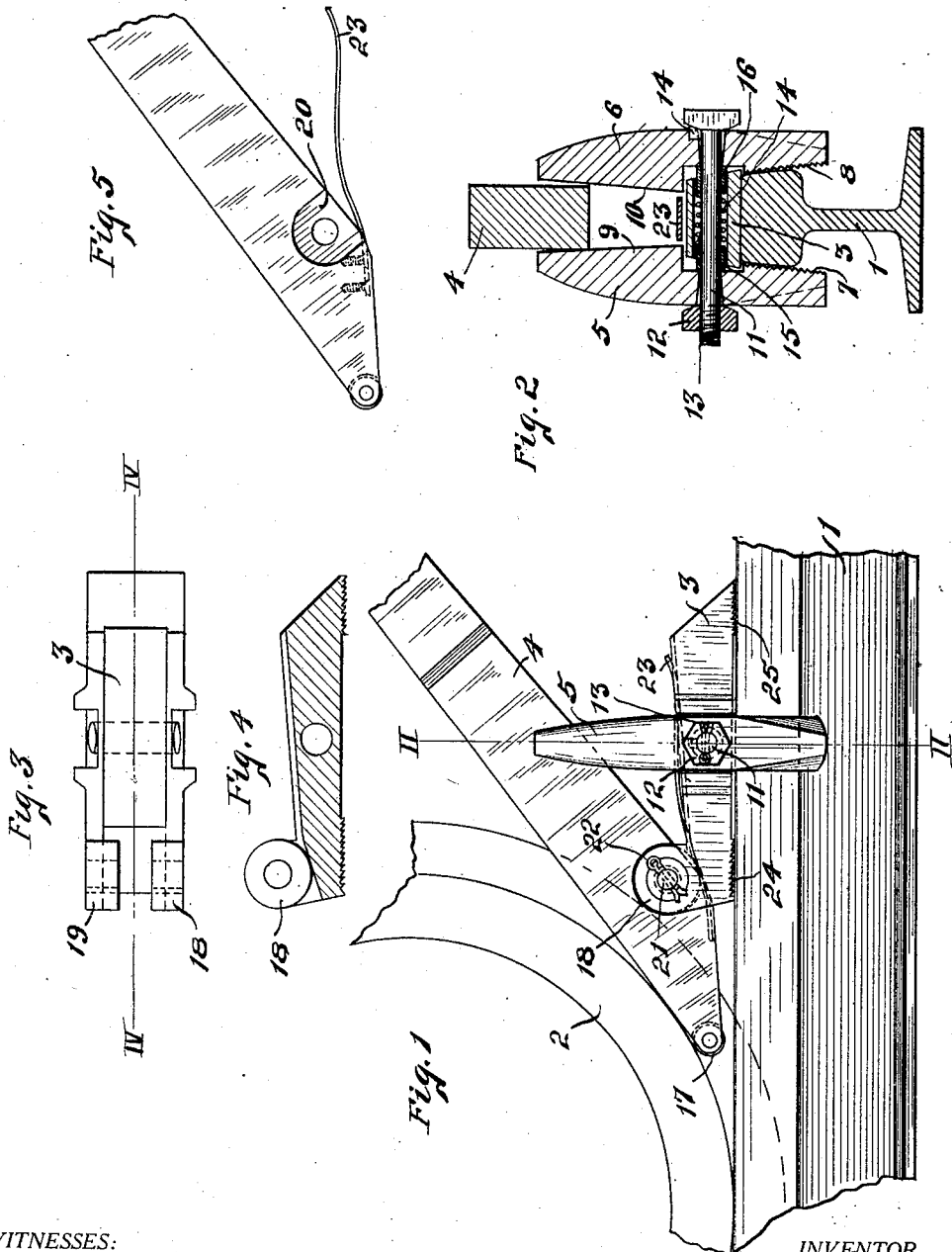


J. J. SABO.
PINCH BAR FOR MOVING CARS.
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WITNESSES:
Julius H. Hendig.
James C. Bradley

INVENTOR.
John J. Sabo
BY *Paul Symmes*
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN J. SABO, OF PITTSBURGH, PENNSYLVANIA.

PINCH-BAR FOR MOVING CARS.

1,050,852.

Specification of Letters Patent.

Patented Jan. 21, 1913.

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To all whom it may concern:

Be it known that I, JOHN J. SABO, a subject of the Emperor of Austria-Hungary, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pinch-Bars for Moving Cars, of which the following is a specification.

The invention relates to pinch bar tools for moving cars. It has for its primary objects; the provision of a tool in which the danger of the bar slipping upon the rail is entirely eliminated, the provision of a bar in which the fulcrum member of the device is made to positively grip the rail by the actuation of the operating arm or lever, and the provision of a simple and compact device in which the work of operating the bar is reduced to a minimum and a maximum distance of movement of the car wheel secured for each downward stroke of the operating lever. One embodiment of the invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a side elevation of the device in position for use, the handle of the operating bar being broken away, Fig. 2 is a section on the line II—II of Fig. 1, Fig. 3 is a plan view of the fulcrum block, the operating and gripping levers being removed, Fig. 4 is a section on the line IV—IV of Fig. 3, and Fig. 5 is a side elevation of the lower portion of the operating lever.

Referring to Figs. 1 and 2, the principal parts of the apparatus as there shown are as follows. 1 is the rail upon which the device rests; 2 is the wheel of the car to be moved; 3 is what may be termed the fulcrum block; 4 is the operating lever pivoted at its end to the fulcrum block, and 5 and 6 are the gripping levers which are pivoted to the sides of the bearing block 3.

The gripping arms 5 and 6 are provided at their lower inner faces with toothed surfaces 7, 8, adapted to engage the sides of the head of the rail, and the upper inner faces of the arms or levers 5, 6, are slightly inclined as indicated at 9 and 10, to form cam surfaces in which the operating lever 4 engages as it approaches its lower position. The arms 5 and 6 are held in position by means of a bolt 11 having at its one end the nut 12 and the cotter 13 for preventing the rotation of the nut. The bolt is prevented from rotating, by a small lug 14 which fits into a recess in the side of the lever 6. The

levers 5 and 6 fit loosely upon the bolt 11, as indicated in Fig. 2, so that the levers may rock slightly, and the levers are normally held in their outermost positions by means of a spring 14 bearing against cylindrical distance pieces 15 and 16 mounted so that they slide freely on the bolt 11.

The end of the lever 4 is provided with a roller 17 for engaging the tread of the wheel, such roller 17 serving to reduce the wear at this point and reducing the friction, the roller being readily replaceable when broken or worn out. The fulcrum block 3 is provided on its end with a pair of up-standing disk-shaped portions 18 and 19 (Figs. 1, 3, and 4), which disk-shaped portions are adapted to fit into recesses 20 in the sides of the operating levers (Fig. 5). Perforations are provided through the members 18 and 19, and through the lever 4, into which fits the bolt 21 provided at one end with a head (not shown), and at the other end with a cotter pin 22. The lever is normally held with its handle in upper position by means of the leaf spring 23 secured adjacent the end of the lever as indicated in Fig. 5, and bearing upon the top surface of the fulcrum block 3. The lower surface of the fulcrum block 3 is provided with corrugated portions 24, 25, to prevent longitudinal movement of the block upon the rail.

In operation the device is placed in the position indicated in Fig. 1, and the handle of the lever 4 lowered. At the lower portion of its stroke this lever 4 engages the cam surfaces 9 and 10 upon the gripping levers 5, 6, forcing the upper ends of such levers outward and the lower ends inward, thus causing such lower ends to grip the sides of the rail. At this time the roller 17 on the end of the operating lever engages the tread of the wheel and the wheel is forced along the track. Upon raising the handle of the lever 4 such lever is disengaged from the gripping levers 9 and 10, thus permitting such levers to spread apart and release the head of the rail, so that the fulcrum block can be shoved ahead to secure a new position of operation with respect to the wheel.

It will be seen from the foregoing that the device exerts a very positive and effective moving action upon the wheel, inasmuch as the fulcrum block carrying the lever is rigidly fixed in position with respect to the rail head and is held against movement either longitudinally of the rail or lat-

erally thereupon. It is therefore impossible for the device to slip during the application of power to the lever 4, and all danger due to the operation of the device is eliminated. 5 It will also be seen that while the device is positively held in position during the downward movement of the handle of the lever, it is perfectly free to move forward to a new position after the lever is raised. The 10 provision of the disks 18 and 19 fitting into the recesses 20 in the sides of the handle 4 is advantageous, in that the bearing strain is taken by such members, thus removing the strain from the pin or bolt 21 which may be 15 made comparatively small. Various other advantages incident to the construction will be readily apparent to those skilled in the art.

It will be apparent that my invention is 20 not limited to the precise construction shown, and that various departures might be made without departing from the spirit of the invention which contemplates broadly the use of gripping means carried by the 25 fulcrum block and operated to grip the rail as the handle moves down and release the rail as the handle moves up. My invention comprehends any and all of such arrangements, as well as minor changes in the 30 details of construction, such as modifications of the engaging end of the operating lever, and the means for pivotally connecting the operating lever with the fulcrum block.

Having thus described my invention and 35 illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:

1. A pinch bar for moving cars, comprising a fulcrum block having a rail engaging 40 surface at the front end, an operating lever pivoted on the block above the said rail engaging surface and to the rear of the front edge of such surface, a pair of rail gripping levers mounted for rocking move- 45 ment on the fulcrum block to the rear of the

point of pivotal support of the operating lever, with their lower ends in position to grip the sides of the rail and their upper ends in position to engage the operating lever as it descends. 50

2. A pinch bar for moving cars, comprising a fulcrum block adapted to rest on the top of a rail, an operating lever pivoted to the block and having a handle at one end 55 and an operating portion at the other end for engaging the wheel of a car to be moved, a pair of rail gripping levers mounted on opposite sides of the fulcrum block, a rod extending through the fulcrum block and carrying the gripping levers, and a compression spring surrounding the rod and tend- 60 ing to separate the lower ends of the rail gripping levers, the said operating lever being arranged to move the upper ends of the rail gripping levers outwardly as it moves 65 down.

3. A pinch bar for moving cars, comprising a fulcrum block adapted to rest on the top of a rail, an operating lever pivoted to the block and having a handle at one end 70 and an operating portion at the other end for engaging the wheel of a car to be moved, a pair of rail gripping levers mounted on opposite sides of the fulcrum block, a rod 75 extending through the fulcrum block and carrying the gripping levers, sleeves carried by the rod and engaging the inner faces of the rail gripping levers, and a compression spring between the sleeves tending to separate them, the said operating lever being 80 arranged to move the upper ends of the rail gripping levers outwardly as it moves down.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

JOHN J. SABO.

Witnesses:

HARVEY L. LECHNER,
ARCHWORTH MARTIN.