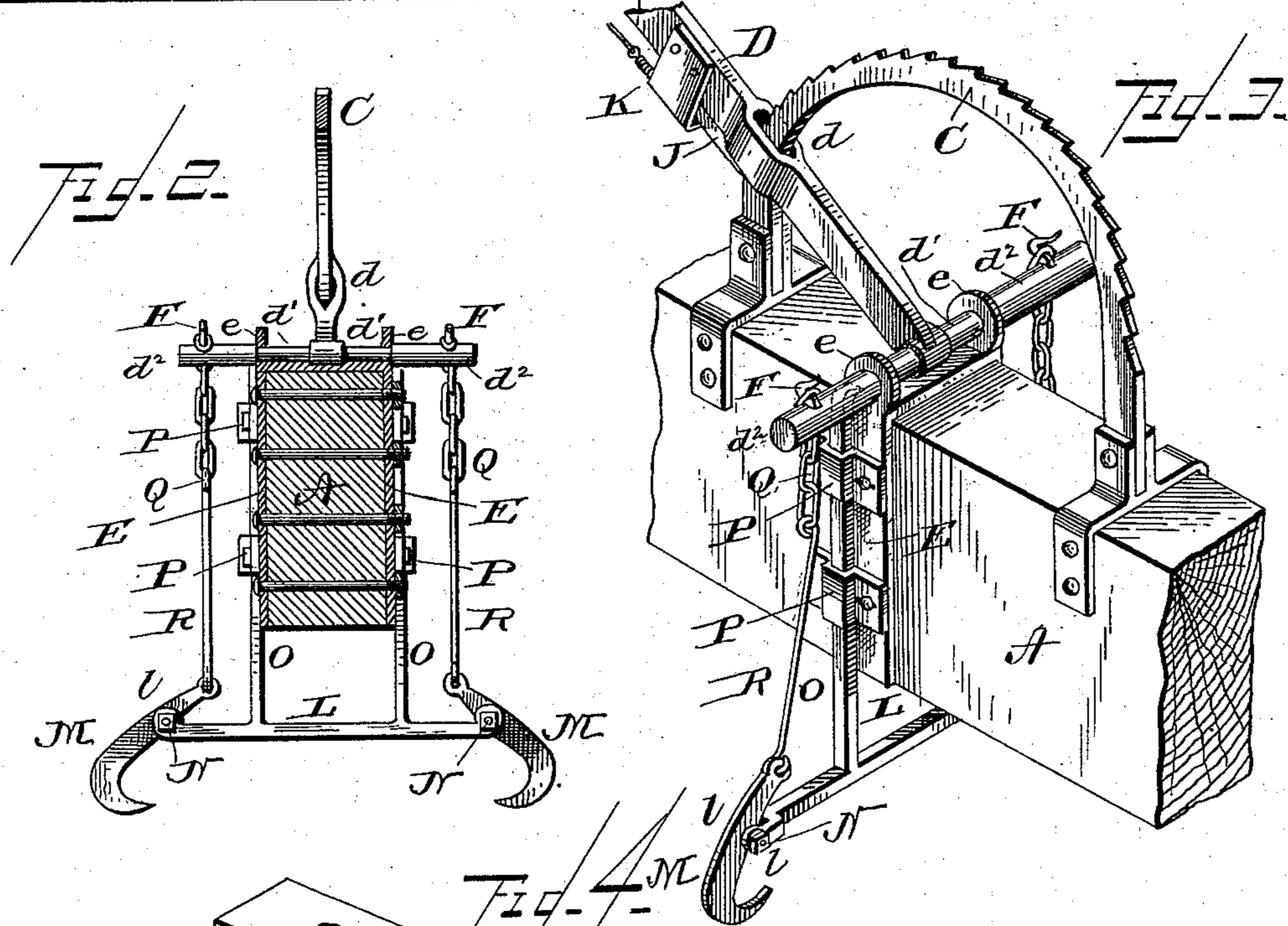
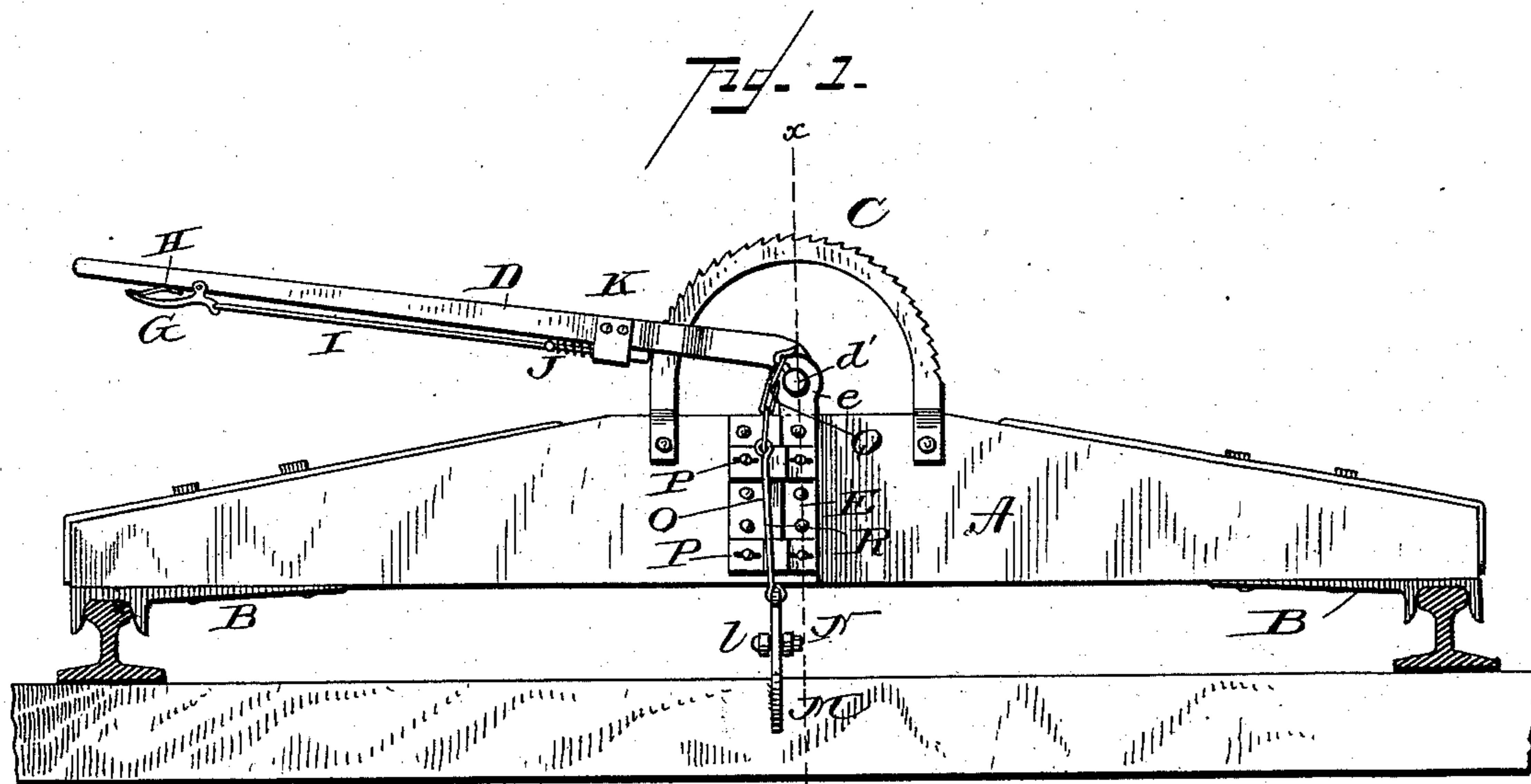


(No Model.)

A. F. WASHBURN & E. E. KRENGEL.
RAILWAY GAGE AND TIE GRIP.

No. 406,801.

Patented July 9, 1889.



WITNESSES
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UNITED STATES PATENT OFFICE.

ALFRED FARINGTON WASHBURN AND ERNST E. KRENGEL, OF INDEPENDENCE, OREGON.

RAILWAY-GAGE AND TIE-GRIP.

SPECIFICATION forming part of Letters Patent No. 406,801, dated July 9, 1889.

Application filed September 28, 1888. Serial No. 286,698. (No model.)

To all whom it may concern:

Be it known that we, ALFRED FARINGTON WASHBURN and ERNST E. KRENGEL, both residents of Independence, in the county of Polk and State of Oregon, have invented certain new and useful Improvements in Combined Railway-Gages and Tie-Grips; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of our combined railway-gage and tie-grip. Fig. 2 is a cross-section. Fig. 3 is a detail view, in perspective, of the gripping device; and Fig. 4 is a detail view of the gage-iron.

Like letters of reference denote corresponding parts in all the figures.

Our invention has relation to combined railway-gages and tie-grips; and it has for its object to produce a device of this character which may be employed as a convenient and efficient gage for properly adjusting the distance apart of the two lines of railway forming a track; furthermore, to produce a gripping device whereby the ties to which the rails are secured may be held in place during the operation of spiking said rails to the ties.

With these objects in view the invention consists in the improved construction and combination of parts of a combined railway-gage and tie-grip, as will be hereinafter fully described in the specification, illustrated in the drawings, and more particularly pointed out in the claim.

Referring to the drawings, the letter A represents the beam, provided with end gage-irons B B, said beam having its greatest width at its center, the upper edge at this point being horizontal with a gradual incline or slant to the ends thereof, and having secured thereto a curved or arched rack C.

The lever D, having longitudinal slot d in its lower end, passes over the arched or curved rack, and is provided on its end with a cross-head d' , said cross-head passing through eyes $e e$ in the upper ends of bars E E, secured to the sides of the beam, and provided with en-

larged ends $d^2 d^2$, to prevent its working out of position within the eyes or perforations, which said enlarged ends are provided with hooks F F. The lever D is provided with a pivoted finger-piece G, having disposed between its under side and the lever a spring H. Secured to the inner end of the finger-piece is a cord I, said cord having its other end connected to a pawl or catch J, adapted to engage the rack-bar and securely retain the lever in its adjusted position. It will be seen that when pressure is exerted upon the outer end of the finger-piece the pawl or catch is released from engagement with the teeth of the bar and the lever is free to be adjusted in any position, and when the desired position is reached pressure is simply relaxed, when the pawl will resume its normal position of engagement with the teeth. A guideway K is secured to the lever, through which the pawl passes and is kept in proper position against the lever.

The gripping device consists of a lower piece L, having bifurcated ends $l l$, hooks M M being pivoted in said bifurcated ends by bolts N N, and also of two upward-extending bars O O, preferably integral with said lower piece, and having hooked ends adapted to engage notches or to be driven into the sides of the beam. These upward-extending pieces O O are disposed upon each side of the beam A and secured thereto by keepers or sleeves P P, the flanges of the keepers being provided with bolt-holes for the passage of bolts, the bolts on one side also passing through the bars E E and serving to secure said bars to the sides of the beam. Chain-links Q Q pass over the hooks F F in the enlarged ends of the cross-head d , the lower links of the chain being secured to bars R R, which said bars are in turn pivotally secured to the hooks M M.

In practice the beam is first arranged above one of the ties of the railway and the gripping device operated by simply pressing on the finger-piece, which will have the effect of releasing the pawl, when the lever is free to move. As the lever is turned the bar pivotally secured to the hooks will serve to bring the lower points of the hooks together, so as to grasp the tie firmly, when the pressure on the finger-piece may be relaxed, allowing the pawl to engage the teeth of the bar, and thus

effectively gripping the tie. The tie being thus held firmly in position by the gripping device, the track may now be passed through the way of each gage-iron, whereby the exact and proper width of the track is secured, and in this position may be readily spiked to the tie without the least danger of lateral displacement of either the tie or track. The beam A is usually made of such a length as to permit the gage to comply with the usual requirements of four feet eight and one-half inches—the width generally adopted in this country.

It will also be seen that the gripping device can be easily adjusted so as to grasp the tie at any point of its width by simply driving the bent ends of the upward-extending pieces O O into the sides of the beam A at a point where the hooks M M will grasp the tie in the position desired.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

The combination of the beam, the arched or curved rack-bar, the lever having longitudinal slot and provided with a cross-head having enlarged ends, said enlarged ends being provided with hooks, means for securing the lever in its adjusted position, the side bars, each provided with an eye or perforation in its upper end, the bracket having the lower cross-piece thereof provided with bifurcated ends, the hooks pivoted in said bifurcated ends, and the connecting links and rods, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

ALFRED FARINGTON WASHBURN.

ERNST E. KRENGEL.

Witnesses:

OTIS D. BUTLER,
H. HIRSCHBERG.