C. F. WHIPPLE.
Wagon-Brake.

No. 210,442. Patented Dec. 3, 1878.

Fig: 1.

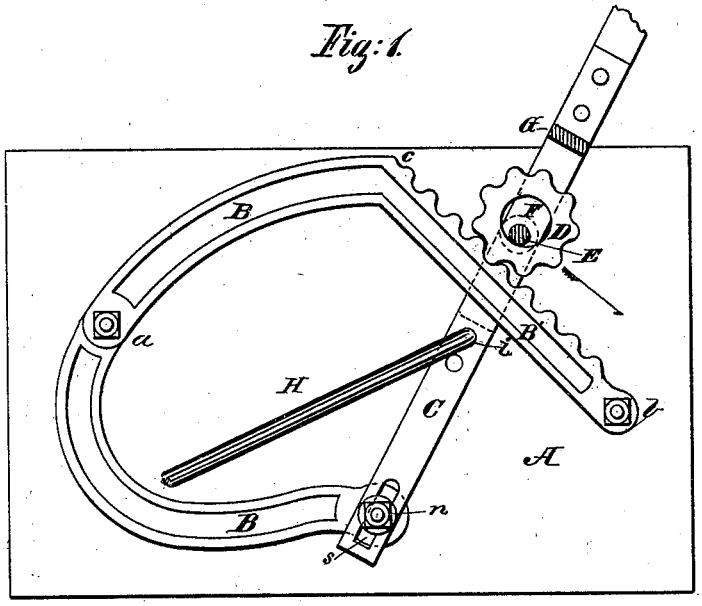
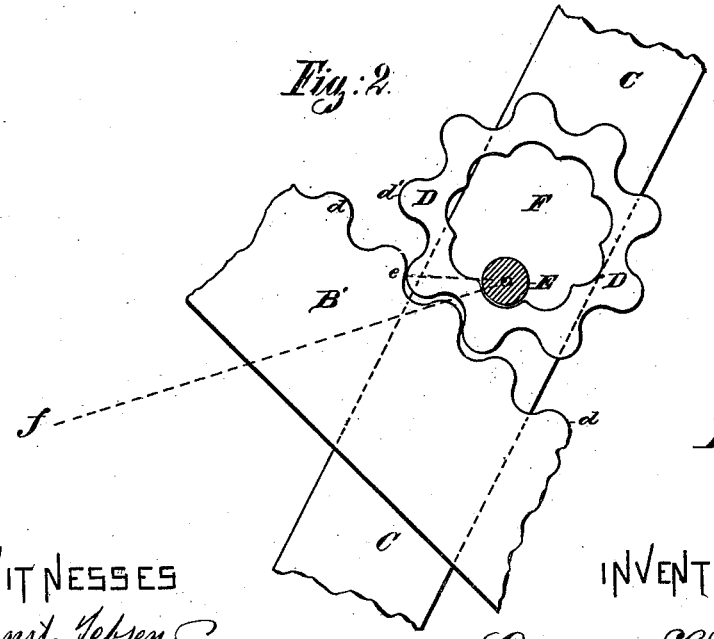


Fig: 2.



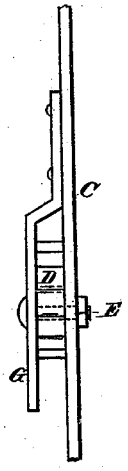


Fig: 3.

WITNESSES
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CLARENCE F. WHIPPLE, OF RACINE, WISCONSIN.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **210,442**, dated December 3, 1878; application filed October 15, 1878.

To all whom it may concern:

Be it known that I, CLARENCE F. WHIPPLE, of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Wagon-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to a single-lever brake-lock for wagons; and consists in a combination of a frame or rack fixed to the wagon-box, a single slotted lever connected with the brake-rod, and an automatic locking device secured to the lever, and engaging the frame or rack to lock the brake, and also to release the same from engagement therewith by simply swaying the lever, all substantially as hereinafter more fully described.

It is the object of my invention to provide a brake-lock that shall be positive in its action, and in which the locking device will operate and may be disengaged without the aid of a spring.

In the drawing, A represents the side-board of a wagon-box, and B B′ an iron frame secured thereto by the three bolts *n a b*. From *n* to *a* the frame lies against the side-board A, this portion of the frame being for the purposes of giving firm support to other portions, fixing properly and surely the pivotal point *n*, and enabling the entire apparatus to be put together in proper manner for attachment to the wagon in the shop of the manufacturer. From *a* to *b* the frame stands off from the box a short distance to allow the lever C (or the guard G, if applied inside the lever) to work freely between the frame and the box.

The lever C has a slot, *s*, at its lower end, through which it is pivotally secured to the frame by the bolt *n*, and rises to any length desirable to give proper purchase in operating the same by the hand.

Between the lever C and the guard G, joined as shown in Figure 3, is pivoted the wheel D by the bolt E. For reasons to be hereinafter stated, the central opening, F, in D, through which E passes, is relatively very large.

From *a* to *c* the frame B is concentric with bolt *n*; but from *c* to *b* it is straight or in an arc, and is swung inward about the point *a* toward *n*, this latter portion being marked B′.

H is the brake-rod, fastened to lever C at *i*, and operating to set the brake by draft upon it—that is to say, by a movement of the lever about its pivot *n* in the direction of the arrow, Fig. 1.

The guard G extends as shown by dotted lines, Fig. 1, for the purpose of always holding the lever and wheel D in proper relation to the frame.

The mode in which my devices co-operate to lock the brake will be best understood by reference to Fig. 3, in which also appears a preferred scalloped form of central opening, F, in the wheel D.

In the drawing the periphery of D and the margin of B′ in contact with the wheel are coarsely toothed to mesh or engage as a rack and pinion. While this construction is preferable as being more positive, the frame B′ may be plain or "sand-smooth" on its upper margin, and the wheel may be polygonal, as an octagon, or any intermediate forms may be employed. The object is to bring the line of draft *o f* below the point *e* in the line of bearing, and resistance to backward rotation, *o e*, when the brake is set. The line of draft and the point *e* being in the relation shown, the greater the strain upon the brake-rod (parallel with *o f*) the more firmly the brake is set.

To disengage the brake, the lever is swayed in a direction opposite to that indicated by the arrow, when the point *e* is brought first in and then below the line *o f*, the same power being exerted by the hand in this operation as in setting the brake. If the bolt E were concentric with D in the relative positions of the parts shown in Fig. 2, the line of draft *o f* would not be brought below *e*, and the brake would not set. Hence the opening F is made large, as shown. The slot *s* allows the wheel D to engage the rack B′ the whole distance from *b* to *c*, and to sweep from *c* to *a*, at or toward which latter point the lever stands when the brake is off.

The frame B B′ may, when the internally-scalloped pinion shown in Fig. 2 is employed, be a continuous arc concentric with the lever-axis, if desired.

The action of the internally-scalloped pinion

is like that of a pinion having a single eccentric aperture of the size of the pin in place of one of the scallops, with the advantage over such a pinion that the brake having the scalloped pinion will lock at shorter intervals than one having the eccentric-pin.

Having thus described my invention, I claim—

The combination, in a wagon-brake lock, of the slotted lever C, frame B B′, and wheel D, having the hole F materially larger than the bolt E, constructed and operating substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

CLARENCE F. WHIPPLE.

Witnesses:

JOHN W. KNIGHT,

SIMEON WHITELEY.