(No Model.)

J. F. SHEPARD.

WAGON BRAKE.

No. 553,138. Patented Jan. 14, 1896.

Fig. 1

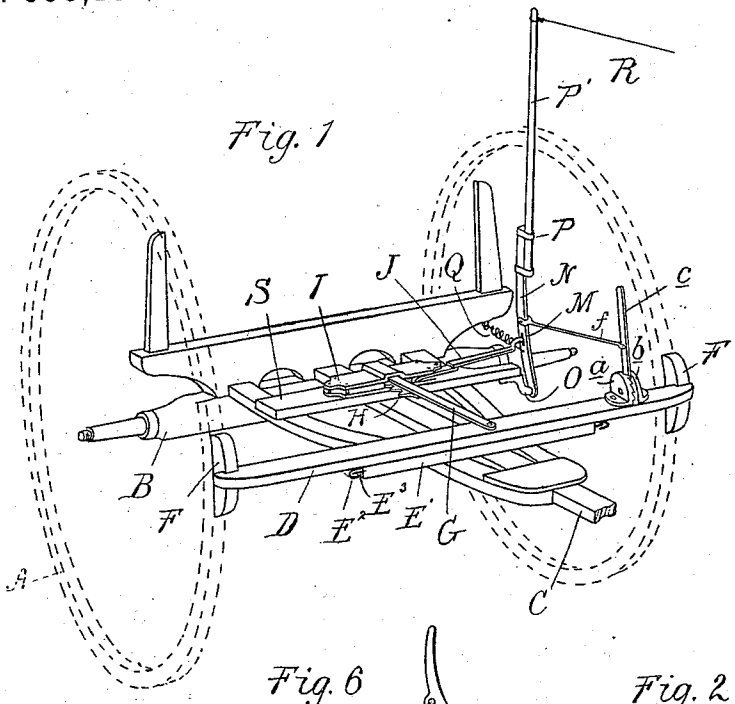


Fig. 6

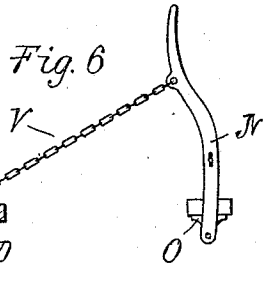


Fig. 2

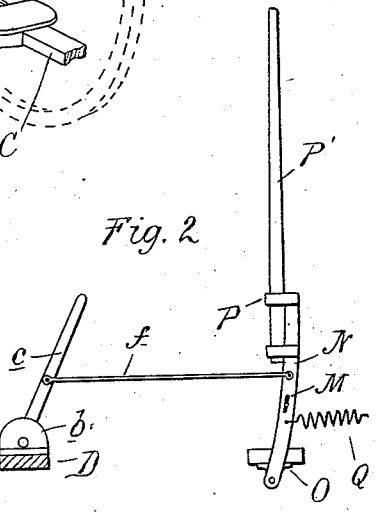


Fig. 3

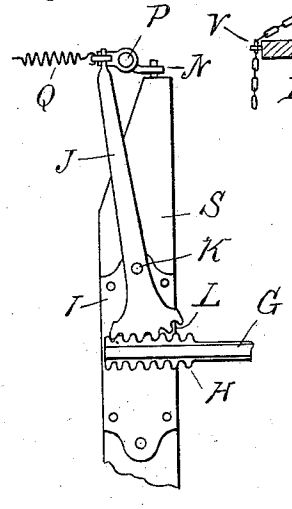


Fig. 5

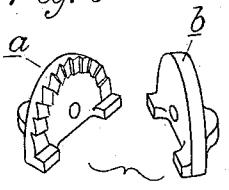


Fig. 4

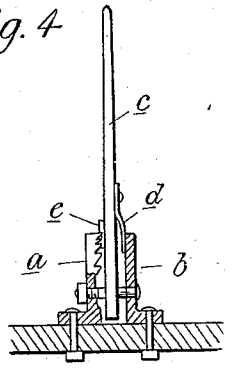
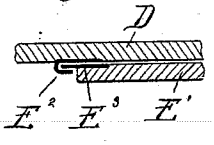


Fig. 7



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O. F. Barthel

Inventor:
John F. Shepard
By Thos. G. Sprague & Son Attys.

UNITED STATES PATENT OFFICE.

JOHN F. SHEPARD, OF JACKSON, MICHIGAN, ASSIGNOR TO STEPHEN H. CARROLL AND THOS. J. BIRNEY, OF SAME PLACE.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 553,138, dated January 14, 1896.

Application filed April 22, 1895. Serial No. 546,654. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SHEPARD, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Wagon-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of the actuating or setting mechanism for the brake designed to be used with or without a box, and particularly in the construction of such mechanism whereby the setting or holding ratchet is arranged upon the brake-beam.

The invention further consists in the peculiar construction, arrangement and combination of the various parts.

The invention is shown as applied in connection with brake-actuating mechanism described in my patent No. 518,928, of April 24, 1894.

In the drawings, Figure 1 is a perspective view of the rear wheels of a wagon, showing my improvement applied thereto. Fig. 2 is a side elevation of the attachment. Fig. 3 is a top plan view thereof without the ratchet attachment. Fig. 4 is a vertical section through the ratchet-lever and ratchet-plates. Fig. 5 is a detached perspective view of the ratchet-plates. Fig. 6 is an elevation of a modified form of holding device on the brake-beam, and Fig. 7 is a section through a portion of the brake-beam.

A represents the wheels, B the axle, and C the reach of a wagon of usual construction.

D is the brake-beam slidingly secured on the cross-bar E′, having guide-brackets E^2 on its under side, engaging over the guide-flange E^3 on the cross-bar. This beam is provided with the usual brake-shoe F, adapted to bear upon the periphery of the wheel. Centrally of the brake-beam is secured the draft-bar G, which at its rear end is provided on each side with rack-bars H. This bar is guided between the plates I, which are secured upon a cross-bar S near the rear end of the hounds. These plates are separated a sufficient distance to permit of the engagement between them of the lever J, which is pivoted at K and at its inner end is provided with the notched segment L, adapted to engage with the rack on the draft-bar. These parts last described are substantially of the construction described and claimed in my prior patent referred to. The end of the lever J engages in a slot M in the lever N. This lever at its lower end is pivoted on the bracket O, which is secured to one end of the cross-bar S and is sufficiently long to give the proper leverage. The upper end of this lever is provided with a socket P to receive the pole P′. To the rear of the lever N is secured a spring Q, connected to any suitable stationary part of the wagon—such, for instance, as the bolster.

The parts thus constructed and described are intended to be used as follows: In mountainous countries, where such brakes are used in freighting over the mountains, the driver of the team usually rides the wheel-horse, and he is provided with a suitable rope R, which extends from the upper end of the pole P′. When it is desired to brake the wheels the driver leans forward and applies power through the rope and the pole to the lever N, which rocks the lever J and draws upon the brake-beam through the draft-bar G, the leverage being such that even a slight pull will firmly set the brakes. It is evident that the lever may be operated as well from the wagon-box or from beside the wagon, if desired. Now in case it is desired to set the brakes when the box is off, I apply a holding device for the lever upon the brake-beam and connect this with the brake-lever. The holding device I have shown in Figs. 2, 4 and 5 comprises a segmental notched or ratchet plate *a*, the complementary plate *b* having a plain face, the lever *c* journaled at its lower ends centrally of these plates and provided at one side with a spring *d* adapted to bear against the face of the plate *b* and on its opposite side with a flange *e* adapted to engage in the teeth on the ratchet-plate. This lever is connected with the brake-lever by means of a link *f*. Now in the ordinary use of this device the brake may be set in the manner described. When the pole P′ is used or if the pole is not used the driver or other person walking beside the wagon can set the brake

by drawing forwardly upon the lever N, which will apply the brake and which will be locked in its adjusted position.

It will be noticed that the draft is applied to the brake-beam centrally by the mechanism described, so that there is no uneven friction upon the shoe. To release the brake the operator simply rocks the lever *c* laterally, compressing the spring *d* and disengaging the flange *e* from the notched plate *a*, when the spring Q will draw the brake-shoes free from the wheels.

Instead of the ratchet-plates and spring, as described, I may use other holding devices for the brake-lever, such as the chain V, extending from the lever M and engaging a pin V′ on the brake-beam.

What I claim as my invention is—

1. In a wagon brake, the combination of the running gear of a wagon, the cross bar S, the brake lever pivoted at the end thereof, the brake beam connection from that lever centrally to the beam, and connection from that lever to the end of the brake beam, and means carried by the brake beam for holding the brake lever in its adjusted position, substantially as described.

2. In a wagon brake, the combination of the brake beam, a draft bar on the wagon adapted to draw upon the brake beam, a vertical brake lever operating said draft bar, and a holding device on the brake beam for retaining the brake lever in its adjusted position, comprising a vertical lever pivoted to the beam and a clutch mechanism for holding the same in different position, substantially as described.

3. In a wagon brake, the combination of the brake beam, a rigid cross-bar a draft bar on the wagon adapted to draw upon the brake beam, a vertical brake lever for operating said draft bar pivoted on said cross-bar, a ratchet plate on the brake beam, a lever engaging said plate, and a connection between the brake lever and said ratchet lever, substantially as described.

4. In a wagon brake, the combination of the brake beam, a cross bar on the hounds, a draft bar on said cross bar centrally connected to the brake beam, a rack bar on the side of the draft bar, a toothed segment at one end of an actuating lever, engaging said rack bar, a bracket at the end of the cross bar and a brake lever pivoted to said bracket and with which the end of the actuating lever engages, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. SHEPARD.

Witnesses:
M. B. O'DOGHERTY,
O. F. BARTHEL.