

Wagon Brake.

Patented Nov. 3, 1868.

Fig. 1.

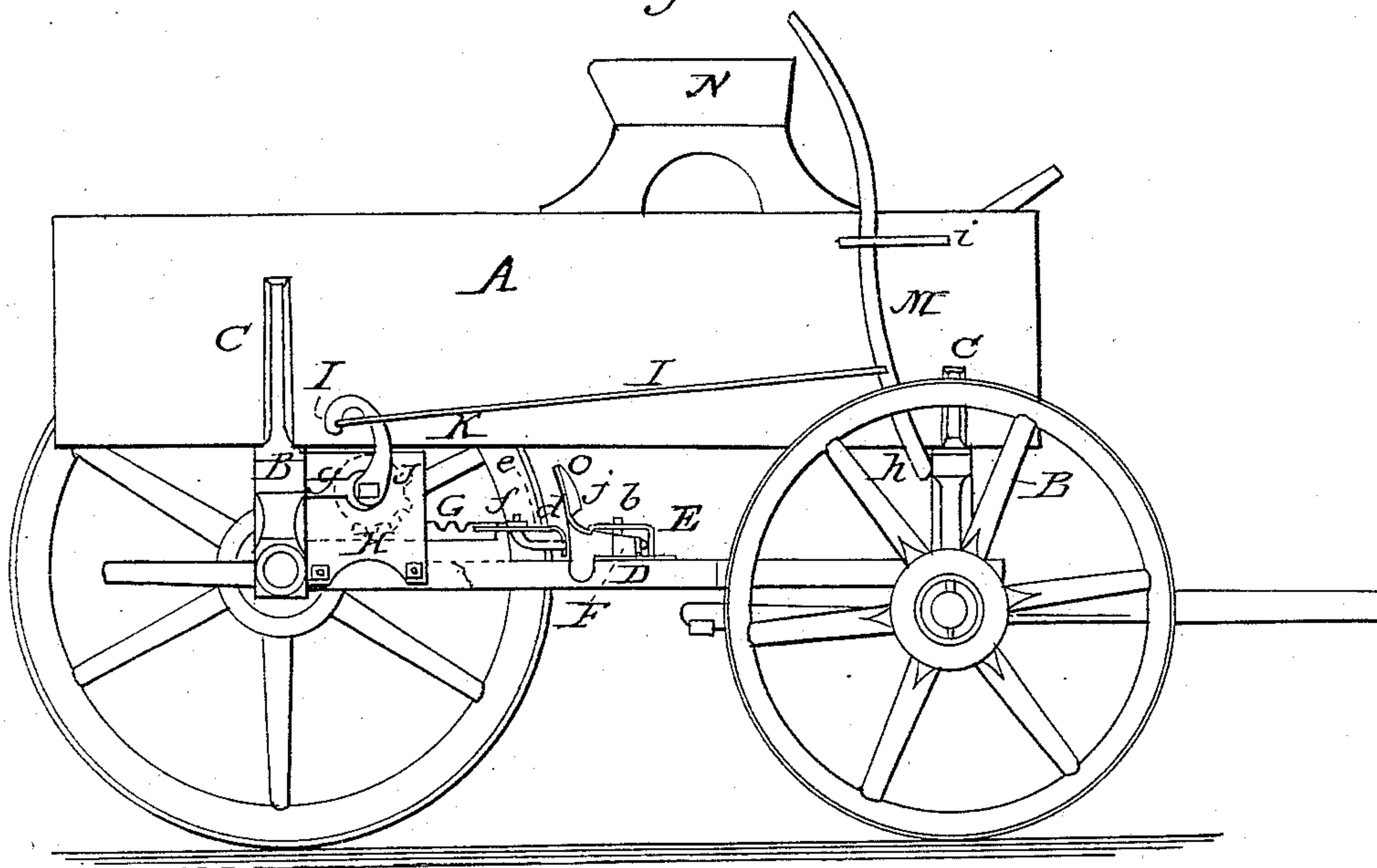
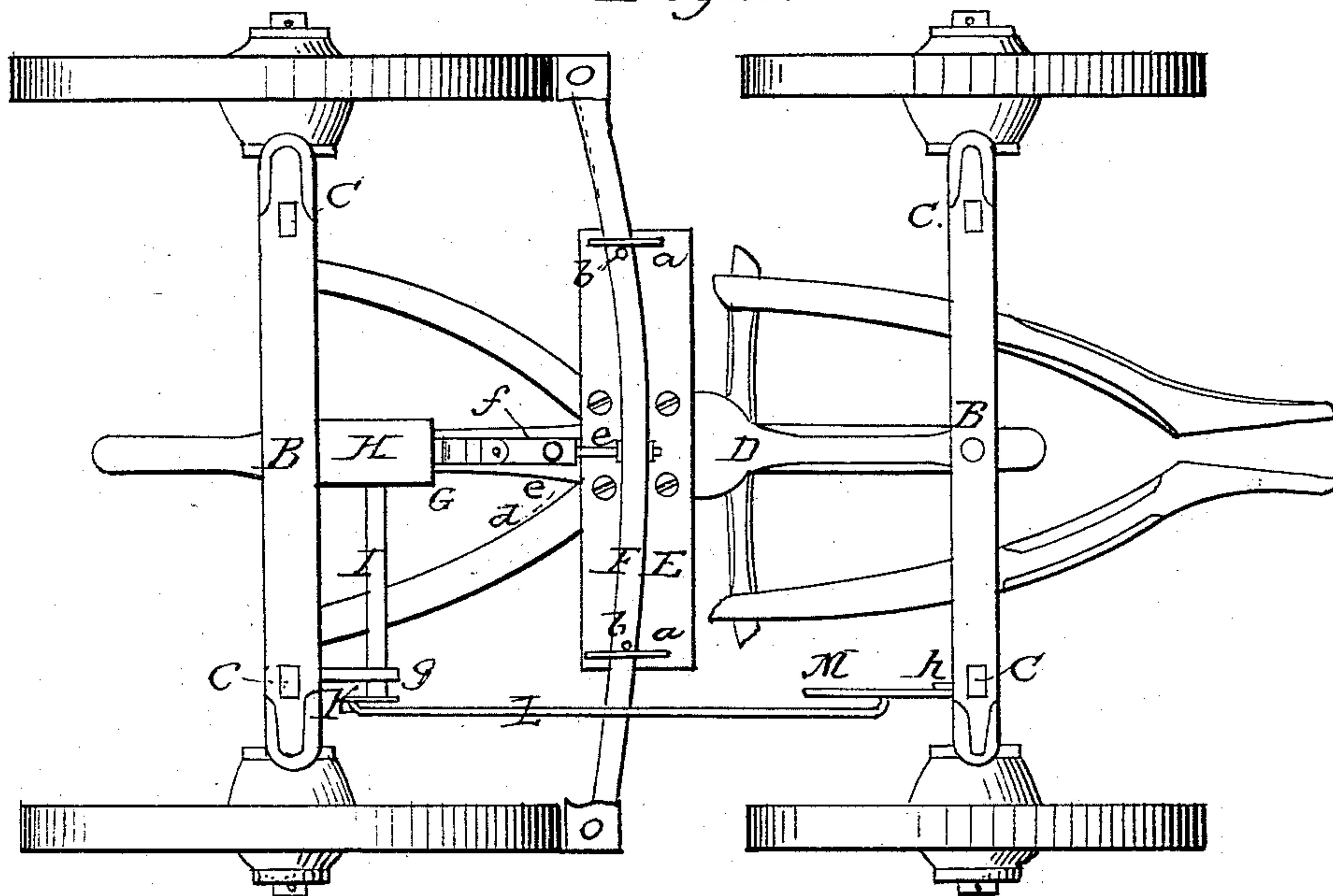


Fig. 2.



INVENTOR:

Jacob F. Henry
Phil D. Lerner

George McKenzie
By his attorney
Wiederholm & Co
Per K.

United States Patent Office.

GEORGE MCKENZIE, OF ZANESVILLE, OHIO.

Letters Patent No. 83,781, dated November 3, 1868.

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, GEORGE MCKENZIE, of Zanesville, in the county of Muskingum, and State of Ohio, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side elevation of a wagon, having my improvements attached, one of the hind wheels being removed, and

Figure 2, a top view of the same, the wagon-box or body being removed from the running gear.

My improvements relate to that class of wagon-brakes which are operated by means of a hand-lever.

A large proportion of the wagon-brakes hitherto invented have never been extensively used, for the reason that, owing to their complicated nature, their cost, at first considerable, is largely increased because of their frequent liability to get out of order so as to necessitate repairs.

My invention has for its object the production of an inexpensive, yet effective brake, readily applicable to vehicles already manufactured, easily operated, and which shall not be liable to get out of repair.

My invention consists, first, in operating the sliding-brake bar, by means of a hand-lever, through the medium of a rack and pinion, together with the devices employed for perfecting the same; and, second, in providing tire-scrappers to be attached to the ends of the brake-bar, for the purpose of preventing the destructive wearing of the parts which come in contact with the wheel, all of which will hereinafter be more fully described.

In order to enable those skilled in the art to which my invention appertains, to make and use my brake, I will now proceed to describe the same more fully in detail, with reference to the accompanying drawings, in which similar letters indicate corresponding parts in the two figures.

A, in the drawings, represents the wagon-box or body, supported upon bolsters, B B, between uprights, C, as usual. D is the reach, on the top of which, near the centre, a flat transverse plate, E, of metal is secured by means of screws. On this plate, E, the brake-bar F is permitted to move back and forth in guides *a a*, affixed to the upper side of said plate, E, one near each end of the latter. Pins *b b* projecting from the brake-bar prevent the longitudinal movement of the latter, as shown clearly in fig. 2.

c represents a screw-rod, passing through the centre of the brake-bar, and secured by means of nuts. This rod, *c*, passes loosely through an opening in the bent-down portion *d* of a narrow plate, *e*, and is then bent up so as to again pass through said plate at *f*, where it is secured by means of a screw-nut, as shown. It will be observed that this connection may be made adjustable by the provision of several holes at different points in the plate *e*, in either of which the rod *c* may be secured.

At its rear end, the plate *e* is attached to a rack-

bar, G, which is fitted to slide in a casing, H, bolted to the reach, immediately in front of the rear bolster.

On a horizontal rock-shaft, I, which has its bearings in the casing H, and a support, *g*, fixed in the rear bolster B, a pinion, J, is keyed within the casing H, and is so arranged that its teeth engage with those of the rack-bar G. K is a curved arm, keyed to the outer end of shaft I. L represents a rod which connects the extremity of this arm, K, with a lever, M, pivoted at *h*, to the front bolster, B, and extending upward at the side of seat N, so as to be conveniently grasped by the driver. The lever M works in a guide, *i*, affixed to the side of the wagon-body. A series of holes for the attachment of the rod L may be provided in lever M, so as to render the connection between said lever and the arm K adjustable.

O O represent metallic scrapers attached to the ends of the brake-bar, and arranged to come in contact with the tires of the wheels, so as to remove the earth, sand, and gravel from the same, which, if allowed to remain, would rapidly wear out the rub-blocks, brake-shoes, or bar, with which they come in contact. The inner edge of each scraper is bent up, as at *j*.

To apply this brake, it is only necessary to press the hand-lever forward. This movement partially turns the rock-shaft, and with it the pinion, thereby sliding the rack-bar, and drawing back the brake-bar into contact with the wheels. To keep the brakes applied, the lever is held depressed by the hand, or a self-holding device may be employed for this purpose.

In order to release the brake from contact with the wheels, the hand-lever is drawn back to the position shown in fig. 1.

Constructed as above described, my brake combines extreme simplicity with effectual and easy operation, thus fulfilling the object for which it was designed, as will be obvious to those interested in improvements in this class.

Having thus described my invention,

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

1. The adjustable connecting-parts *c e*, in combination with the rack-bar G and pinion J of a wagon-brake, substantially as described.

2. The scrapers O, applied to the brake-bar F, substantially as and for the purpose herein set forth and shown.

3. The plate E, provided with guides *a*, and secured to the reach, when used in connection with the parts set forth in the first clause of claim, substantially as shown and described, and forming a surface on which the brake-bar F moves, as set forth.

4. The casing H, bolted to the reach, when enclosing the pinion J, and forming, at the same time, a bearing for the rock-shaft I, and a space in which the rack-bar G may be moved back and forth, as set forth.

To the above, I have signed my name, this 12th day of September, 1868.

GEO. MCKENZIE.

Witnesses:

JNO. W. KING,
B. M. DILLEY.