

No. 660,964.

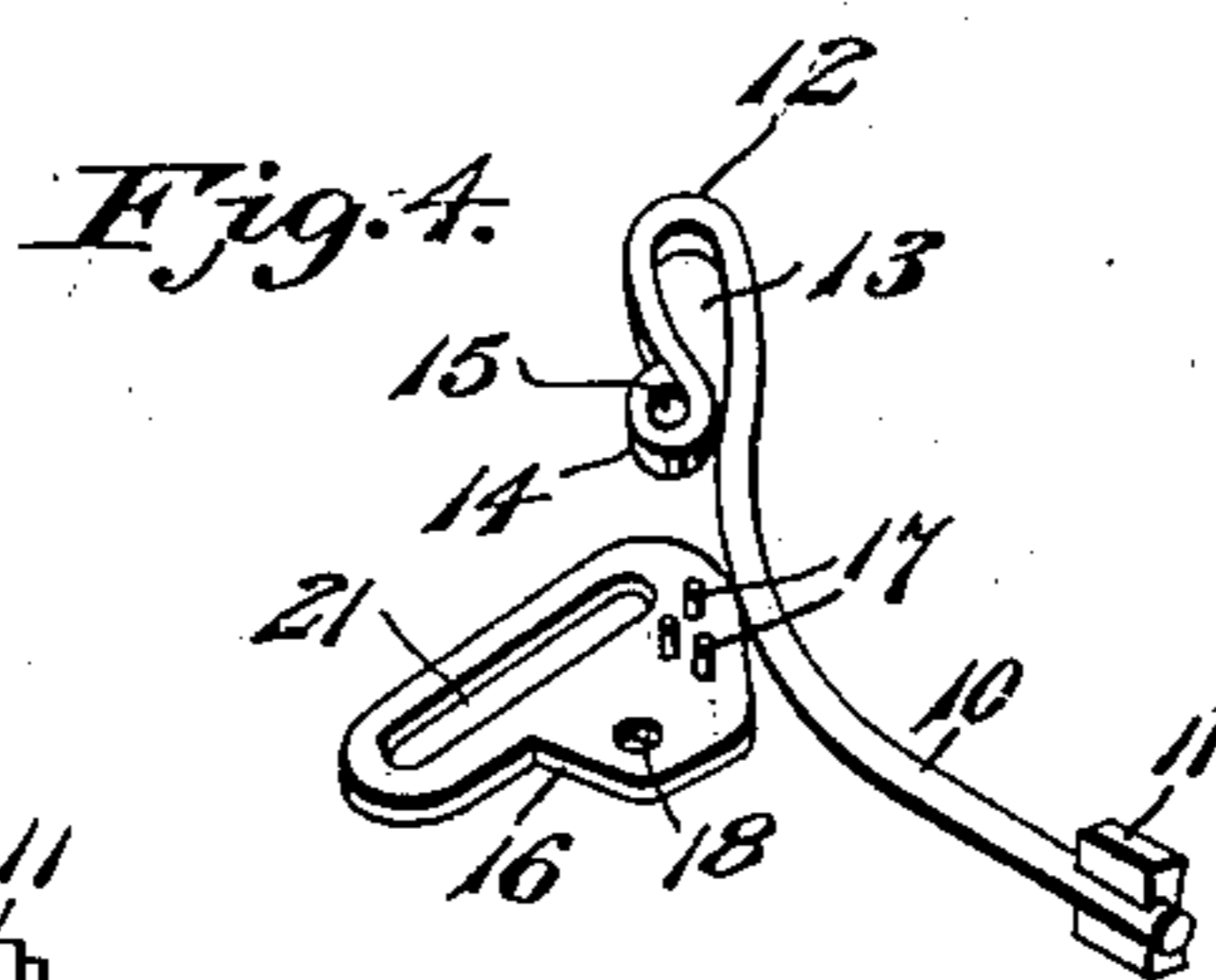
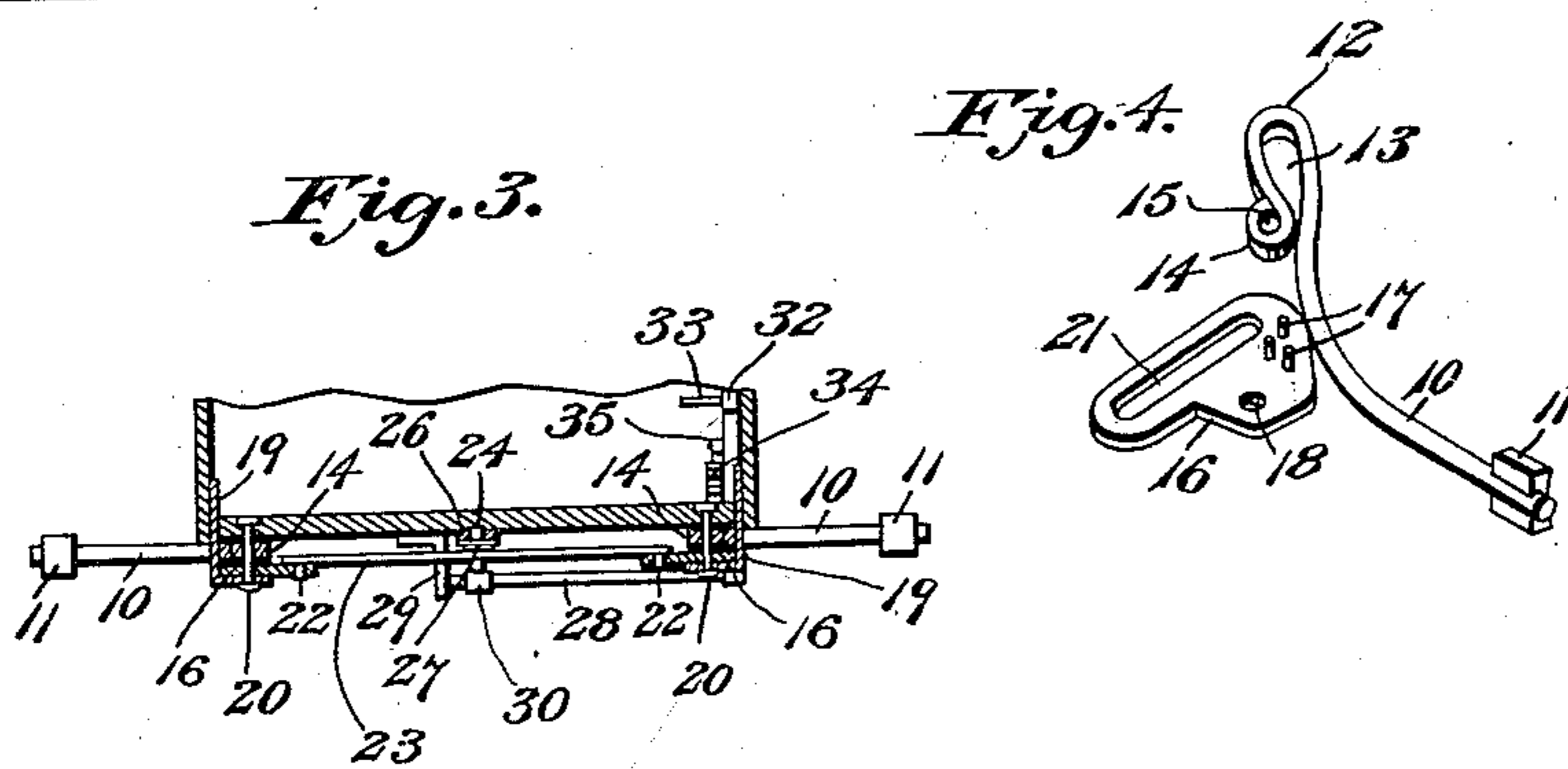
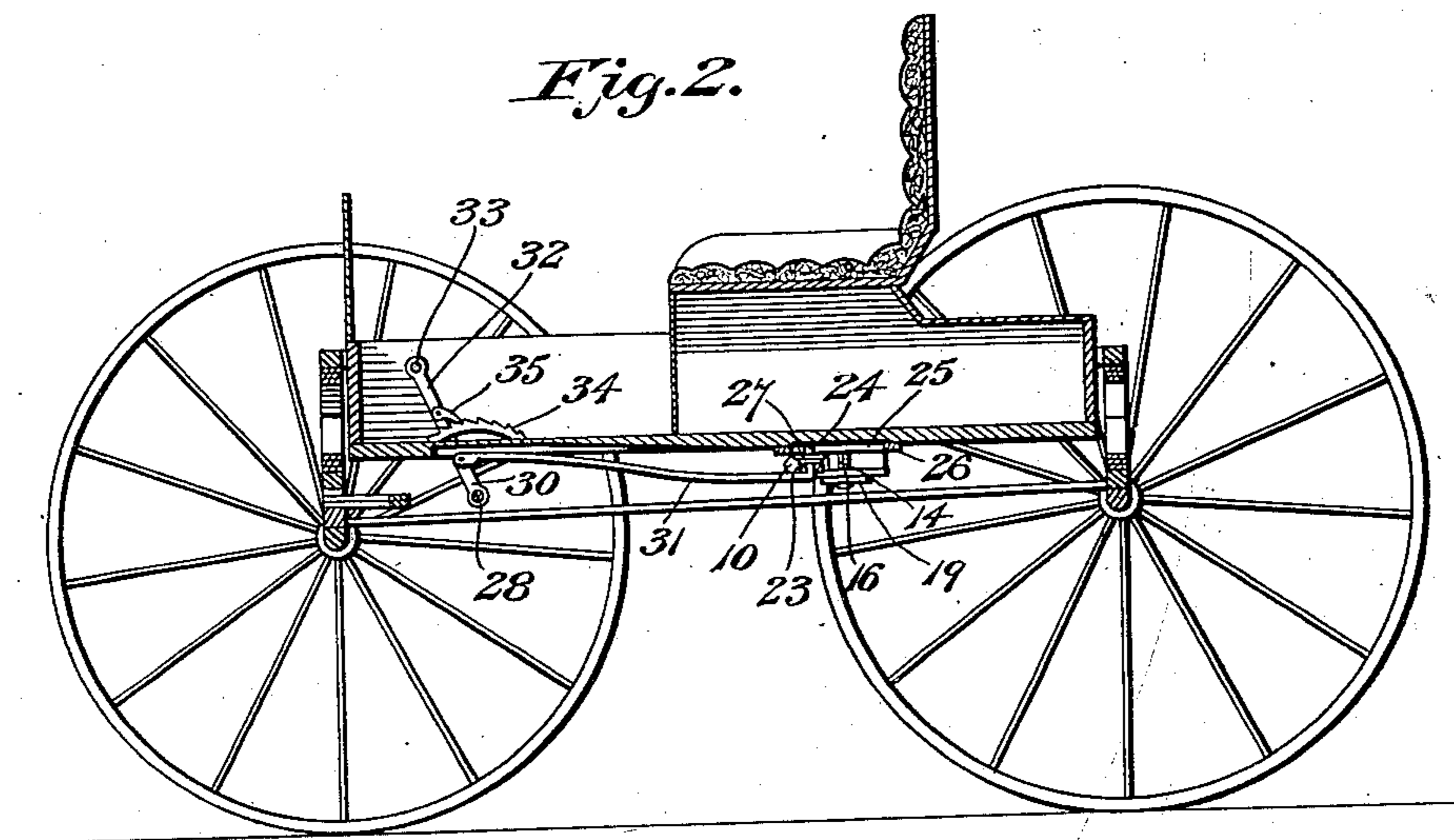
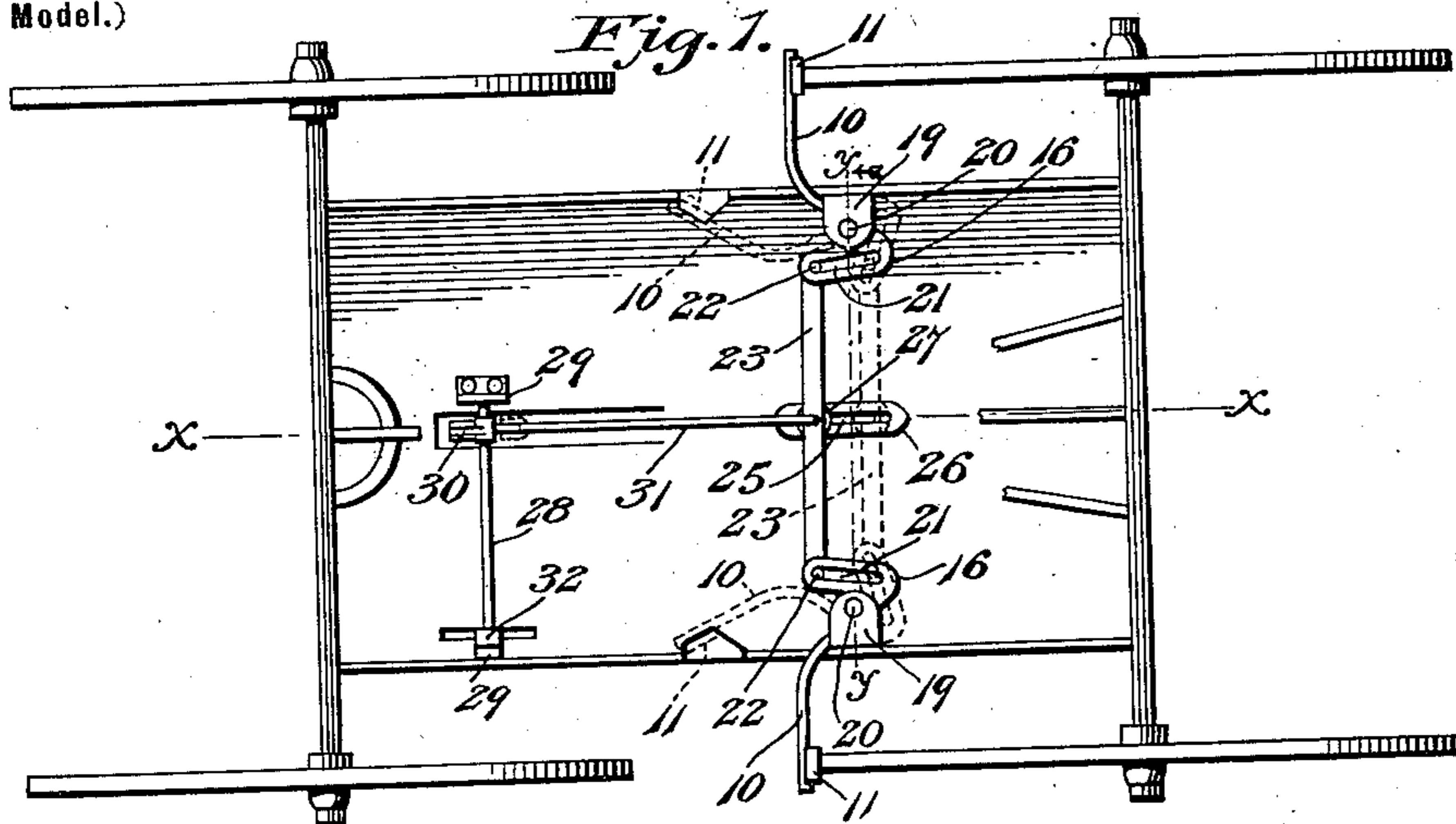
Patented Oct. 30, 1900.

C. W. MARTINAS.

BRAKE.

(Application filed June 9, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES W. MARTINAS, OF BLOOMSBURG, PENNSYLVANIA.

BRAKE.

SPECIFICATION forming part of Letters Patent No. 660,964, dated October 30, 1900.

Application filed June 9, 1900. Serial No. 19,751. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. MARTINAS, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a new and useful Brake, of which the following is a specification.

This invention relates to vehicle-brakes; and one object is to provide simple and positively-acting means whereby the brake-shoes when out of operative position will be disposed under the body of the vehicle and entirely away from the wheels.

A further object is to produce a brake wherein the parts that are liable to wear are easily detachable in order that such parts may be replaced at slight expense and without the necessity of renewing the greater part of the mechanism.

These and other objects that will hereinafter appear are attained in the preferred construction, which is fully described in the following specification and shown in the accompanying drawings, which form part of the same, and in which—

Figure 1 is a plan view of the under side of the body of a vehicle, showing my invention applied thereto. Fig. 2 is a longitudinal section of the same on the line $x x$ of Fig. 1. Fig. 3 is a cross-section on the line $y y$ of Fig. 1. Fig. 4 is a detail perspective of one of the brake-levers in a reverse position and showing the cam-plate removed.

Similar reference-numerals refer to similar parts throughout the several figures of the drawings.

In carrying out the invention there is employed a pair of oppositely-arranged brake-arms 10, pivoted near one end to the under side of the bottom of the vehicle-body and carrying at their opposite ends the brake-shoes 11.

As shown in Fig. 4, the arms 10 are preferably made of a single bar, the main portion of which is curved, the inner portion being bent upon itself, as at 12, to form an opening 13, the end being bent outwardly upon itself, as at 14, whereby the pivot-eye 15 is provided, the whole forming an ogee curve. To the inner end of the arm 10 is detachably secured a cam-plate 16, which is provided with a locking lug or projection, which may consist of a

plurality of pins 17, arranged to fit within the opening 13 of the brake-arm 10. The cam-plate 16 is further provided with a pivot-eye 18, which alines with the pivot-eye 15 when the cam-plate is in position on the brake-arm. To hold the brake-arm in place on the vehicle-body, angular clips 19 are provided, which are secured at one end to the body of the vehicle, the other ends extending over a portion of the cam-plate 16 and having bolt-openings which aline with the pivot-eyes 15 and 18 of the brake-arms and cam-plates, respectively. Through these several openings pass the pivot-bolts 20, by means of which the arms are pivotally connected to the vehicle and, together with the clips 19, hold the cam-plates in place upon the arms 10. The cam-plates are also provided along their inner sides with the slots 21, which are at an angle to the brake-levers and are normally inclined toward each other. These slots 21 receive the pins 22, projecting from the sliding cross-bar 23, which is also provided at its central portion with a projecting stud 24, that slides in the guiding-groove 25 in the under side of the vehicle-body. The groove 25 is protected around its edges by the wear-plate 26, on which slides a washer 27, carried by the guide-pin 24.

To operate the cross-bar 23, a rock-shaft 28, mounted in suitable bearings 29, is provided with a crank-arm 30, to the end of which is pivotally connected the end of the pitman 31, the opposite end of said pitman being connected to the center of the slide-bar 23. The rock-shaft is also provided with an operating-lever 32, that passes up through the bottom of the vehicle-body and is provided with a handle 33. To hold the lever 32 in the desired position, a rack 34 is provided on the inner side of the vehicle, said rack being engaged by a pawl 35, which is carried by the lever 32.

The normal position of the brake-levers when out of operative position is under the vehicle-body, with the operating-lever close to the seat. When the lever is pushed forward, the slide-bar is moved forward and the pins 22 throw the levers 10 out into engagement with the wheel, and said pins, acting in the nature of a wedge between the cam-plate 16, will as they move forward put great pres-

sure upon the wheels, with a comparatively small expansive power upon the operating-lever 32.

When the brakes are thrown out of engagement with the wheels, the shoes pass under the vehicle-body and being close to the same all dirt and mud will be removed therefrom by the edge of the body. Furthermore, in this position they are entirely away from the wheels and no mud will accumulate on the shoes as in the ordinary brake.

If the slots 21 of the cam-plates 16 become worn, these plates may be easily removed and replaced by new ones at slight expense, thereby obviating the necessity of entire new brake-levers.

It will therefore be seen that a durable and effective brake is provided that is simple and inexpensive and that will exert a great clamping action upon the wheels with a minimum amount of power upon the operating-handle.

It is to be understood that the invention is not to be limited to the exact construction shown, as changes in the form, proportions, and minor details of construction within the scope of the appended claims may be made without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. The combination of a pair of opposite pivotal brake-levers provided with cam members at their inner ends, and a reciprocatory cross-bar interposed between the brake-levers and having an operative sliding connection respectively with the cam members of the opposite brake-levers, said operative connection comprising means for increasing the leverage of the brake-levers as they are thrown into action.

2. The combination of a pair of opposite pivotal brake-levers provided with cam members having inclined slots at their inner ends, and a reciprocatory cross-bar interposed between the brake-levers and having an operative sliding connection respectively with the cam members of the opposite brake-levers, said operative connection comprising means for increasing the leverage of the brake-levers as they are thrown into action.

3. In a vehicle-brake, the combination of a

pair of pivoted brake-levers having shoes at one end, and at their other ends provided with cam-slots, a sliding bar having projections engaging in said cam-slots, means for guiding said bar, and means for operating the bar to throw the brake-levers into and out of operation, substantially as described.

4. In a vehicle-brake, a brake-lever comprising a pivot-arm, a cam-plate detachably secured to said arm, and means engaging said cam-plate to operate the arm, substantially as described.

5. In a vehicle-brake, the combination with a pair of pivot-levers having brake-shoes at one end, of cam-plates detachably secured to the opposite end of said levers, said cam-plates being provided with slots, a sliding cross-bar having pins engaging in said slots, means for guiding said cross-bar, a rock-shaft connected to said cross-bar and having an operating-lever, whereby the brake-shoes are thrown into and out of engagement with the wheels of a vehicle when the lever is operated, substantially as described.

6. In a vehicle-brake, the combination with a vehicle-body having a guiding-slot on its under side, of pivoted brake-levers provided with cam-plates, a reciprocatory cross-bar having a sliding connection with the slot of the vehicle-body, said cross-bar being also slidably connected with the cam-plates, substantially as described.

7. The combination with a pair of pivoted brake-levers provided at one end with brake-shoes, and at their opposite ends with openings, of cam-plates having locking projections, said locking projections being adapted to fit in the openings of the brake-levers whereby the cam-plates are detachably secured to the brake-levers, a sliding cross-bar having sliding connection with said cam-plates, and means for operating the sliding cross-bar, whereby the brake-levers are thrown into and out of operation, substantially as described.

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

CHARLES W. MARTINAS.

Witnesses:

RALPH R. JOHN,
H. C. HOWER.