

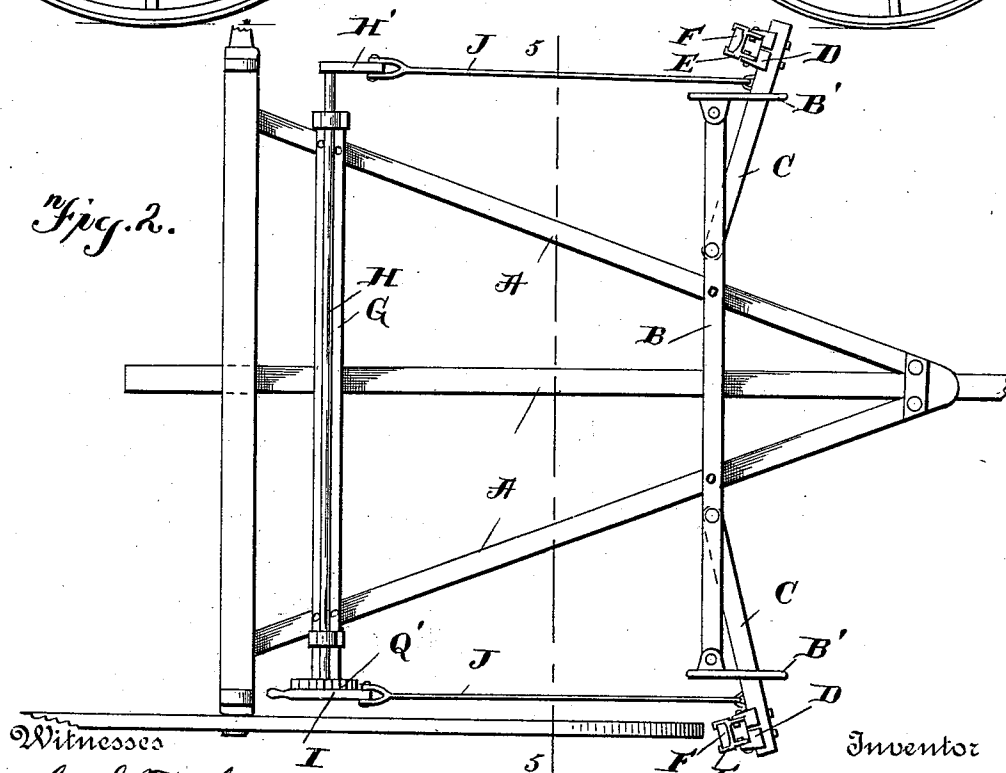
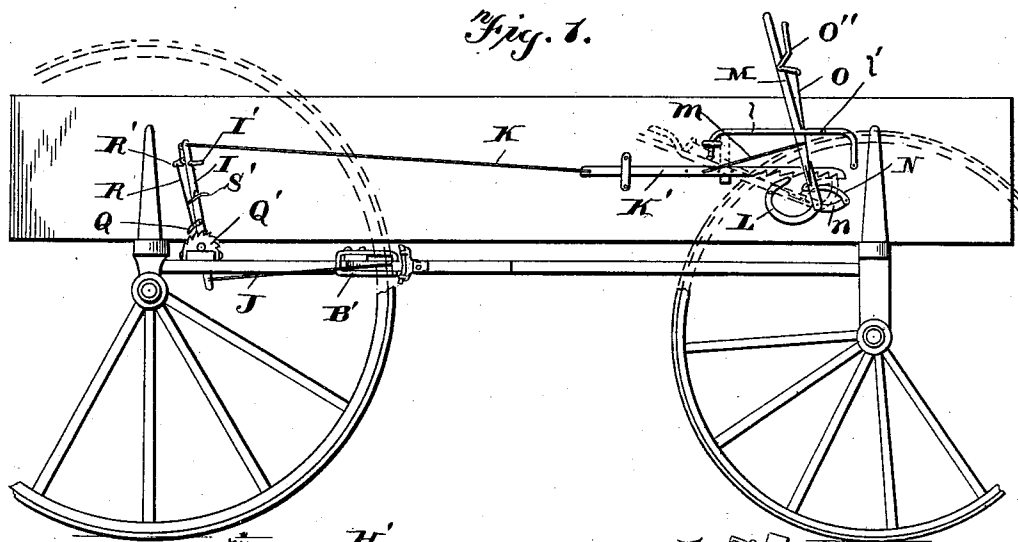
(No Model.)

3 Sheets—Sheet 1.

W. J. STEPHENSON.
WAGON BRAKE.

No. 568,633.

Patented Sept. 29, 1896.



Witnesses

Geo. C. French

James W. Berans

Inventor

W. J. Stephenson

By Attorneys *Patterson & Co.*

W. J. STEPHENSON.
WAGON BRAKE.

No. 568,633.

Patented Sept. 29, 1896.

Fig. 3.

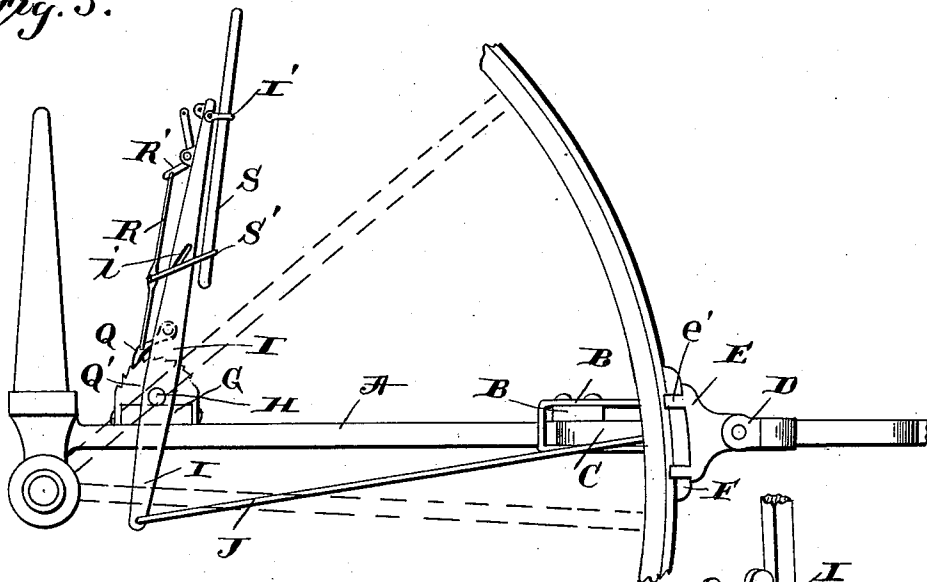


Fig. 4.

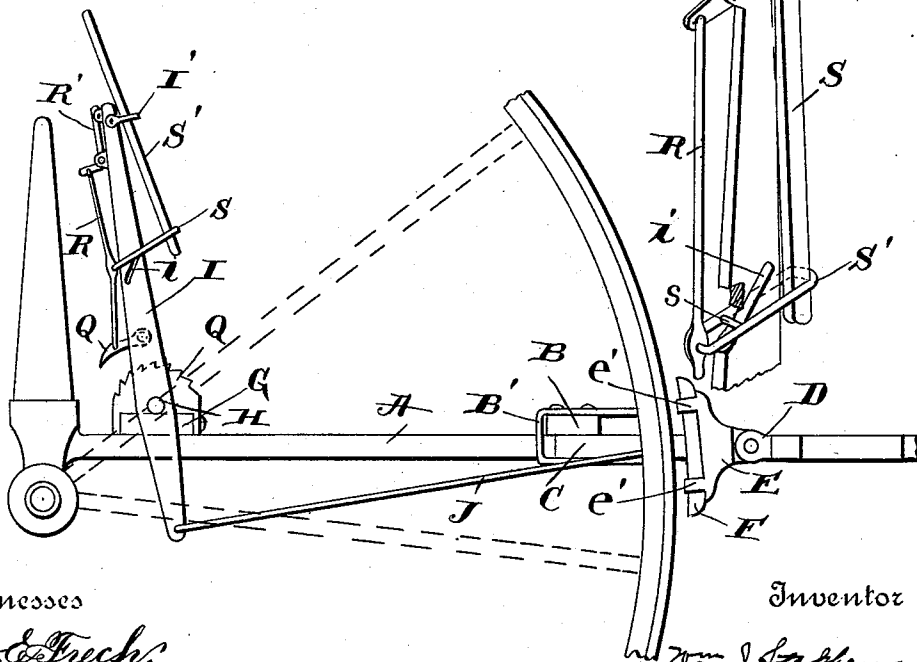
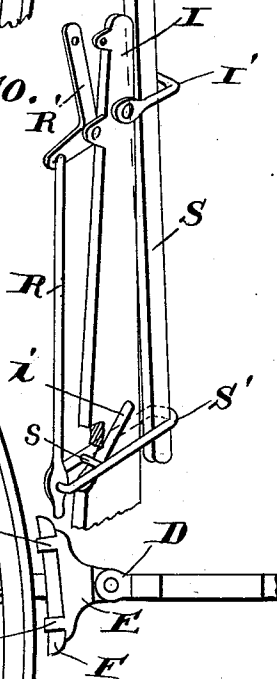


Fig. 10.



Witnesses

Geo. E. Trech

James W. Bowers

Inventor

Wm. J. Stephenson

By Attorneys Tait & Nesbit

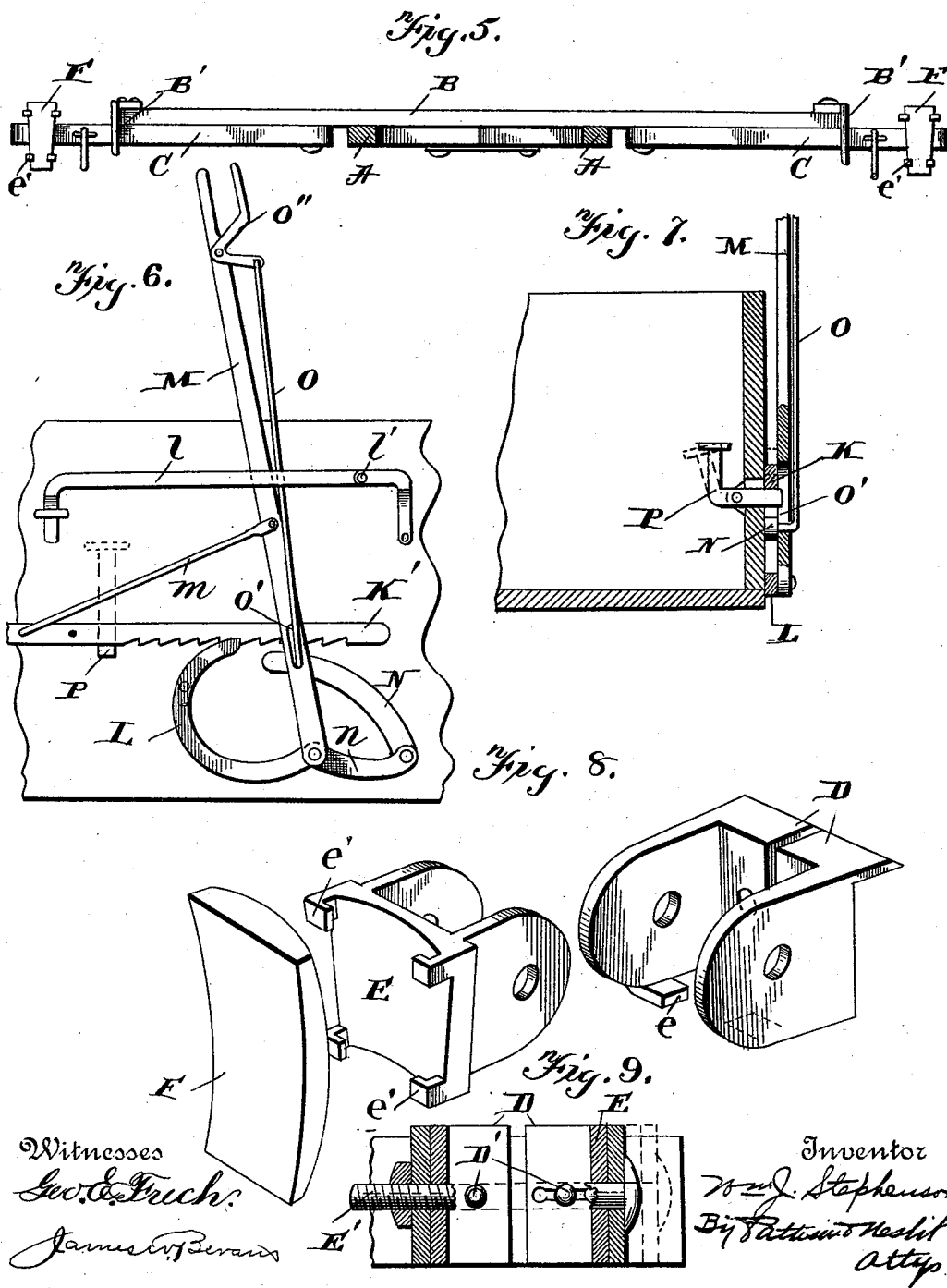
(No Model.)

3 Sheets—Sheet 3.

W. J. STEPHENSON.
WAGON BRAKE.

No. 568,633.

Patented Sept. 29, 1896.



UNITED STATES PATENT OFFICE.

WILLIAM J. STEPHENSON, OF EDNA, KANSAS.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 568,633, dated September 29, 1896.

Application filed January 24, 1896. Serial No. 576,716. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. STEPHENSON, of Edna, in the county of Labette and State of Kansas, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention has reference to wagon-brakes, and the object thereof is to provide improved mechanisms for setting and releasing the brake both when the wagon-body is on and off.

A further object is to provide an improved brake-lever and brake-shoe mechanism.

The invention consists in the novel features of construction hereinafter fully described and claimed, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of a wagon carrying a body or box provided with my improved brake. Fig. 2 is a plan view of the rear portion of the wagon-gear. Fig. 3 is a side elevation of the brake mechanism with the wagon-body removed. Fig. 4 is a similar view with the brake released from the wheel. Fig. 5 is a vertical cross-sectional view on the line 5 5 of Fig. 2, looking toward the front end of the wagon. Fig. 6 is an enlarged detail view of the brake-operating lever and releasing device carried by the wagon-body. Fig. 7 is a cross-sectional view of a portion of the body, showing the foot-trip or releasing device. Fig. 8 illustrates in detail the brake lock and holder. Fig. 9 is a cross-sectional view of the parts shown in Fig. 8 when united. Fig. 10 is a detail perspective view of the operating-lever on the rear of the wagon and mechanism supported thereby.

A designates the rear running-gear, and secured transversely on the forward portion thereof is the bar B, carrying at its ends the depending elongated loops B'.

C are the brake-levers extended through loops B' and pivotally secured to the under side of bar B. To the outer end of each lever C is secured the sectional support D, one portion thereof being secured to the brake-lever

by bolt D', as shown in Fig. 9, while the other section of the holder is adjustable thereon, the securing-bolt D extending through the horizontal slot formed therein, as is also shown in said figure. A shoe-holder E is mounted in the adjustable holder D by bolt E', the lower side of holder D resting on lug e of holder D. Flanged lug e' on the forward face of holder D secures the wedge-shaped brake-blocks F, which may be renewed from time to time, as desired. Owing to the construction shown, it is impossible for the block F to work downward and out of place. If desired, block F may be dispensed with and holder E caused to bear directly against the wheel.

Arranged transversely on the rear portion of the running-gear is the bar or support G, and mounted in bearings thereon is shaft H, and formed on one end of the shaft is crank H', while on the other end, mounted between its ends, is lever I, and the lower extremity of crank H' and I are connected to the respective brake-levers B by rods J. Thus it will be observed that a forward movement of lever I will set the brake. For operating the same with the body in position, as shown in Fig. 1, a rod K extends forward from the upper end of lever I, the connection of the said rod with the lever holding a ratchet mechanism carried by the said lever out of gear, and the purpose of this ratchet mechanism will be presently explained.

Rod K at its forward end is connected to bar K', notched upon its under edge, as shown. Secured permanently to the body is dog L, over which bar K is moved forward and which prevents the bar from moving backward until released. Hand-lever M is fulcrumed at its lower end to the body and extends upward inside of the guide l, and is connected to bar K' for the purpose of drawing it forward and setting the brake by rod m. For releasing bar K' from the dog L, I provide the vertically-swinging trip N, arranged beneath and in line with said bar and afford it necessary movement through the medium of link n. Trip N is raised to throw bar K' from engagement with the dog by rod O, which secures the proper connection with the trip through slot O' in lever M and which at its upper end is connected to

the small hand-lever O'' at the top of lever M. Thus with one hand the brake may be set and released with ease. An angular foot-trip P projects from the inner side of the body beneath bar K', which may be used for readily releasing the brake by pressure of the foot, the mechanism being clearly shown in Fig. 7. Guide or guard l is made in sections, and the rear portion thereof is adapted to swing upward on pivot l', so as to permit the hand-lever mechanism to be turned down on the outer side of the body when not in use, and thus entirely out of the way, as shown in dotted lines in Fig. 1.

For operating the brake when the body is removed the ratchet mechanism, held out of operative position, as heretofore stated, is released by the disconnection of rod K and permitted to assume the operative position indicated in Figs. 3 and 4. This mechanism consists of a dog Q, carried by the lever I, adapted to engage ratchet Q', secured to bar B. The dog is controlled by rod R, which at its upper end is connected to the angle-lever R', the function of this last-named lever being to hold the dog raised and out of engagement with the ratchet when the operating mechanism carried by the wagon-body is used. The upper end of lever I carries on its forward side a ring or loop I', through which depends an operating-bar S. The lower end of this bar projects through the elongated ring S', surrounding lever I and secured at its rear side to rod R and provided between its ends with a transverse bar s. This transverse bar extends through diagonal slot i in lever I, so that by a backward push upon bar S the lower end will be thrown forward, thus pulling forward link S' and causing it to be raised through the medium of bar s, traveling in the diagonal slot, thereby raising and disengaging dog Q from ratchet Q' and releasing the brake. A forward pull upon the upper end of bar S will simply draw forward lever I, which is firmly held by the dog, as will be readily understood.

Thus a most simple and effective brake mechanism is provided which may be operated as well when the wagon is in use with its body as when used without it. It may be stated that bar S is provided and arranged as shown for convenience in operating the brake when loads of lumber or other material are piled high upon the wagon, so as to render lever I quite out of reach. It will be understood, however, that the said bar may be dispensed with and the brake set and released by the driver through the medium of the angular lever R', as will be understood.

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

1. The combination of a support having outwardly-extending parallel members, lugs e at the lower ends of said members, a brake-shoe holder having projecting parallel members adapted to overlap and be pivotally se-

cured to the support members, the lugs e engaging and limiting the downward movement of the shoe-holder, and a brake-shoe adapted to be secured to the holder, substantially as shown and described.

2. The combination of support D having outwardly-extending vertically-disposed parallel members formed with alined openings, lugs e at the lower ends of the support members, a shoe-holder having outwardly-extending vertically-disposed parallel members adapted to overlap the support members and formed with openings alining with the openings of the support members, a pivotal bolt extended through the said openings and uniting the support and holder, and a brake-block adapted to be secured to the holder, substantially as shown and described.

3. The combination of the transverse crank-shaft, the wheel-engaging mechanism operated thereby, the lever for turning the crank-shaft, the dog and dog-raising rod carried by the lever, the permanent ratchet engaged by the dog, the link surrounding the lever connected to the rod, the transverse bar carried by the link extending through the diagonal slot formed in the lever, and bar S carried by the upper end of the lever and at its lower end connected to and adapted to move the link transverse the lever, the parts operating substantially as shown and described.

4. In a wagon-brake, the wheel-engaging mechanism, notched bar K adapted to set the same by a forward movement, a dog arranged beneath the bar and adapted to engage the notches thereof and prevent backward movement, and a releasing device adapted to raise the bar from engagement with the dog, substantially as shown and described.

5. In an improved wagon-brake, the wheel-engaging mechanism and devices for actuating the same, the notched bar adapted to set the brake by a forward movement, the permanent dog arranged beneath the bar to engage the notches thereof and prevent its backward movement, and a vertically-movable trip arranged beneath the bar for raising it from engagement with the dog, substantially as shown and described.

6. In an improved brake mechanism, the wheel-engaging devices, the forwardly-movable bar which serves to set the same, a device over which the bar moves for preventing backward movement thereof, the vertically-movable trip N for raising the bar from engagement with the said device, and the link to which the trip is pivotally secured for affording proper movement, substantially as shown and described.

7. In a brake mechanism, the wheel-engaging devices, the forwardly-movable notched bar for actuating the same, the permanent dog over which the bar moves to prevent backward movement of the latter, the hand-lever connected to the said bar for operating it, the trip arranged beneath the bar and provided with the link connection, the rod for raising

the trip, and the small hand-lever carried by the first-named lever to which the said rod is connected, substantially as shown and described.

5 8. The combination of a wheel-engaging mechanism, a forwardly-movable bar for setting the same, a device for holding the bar from backward movement, and the angular
10 foot-trip for raising the bar from engagement with said device for releasing the same, substantially as shown and described.

9. In a brake, the combination with the hand-lever, of a guide through which the hand-lever is adapted to move, said guide being
15 adapted to open to permit the depression of the hand-lever out of the way, substantially as shown and described.

10. In a brakemechanism, the combination of transverse bar B, elongated loops B' at its
20 ends, brake-levers C extended through said loop and pivotally secured at their inner ends

to bar B, the brake-shoes carried by levers C, and mechanisms for moving the said levers through the loops B', substantially as shown and described.

11. The combination of the brake-lever, the sectional holder secured thereto with one section adjustable toward the other, the brake-shoe holder pivotally mounted in the sectional holder and held from downward movement
25 by lugs e' on the sectional holder, the flanged lugs on the forward face of the brake-shoe holder, and the brake-shoes adapted to be confined by said lugs, substantially as shown and described.

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

WILLIAM J. STEPHENSON.

Witnesses:

T. A. REYNOLDS,
H. H. ISHAM.