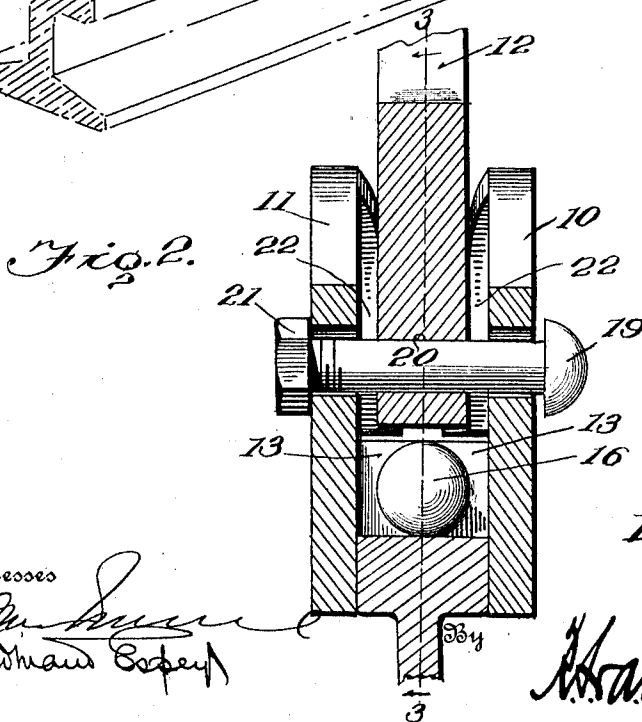
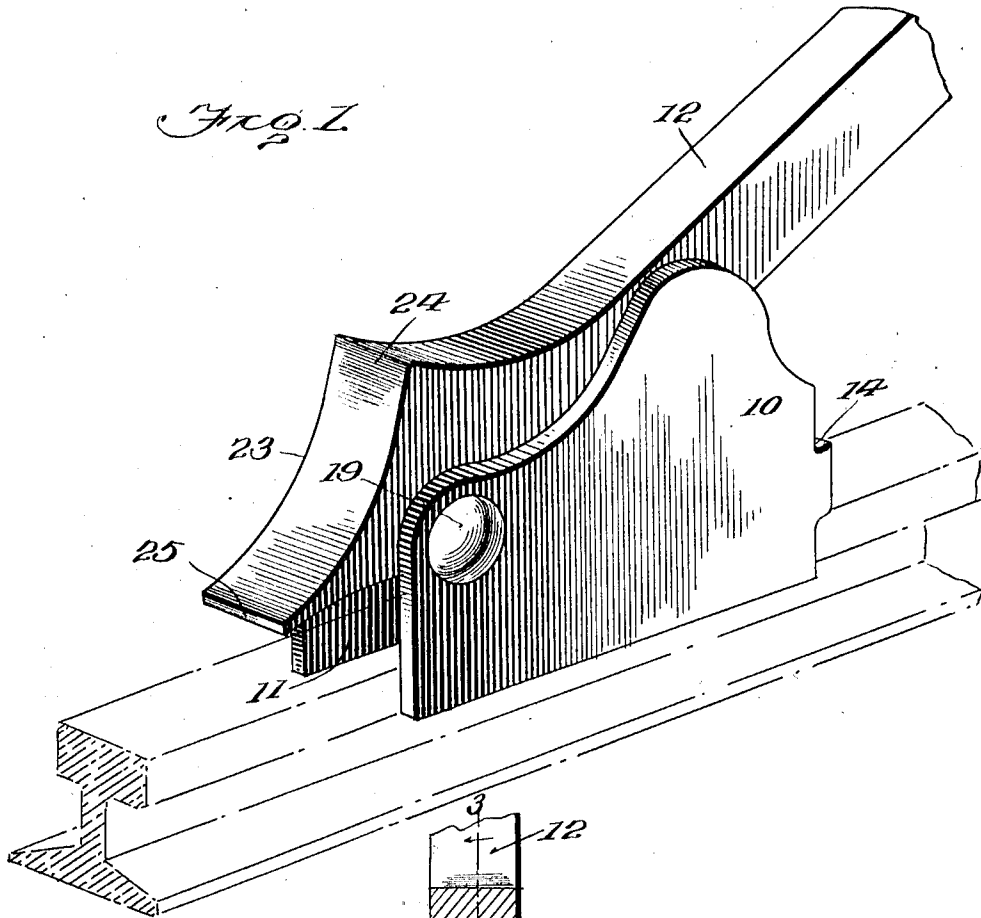


E. H. PUGH.
CAR STOPPER AND STARTER.
APPLICATION FILED DEC. 17, 1912.

1,061,567.

Patented May 13, 1913.

2 SHEETS—SHEET 1.



Witnesses

Wm. H. Pugh
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Inventor
E. H. Pugh.

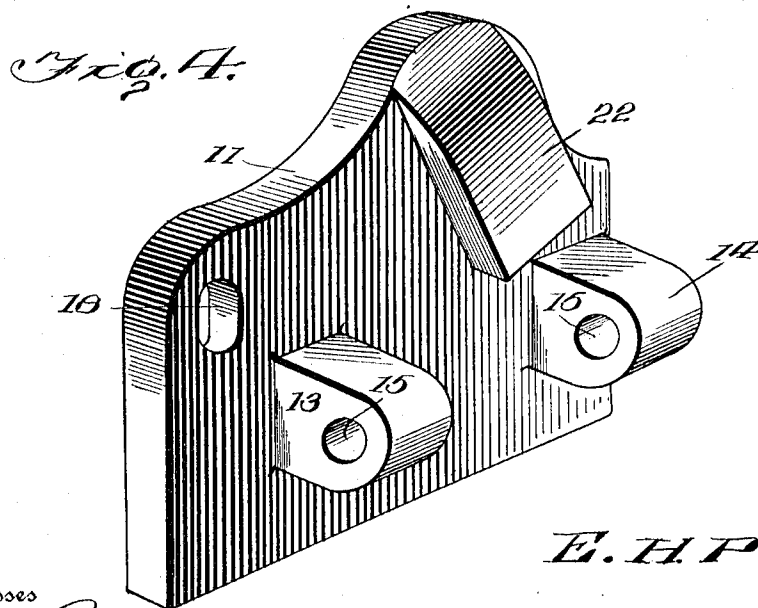
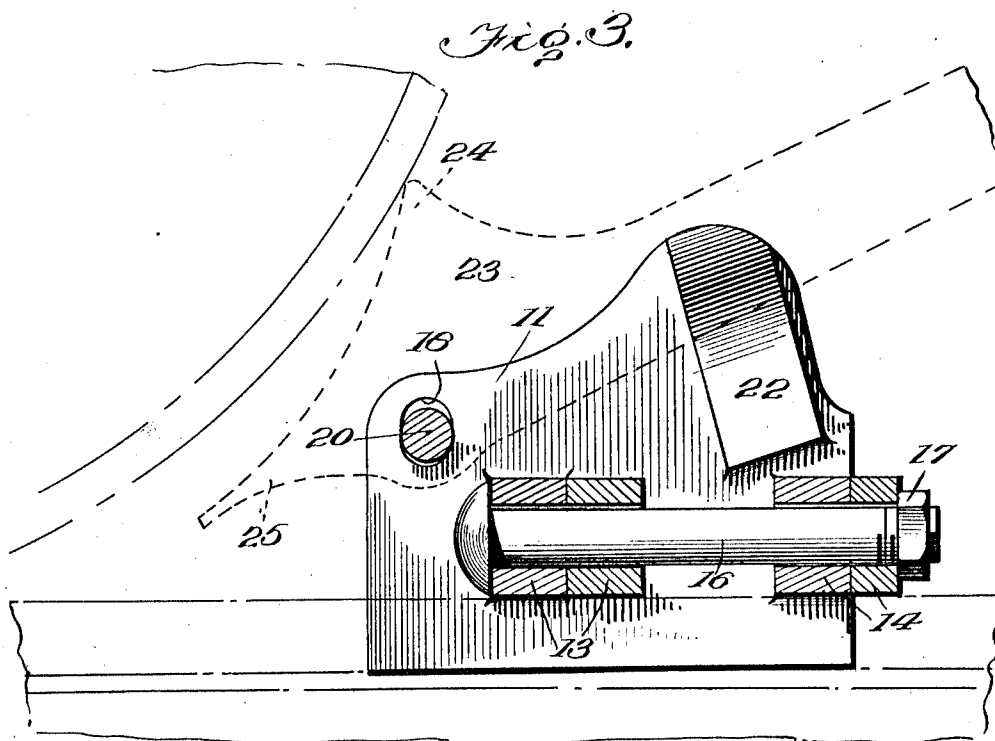
H. W. Hacy, Attorneys.

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Witnesses

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Wm. H. Pugh

By

E. H. Pugh, Inventor
Wm. H. Pugh, Attorneys.

UNITED STATES PATENT OFFICE.

ENOCH H. PUGH, OF NELSONVILLE, OHIO.

CAR STOPPER AND STARTER.

1,061,567.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed December 17, 1912. Serial No. 737,338.

To all whom it may concern:

Be it known that I, ENOCH H. PUGH, citizen of the United States, residing at Nelsonville, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Car Stoppers and Starters, of which the following is a specification.

My invention relates to new and useful improvements in car stopping devices and the object of my invention is to provide a device which, while simple in construction, will effectively bring cars upon steep grades to a short steady stop and which may later, if desired, be used to start the cars.

A further object of my invention is to so construct my combined car stopper and starter that it may be readily removed from the track after the departure of the car, being bound thereto only by the pressure exerted upon it by the car. And a still further object of my invention is to provide a device of the above described character including a pair of spaced apart, pivotally connected rail engaging clamp plates, and a lever or pinch bar pivoted between the clamp plates in such a manner that a car wheel engaging against the heel of the pinch bar when the device is in position upon a rail will force the pinch bar between opposed cam faces of the clamp plates to swing the lower portions of the clamp plates into binding engagement with the rail and thus stop the car.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings, and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawings: Figure 1 is a perspective view of my improved car stopper and starter, showing the same in locking position upon a conventional type of rail, the rail being shown in dot and dash lines; Fig. 2 is a vertical section on the line 2—2 of Fig. 3, looking in the direction of the arrows, to show the opposed cam faces of the clamp plates and the manner in which the lever engages between the same; Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2, showing the manner in which the plates are connected to each other and in which the pinch bar or lever is pivoted between the plates, the device being shown upon a rail with a car wheel engaging the heel of the

pinch bar to move the same into clamping position, the pinch bar being shown in dot and dash lines to permit a more complete disclosure of the clamp plate construction; Fig. 4 is a perspective view of one of the clamp plates forming the body of my device, looking at the inner face of the same.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The preferred embodiment of my combination car stopper and starter primarily includes a body member comprising pivotally connected rail engaging clamp plates 10 and 11 and a pinch bar or lever 12 pivotally mounted adjacent one end between the forward ends of the clamp plates.

The clamp plates are formed of metal and of sufficient weight to withstand the shocks and strains to which they will be subjected and each of these plates is provided upon its inner face with a pair of longitudinally spaced apart, inwardly extending, integrally formed ears 13 and 14, these ears being provided adjacent their free ends with bolt receiving bores 15, the bore of one ear being in alinement with the bore of the other. As best shown in Fig. 3 of the drawings, the ears upon the plate 10 are formed with respect to those upon the plate 11 so that when the plates are pivotally connected by the bolt 16, the ears of one plate will bear against the corresponding ears of the other, the plates extending in parallel spaced relation with the ends of one in alinement with the ends of the other. In order to prevent accidental disengagement of the plates, a nut 17 is threaded upon the bolt 16 to hold the same in place. These ears 13 and 14 are so proportioned that when the clamping plates 10 and 11 are in parallel spaced relation as shown in Fig. 2, the lower portions of the plates will be spaced apart a distance equal to the width of the head of a conventional rail and it will therefore be seen that any forcing apart of the upper portions of the clamping plates will force the lower portions thereof into binding engagement against the sides of the rail head to lock the plates in place.

Each of the plates 10 and 11 is provided in its forward portion with an elliptical bolt receiving bore 18, the major axis of which extends vertically as shown in Figs. 3 and 4

of the drawings and the lever or pinch bar 12 is pivotally mounted between the plates, adjacent its forward end by a bolt 19 passed through these bores and a bore 20 formed in the head of the pinch bar, this bolt being
5 loosely held in place by a nut 21.

In order to provide means for swinging the upper portions of the clamping plates away from each other to swing their lower
10 portions into engagement with the rail head, I have provided each of the clamping plates, upon its inner face, with an integrally formed cam shoulder 22, these shoulders gradually increasing in thickness from their
15 upper to their lower ends as best shown in Figs. 2 and 4 of the drawings and extending substantially at right angles to the body portion of the pinch bar 12 when the latter is swung into engagement between the same.
20 This body member 12 of the pinch bar is so proportioned as to pass readily between the upper ends of the cam shoulders 22, but the inclination of these shoulders is such that upon further downward movement of
25 the pinch bar the upper portions of the clamp plates will be forced away from each other.

The pinch bar, previously designated by the numeral 12, includes a body member of
30 any desired sectional shape and of suitable length, this body member being preferably formed of metal and terminating at its pivotal end in an enlarged head 23. The bolt receiving bore 20 is formed in the lower
35 portion of this head below the longitudinal axis of the bar and the head immediately above this bar is extended upwardly to provide a heel 24 against which the wheel of the car being stopped will engage. The forward end of the head or toe portion thereof
40 is tapered as shown at 25, the face portion between the toe and heel of the head being arcuate as shown to form a seat for the car wheel when the device is in locked position
45 upon the rail.

In operation, the device is positioned upon one of the car rails of the track in the position shown in the drawings and at the point
50 at which the car is to be stopped. As shown in Fig. 3 of the drawings, the car wheel engages directly against the heel portion 24 of the pinch bar and therefore swings its body portion 12 between the cam shoulders 22 of the clamp plates to firmly bind the device
55 upon the rail and so bring the car to a short even stop.

The car may be started when desired by pulling upwardly upon the free end of the pinch bar, said bar being then employed in
60 the same manner as the ordinary pinch bar with the exception that the clamping plates hold it more firmly upon the track. If the car is merely drawn away from the stopping device, the latter may be readily removed from the rail as there is practically

no binding action between the pinch bar and cam shoulders 22 when the head of the pinch bar is released and said bar may therefore be easily raised upon which the clamping plates will be freed from the rail.

From the foregoing description, it will be apparent that I have provided an extremely simple and effective form of car stopping and starting device and one which, because
70 of the fact that it has no sharp edges to get dull or delicate parts to break, is exceptionally durable and peculiarly adapted for hard service.

It will of course be understood that minor changes in details of construction, may be made if desired, without in the slightest degree departing from the spirit of my invention.

If desired, any suitable means may be supplied for compensating for the wearing
85 away of the plates where they clamp on the rail. One manner of accomplishing this is by the provision of adjustable wedge members mounted upon the inner faces of the clamping plates.

Having thus described the invention, what is claimed as new is:

1. A car stopper and starter including co-acting clamp plates, a lever pivoted between the plates, and a bolt pivotally connecting
95 the plates and lying in the vertical plane of the lever.
2. A car stopper and starter including co-acting pivotally connected clamp plates and a lever swingingly mounted between the
100 plates, the pivot of the plates extending at right angles to the pivot of the lever.
3. A car stopper and starter including co-acting clamp plates pivotally connected intermediate their height by a bolt and with
105 their adjacent ends free for swinging movement toward and away from each other about the bolt as an axis, and a lever mounted between the plates and movable to swing the same into active position.
4. A car stopper and starter including a pair of plates provided with longitudinally spaced apart inwardly directed perforated ears, a bolt passed through the perforations
110 of the ears and pivotally connecting the plates, the inner faces of said plates being provided with cam shoulders, and a lever pivoted between said plates and movable between said cam shoulders.
5. A car stopper and starter including
120 plates pivotally connected intermediate their height, a lever pivoted between said plates and above the pivotal connection between the same, and means carried by the inner faces of the plates and engagable by
125 the lever, whereby the downward swinging of the lever will swing the upper portions of the plates away from each other.
6. A car stopper and starter including pivotally connected plates, a lever terminating at
130

one end in an enlarged head, a bolt passed through the plates and lever head and pivotally mounting the lever between the plates, said lever head being provided above its
5 point of pivotal connection with an upwardly directed extension and at its end with a tapered extension, and shoulders formed upon the inner faces of the plates at right angles to the axis of the lever, said
10 shoulders increasing in thickness from their outer to their inner ends and being engageable by the lever.

7. A car stopper and starter including pivotally connected clamp plates, said
15 plates being provided with elliptical bores with their major axes extending vertically, a bolt passed through said bores, a lever pivoted upon said bolt, and cam shoulders

extending circumferentially with respect to the bolt formed upon the inner faces of the
20 plates and engageable by said lever.

8. A car stopper and starter including a pair of spaced apart plates having direct pivotal connection with each other and provided upon their inner faces with cam
25 shoulders, a lever pivoted by one end between the forward ends of said plates and movable between said shoulders, and a head formed upon the end of the lever and extending above the same.
30

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

ENOCH H. PUGH. [L. S.]

Witnesses:

A. C. COMSTOCK,
H. C. COMSTOCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."