2 Sheets—Sheet 1.

G. F. BURTON.

Wagon-Lock.

No. 209,547. Patented Nov. 5, 1878.

Fig 1.

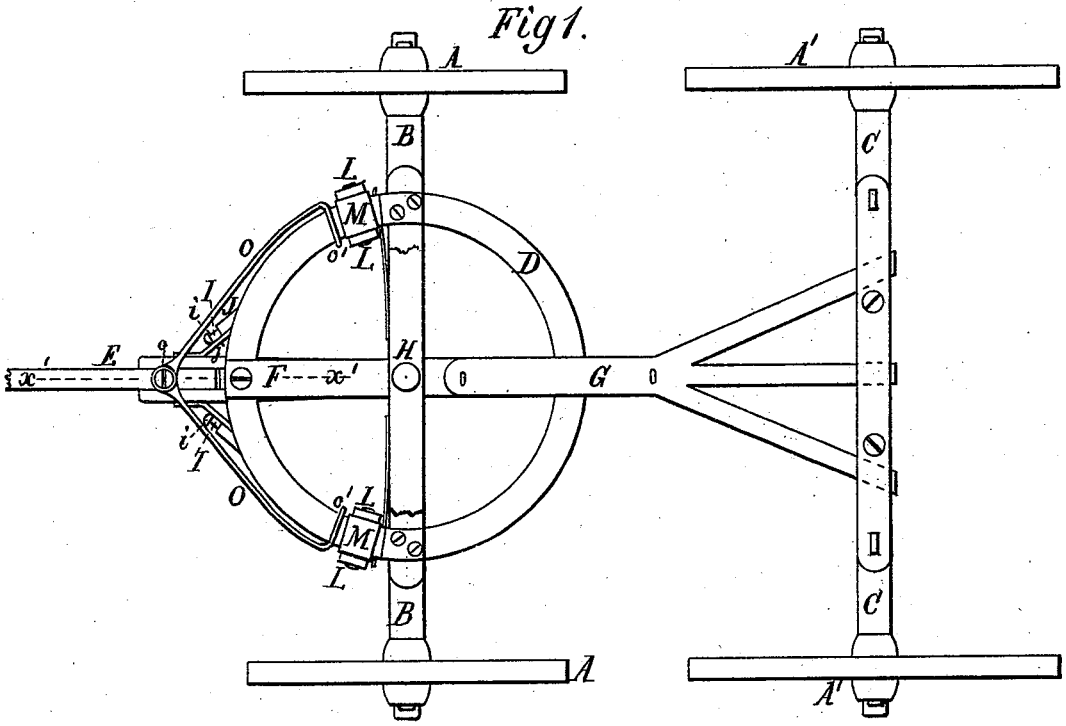


Fig 2.

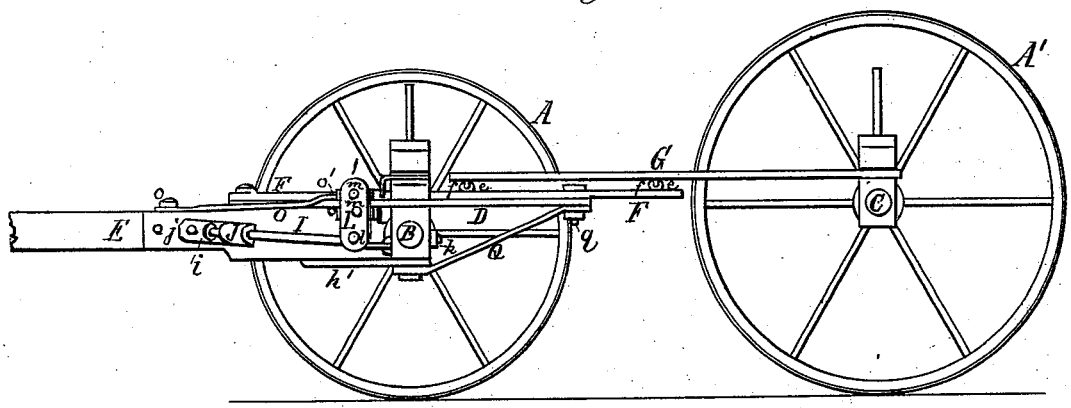


Fig 3.

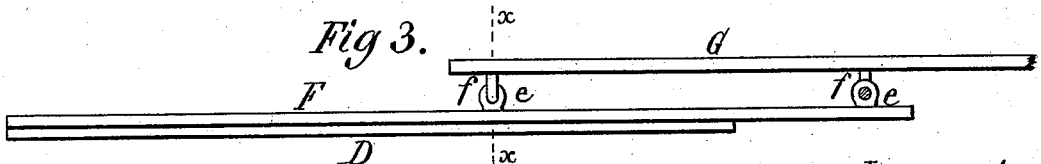
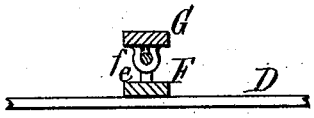


Fig 4.



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by
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2 Sheets—Sheet 2.

G. F. BURTON.

Wagon-Lock.

No. 209,547. Patented Nov. 5, 1878.

Fig 5.

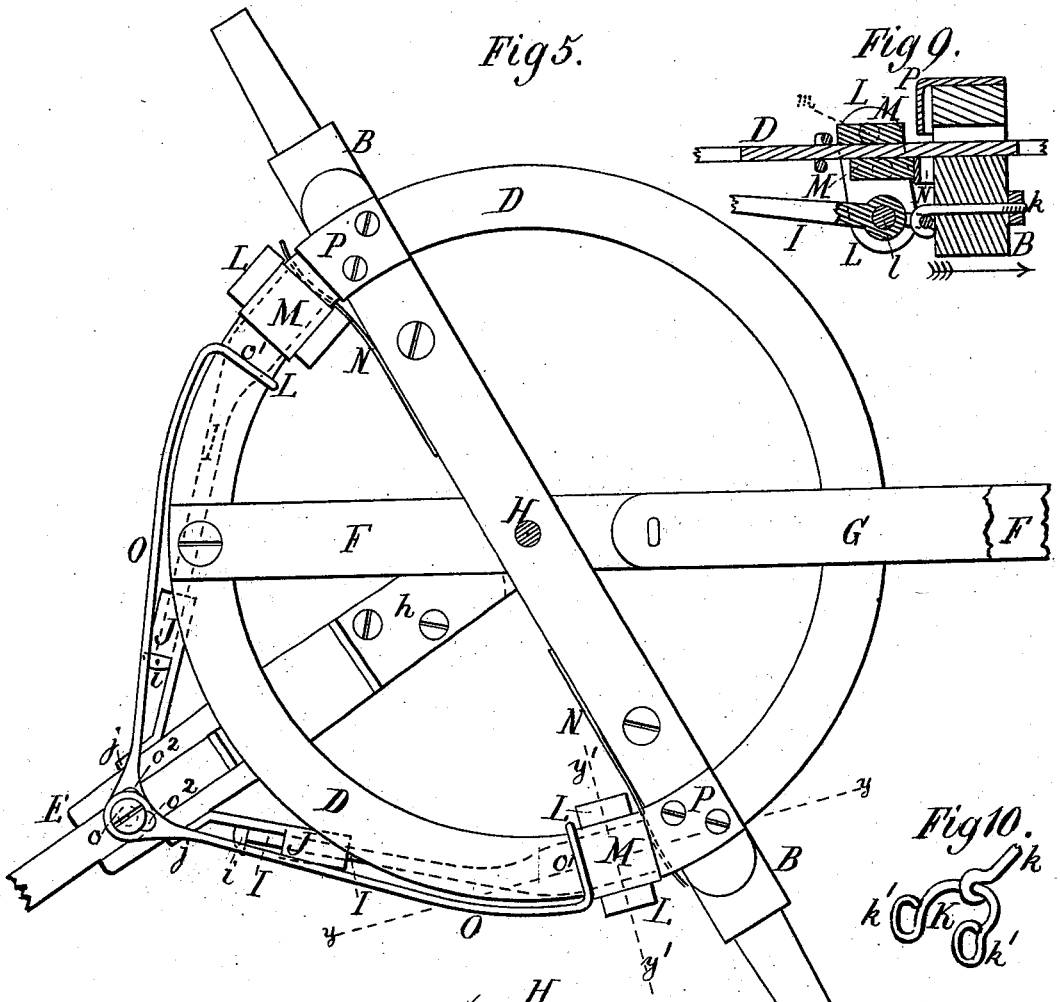


Fig 9.

Fig 10.

Fig 6.

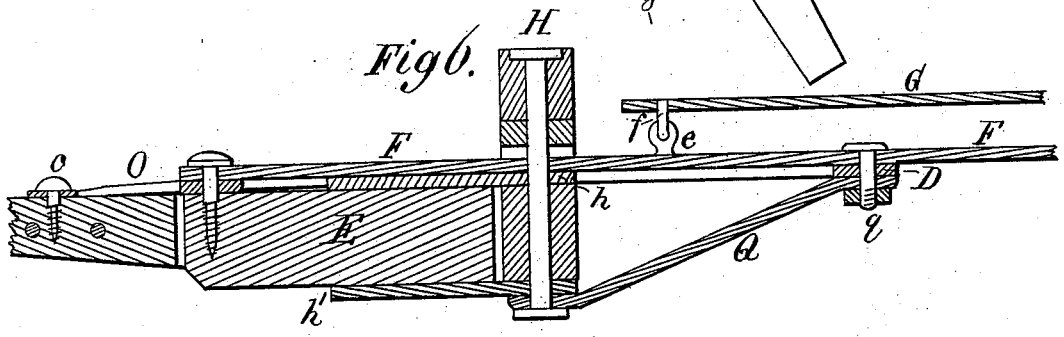
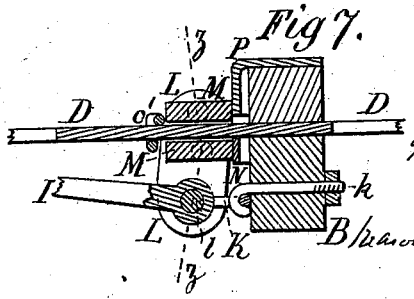


Fig 8.

Fig 7.



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UNITED STATES PATENT OFFICE.

GEORGE F. BURTON, OF MENOMONEE, WIS., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO ROCKWELL J. FLINT AND FRANK J. McLEAN, OF SAME PLACE.

IMPROVEMENT IN WAGON-LOCKS.

Specification forming part of Letters Patent No. **209,547**, dated November 5, 1878; application filed September 21, 1878.

To all whom it may concern:

Be it known that I, GEORGE F. BURTON, of Menomonee, in the county of Dunn and State of Wisconsin, have invented a new and useful Improvement in Wagon-Locks, which improvement is fully set forth in the following specification and accompanying drawings, in which latter—

Figure 1 is a plan view of a wagon-truck having my improved wagon-lock, and showing some of the upper parts in the front broken away in order to expose the parts below. Fig. 2 is a side elevation of the same, the wheels nearest to the observer being removed. Fig. 3 is a detail view of the reach-connection, partly in elevation and partly in section. Fig. 4 is a cross-section of the same. Fig. 5 is an enlarged plan view of the front axle-tree and fifth-wheel. Fig. 6 is a vertical section of the same in the line x' x' of Fig. 1. Fig. 7 is a sectional detail view in the line y y of Fig. 5, showing more plainly one of the locking devices out of action. Fig. 8 is a vertical section of the same in the line y' y' of Fig. 5. Fig. 9 is a detail view similar to Fig. 7, showing the lock biting or in action upon the fifth-wheel. Fig. 10 is a perspective view of the link whereby the lock is attached to the axle-tree.

The nature of my invention consists in certain constructions, combinations, and arrangements of parts hereinafter fully described and specifically claimed, whereby that description of wagon which is provided with a vertically-turning rear reach and a fifth-wheel and locking devices which prevent the front axle from turning independently of the tongue is greatly improved and simplified.

In the accompanying drawings, A A′ represent the wheels of a wagon; B, the front axle-tree; C, the rear axle-tree; D, the fifth-wheel, and E the tongue, of a wagon of ordinary construction. A bar, F, is longitudinally attached to the fifth-wheel D, and its rear part is connected, by means of eyebolts e f, to the reach of the wagon. This construction permits the parts F and G to change their relative positions by swinging vertically upon the connections e f without getting out of line.

The tongue E is pivoted to the king-bolt H by means of two metal straps, h h', which are fastened to the upper and lower parts of the tongue and move on the upper and lower surfaces of the axle-tree B, so as to hold the tongue up level and permit it to swing slightly on the king-bolt independently of the front axle-tree. The tongue is provided with two diagonal braces, I, the front parts of which move in sleeves J, suitably fastened at j to the tongue. The ends of the braces I are provided with heads i, which limit the movement of the braces in the sleeves and transmit the main portion of the motion of the tongue to the axle-tree B. The said braces are pivoted to links K, which are fastened to the front axle-tree, B, by means of eyebolts k. The brace I and link K are united by a pivot, l, which also connects the lower parts of two links, L, as seen in Fig. 8. The link K consists of a curved rod, having two eyes, k', as shown in Fig. 10, through which eyes the pivot l is passed.

The links L are provided with clamp or griping plates M, arranged one above and one below the fifth-wheel D, and provided with journals m, which are fitted into the links L at such distance apart that when the links stand vertically, or nearly so, as seen in Fig. 7, the clamp or griping plates M may be freely moved over the fifth-wheel by turning the tongue; but when the position of the links L is inclined, as seen in Fig. 9, which position they will assume when either of the front wheels A, by reason of back thrusts, tends to move the front axle independently of the tongue E, the said clamp or griping plates are caused to gripe upon the fifth-wheel and lock the front axle thereto.

Two springs, N, suitably fastened to the axle-tree B, serve to keep the links L in a forwardly-inclined position by bearing against the rear sides of the lower clamp-plates M, and thus a very slight swinging movement of the axle-tree will instantly cause one pair of the clamp-plates to bite or gripe upon the fifth-wheel.

The tongue E is provided with two arms, O, fastened to it at o, which arms extend to within a short distance of the clamp-plates M, where they are bent over the fifth-wheel, as seen at o^1 in Figs. 1 and 5, so as to form shoulders or stops for the clamp-plates to abut against, as shown.

The axle-tree B is provided with two angular abutments, P, against which the upper clamp-plates M alternately abut, and whereby the respective links L are prevented from assuming a backward inclination sufficient to cause the clamp-plates to gripe upon the fifth-wheel. The king-bolt is connected, by means of a lower brace, Q, with the plate F and fifth-wheel D at *q*, as shown in Fig. 6. The arms O, at their place of fastening, are provided with slots o^2, whereby they are adjustable, so as to compensate for wear of the parts of the locking device.

Operation: In a normal position, the wagon appears as shown in Fig. 1, the arms O, braces I, and tongue E occupying a central position with respect to each other, and the clamp-plates M being inclined forward and ready to gripe upon the fifth-wheel. If the right front wheel A should strike an obstacle in the road while the wagon is in motion and receive a backward thrust, the lower ends of the links L would thereby be drawn back a short distance and cause the clamp-plates to firmly gripe the fifth-wheel and immediately lock the axle-tree thereto, thus rendering the axle-tree immovable unless the tongue moves and releases the plates. If a similar resistance to the left wheel takes place, the parts *l* M D on the left side will operate in the same manner as those on the right. If the tongue E is turned to the left, as shown in Fig. 5, the right sleeve J slides toward the end of the brace I until it strikes the head *i*, while the left arm O pushes the left clamp-plate M back against the abutment P into the position shown in Fig. 7, and prevents it from locking the axle-tree to the fifth-wheel. During this operation the clamp-plates on the right side slip forward upon the fifth-wheel without closing upon it. This operation is reversed when the tongue is turned to the right.

When the clamp-plates become so worn that they require a greater inclination of the links L in order to close upon the fifth-wheel, the arms O are adjusted forward, and thereby shortened by means of the slots o^2 and fastening *o*.

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

1. In a wagon or vehicle, the combination of a swinging axle-tree, a rigid fifth-wheel, and a frictional locking mechanism fastened to the axle-tree and locking itself upon the fifth-wheel when the axle-tree has a tendency to swing independently of the tongue of the wagon, substantially as and for the purpose set forth.

2. In a lock for wagons and other vehicles, the spring N, for keeping the frictional locking mechanism in a condition ready for locking upon the fifth-wheel, substantially as set forth.

3. The combination of the braces I, sleeves J, and pivoted tongue E, whereby the tongue is allowed to operate the rods O, substantially as and for the purpose set forth.

4. In a lock for wagons and other vehicles, the arms O, whereby the locking mechanism is prevented from locking the axle-tree to the fifth-wheel when the tongue is turned, substantially as set forth.

5. The combination of the front and rear bars, F and G, fifth-wheel D, and eyebolt-connections *e f*, substantially as and for the purpose set forth.

GEORGE F. BURTON.

Witnesses:
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F. J. McLEAN.