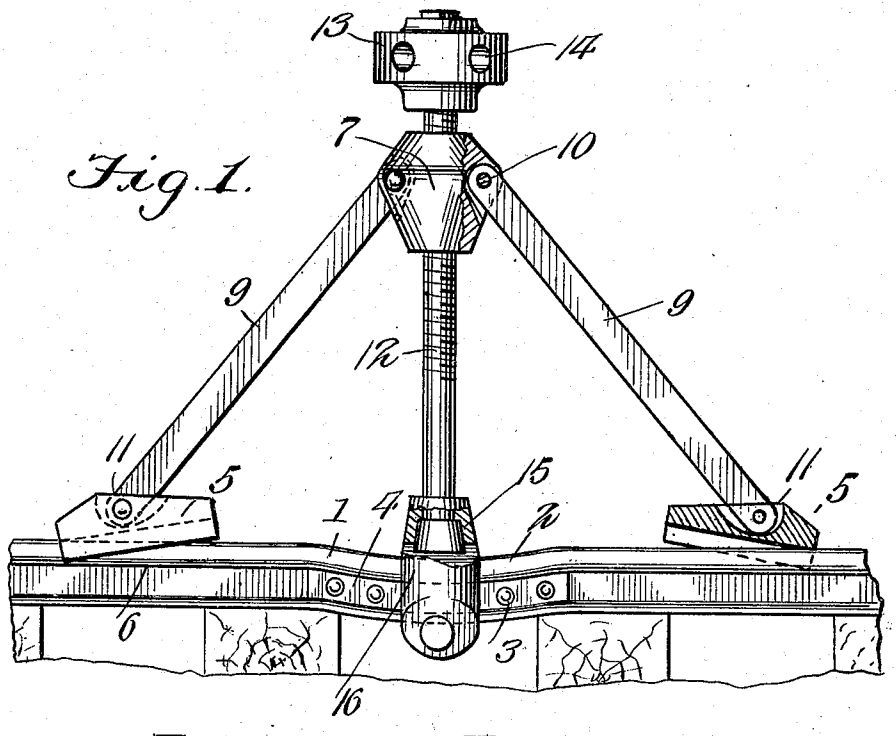
J. WAREHOCK.

RAIL STRAIGHTENING DEVICE.

APPLICATION FILED AUG. 18, 1908.

924,514. Patented June 8, 1909.

Fig. 1.



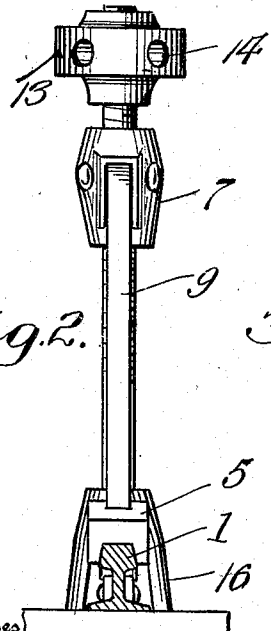


Fig. 2.

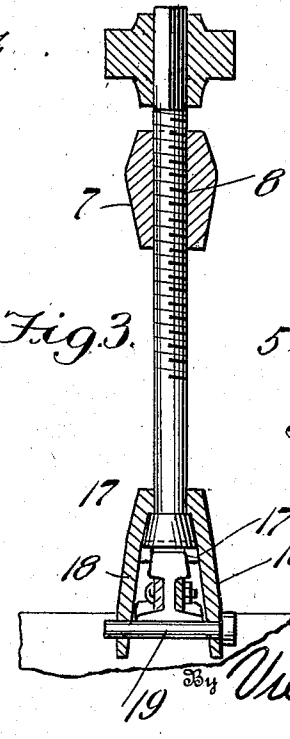


Fig. 3.

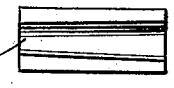


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN WAREHOCK, OF SENEY, MICHIGAN, ASSIGNOR OF ONE-HALF TO JAMES HARCOURT, OF SENEY, MICHIGAN.

RAIL-STRAIGHTENING DEVICE.

No. 924,514. Specification of Letters Patent. Patented June 8, 1909.

Application filed August 18, 1908. Serial No. 449,185.

To all whom it may concern:

Be it known that I, JOHN WAREHOCK, a citizen of the United States, residing at Seney, in the county of Schoolcraft and State of Michigan, have invented new and useful Improvements in Rail-Straightening Devices, of which the following is a specification.

This invention relates to a device for raising and straightening the ends of railway rails at the joints where the rails, under the hammering of the wheels of the rolling stock, are gradually bent downward. As is well known, the meeting ends of railway rails are coupled by bolts and fish plates, the joints constituting the weakest portions along the line of the rail. This weakness soon causes the rails to become battered at about a foot beyond each side of the joint, and necessitates the replacement of the old rails with new ones at considerable expense. Owing to the expense, from this cause, of keeping the rails in good condition, the bent rails are often permitted to remain until they have become so battered that it is absolutely necessary to replace them, with obvious disadvantages and danger to the travel of trains.

The object of my invention is to provide a simple, easily operated and effective device by which the downwardly bent ends of rails may be straightened or bent back to normal position and then properly braced to sustain them, thus greatly increasing the life of the rails.

In the accompanying drawing illustrating the invention, Figure 1 is a side elevation, partly in section, showing the application of the invention for straightening the bent ends of rails at the joints. Fig. 2 is an end elevation of the same, one of the rails appearing in transverse section. Fig. 3 is a central vertical transverse section through the device. Fig. 4 is a bottom plan view of one of the supporting blocks.

Referring to the drawing, the numerals 1 and 2 represent the meeting ends of rails which are bent or deflected downward at the joints together with their connecting bolts 3 and fish plates 4.

The straightening device embodying my invention comprises a pair of supporting blocks or shoes 5 adapted to engage and rest upon the respective rails at points on opposite sides of the bent joint. These blocks are adapted to rest squarely on the heads of the rails and are provided at opposite sides with flanges 6 to bear against the sides of the heads of the rails and support them in position against lateral displacement. A head block 7 is arranged above and on a line centrally between the supporting blocks 5 and is provided with a threaded opening 8 and connected with said supporting blocks by bars or levers 9, which are pivotally mounted at their upper ends on pivot bolts 10 set in recesses in the opposite sides of the block 7 and similarly mounted at their lower ends on bolts 11 in recesses formed in the upper sides of the blocks 5, thus enabling the supporting blocks to be set at different distances apart as occasion requires in the operation of the device.

A screw or threaded stem 12 is provided to work in the threaded opening 8 in the block 7, through which it extends, and is angular in form at its upper end to receive a disk or head 13 provided with a series of openings or sockets 14 for the reception of a bar or lever by which said screw may be turned, the block 7 operating as a stationary nut for the up and down travel of said screw, as will be readily understood. The screw is swiveled at its lower end, as shown at 15, to the upper end of a coupling or straining saddle 16 which is provided with supporting lugs 17 to rest upon the heads of the rails and with side flanges 18 of a length to extend below the rails and perforated for the passage of a bearing pin or bolt 19.

In straightening the deflected end of the rails at the joints, the device is arranged as shown in Fig. 1 with the supporting blocks 5 resting on the rails at opposite sides of the joint, and the stem is screwed down until the straining saddle embraces the rails at the joints, after which the pin or bolt 19 is applied to bear against the base portions of the rails. A bar or lever is then fitted in one of the sockets of the head 13 and the latter turned to cause the screw to feed upward, said bar or lever being successively applied in the different sockets to turn the screw a part revolution at a time to gradually elevate the straining saddle. By this means the deflected ends of the rails will be gradually bent upward and straightened out to their normal position while the adjacent straight portions of the rails are being held down by their fastening spikes and the pres-

sure of the blocks 5. In practice, the recessed base portions of the blocks 5 formed by the engaging flanges 16 are preferably longitudinally tapered, as shown in Fig. 4, so that the blocks may move outward under the tendency of the movement of the screw to force the nut 7 downward until said blocks bind with maximum force against the rails, whereupon the nut will be held stationary, as will be readily understood. After the bent ends of the rails have been straightened out, earth may be tamped under the same or they may be otherwise suitably braced to support them against subsequent deflection.

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

A device for straightening the downwardly bent meeting ends of railway rails at the joints, comprising bearing blocks to rest upon the heads of the rails at the opposite sides of the joint, said blocks having depending side flanges to engage the sides of the heads of the rail, an inverted U-shaped saddle adapted to straddle the rails at the joint, the arms of said saddle being provided at their lower ends with openings, a removable pin adapted to be passed through said openings and beneath the rails to secure the saddle in position, a head having a threaded passage, bars pivotally connected with the bearing blocks and head, a screw working through said threaded passage in the head and having its lower end provided with an enlarged portion swiveled to the crown of the saddle, and a power-applying member on the upper ends of the screw.

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

JOHN WAREHOCK.

Witnesses:
JAMES HARCOURT,
STANLEY WAREHOCK.