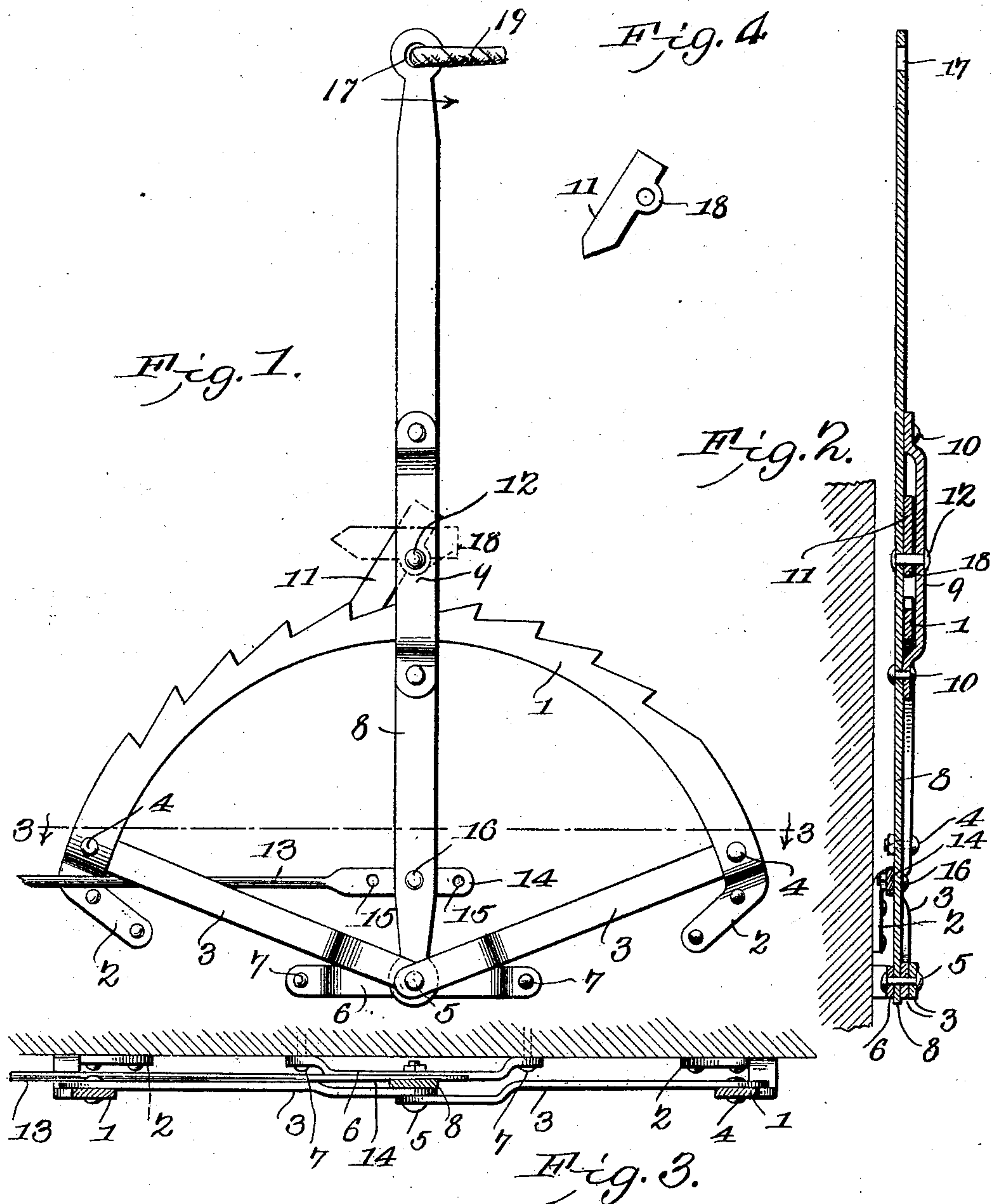


No. 841,842.

PATENTED JAN. 22, 1907.

E. M. AKERS.
BRAKE LEVER.

APPLICATION FILED DEC. 29, 1905.



WITNESSES:

E. J. Stewart
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UNITED STATES PATENT OFFICE.

ERASTUS M. AKERS, OF IONE, OREGON.

BRAKE-LEVER.

No. 841,842.

Specification of Letters Patent.

Patented Jan. 22, 1907.

Application filed December 29, 1905. Serial No. 293,863.

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.

This invention relates to ratchet-levers, and is designed to provide certain new and useful improvements therein, whereby the dog may be promptly and conveniently released by a movement of the lever, which may be accomplished from a point remote from the lever. In this connection it is proposed to particularly adapt the device for use as a brake-lever on wagons and to enable the controlling of the lever of a trailing wagon from the front wagon or from the saddle-horse of a team of horses.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a brake embodying the features of the present invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a plan section on the line 3 3 of Fig. 1. Fig. 4 is a detail view of the dog carried by the lever.

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

In carrying out the present invention I employ a toothed arcuate rack-bar or segment 1, which has its end portions 2 bent or offset laterally and then extended inwardly to form attaching-brackets, which are designed to be bolted or otherwise secured to the outer side of a wagon. Braces 3 are secured to what will be termed the "inner" face of the rack just above the elbow produced by the offset bracket terminals 2, each of said braces being riveted to the rack-bar, as at 4. These braces converge to the center, from which the arcuate rack is struck and are overlapped and pierced by a fastening 5, which also pierces the middle portion of a bracket

6, having offset terminals secured to the adjacent side of the wagon by suitable fastenings 7.

A brake-lever 8 is fulcrumed upon the fastening 5 and rises to a suitable height above the rack 1 and across the inner side thereof. A strap or bracket 9 has its end portions secured to the outer face of the lever by fastenings 10 at points above and below the rack with its intermediate portion offset, so as to lie at the outer side of the rack, whereby the lever and the bracket produce a guide-slot receiving the rack and operating to prevent lateral play of the lever. Between the lever and the bracket 9 there is a gravity-dog 11, which is pivoted intermediate of its ends upon a rivet or the like 12, piercing the bracket 9 and the lever, one end of the dog being shaped to engage the teeth of the rack and also slightly longer than the other end thereof, so as to be normally held by gravity in engagement with the rack. A rod 13 for connection with the brake-beam (not shown) passes between the adjacent brace 3 and the offset bracket terminal 2 of the rack with its adjacent end portion flattened, as at 14, and pierced by a series of openings 15 for the reception of a pin or bolt 16, which is carried by the lever. By this arrangement the connecting-rod is guided in its movement and held against undue lateral play.

As hereinbefore indicated, the present lever has been especially designed to be controlled from a point remote from the lever, wherefore in practice a rope 19, chain, or the like is attached to the upper free end of the lever, which is provided with an eye or opening 17 for this purpose and said rope or chain leading to a saddle-horse or to another wagon, which is drawing the wagon having the present brake. By giving a quick pull or jerk upon the rope or chain in the direction of the arrow in Fig. 1 the dog 11 will be thrown upwardly into the dotted-line position, and by promptly releasing the rope or chain the lever will be swung backwardly by the tension of the brake before the dog can again drop into engagement with the rack. It is of course important that the proper pivotal point for the dog 11 be carefully determined in order that it may be so balanced as to have its rear end rise promptly when the lever is quickly drawn forward and to remain poised in an elevated position long enough to

enable the backward movement of the lever to its limit or as far as permitted by the party who is controlling the rope.

From the foregoing description it will be understood that the present device is exceedingly simple and at the same time effective for the purpose designed, as all extraneous means for controlling the dog are dispensed with and the dog is actuated by the momentum it acquires from the movement of the lever. Moreover, the dog is properly balanced by locating its pivotal support slightly removed from the center of the dog, thereby avoiding the use of springs and other extraneous counterbalancing means, which are liable to become broken, displaced, or otherwise rendered useless.

By preference I propose to pivot the dog 11 at a point below its longitudinal center, and therefore provide a perforate ear 18, depending from the lower edge of the dog for the reception of the pivot-pin 12, whereby the dog is more sensitive and will respond promptly to a quick throw of the lever.

Having thus described the invention, what is claimed is—

1. A ratchet-lever including an arcuate rack having its ends offset and formed into attaching-brackets, braces radiating from the center of the arc of the rack and secured to the ends of the rack, a bracket separate from the rack a lever fulcrumed upon the last-mentioned bracket, and a dog carried by the lever and pivoted between its ends at a point adjacent but in front of the center

thereof, whereby a sudden jerk upon the lever will cause the dog to fly out of engagement with the rack, and remain disengaged therefrom long enough to permit backward movement of the lever.

2. A ratchet-lever including an arcuate rack having its ends offset and formed into attaching-brackets, braces converged from the ends of the rack and overlapping at the center of the arc from which the rack is struck, a bracket to which the overlapped ends of the braces are connected, a lever fulcrumed upon the connection between said bracket and the braces, and a dog carried by the lever and engaging the rack.

3. A ratchet-lever including an arcuate rack having its ends offset and formed into attaching-brackets, braces converged from the ends of the rack and overlapping at the center of the arc from which the rack is struck, a bracket to which the overlapped ends of the braces are connected, a lever fulcrumed upon the connection between said bracket and the braces, a dog carried by the lever and engaging the rack, and a connecting-rod secured to the lever and working between one of the braces and the adjacent terminal bracket of the rack.

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:

PAUL G. BALSIGER,
GEORGE M. CALHOUN.