(No Model.)

W. L. HUTSON.

WAGON BRAKE.

No. 285,624. Patented Sept. 25, 1883.

Fig 1

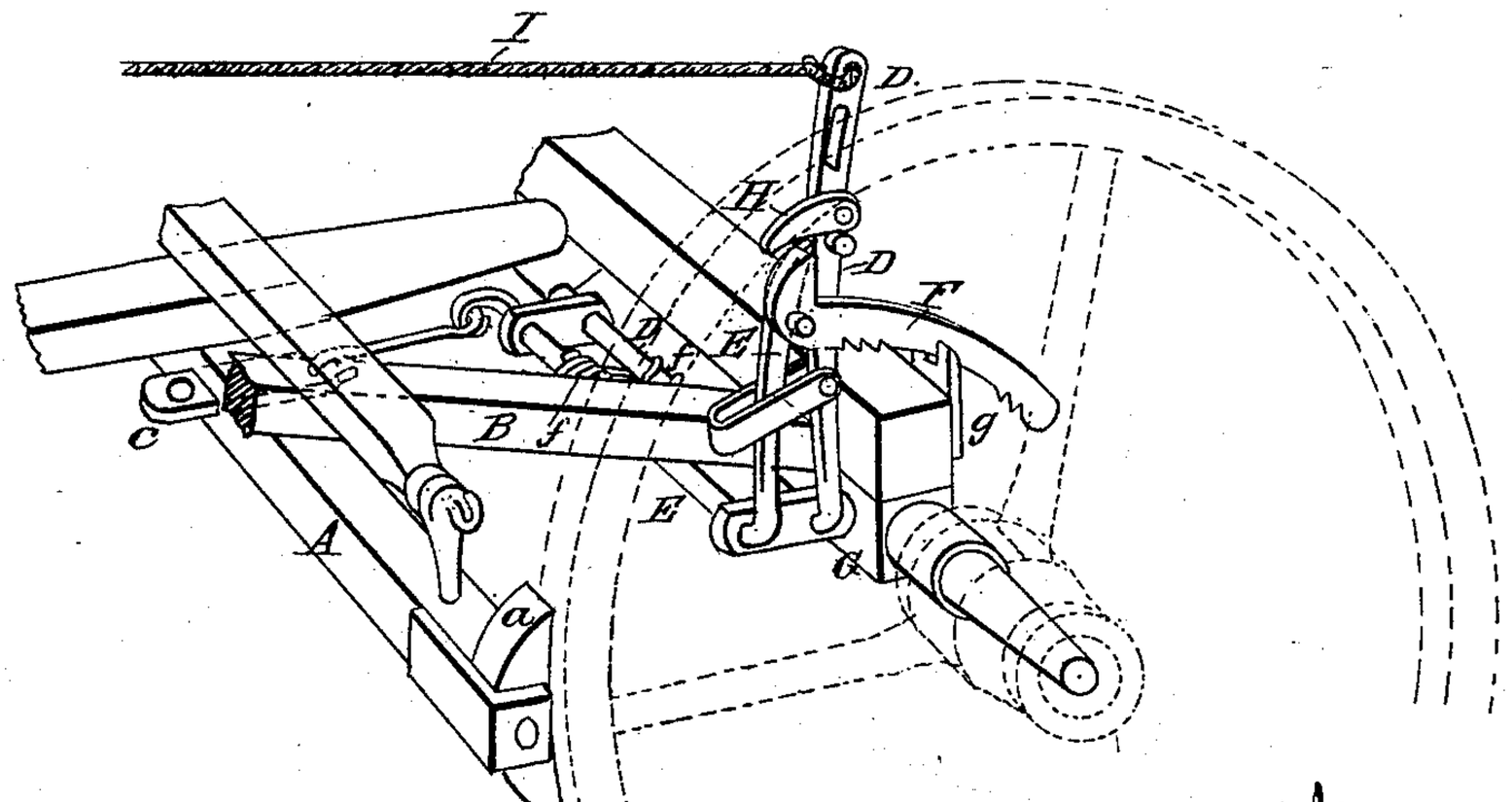


Fig 2

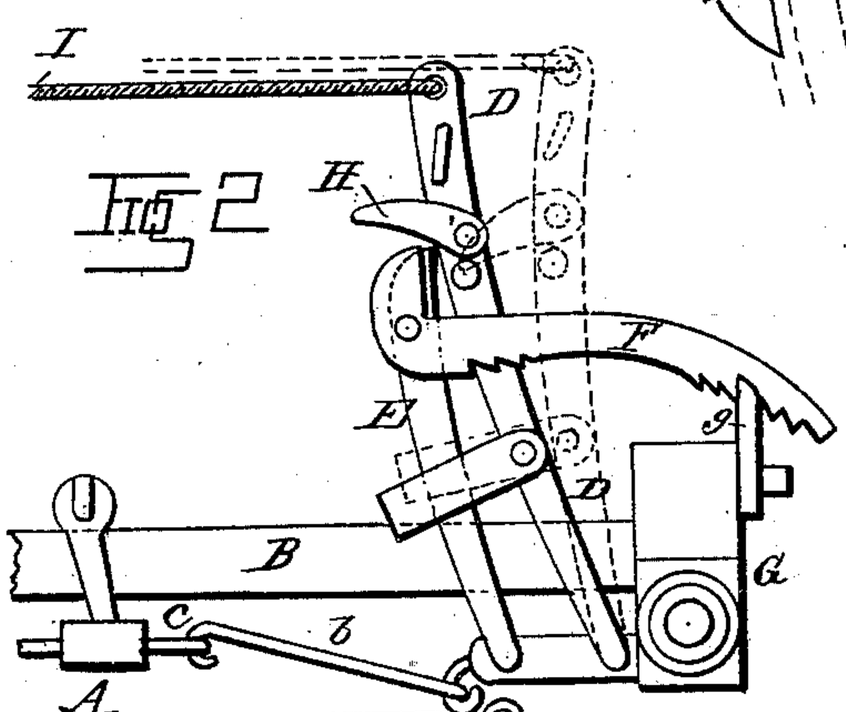


Fig 3

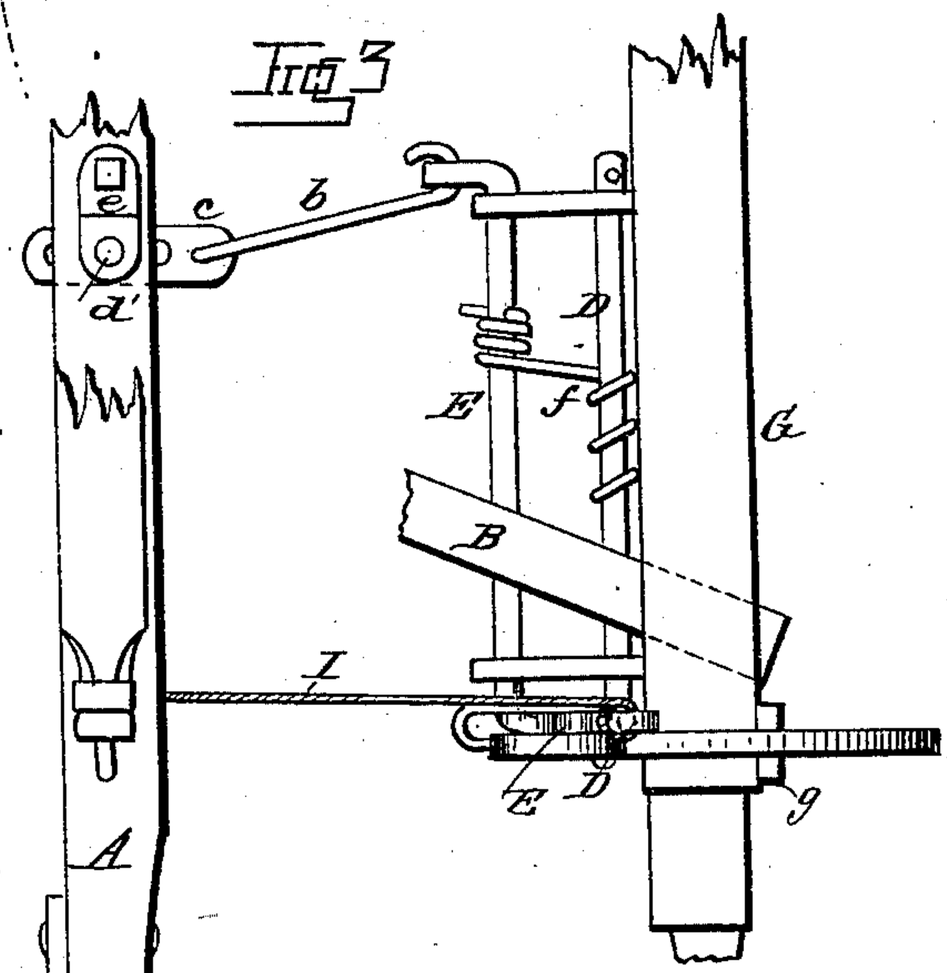
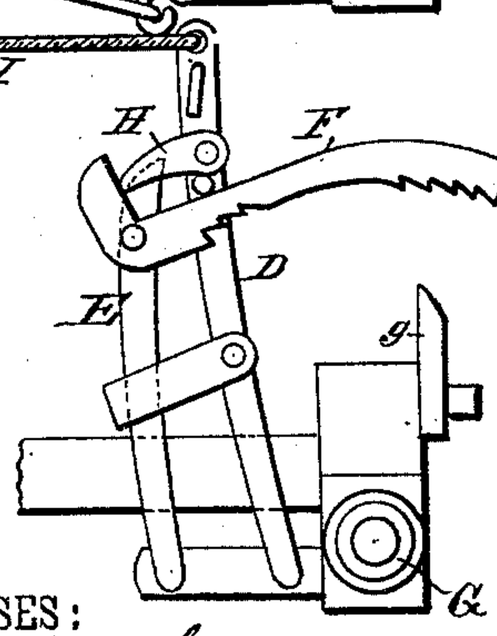


Fig 4



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UNITED STATES PATENT OFFICE.

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WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 285,624, dated September 25, 1883.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LANE HUTSON, a citizen of the United States, residing at St. Lawrence, in the county of Chatham and State of North Carolina, have invented a new and Improved Wagon-Brake, of which the following is a specification.

The nature of my brake is such that the same lever which applies it serves as a trip to release it by acting on a second lever, which is connected directly with the brake-beam.

The construction, combination, and operation of parts are as herein described and claimed.

In the accompanying drawings, Figures 1 and 3 are respectively a perspective view and plan view, showing the normal position of the brake mechanism in connection with the rear portion of a running-gear. Fig. 2 is a side view, showing the levers thrown forward for applying the brake. Fig. 4 is a side view of the levers, illustrating the operation of releasing the brake.

The brake-beam A is suspended from the rear hounds, B, so as to swing free beneath them, and when moved backward applies the blocks *a* to the rear wheels, C.

The means for moving the brake-bar consist of two levers, D E, which are bent at a right angle, their horizontal portions being journaled side by side in arms *d*, attached to the rear axle, F. The inner end of the front lever, E, is bent forward at a right angle, and is connected with the brake-beam by means of a rod, *b*, and metal plate *c*, that enters a slot in the brake-beam. The plate is provided with holes to receive a pin or bolt, *d'*, that passes vertically through the brake-beam and is held in place by a cap-plate, *e*, as shown in Fig. 3. By adjusting plate *c* in the slot of the brake-beam A the wear of the blocks *a* may be compensated for, so that the brake may always be applied with the requisite force. The two levers D E are encircled by spiral springs *f*, that normally hold their vertical arms thrown back in the position shown in Fig. 1, in which case the brake is out of action. The vertical arm of lever E is the shorter, and passes through a loop or guide attached to the other lever. A ratchet or toothed pawl, F, is pivoted to the upper end of lever E, and extends backward over a catch-plate, *g*, fixed on the axle G. The front end of said pawl F is turned upward to adapt it to engage with a trip-dog, H, which is pivoted to the longer lever D.

The lever D may be operated by hand; but in this instance I employ a cord, I, which is attached to its upper end, as shown, and in practice extends forward to the driver's seat.

The operation of my improved brake mechanism is as follows: In the normal position the vertical arms of levers D E are inclined backward, as shown in Fig. 1. When the cord I is pulled, the vertical arms of the levers are both carried forward, since the upper end of rock-lever E bears against lever D, and is hence compelled to move with it. In this movement the inner bent end of lever E is thrown down, which obviously has the effect of drawing the brake-beam A backward and applying the brake-blocks to the wheels. The ratchet-pawl F also comes into action at the same time, and by engagement with the catch-plate *g* holds the rock-lever E in the position to which it has been moved forward, and thus keeps the brake applied. On releasing the cord I the spring *f* throws lever D back, as shown in dotted lines, Fig. 2. Said lever then resumes the position shown in Fig. 1. When it is desired to release the brake, a second pull on the cord I carries the lever D forward again, and this time its dog H comes in contact with the upturned end of the ratchet-pawl F, Fig. 4, and trips the latter, thus allowing the spring *f* to throw the lever E back to its normal position and allowing the brake-beam A to swing free, as before. As the rock-lever E is thrown back the trip-dog H slips over the end of the ratchet-pawl F and resumes its former or normal position. It will be perceived, therefore, that the first forward movement of the lever D applies the brake, and that the lever resumes its normal position as soon as the cord is released, and that on the second forward movement of lever D the brake is let off.

The mechanism for operating the brake-bar

may be attached to the rear axle alone, or partly to it and the side of the wagon-body, as found most convenient and practicable.

What I claim is—

1. The combination, with a brake-beam, of two levers, a holding-pawl, and a trip device, substantially as shown and described, to operate as specified.

2. The combination, with the brake-beam, of the rock-lever E and a ratchet-pawl pivoted thereto, and the main operating-lever D, having a trip-dog attached, and arranged for acting on the upturned end of the said pawl, all substantially as shown and described.

3. The combination, with the brake-beam, and a rock-lever arranged for moving the same, and provided with a holding-pawl, of a second lever which carries a device adapted to trip said pawl and release the brake when the second lever is moved forward, as shown and described.

WILLIAM LANE HUTSON.

Witnesses:
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