(No Model.)

J. B. BURKETT.

BRAKE LEVER.

No. 557,549. Patented Apr. 7, 1896.

Fig. 1.

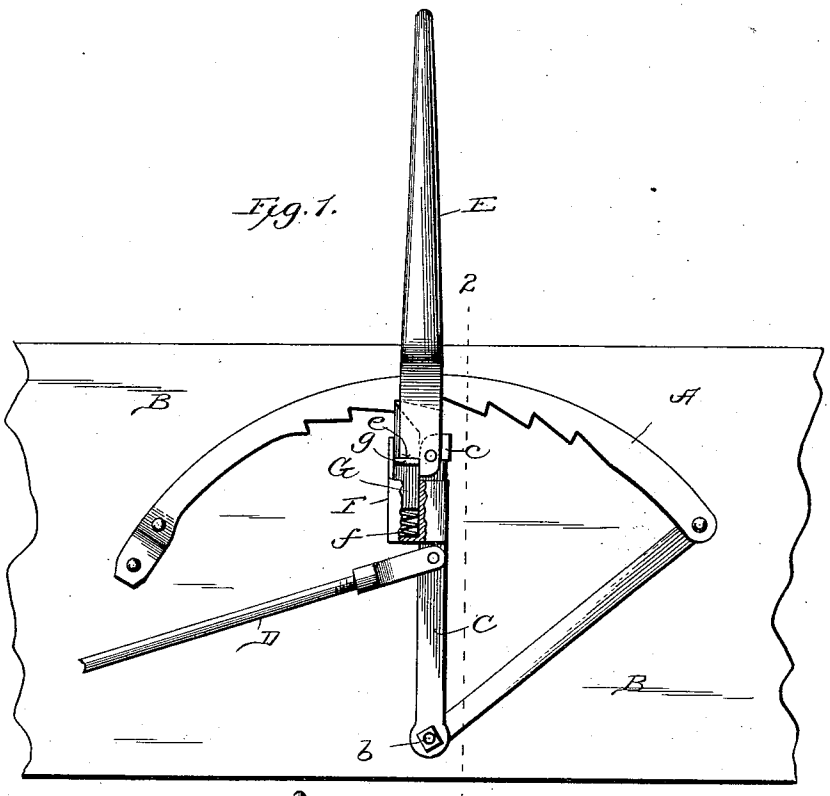


Fig. 2.

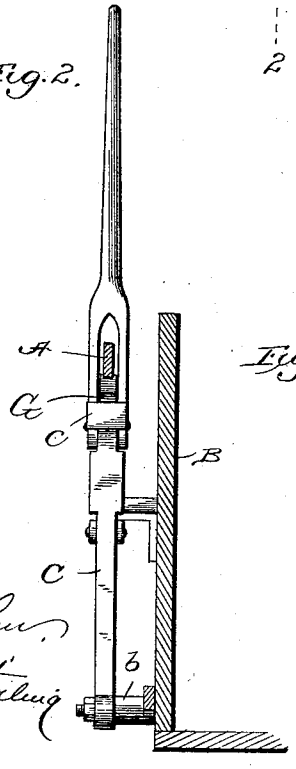


Fig. 3

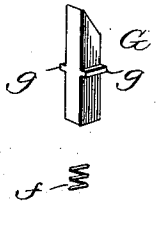


Fig. 4.

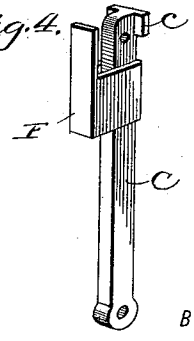
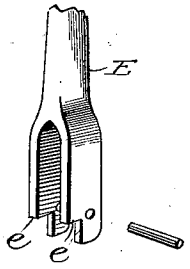


Fig. 5.



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JOSEPH B. BURKETT, OF LEVITA, TEXAS.

BRAKE-LEVER.

SPECIFICATION forming part of Letters Patent No. 557,549, dated April 7, 1896.

Application filed November 16, 1895. Serial No. 569,163. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. BURKETT, a citizen of the United States, residing at Levita, in the county of Coryell and State of Texas, have invented certain new and useful Improvements in Brake-Levers; 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 appertains to make and use the same.

My invention relates to brake-levers, and more particularly to that class employing an arc-shaped ratchet-bar and a lever radial thereto.

My object is to simplify the mechanism, promote the efficiency, and reduce the cost of construction of brake-levers of this class; also to provide means for dispensing with a pivoted pawl, and providing in lieu thereof a direct-acting or vertically-movable plunger to engage the ratchet-teeth, and means for bracing said plunger near its upper or engaging end against the backward pressure on the same after the brake is applied; also to provide means for increasing the power or leverage upon the plunger when it is desired to release the brake.

In the accompanying drawings, forming a part of this specification, I have shown my brake-lever as applied to the side of a wagon, in which—

Figure 1 is a side elevation, the plunger-box being partly torn away. Fig. 2 is a vertical section taken on the line 2 2 of Fig. 2. Fig. 3 is a detail view of the plunger detached. Fig. 4 is a detail view of the lever detached, with the plunger-box in place. Fig. 5 is a detail view of the lower end of the handle-bar.

Referring now particularly to the drawings, A denotes an arc-shaped ratchet-bar having the teeth upon its under or concave side. Said bar is riveted upon the side of a wagon-body B in any suitable manner.

C denotes a lever pivoted to the wagon-body by a suitable bolt *b* and provided with the usual brake-rod D connecting with the brake.

A detail view of the lever C detached is shown in Fig. 4, giving the construction of the upper part of the same and more especially the head of the lever, having a shoulder *c* formed integral therewith, crossing the same at right angles and projecting upon each side of the head.

E denotes a handle-bar, its lower end terminating in a yoke which embraces the head of the lever C and the ratchet-bar. Said yoke is pivoted, as shown in Figs. 1 and 2, to said head, and when in its normal position bears against the extended ends of the shoulder *c*. *e* denotes shoulders formed upon each side of said yoke, which serve to release the brake, as hereinafter described.

F denotes a boxing detachably secured to the lever C by bolts and nuts, and serving as a housing for a coiled spring *f* and the lower end of a plunger G, which is pressed in on top of said spring. Said plunger is provided upon each side with lugs *g*, which in their normal position press against the shoulders *e* through the action of the coiled spring bearing upwardly on the foot of the plunger. The length of the plunger above said shoulders is sufficient to allow it to engage with the teeth of the ratchet-bar. This upper portion of the plunger has a play parallel to the arms of the yoke, which prevent its lateral escape, while they direct its parallel movement and engagement with the teeth of the ratchet-bar. The upper end of the plunger is beveled, forming a tooth which engages with the ratchet-teeth when the brake is set, and below said bevel the plunger bears against the upper end of the lever C, which braces said plunger at the base of its tooth against the backward pull upon the brake-rod. The position of the plunger is always parallel to the lever and its handle-bar and is positively driven by the coiled spring in a line radial to the ratchet-bar to engage with the teeth of the same, or in the opposite direction when depressed by the shoulders *e* of the handle-bar.

To set the brake, the handle-bar is pressed forward. This causes its lower forward end to bear against the shoulder *c* of the lever and force it forwardly. The spring-actuated plunger is carried by the lever over the ratchet-bar, riding over the teeth of the same as it passes. Should it be desired, this contact of the plunger and teeth of the ratchet or dragging of the same over the ratchet-teeth as the brake is set may be avoided. To do this, the handle-bar is turned slightly

backward and pressed forward. This will cause the shoulders on the yoke to bear the tooth down out of contact with the ratchet-teeth.

To release the brake, the operator pulls back on the brake-handle. This causes the shoulders *e* on the yoke to bear downwardly on the lugs of the pawl and force it out of engagement with the ratchet-teeth. It is evident that the shoulders *e* of the handle-bar have a powerful leverage upon the lugs *g* on each side of the plunger and enable the operator to release the brake instantly with slight effort. As the handle-bar is pivoted at the extreme end of the lever C, it materially increases the power of said lever in setting the brake.

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

1. In a brake-lever having an arc-shaped ratchet-bar and lever radial thereto, the combination of the lever hinged to the yoke formed on the lower end of the handle-bar, a pawl loosely mounted on the rear side of said lever and bearing against said side when the brake is set, said pawl being spring-actuated to move parallel with said side and project beyond the same and contact radially with the ratchet-teeth between said yoke.

2. In a brake-lever having an arc-shaped ratchet and pivoted handle-bar projecting below said ratchet, the combination of the lever having a shoulder formed on its upper forward end, the handle-bar having a yoke at its lower end the arms of which bear against the extreme ends of said shoulder, the shoulders formed on said yoke and the direct-acting plunger having lugs on each side which bear against the shoulders of said yoke and adapted to move in a plane parallel to said lever.

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

JOSEPH B. BURKETT.

Witnesses:
Q. A. ELLIS,
H. C. WHITE.