(No Model.)

2 Sheets—Sheet 1.

F. W. DOBBEL.

WAGON BRAKE.

No. 486,245. Patented Nov. 15, 1892.

Fig. 1

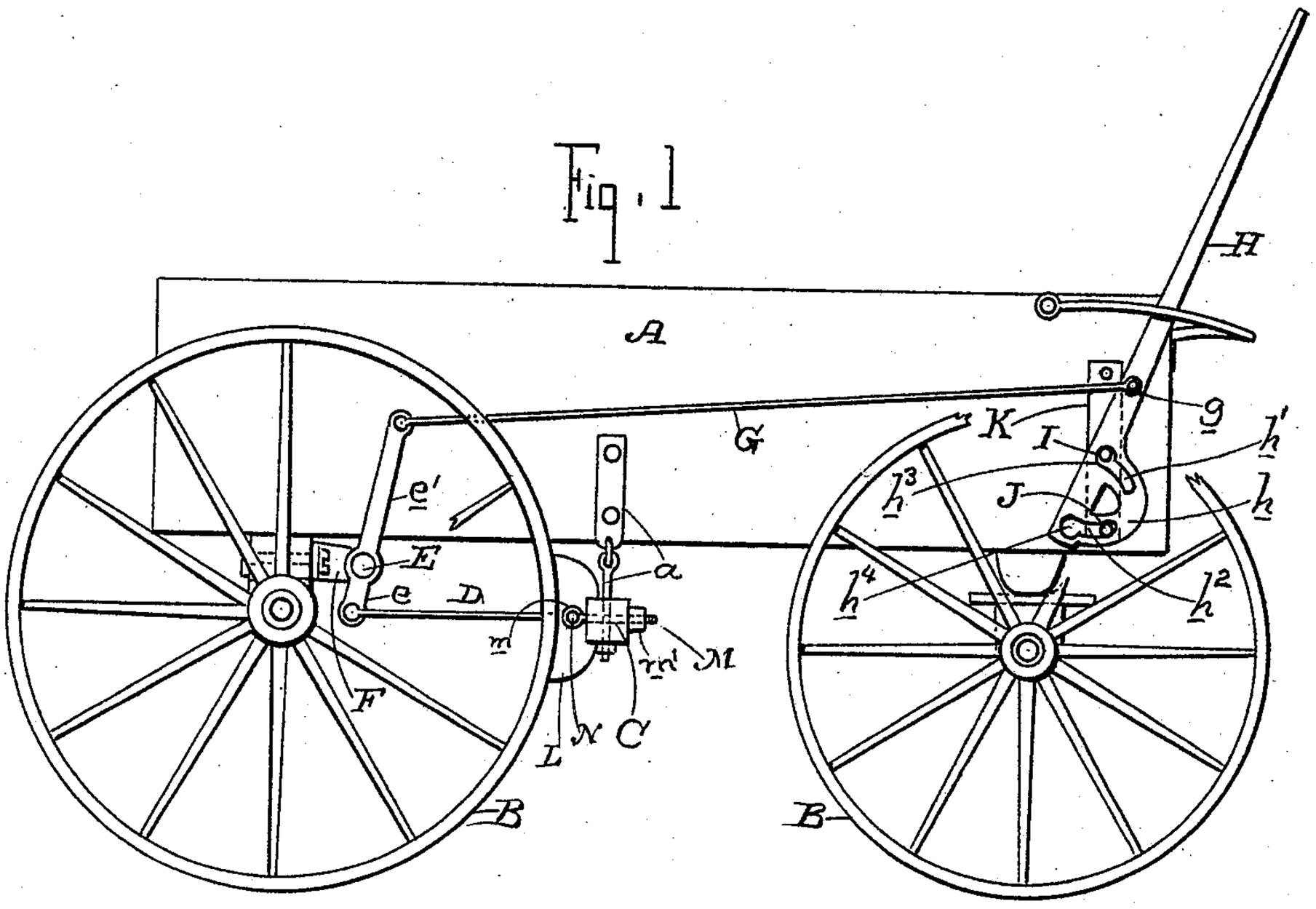
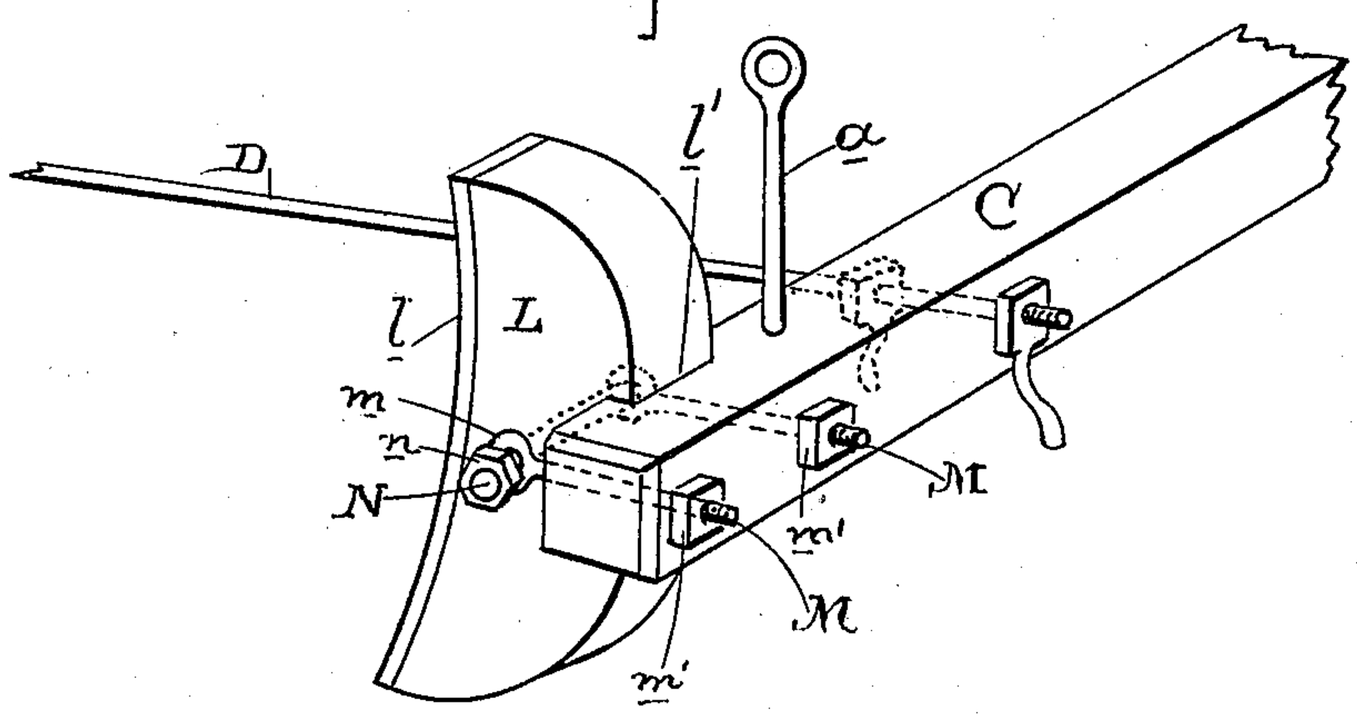


Fig. 2



Witnesses;
J. B. Morse
J. A. Bayless

Inventor,
Frederick W. Dobbel
By Dewey & Co.
Attys.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

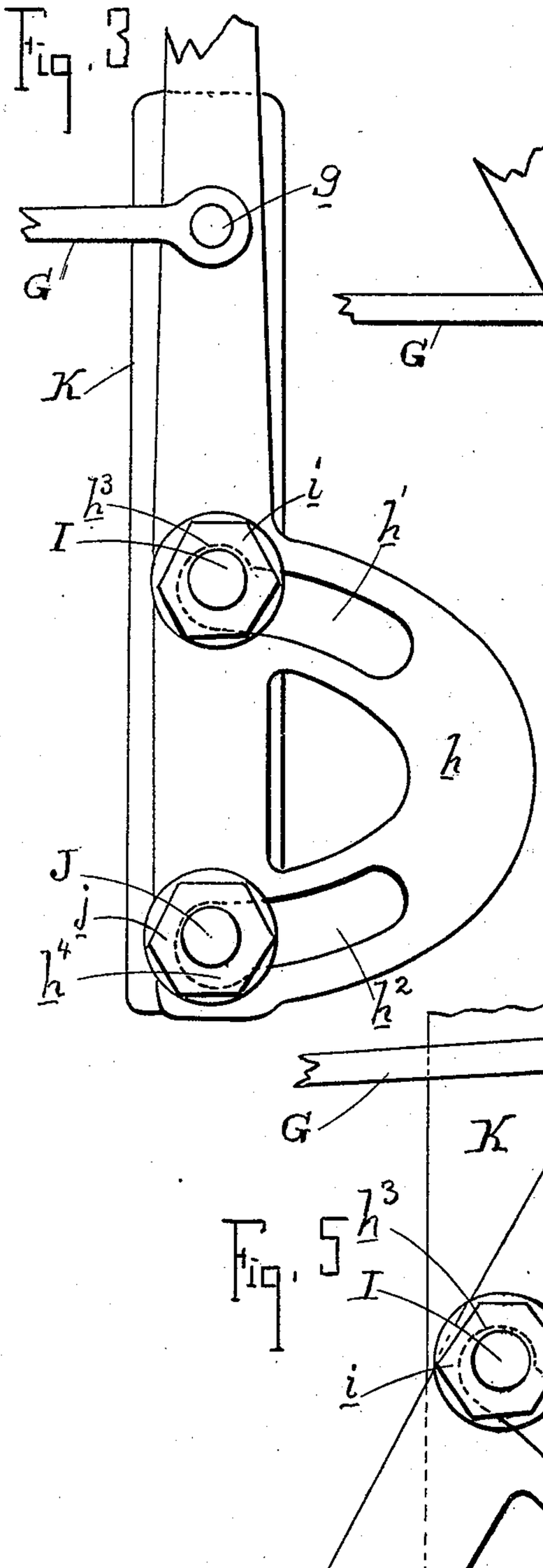

Fig. 4

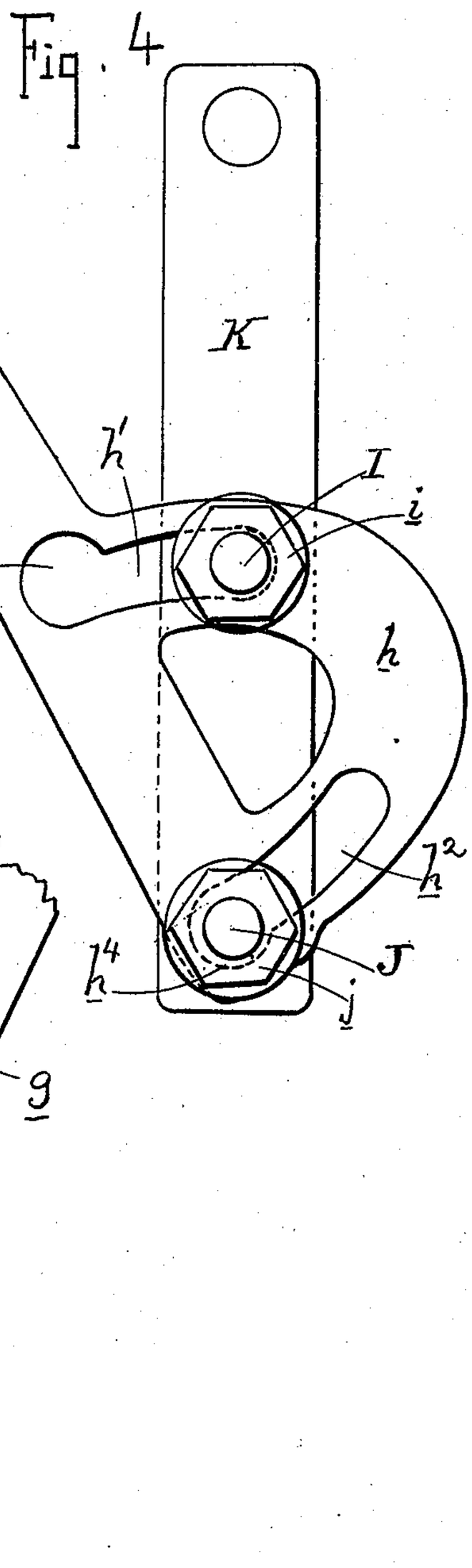

Fig. 5

Witnesses,
J. B. Morse
J. A. Bayless

Inventor,
Frederick W. Dobbel
By Dewey & Co.
Attys.

UNITED STATES PATENT OFFICE.

FREDERICK W. DOBBEL, OF PURISSIMA, CALIFORNIA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 486,245, dated November 15, 1892.

Application filed July 5, 1892. Serial No. 439,036. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. DOBBEL, a citizen of the United States, residing at Purissima, San Mateo county, State of California, have invented an Improvement in Wagon-Brakes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of brakes for wagons and other wheeled vehicles; and it consists in the novel construction and arrangement of the main operating-lever and in the novel fastening of the brake-block to the beam, which I shall hereinafter fully describe, and specifically point out in the claims.

The object of my invention is twofold—first, to provide such an arrangement and construction of the operating-lever as will give on the backward throw thereof the greatest amount of movement in order to fully throw off the brakes from the wheels and on the forward movement to give the greatest purchase or leverage for forcing the brakes to the wheels, and, second, to provide simple and effective means for holding the brake-block to the beam, giving great stability, and means for tightening it up when loosened.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a side elevation of a wagon, showing the application of my brake. Fig. 2 is a perspective view showing the attachment of the brake-block to the beam. Fig. 3 is a view showing the main operating-lever in a central position. Fig. 4 shows it thrown back. Fig. 5 shows it thrown forwardly.

A represents the body of a wagon, of which B are the wheels.

C is a brake-beam supported under the wagon in any suitable manner and adapted to be moved forward and back by suitable intermediate connections with the main power-lever at the front of the bed. The manner of mounting the brake-beam and the character of these intermediate connections are as far as my present improvements are concerned immaterial. I have, however, shown the brake-beam as being supported from hangers *a*, depending from the bed and connected by rods D with the cranks *e* of a rock-shaft E, supported in brackets F, carried by the rear axle, said rock-shaft being operated through a crank *e'*, to which the connecting-rod G is attached.

H is the main operating-lever, and to this lever, at the point *g*, the connecting-rod G is attached. The operating-lever H at its lower end is provided with a wide foot portion *h*, in which are made the upper curved elongated slot *h'* and the lower curved elongated slot h^2. Through the upper slot freely passes a fixed outwardly-projecting pivot-pin I and through the lower slot freely passes an outwardly-projecting fixed pivot-pin J, said pins having on their outer ends devices—such as nuts *i* and *j*—for holding the lever-foot thereon. These pins project outwardly from the bed or body of the wagon and are preferably formed upon or secured to a plate K, fixed to the wagon-bed. It will be observed that the point *g* of connection between the rod G and the main lever is above the upper pivot-pin I. At the back end of the upper slot *h'* is an upwardly-extending recess or socket h^3 and at the back end of the lower slot is a downwardly-extending recess or socket h^4.

The operation of this lever is as follows: Starting with it in a vertical position, both pins I and J are at the rear or back ends of the slots *h'* and h^2, the pin I resting in recess h^3 and the pin J being above and free of recess h^4. Now moving the lever H backwardly, it first rises in order to relieve the recess h^3 from pin I, and this rise lifts recess h^4 up to pin J. Being now free of pin I and caught by pin J, the lever moves backwardly about lower pin J as a pivotal center, its upper slot *h'* playing past upper pin I, upon which the whole lever rests. The full length of the lever H is thus utilized in this movement, and the throw is the greatest possible, thereby resulting in the maximum throw-off of the brakes from the wheels. Now when the lever H is moved forwardly again it still turns upon the lower pin J as a center until it arrives at a vertical position, thus bringing the brakes back again to the wheel. In this vertical position it drops to its first place with recess h^3 over pin I and recess h^4 below and free of pin J. Then moving said lever H forwardly beyond the vertical position and being caught on pin I and free of pin J it now turns about the upper pin I as a pivotal cen-

ter, its lower slot h^2 playing over the lower pin J. This change in the fulcrum of the lever, bringing its pivotal center nearer to its point of connection with the connecting-rod G, results in an increased leverage, and the brakes are thereby applied with the maximum force. By this arrangement, therefore, I get on the backward movement the maximum throw-off of brakes and on the forward movement the maximum force to apply the brakes.

L are the brake-blocks, carried by the brake-beam C and having the usual shoes l. The blocks are attached to the beam in the following manner: Eyebolts M pass through the brake-beam and their eyes m lie on each side of the brake-block. Through these eyes and through the brake-block passes a transverse bolt N, having a nut n, by which it can be tightened. The eyebolts M have nuts m' upon their forward ends to tighten them. It will be seen that the brake-block is thus held firmly and rigidly between the eyebolts by the transverse bolt N, and said eyebolts can be tightened to the brake-block by setting up the nut n of transverse bolt N, and the brake-block can be tightened to the beam by setting up the nuts m' of the eyebolts. In order to further steady the brake-block on the beam, I groove it out, as shown at l', to fit over the brake-beam.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a vehicle-brake, the combination of the main operating-lever having independent elongated bearing-slots in its lower end, a fixed pivot-pin passing freely through one of said slots, a second fixed pivot-pin passing freely through the other slot, whereby the lever changes its fulcrum in its backward and forward movement, and the connecting-rod G of the brake mechanism attached to the brake-lever at a point above the pivot-pin I, substantially as herein described.

2. In a vehicle-brake, the combination of the main operating-lever H, having its foot provided with the curved elongated upper slot h' and the curved elongated lower slot h^2, the fixed pivot-pin I, passing freely through the upper slot, the fixed pivot-pin J, passing freely through the lower slot, and the connecting-rod G of the brake mechanism attached to the lever at a point above the pivot-pin I, substantially as herein described.

3. In a vehicle-brake, the combination of the main operating-lever H, having its foot provided with the curved elongated upper slot h' and the curved elongated lower slot h^2, the fixed pivot-pin I, passing freely through the upper slot, the fixed pivot-pin J, passing freely through the lower slot, suitable stops or catches to arrest the lever on either pin, whereby it changes its fulcrum in its backward and forward movement, and the connecting-rod G of the brake mechanism attached to the lever at a point above pivot-pin I, substantially as herein described.

4. In a vehicle-brake, the combination of the main operating-lever H, having its foot provided with the curved elongated upper slot h' with the upwardly-extending recess or stop at its back end and the curved elongated lower slot h^2 with the downwardly-extending recess or stop at its back end, the fixed pivot-pin I, passing freely through the upper slot, the fixed pivot-pin J, passing freely through the lower slot, and the connecting-rod G of the brake mechanism attached to the lever at a point above the pivot-pin I, substantially as herein described.

5. In a vehicle-brake, the means for attaching and tightening the brake-block to the brake-beam, consisting of the separated eyebolts passing through the brake-beam and provided with tightening-nuts, the eyes of said bolts lying on each side of the brake-block, and the transverse bolt passing through said eyes and intervening brake-block and provided with a tightening-nut, substantially as herein described.

6. In a vehicle-brake, the brake-beam and the brake-block grooved or notched upon said beam, in combination with the eyebolts passing through said beam and having tightening-nuts, the eyes of said bolts lying on each side of the brake-block, and a transverse bolt passing through said eyes and the intervening brake-block and provided with the tightening-nut, substantially as herein described.

In witness whereof I have hereunto set my hand.

FREDERICK W. DOBBEL.

Witnesses:
S. H. NOURSE,
J. A. BAYLESS.