No. 611,096. Patented Sept. 20, 1898.

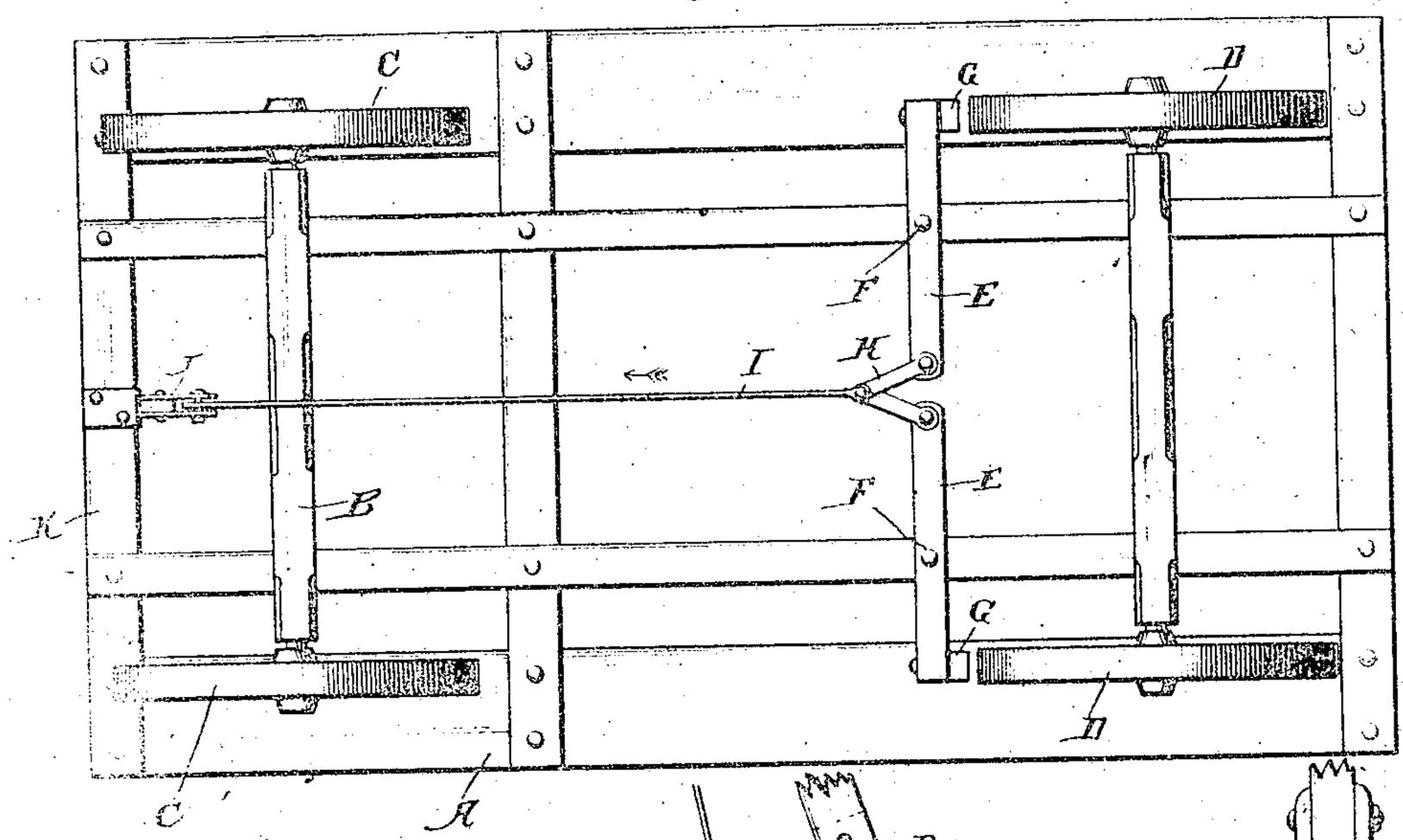
C. C. & W. L. BARROW.

BRAKE FOR HAY FRAMES.

(Application filed Nov. 23, 1897.)

(No Model.)

Fig. 1.



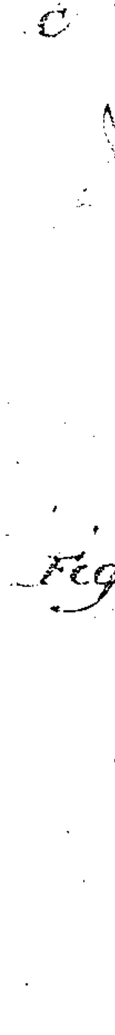


Fig. 2.

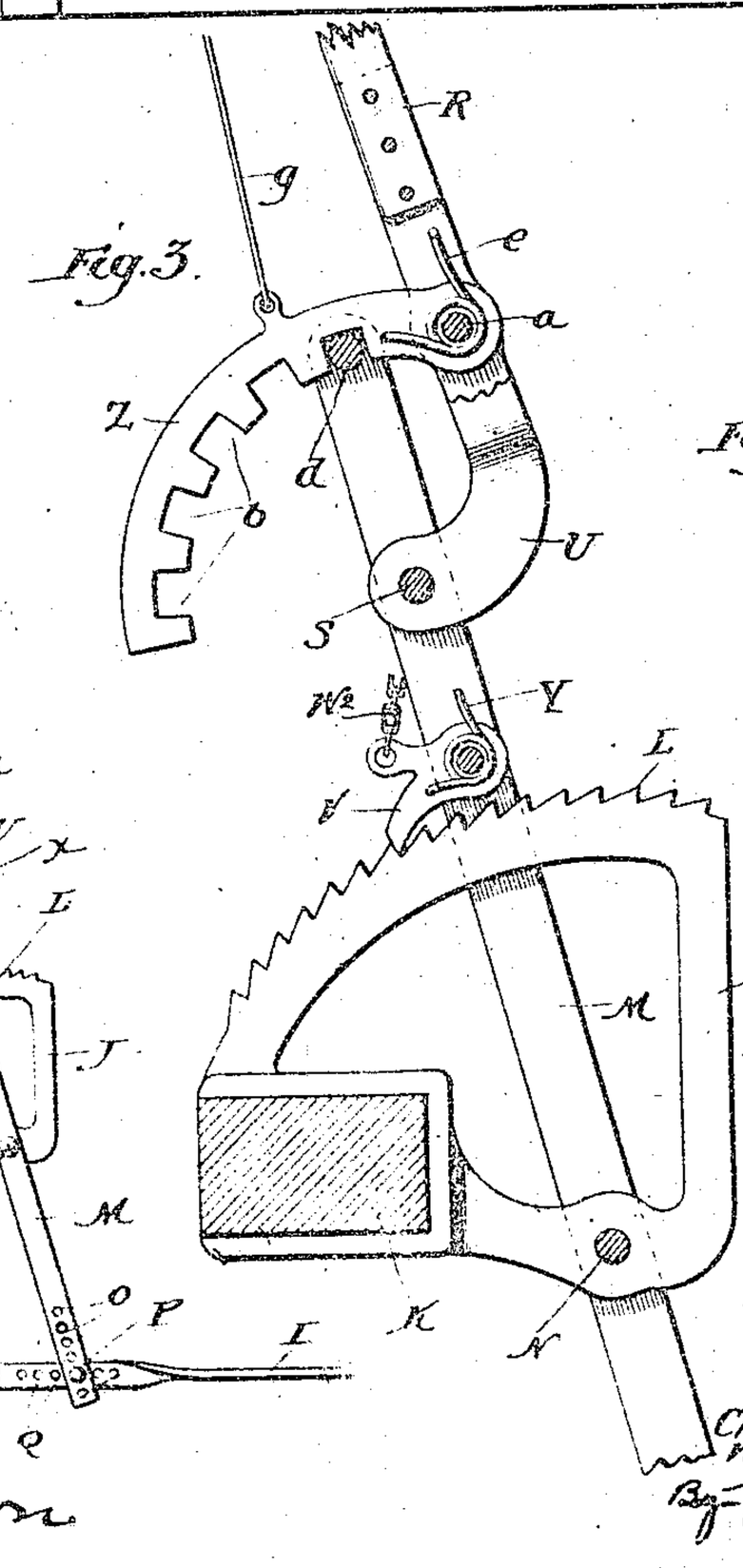


Fig. 3.

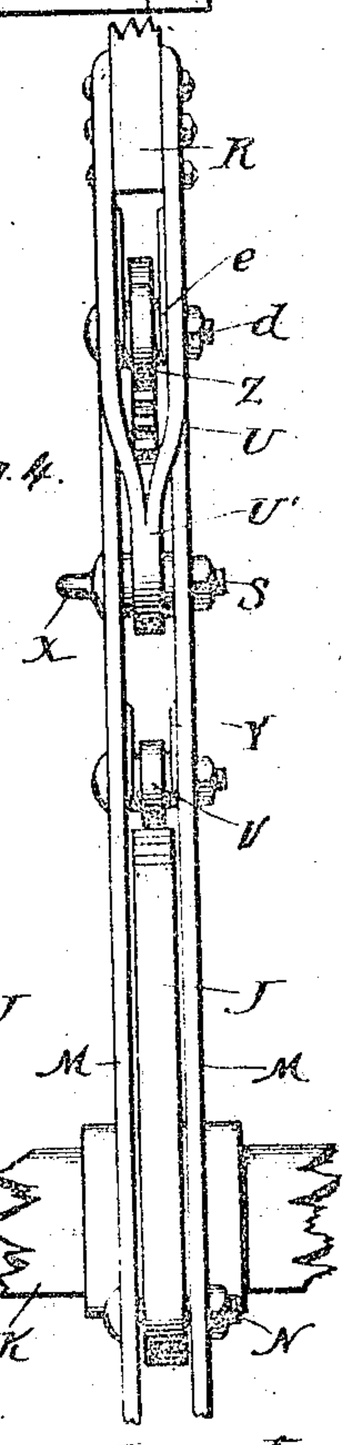


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES C. BARROW AND WALTER L. BARROW, OF SHILOH HILL, ILLINOIS.

BRAKE FOR HAY-FRAMES.

SPECIFICATION forming part of Letters Patent No. 611,096, dated September 20, 1898.

Application filed November 23, 1897. Serial No. 659,560. (No model.)

To all whom it may concern:

Be it known that we, CHARLES C. BARROW and WALTER L. BARROW, citizens of the United States, residing at Shiloh Hill, in the county of Randolph and State of Illinois, have invented a certain new and useful Improvement in Brakes for Hay-Frames and the Like, of which the following is a specification.

Our invention relates to a new and useful improvement in brakes for hay-frames and the like, and has for its object to provide an exceedingly simple and effective apparatus of this description by means of which the brake-shoes may be applied to the wheels of a wagon from various positions of the operator; and a further object of our invention is to provide for the falling or swinging of the upper portion of the brake-lever out of the way when occasion may require by the load or from other causes.

A still further object of our invention is to put the locking and unlocking of the brake under perfect control of the driver, and also to permit the adjustment of the upper portion of the lever to any desired position by the driver from the upper end of the brake-lever; and a still further object of our invention is to provide for the various adjustments necessitated by the slack in the brake-rod or the depth of the frame.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a bottom plan of a wagon having a hay-frame thereon and showing the arrangement of the brake bars and shoes relative to the wheels, as well as the brake-rod connecting said bars with the brake-lever; Fig. 2, an elevation of the brake-lever and its toothed segmental stand, the cross-bar to which said stand is bolted being in section; Fig. 3, an enlarged view of the lower portion of the lever, one side thereof being sectioned away, so as to clearly illustrate the manner of operating the locking-dog and adjusting-cap; and Fig. 4, an edge view of the portion of the apparatus shown in Fig. 3.

In carrying out our invention as here embodied, A represents a hay-frame, which is supported in the usual manner upon the axles B, the latter having journaled thereon the wheels C and D, and to the under side of this frame are pivoted the brake-bars E, as indicated at F, the outer ends of said bars carrying the shoes G, adapted to be forced against the wheels D, while the inner ends of these bars are coupled by means of the links H to the brake-rod I, so that when said rod is drawn in the direction of the arrow marked adjacent thereto the brake-bars will force the shoes firmly against the wheels, thus accomplishing the result for which the brake is intended.

A stand or bracket J is bolted to the cross-bar K and consists of a single piece so formed as to produce the toothed segment L. The brake-lever M consists of two metal bars arranged parallel side by side and is pivoted at N to the bracket J and is attached at its lower end by the bolt P, which passes through two of the series of holes O and Q, to the brake-rod I. Thus when the brake-lever is swung in the proper direction this rod will be drawn upon and the brake-shoes forced against the wheels D, as before set forth.

An operating-lever R is pivoted at S between the side bars of the brake-lever M, and this operating-lever is preferably of wood, having secured to the lower end thereof two metal strips U, which are welded together at their lower ends, as indicated at U', where they pass between the side bars of brake-lever and are thus pivoted. A ratchet-dog V is also pivoted between the side bars of the brake-lever and adapted to engage with the teeth L, so that when the brake-lever is swung in such manner as to apply the shoes it may be locked in this position, thereby relieving the operator of the necessity of constantly holding the lever in this position; but when it becomes necessary to release the brake-lever this is accomplished by means of a hand-lever W, which is pivoted to the upper end of the operating-

lever and connected to the ratchet-dog by means of a wire W′ and a chain W^2, which forms a continuation of said wire and passes through the eye X, formed upon the pin S, for the purpose hereinafter set forth, so that by pressing upon the hand-lever W the dog will be disengaged from the teeth L, thus freeing the brake-lever and permitting it to be swung in a reverse direction, thereby removing the brake-pressure.

A suitable spring Y is so arranged as to normally hold the ratchet-dog in engagement with the teeth L.

The operating-lever R being pivoted to the brake-lever, as before described, it is necessary that it shall be held rigid therewith in order that power may be transmitted to said brake-lever, and this we accomplish by the use of a segmental rack Z, which is pivoted at *a* between the strips U and has formed therein the notches *b*, adapted to engage with the bolt *d*, which latter is also utilized to secure the upper ends of the side bars of the brake-lever in position.

A spring *e* is coiled about the bolt *d* and so attached to the rack-bar as to normally hold it in engagement with the bolt *a*. Thus when the operating-lever is adjusted to any desired position it will therefore be held in this position by the engagement of one of the notches *b* with the bolt *d*, and when a readjustment of the operating-lever is desired the hand-lever *f*, which is pivoted to the upper portion of the operating-lever and connected by means of the wire *g* to the rack-bar, is manipulated to withdraw the rack-bar out of engagement with the bolt *d*. This last feature of our invention is exceedingly important, since it permits the adjustment of the operating-lever to a variety of positions, thereby enabling the operator to manipulate the brake-lever without inconvenience from the load or otherwise, and when the operating-lever is swung from one position to another it is to be noted that the chain W^2 is not affected by this movement, since it passes through the eye X at the center of movement of said operating-lever, thus maintaining the chain in its taut or slack condition at all times.

Having thus fully described our invention, what we claim as new and useful is—

1. A brake for hay-frames consisting of suitable brake-bars, shoes carried thereby, a rod connected therewith, a segmental rack-stand attached to the frame, a brake-lever pivoted to said stand, and attached at its lower end to said rod, a ratchet-dog pivoted to the brake-lever and adapted to engage the teeth of the stand, an operating-lever pivoted to the brake-lever, a segmental rack-bar pivoted to the operating-lever and adapted to engage the bolt carried by the brake-lever, and means for throwing the ratchet-dog and rack-bar into and out of activity, as specified.

2. A brake of the character described consisting of two brake-bars pivoted to the frame, shoes carried by the outer ends of said bars, a brake-rod, means for coupling said rod to the brake-bars, a segmental rack-stand secured to the frame, a brake-lever pivoted to said stand and attached at its lower end to the brake-rod, a ratchet-dog pivoted to the brake-lever, a spring for holding said dog in engagement with the segmental teeth, an operating-lever pivoted to the brake-lever, a rack-bar pivoted to the operating-lever and adapted to engage with a suitable bolt carried by the brake-lever, a hand-lever W, means for connecting said hand-lever with the ratchet-dog, a hand-lever *f* also pivoted to the operating-lever, and means for connecting the last-named hand-lever to the rack-bar, substantially as and for the purpose set forth.

3. The herein-described combination of the brake-bars E pivoted to the under side of the frame, shoes carried by said bars and adapted to act upon the wheels, a brake-rod, links for connecting said rod to the brake-bars, a segmental stand secured to the frame, a brake-lever pivoted to said stand and attached to the brake-rod, teeth formed upon the segmental portion of the stand, a ratchet-dog pivoted to the brake-lever and adapted to engage said teeth, a spring for normally holding said dog in engagement with said teeth, an operating-lever pivoted to the brake-lever, a rack-bar pivoted to the operating-lever, a spring adapted to normally hold said rack-bar in engagement with a suitable bolt carried by the brake-lever, a hand-lever *f* pivoted to the upper end of the operating-lever, a wire connecting said hand-lever with the rack-bar whereby the latter may be disengaged from its bolt, a hand-lever W also pivoted to the upper end of the operating-lever, a wire and chain connecting the last-named hand-lever with the ratchet-dog, said chain passing through an eye located upon the axial line of the pivot-point of the operating-lever, substantially as and for the purpose set forth.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

CHARLES C. BARROW.
WALTER L. BARROW.

Witnesses:
GEO. TEGTMEYER,
HAMILTON PARKHILL.