

(Model.)

C. F. MOORE.
WAGON BRAKE LEVER.

No. 337,974.

Patented Mar. 16, 1886.

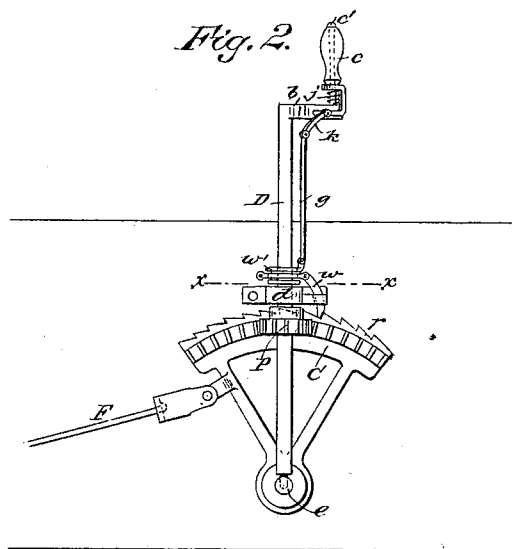
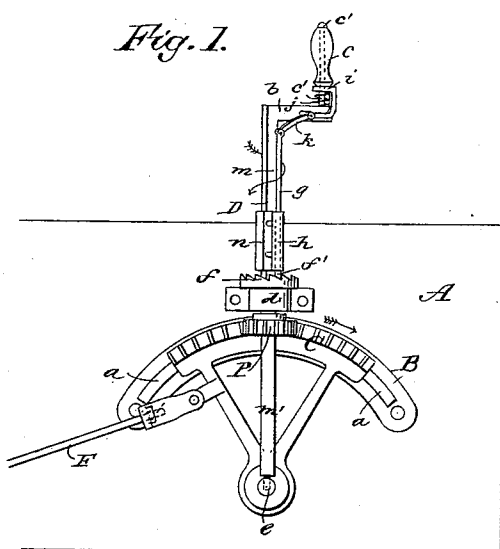


Fig. 6.

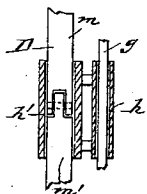


Fig. 5.

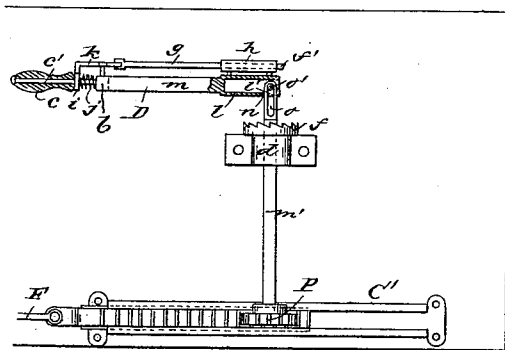


Fig. 3.

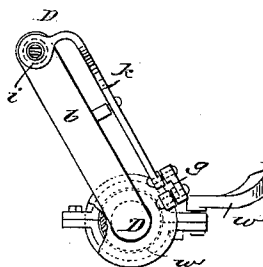
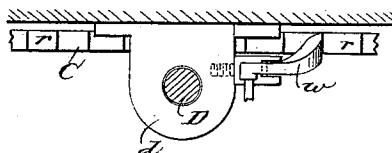


Fig. 4.



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WAGON-BRAKE LEVER.

SPECIFICATION forming part of Letters Patent No. 337,974, dated March 16, 1886.

Application filed August 23, 1885. Serial No. 175,561. (Model.)

To all whom it may concern:

Be it known that I, COLUMBUS F. MOORE, of Waveland, in the county of Montgomery and State of Indiana, have invented a new, and Improved Operating Mechanism for Wagon-Brakes, of which the following is a full, clear, and exact description.

My invention relates to the construction of a mechanism for operating the ordinary form of brake for wagons and other vehicles; and the invention consists of a tooth-rack operated by pinion that is carried by a jointed rod or shaft, and of a novel pawl-operating attachment, together with certain details of construction and combinations of parts, as will be hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the brake-operating mechanism, representing the same as applied to the forward portion of a wagon-box. Fig. 2 is a similar view of a modified construction. Fig. 3 is a plan view of the mechanism detached from the wagon-box, the handle being removed. Fig. 4 is also a plan view, partly in section, taken on line *x x* of Fig. 2. Fig. 5 is a view of the mechanism employed to operate a straight rack, the crank-arm being shown as folded down; and Fig. 6 is a detail view of a modified joint.

Referring now more particularly to the construction illustrated in Fig. 1, A represents the wagon-box, to which there is secured a segment, B, concentrically slotted, as at *a*. A toothed sector, C, is studded to the wagon-box in position to swing in an arc that is concentric with the segment B, the sector C being provided with a lug that rides in the slot *a*. A rod, D, to the upper end of which there is secured a crank-arm, *b*, having a handle, *c*, is mounted in bearings formed by a bracket, *d*, and stud *e*, the latter acting as a step for the lower end of the rod. The rod D carries a fast pinion, P, which engages with the teeth of the sector C, so that when the rod D is rotated the sector will be carried forward or back, according to the direction of the rotation

of the shaft or rod D. Now, when the sector is thrown over in the direction of the arrow, it will move the draw-bar F forward and force the brakes against the peripheries of the wheels, and to hold the brakes in the position indicated I provide a mechanism which I will now describe. Upon the upper side of the bracket *d* there is formed a ratchet, *f*, with which there engages a tooth, *f'*, formed at the lower end of a vertical rod, *g*, which is free to slide up or down in the sleeve *h*. The upper end of the rod *g* is pivotally connected to one end of a lever, *k*, which is studded to the crank-arm *b*. The other end of the lever *k* is looped at *i*, and encircles the lower part of the rigid upright *c'*, which carries the loose handle or hand-piece *c*, the loop *i* being held against the under end of the handle *c* by a spring, *j*, the action of which is to elevate the end *i* of the lever *k*, thereby depressing the rod *g*, and bringing the tooth *f'* into engagement with the teeth of the ratchet *f*.

From the construction described it will be seen that to apply the brake it is only necessary to rotate the rod D in the direction of the arrow, the parts being held in any position to which they may be moved by the engagement of the tooth *f'* with the ratchet *f*, and it will also be seen that to relax the pressure on the brake all that is necessary is to press down on the handle *c*, compress the spring *j*, and lower the end *i* of the lever *k*, thereby raising the bar or rod *g*, and with it the tooth *f'*, from engagement with the ratchet *f*.

It is often desirable that the crank-arm and handle should be folded down out of the way, as shown in Fig. 5, and to this end the rod D is jointed at *n*, as shown best in the figure just referred to. To form this joint, the upper section, *m*, of the rod is formed with a socket, *l*, one side of which is cut away, as shown at *l'*, while the lower section, *m'*, is slotted at *o*, the two parts or sections being united by a bolt, *o'*, and being arranged so that they can be placed as shown in Fig. 1, or folded down out of the way, as in Fig. 5.

Another form of joint might be made by cutting the uniting ends of the two sections, as shown in Fig. 6, and pivoting the parts together. In this case sleeve *h* would be secured

to and move with a second sleeve, *h'*, that would be arranged to slide up on the rod *D*, to permit the folding of the crank-arm, or be slid down over the meeting ends of the sections *m* and *m'* and hold them in rigid perpendicular position.

In Figs. 2, 3, and 4 I have illustrated a construction wherein the sector *C* is formed with ratchet-teeth *r* on its peripheral face, and the sector is held in position by a pawl, *w*, carried by a sliding collar, *w'*, to which the lower end of the rod *g* is secured, so that when the handle *c* is depressed the pawl *w* will be raised from engagement with the ratchet-teeth *r*.

In Fig. 5 I illustrate the mechanism as applied to a straight rack-bar, *C'*, to which the draw-bar *F* is secured, this form being intended for use in cases where it is desirable that the bar should be located near the bottom of the box *A*, out of the way.

Although I have described the segment *B* as slotted, it may be a simple flat wear-plate.

The draw-bar *F* is threaded at one end to engage with a nut, as shown, in order that it may be adjusted to a proper length.

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

1. The combination, with a toothed rack, of a pinion operated by a crank-armed bar, as *D*, provided with a sliding hand-piece, *c*, and carrying a lever, *k*, formed with an end, *i*, and

connected by a rod, *g*, with a ratchet, *f*, substantially as described.

2. The combination, with a toothed rack, of a pinion operated by a jointed crank-armed bar, as *D*, that is provided with a sliding hand-piece, *c*, and carrying a lever, *k*, formed with an end, *i*, that is normally elevated by a spring, *j*, said lever being connected by a rod, *g*, with a ratchet, *f*, substantially as described.

3. The combination, with a toothed rack, of a pinion operated by a bar, *D*, made up of sections *m m'*, one of which is socketed at *l* to receive the end of the other section, which is slotted at *o*, the two sections being united by a bolt, *o'*, the crank-arm of said bar being provided with a sliding hand-piece, *c*, and carrying a lever, *k*, looped at *i*, that is connected with a ratchet by a rod, *g*, which is normally depressed by a spring, *j*, substantially as described.

4. The combination, with a toothed sector-rack, of a pinion operated by a crank-armed bar, as *D*, provided with a sliding hand-piece, *c*, and carrying a lever, *k*, formed with an end, *i*, that is normally elevated by a spring, *j*, said lever being connected by a bar, *g*, with a ratchet, *f*, substantially as described.

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Witnesses:

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