

(No Model.)

T. GILPIN & L. McHARGUE.  
DRILLING MACHINE.

No. 528,472.

Patented Oct. 30, 1894.

Fig. 1.

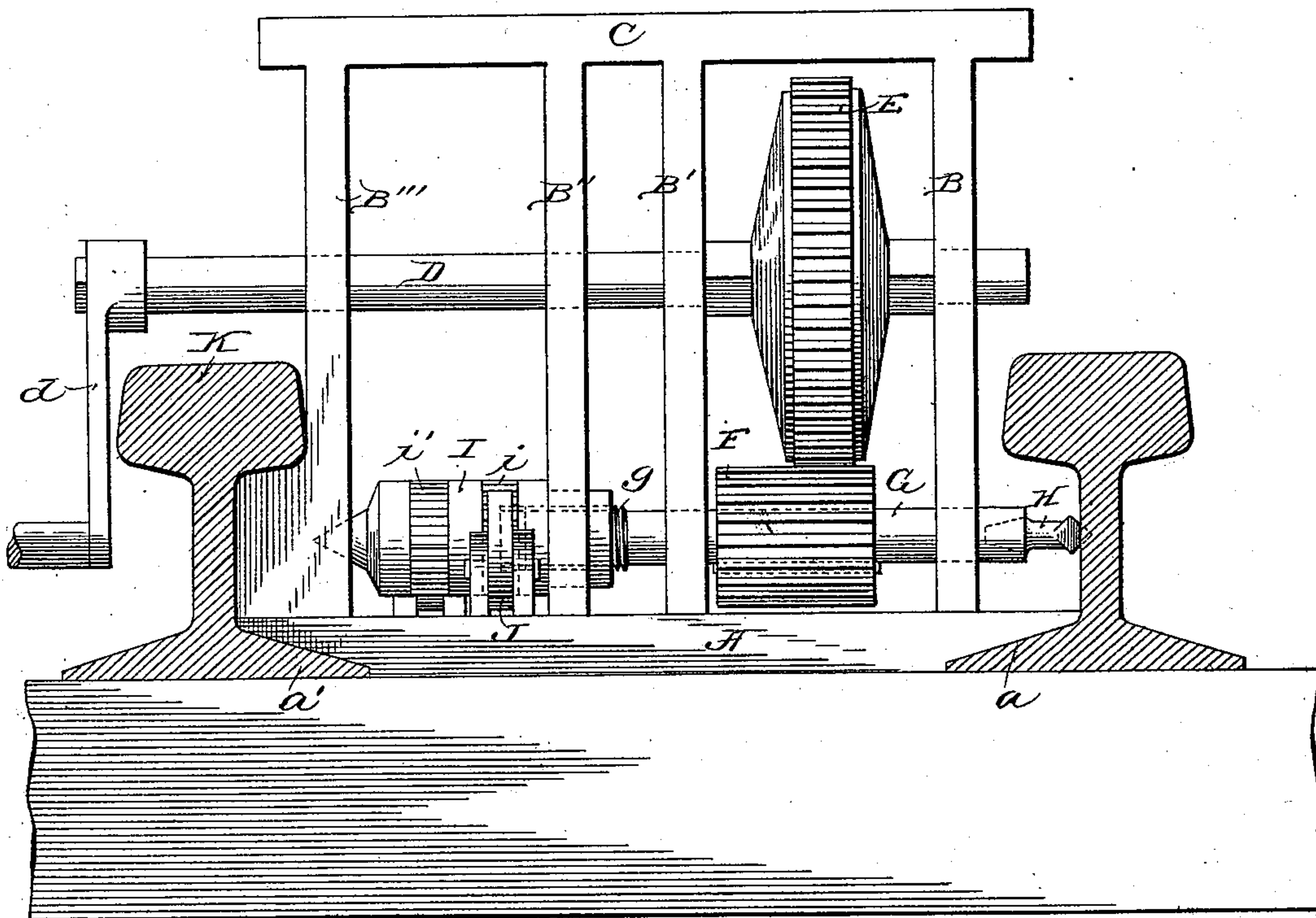
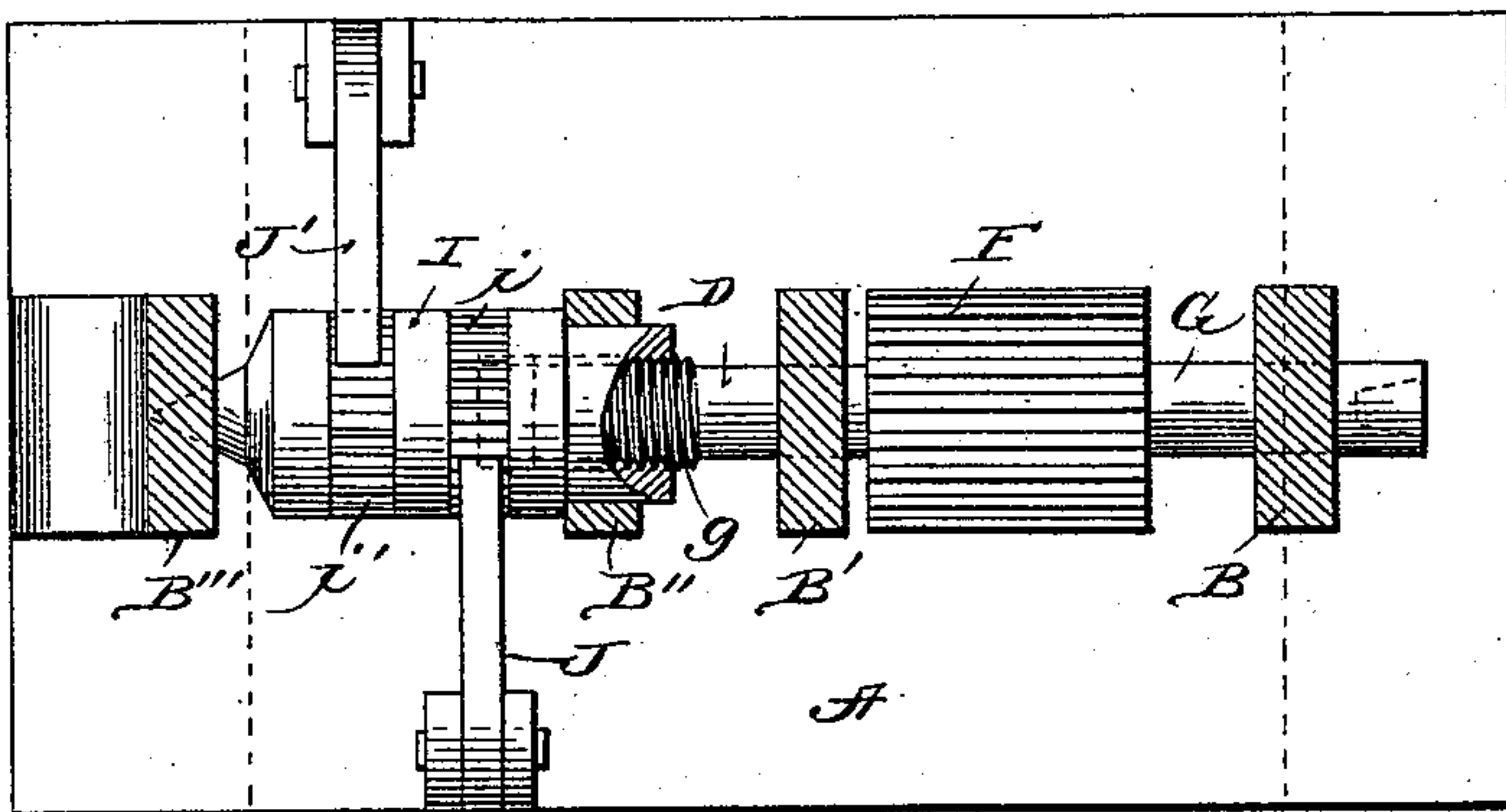


Fig. 2.



witnesses:  
Harry D. Rhur  
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Attys.



# UNITED STATES PATENT OFFICE.

TILMAN GILPIN AND LEE MCHARGUE, OF BROADHEAD, KENTUCKY.

## DRILLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 528,472, dated October 30, 1894.

Application filed December 7, 1893. Serial No. 493,070. (No model.)

### *To all whom it may concern:*

Be it known that we, TILMAN GILPIN and LEE MCHARGUE, citizens of the United States, residing at Broadhead, in the county of Rock Castle and State of Kentucky, have invented certain new and useful Improvements in Drilling-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a new and improved drilling machine especially designed for drilling the bolt holes in railway rails for the attachment thereto of the fish plates, and has for its object to provide a device whereby such holes may be drilled while the rails are in position upon the ties without resorting to the slow and tedious hand ratchet drills now commonly in use, and to this end our invention consists in the novel construction and combination of parts hereinafter fully described and afterward definitely pointed out in the claim, due reference being had to the accompanying drawings forming a part of this specification, wherein—

Figure 1, is a side elevation of our improved device, illustrating the same in operative position, and Fig. 2, a detail view of the feed mechanism.

Referring to the drawings the letter A indicates the base of the machine to which are secured uprights B, B', B<sup>2</sup> and B<sup>3</sup> united at their tops by a cross brace C, said parts forming the frame of the machine. D indicates the driving shaft adapted to revolve in bearings formed in the upper part of said uprights and provided at one end with a crank d. Near its opposite end it is provided with a pinion E which meshes with a similar, but smaller, pinion F rigidly keyed to the drill stock G rotating in bearings formed in the uprights B, B', and adapted to receive and hold a drill H, the end g, of said drill stock being screw threaded as shown and engaging a corresponding internal screw thread formed in a feed nut I, which is also mounted in bearings formed in the uprights B<sup>2</sup>, B<sup>3</sup>. Said feed nut is provided upon its periphery with two parallel and oppositely disposed ratchets i, i'; and pivoted to the base A of the machine

upon opposite sides of the feed nut I are pawls J, J', which respectively engage the brackets i, i'. The bottom of the base A at each end is beveled as at a, a', for the purpose now to be described.

In placing our improved drill in position for operation the beveled end a, of the base A is rested upon the inclined flange of the rail to be bored and a short piece of rail K is temporarily spiked to the ties at the proper distance from the track rail to permit the end a', of the base A, to rest upon its inclined flange as shown. The entire device can now be slid along the flanges of the rails until opposite the point to be drilled, when, by turning the crank d, the pawl J being in engagement with its ratchet i on the feed nut, the drill will be rotated and at the same time fed forward. After the hole has been drilled, by causing the pawl J', to engage its ratchet i, and by reversing the revolution of the crank the drill will be withdrawn, and the machine may be moved along the rails to bring the drill opposite the next point at which the rail is to be drilled. By disengaging both pawls J, J', from the feed nut I, the drill will be rotated without lateral motion in either direction.

Having thus described our invention, what we claim is—

In a machine for drilling railway rails, the combination with a base beveled on its opposite ends as shown for the purpose specified, of a horizontal driving shaft bearing a pinion, a horizontal screw threaded drill-stock also bearing a pinion of greater width, an interiorly screw-threaded feed nut for engaging the thread on said drill-stock, a pawl and ratchet mechanism for engaging the feed nut on both sides thereof, and a frame mounted upon the base wherein are journaled said shaft, drill-stock and feed nut, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

TILMAN GILPIN.  
LEE MCHARGUE.

Witnesses:

W. A. GILLIS,  
W. S. SOVILL.