

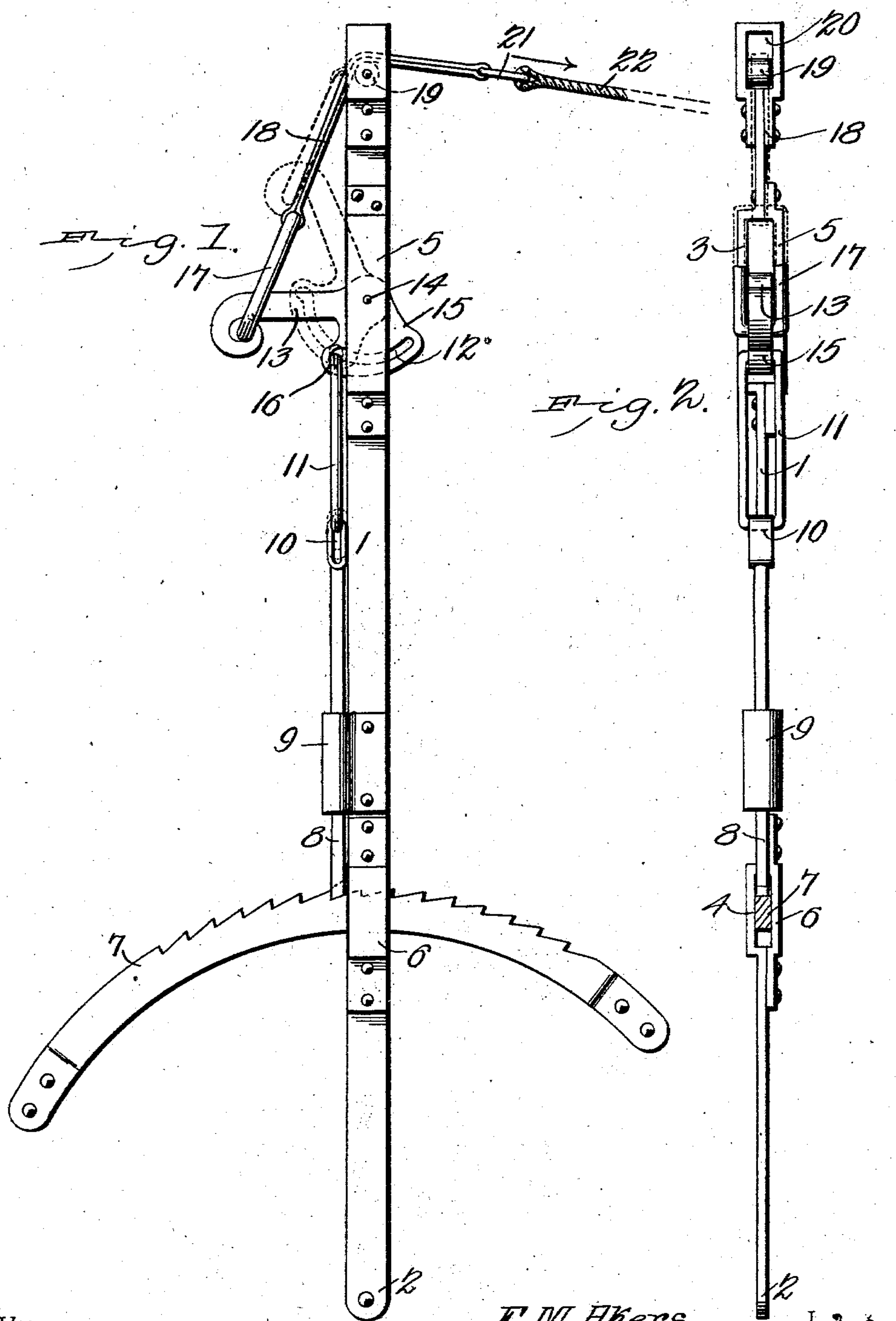
No. 730,431.

PATENTED JUNE 9, 1903.

E. M. AKERS.
BRAKE LEVER.

APPLICATION FILED NOV. 17, 1902.

NO MODEL.



Witnesses
E. F. Stewart
H. F. Riley

E. W. Akers, Inventor
by *C. A. Snow & Co.* Attorneys

UNITED STATES PATENT OFFICE.

ERASTUS M. AKERS, OF IONE, OREGON.

BRAKE-LEVER.

SPECIFICATION forming part of Letters Patent No. 730,431, dated June 9, 1903.

Application filed November 17, 1902. Serial No. 131,743. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS M. AKERS, a citizen of the United States, residing at Ione, in the county of Morrow and State of Oregon, have invented a new and useful Brake-Lever, of which the following is a specification.

The invention relates to improvements in brake-levers.

The object of the present invention is to improve the construction of brake-levers and to provide a simple and comparatively inexpensive one of great strength and durability designed particularly for use on trail-wagons and adapted to be positively operated by a single rope or flexible connection.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a brake-lever constructed in accordance with this invention. Fig. 2 is an end elevation, partly in section.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a brake-lever fulcrumed at its lower end 2 in the usual manner and designed to be mounted on a trail-wagon at one side thereof, and consisting, preferably, of a bar of metal provided with upper and lower angular bends 3 and 4 and having angularly-bent pieces 5 and 6 secured to it adjacent to the bends to form upper and lower openings. The lower opening of the brake-operating lever 1 receives a curved ratchet 7, having angularly-bent ends and designed to be secured to a wagon-body by bolts or other suitable fastening devices and provided with teeth having shoulders at their front ends. The teeth of the ratchet-bar are adapted to be engaged by a slidable locking bar or dog 8, arranged in a guide 9 and provided at its upper ends with a slot or opening 10. The lower end of the locking bar or dog 8 is beveled to form a tooth for engaging the ratchet, and a slot or opening 10 at the upper end of the bar receives a link 11.

The link 11 has its upper portion arranged in a slot 12 of a lever 13, mounted on a pivot

14 and operating in the upper opening of the brake-lever 1. The lever 13, which is approximately L-shaped, is provided with an enlarged arm or head 15, having a curved outer edge, and the slot 12, which is curved, is arranged concentric with the curved edge, or approximately so. The enlarged arm or head 15 is provided at one end of the slot with a notch or recess 16, into which the link is adapted to drop to permit the locking-bar to engage the ratchet, as illustrated in full lines in Fig. 1 of the drawings, and when the operating arm or body portion of the lever 13, which is fulcrumed at its angle, is swung upward to the position illustrated in dotted lines in Fig. 1 of the drawings the link is drawn upward into the slot 12, thereby withdrawing the locking bar or dog from engagement with the ratchet.

When the outwardly-extending arm or body portion of the lever 13 swings downward to the position shown in full lines in Fig. 1, the link will drop into the notch or recess 16 and engage the ratchet. The slot or opening permits the locking bar or dog to move upward independently of the link to enable it to ride forward freely over the ratchet.

The outer end of the arm or body portion of the lever 13 is connected by a link 17 with a strap 18, which passes over a pulley or roller 19, mounted in a top opening 20 of the brake-lever. The top opening is preferably formed by a piece of metal bent into approximately rectangular form and having the terminals extended at one end of the loop and secured to the lever 1 at opposite sides thereof. The link 17 has its lower end arranged in an opening of the outer end of the lever 13, and the strap 18 is preferably doubled to form loops to receive the link 17 and a short link or ring 21 of a rope 22. The strap, however, may be omitted and a rope or other flexible connection may be connected directly to the link 17. The rope 22 extends forward from the brake-lever to enable the brake to be operated at a point in advance of the same, and when it is pulled the latch-operating lever 13 is swung upward to lift the locking bar or dog out of the ratchet, and the brake-lever is swung forward. When the brake-lever is applied and it is desired to relieve the wheels of the brake-

shoes, the rope is given a quick jerk and is suddenly released. This permits the brake-bar 1 to swing backward to the rear end of the ratchet before the locking bar or dog engages the same.

It will be seen that the brake-lever is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that it is adapted to be operated by a single rope. It will also be seen that none of the parts of the brake are weak or delicately constructed and that they are not liable to become broken or to get out of order. Furthermore, it will be clear that when the rope 22 is pulled and the latch-operating lever swung upward, as illustrated in dotted lines in Fig. 1 of the drawings, the upper link 17 engages the brake-lever at the top opening thereof and forms a stop, thereby throwing upon the brake-lever and the flexible connections all of the strain incident to an application of the brake and at the same time relieving the locking mechanism of such strain.

What is claimed is—

1. A device of the class described comprising a ratchet, a brake-lever, a dog carried by the brake-lever and arranged to engage the ratchet, a latch-operating lever mounted on the brake-lever and connected with the dog and having a curved opening to permit it to swing independently of the dog, and provided with a notch to permit the dog to drop into engagement with the ratchet, and means for operating the latch-lever, substantially as described.

2. A device of the class described comprising a ratchet, a brake-lever, a dog mounted on the brake-lever and arranged to engage the ratchet, a latch-operating lever fulcrumed on the brake-lever and provided with an arm having a curved slot and provided at one end thereof with a notch, means operating in the curved slot for connecting the latch-operating lever with the dog, and a flexible connection for operating the latch-operating lever

and the brake-lever, substantially as described.

3. A device of the class described comprising a brake-lever having a guide, a locking bar or dog mounted in the guide, an approximately L-shaped lever fulcrumed on the brake-lever and provided with a curved slot and having a notch at one end of the same, a link operating in the slot and connected with the locking bar or dog, and a flexible connection guided on the brake-lever and connected with the L-shaped lever, substantially as described.

4. A device of the class described comprising a brake-lever, a ratchet, a locking bar or dog slidable on the brake-lever, an L-shaped lever fulcrumed on the brake-lever and provided with a curved slot and having a notch, a link operating in the curved slot and connected with the locking bar or dog, a guide-pulley arranged at the upper end of the brake-lever, a strap passing over the guide-pulley, a rope connected with one end of the strap, and a link connecting the other end of the strap with the L-shaped lever, substantially as described.

5. A device of the class described comprising a brake-lever having an opening, a ratchet, a dog for engaging the ratchet, a latch-operating lever connected with the dog, a flexible connection extending through the opening of the brake-lever, and a link connected to the latch-operating lever and to the flexible connection and arranged to engage the brake-lever at the opening thereof when the flexible connection is pulled in applying the brake, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERASTUS M. AKERS.

Witnesses:

H. O. AKERS,
M. S. MAXWELL.