These several devices, and their manner of operation, are equally applicable to sleighs, to throw their brake-claws into action.

It is not always necessary to attach the fulcrum-bar *e* with the levers *m*, and backing-bar *g*, for proper operation on the upper side of the several parts of the wagon, as they will operate equally as well as when placed beneath.

Neither is it necessary, for proper operation of the brake-bar *c*, and its shoes, *d d*, that they should slide beneath the hounds *a a*, as the staples may be dispensed with, and the said bar *c* may be hung from the eye-joints, and effect a movement toward the wheels by a swinging motion.

This mode of constructing the several parts, and their application to all wagons, possesses greater advantage over those automatic brakes which operate by the pole working longitudinally between the hounds; for when that class of brakes is to be applied, the

hounds have to be replaced with new one furnished with inner parallel surfaces, or the old ones built up, and furnished with the same, while the rear end of the pole must needs be altered to suit such altered hounds. But with my invention the great objection is removed; for none of the parts of the wagon need to be altered, except the end of the pole, which needs only to be redressed to receive the sliding socket, which would be of but little expense.

Having described my invention,

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

1. The combination of the levers *m m*, draw-rods *f f*, with the fulcrum-bar *e*, when the said fulcrum is attached to the pole in the manner substantially as described for the purpose set forth.

2. The sliding socket *C*, working on the end of the pole *B*, and the backing-bar *g*, in combination with the levers *m*, draw-rods *f f*, and the brake-bar *c*, substantially as and for the purpose set forth.

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Witnesses:

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