(No Model.)

W. K. JOHNSTON.

LOCK FOR WAGON BRAKES.

No. 264,086. Patented Sept. 12, 1882.

Fig. 3.

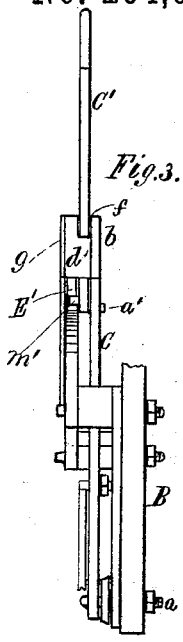

Fig. 1.

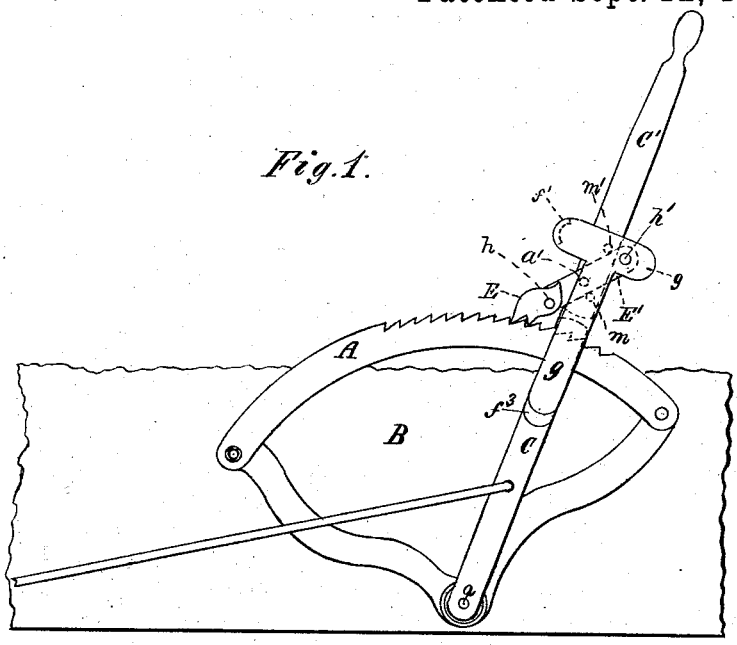

Fig. 2

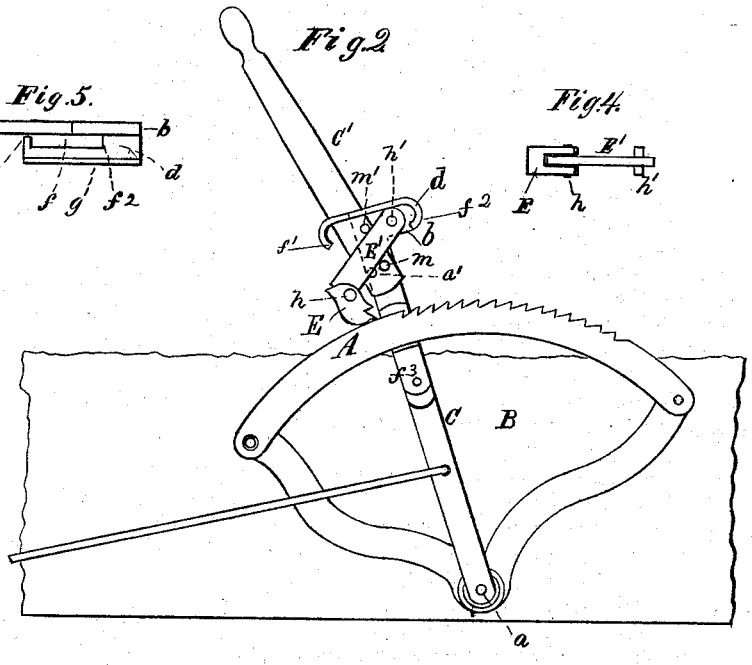

Fig. 5.

Fig. 4.

Witnesses:

R. H. Fenwick

Robt. L. Fenwick

Inventor:

William K. Johnston

by his attys

Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

WILLIAM K. JOHNSTON, OF MARSHALLTOWN, IOWA.

LOCK FOR WAGON-BRAKES.

SPECIFICATION forming part of Letters Patent No. 264,086, dated September 12, 1882.

Application filed July 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. JOHNSTON, a citizen of the United States, residing at Marshalltown, in the county of Marshall and State of Iowa, have invented a new and useful Improvement in Locks for Wagon-Brakes, of which the following is a specification.

My invention relates to an improvement in the means heretofore adopted for relieving the "dog," when it is desired to unlock the wheels of the wagon; and the nature of my invention consists, first, in a jointed dog, in combination with a pivoted lever provided with a means whereby the dog is caused to fold on its joint, is withdrawn from the stop-notches of the toothed arc-plate, and tumbled so as to glide over the stop-notches without taking a hold therein; second, in a jointed dog and a lever provided with means for folding the dog on its joint and tumbling it out of the stop-notches, and also with means for unfolding and tumbling it into either of the stop-notches so that it takes a hold therein.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a wagon with my improved wagon-brake lock applied to it, and showing the parts as they appear when the brake is locked. Fig. 2 is a similar view to Fig. 1, but showing the T-plate removed and the parts as they appear when the brake is unlocked. Fig. 3 is an end view of the parts shown in Fig. 1. Fig. 4 is a detail top view of the jointed dog, and Fig. 5 is a detail top view of the lever as shown in Fig. 1.

Similar letters of reference in the several figures indicate corresponding parts.

The toothed rack or arc-plate A is fastened permanently to a wagon-body, B, as usual. The locking-lever is made in two pieces, C C′, and the piece C is fastened by a pivot, *a*, to the center hub of the arc-plate, while the piece C′ is fastened to the piece C by a pivot-pin, *a′*, as shown. The piece C of the lever is formed with a head, *b*, and on this head an angular lug, *d*, is formed so as with the piece C of the lever to form an oblong slot, *f*, and a front stop, *f′*, and back stop, f^2. To this angular lug the upper end of a T-shaped plate, *g*, is fastened, while the lower end of said plate is fastened to another angular lug, f^3, of the piece C of the lever, as shown. The piece C′ of the lever passes up through the slot *f*, and has play back and forth therein, being limited in its movement by the stops f' f^2, while the piece C of the lever, together with the piece C′, is allowed to swing on the pivot *a* from end to end of the arc-plate, being guided in its movement by the angular lug and the T-shaped plate, which, with the portion C of the lever, form an oblong slot below the head of the said portion C of the lever, through which the arc-plate is passed before being bolted to the wagon-body.

E is one portion of a jointed dog of cyma-reversa or other suitable shape, with two ratchet-shaped teeth on the lower surface of its forward end, and E′ is another portion of said dog. This latter portion is in form of an oblong flat solid link. The portions E E′ are fastened together by a hinge-pivot, *h*, and the link portion is fastened to the head *b* of the piece C of the lever by a pivot, *h′*, as shown. Thus connected to the lever C C′, the jointed dog E E′ occupies a place between the toothed edge of the arc and the head *b* of the portion C of the lever and the toothed surface of the portion E of the dog occupies the position shown in Fig. 1 of the drawings when the brake is locked, or the position shown in Fig. 2 when it is unlocked.

To effect the unlocking of the dog by the piece C′ of the lever, a pin, *m*, is applied to this piece C′ of the lever beneath the link E′; and to effect the locking of the dog through the said piece C′ of the lever another similar pin, *m′*, is applied to the lever above the link E′, as shown.

The brake-lock described operates as follows: Suppose the wagon-brake is locked and the parts in position as in Fig. 1 and it is desired to unlock it. All that is necessary to be done is to press the part C′ of the lever from the position shown in Fig. 1 to that shown in Fig. 2. This act causes the pin *m* to glide backward under the inclined side of the link E′, and thereby lift the portion E of the hinged dog out of the teeth of the arc-plate, and the further act of pressing the whole lever backward will cause the hinged dog to fold and the portion E to tumble to the position shown in Fig. 2, this tumbling action being insured by the preponderance of weight of the portion E being below the hinge-pivot *a′*. With the dog thus adjusted, it is plain that the portion E

will glide over the toothed arc without taking a hold therein. A backward movement of the lever will cause the pin m' to ride up on the upper inclined side of the link E′ and cause said link to descend and press down upon the hinge-pin a' of the dog in a manner to compel the hinged dog to unfold and the portion C to assume the position shown in Fig. 1, and thereby lock the brake.

I am aware of the Patents Nos. 192,032 and 186,489, and my invention differs from either or both of the plans of construction shown in said patents in the following particulars, to wit: In my combination a jointed dog, E E′, is employed, and this dog has one of its parts arranged to tumble, as illustrated in my drawings; and in connection with this jointed dog two pins, m m', are applied to a jointed lever, C C′, and by means of one of these pins the dog is lifted out of the teeth of the segmental rack or toothed arc and allowed by its gravity to tumble backward, while by the other pin it is adjusted and caused to take into the teeth of the segmental rack. All of these adjustments are effected with a movement of the lever C C′ in the same direction, the part C′ of the lever and the gravity of part E of dog below its hinge effecting the tumbling of the dog, and a continuation of the movement of the whole lever sliding the dog over the toothed surface of the segmental rack. The patents above mentioned employ, respectively, a means very different from what I have shown and described for effecting the withdrawal and readjustment of the pawl or dog, and therefore I do not claim anything shown in said patents; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the jointed lever C C′, constructed and operating as described, of the jointed dog E E′, one part of which is caused to gravitate and tumble as it is released from the segmental rack, and a pin, m, whereby the dog is lifted out of the locking-notches, substantially as herein shown and described.

2. The combination, with the jointed lever C C′, of the pins m m' and jointed tumbling-dog E E′, substantially as and for the purpose described.

WILLIAM K. JOHNSTON.

Witnesses:

THOS. D. DEWEY,

J. F. MEEKER.