No. 727,869. PATENTED MAY 12, 1903.

J. WHITE.

BRAKE LEVER.

APPLICATION FILED FEB. 6, 1903.

NO MODEL.

Fig. 1.

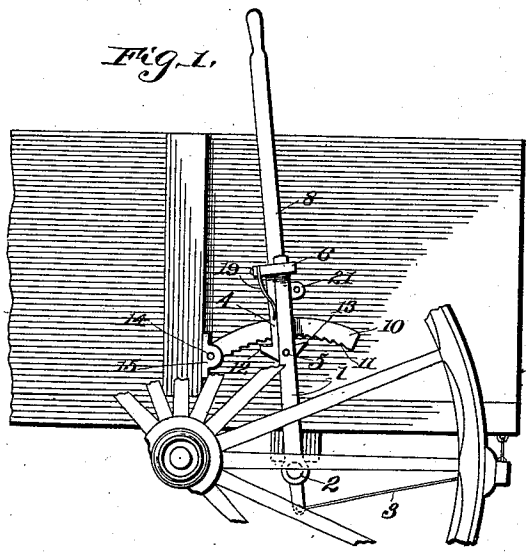


Fig. 2.

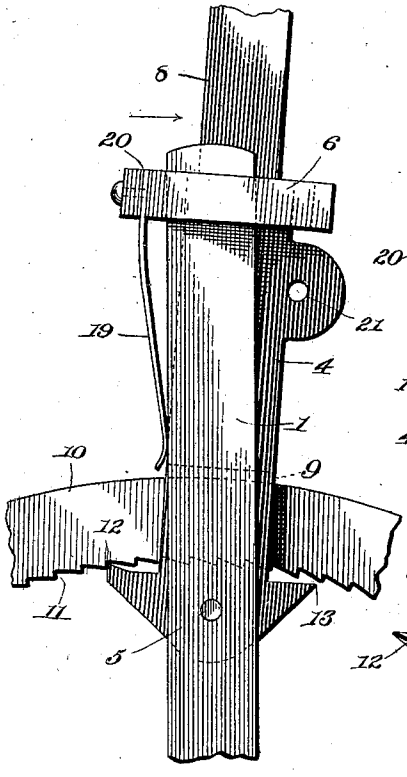


Fig. 4.

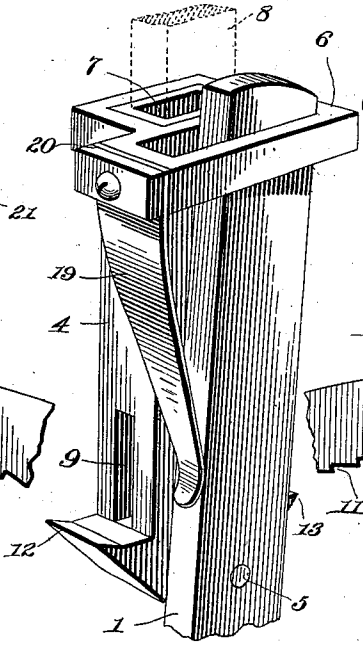
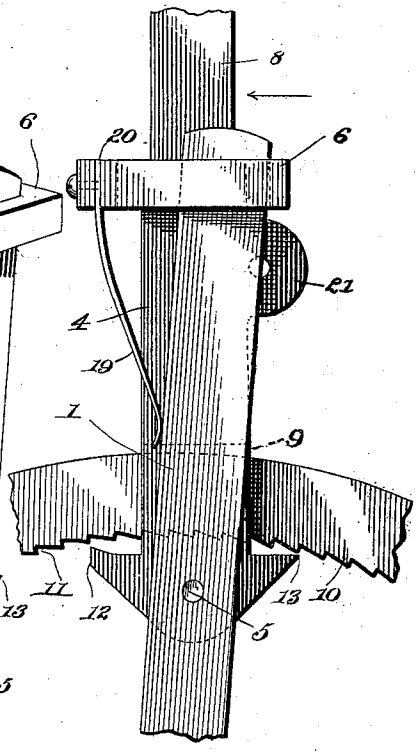


Fig. 3.



Witnesses:

C. L. Taylor

C. W. H. Brown

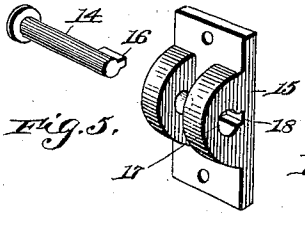


Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES WHITE, OF KIMMSWICK, MISSOURI.

BRAKE-LEVER.

SPECIFICATION forming part of Letters Patent No. 727,869, dated May 12, 1903.

Application filed February 6, 1903. Serial No. 142,137. (No model.)

To all whom it may concern:

Be it known that I, JAMES WHITE, a citizen of the United States, residing at Kimmswick, in the county of Jefferson and State of Missouri, have invented certain new and useful Improvements in Brake-Levers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to levers used for operating the braking mechanisms of vehicles and for other purposes.

The primary object of the invention is to provide means whereby the movement of such a lever may be readily and easily controlled. To accomplish this object, provision is made for the automatic engagement and release of the mechanism for retaining the lever in the desired positions it assumes when power is applied thereto for operating the braking mechanism or for other purposes, this result being attained by the same movement which works the lever.

Novel details will be apparent from the accompanying drawings, which show an embodiment of the invention for purposes of illustration and which form part hereof, when read in connection with the detail description hereinafter and the appended claims.

In the drawings like reference characters refer to corresponding parts in the several views.

Figure 1 is a view of the invention, so much of a wagon being shown as is necessary to illustrate its application to a vehicle. Fig. 2 is an enlarged view of the lever and ratchet mechanism, the ratchet-teeth being shown in locked position. Fig. 3 is a similar view showing the ratchet-teeth in unlocked position. Fig. 4 is a view of the rock-sleeve of the lever, and Fig. 5 is a view of the rack in which the ratchet-bar is pivoted.

Referring more particularly to the drawings, 1 designates the main bar of the lever, which is fulcrumed to the hounds of a wagon or other suitable part at 2 and has connected to it a rod or other means 3 for transmitting power to the brake or other mechanism to which it is applied. A sleeve 4 is pivoted to bolt 5 on and near the top of bar 1 and is held so as to have limited rocking movement with respect to said bar by a collar 6, which embraces said bar, the pivot-bolt 5 being near the bottom and the collar 6 near the top of sleeve 4.

Sleeve 4 is formed with a longitudinal slot 7, in which a hand-bar 8 is snugly but removably fitted, and with a transverse slot 9, in which travels a segmental ratchet-bar 10, having diagonally-arranged teeth 11. The slot 9 is somewhat wider than bar 10. The longitudinal slot 7 extends from the top, but not the entire length, of sleeve 4, and slot 9 extends through said sleeve near its bottom and beneath slot 7.

The sleeve 4 is provided at its bottom with oppositely-disposed laterally-extending lugs 12 and 13, adapted to operate on the teeth 11 of ratchet-bar 10. The ratchet-bar 10 is hung at one end on the pivot 14 of the rack 15, which is fastened on a standard of a wagon or other suitable part. Pivot 14 has a short key 16, and the aperture 17 of ratchet-bar 10, through which this pivot passes, has a notch 18, corresponding to said key, to permit said bar being placed on or removed from its pivot. This key 16 operates to hold the ratchet-bar on the pivot after said bar is slightly turned into its operative position.

When power is applied to hand-bar 8, so as to move the lever in the direction of the arrow, Fig. 2, in order to exert force against the brake or other mechanism, the lug 13 is disengaged from the ratchet-bar 10, and lug 12 runs on the teeth 11 of said ratchet-bar and locks therewith on cessation of such movement, operating to hold the lever tightly in place in an obvious manner.

When it is desired to release the brake or other mechanism against which force is held, power is applied to hand-bar 8 in the opposite direction, as shown by the arrow, Fig. 3. Thereupon sleeve 4, rocking slightly on its pivot, the lug 13 is raised and engages and slightly raises ratchet-bar 10, and the lug 12 is lowered and as a result of this movement and of the slight rising of the ratchet-bar becomes disengaged and unlocked from the teeth 11. The lug 13 in its upward position holds the teeth 11 and lug 12 from disengagement and permits of the lever being thrown as far as desired in the direction of the arrow, Fig. 3. It is seen, therefore, that the brake or other mechanism can be released and thrown off by one movement of the op-

erator and the lever permitted to travel as far as desired in such movement. The collar 6 controls the rocking movement of the sleeve 4, preventing said sleeve rocking too far in either direction.

The slot 9 being of somewhat greater width than ratchet-bar 10, the slight rise and fall of said ratchet-bar incident to operation is readily permitted. A spring 19 is fastened at 20 in a suitable manner to sleeve 4, so as to bear against bar 1 in order to hold sleeve 4 normally in such position that lug 12 will be disengaged from teeth 11 to permit of easy releasing movement. An eye 21 is provided on sleeve 4 in order that a hook may be inserted therein when desired for purposes of operating the lever.

It will be evident that many modifications in the details of construction and alterations in the arrangement of parts can readily be made without in the least departing from the nature and spirit of this invention.

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

1. A brake-lever, comprising a main bar, a sleeve pivoted on said main bar, a pivoted ratchet-bar coöperating with said sleeve, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

2. A brake-lever, comprising a main bar, a sleeve pivoted on said main bar and capable of rocking movement thereon, a collar on said sleeve to control said rocking movement, a pivoted ratchet-bar coöperating with said sleeve, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

3. A brake-lever, comprising a main bar, a sleeve pivoted on said main bar and capable of rocking movement thereon, a collar on said sleeve to control said rocking movement, a transverse slot in said sleeve, a pivoted ratchet-bar operating through said transverse slot, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

4. A brake-lever, comprising a main bar, a sleeve pivoted on said main bar and capable of rocking movement thereon, a collar on said sleeve to control said rocking movement, a transverse slot in said sleeve, a pivoted ratchet-bar operating through said transverse slot, teeth on said ratchet-bar, oppositely-disposed lateral lugs on said sleeve, one of said lugs being adapted to engage with said teeth when said sleeve is rocked in one direction, and the other of said lugs to be engaged with said teeth when said sleeve is rocked in the other direction, substantially as described.

5. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a pivoted ratchet-bar coöperating with said sleeve, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

6. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking movement, a pivoted ratchet-bar coöperating with said sleeve, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

7. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

8. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a lug on said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

9. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, and another lug on said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

10. A brake-lever, comprising a main bar

pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, and another laterally-disposed lug on the other side of said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, substantially as described.

11. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve and adapted to rise and fall and lock with and unlock from said teeth, and another laterally-disposed lug on the other side of said sleeve and adapted to engage and raise said ratchet-bar and thereby assist in unlocking said first-mentioned lug from said teeth, substantially as described.

12. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, another laterally-disposed lug on the other side of said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, and a spring for normally holding said first-mentioned lug unlocked from said teeth, substantially as described.

13. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, another laterally-disposed lug on the other side of said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, and a spring fastened to said sleeve and operating on said main bar for normally holding said first-mentioned lug unlocked from said teeth, substantially as described.

14. A brake-lever, comprising a main bar pivoted near one end, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a pivoted ratchet-bar operating through said slot, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, another laterally-disposed lug on the other side of said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, a spring fastened to said sleeve and operating on said main bar for normally holding said first-mentioned lug unlocked from said teeth, a longitudinal slot in said sleeve, and a hand-bar fitting in said longitudinal slot, substantially as described.

15. In combination with a vehicle, a brake-controlling mechanism, comprising a main bar pivoted near one of its ends to the vehicle, a sleeve pivoted on said main bar near the other end thereof and capable of rocking motion thereon, a collar on said sleeve and embracing said main bar to control said rocking motion, a transverse slot through said sleeve, a ratchet-bar operating through said slot and independently pivoted to the vehicle, diagonally-projecting teeth on said ratchet-bar, a laterally-disposed lug on one side of said sleeve adapted to lock with said teeth, another laterally-disposed lug on the other side of said sleeve adapted to engage said ratchet-bar and unlock said first-mentioned lug from said teeth, a leaf-spring fastened to said sleeve and operating on said main bar for normally holding said first-mentioned lug unlocked from said teeth, a longitudinal slot in said sleeve, a hand-bar fitting in said longitudinal slot, and means connected to the said main bar for transmitting motion therefrom to the brake, substantially as described.

16. The combination with an operating-lever, a member movably connected thereto, a shiftable rack, and oppositely-disposed projections secured to and carried by said movable member arranged in operative relation to said shiftable rack, substantially as described.

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

JAMES WHITE.

Witnesses:
CHAS. J. WHITE,
RALPH HUNT.