To all whom it may concern:

Be it known that I, Edward A. Everett, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Track-Drilling Machines, of which the following is a specification.

This invention relates to track drilling machines and more particularly to power operated machines for drilling the rails of a railway track and has for an object to provide a machine of this type with an enclosed mechanism entirely supported by one rail of the track, that can be conveniently moved along the track, that can be quickly removed and replaced and that provides for moving the drilling mechanism out of the plane of the rail. Other objects will appear from the following specifications and drawings in which Fig. 1, is an elevation partly in section, Fig. 2 is another elevation at right angles to Fig. 1, and Fig. 3 is a detail section taken on line a—a of Fig. 1.

This invention is intended mainly for drilling rails for bonding purposes or for the bolts of splice bars at the rail joints and consists of a gasoline motor or other source of power connected by suitable gearing with a drill spindle and includes a means for clamping the machine to the rail, for feeding the drill to the rail and for swinging the drill spindle through the arc of a circle to clear the rail.

The rail is indicated by 11, 12 and 13 are rollers supporting frame 15 on the shafts 14. 16 is the engine or motor secured to frame 15 and having the handles 17 and 18 attached thereto by which the mechanism may be conveniently rolled along the track.

The drill 21 is carried by the drill spindle 22 running in the bearings 23 and 24 supported by the casing 43. A cap 44 is provided for the end of this spindle and is removable for inspection and adjustment of the spindle. The bevel gear 25 is secured to the drill spindle engaging gear 26, secured to shaft 27 which carries bevel gear 28 engaging bevel 29 on the horizontal shaft 30.

The outer end of this shaft has the belt wheel 31 splined to it by the spline 68 and belt 32 connects this wheel with the belt wheel 33 on the engine shaft adjoining the fly wheel 34. The drill spindle is thus driven from the motor shaft by reduction gear-
are engaged by the latch 67, pivoted at 69 and having the releasing handle 68 held in tension to engage the latch by the spring 70. By depressing the handle 68 the latch is disengaged and the mechanism may be rotated to any position and again latched to the ring 65.

This machine is secured to and entirely supported by one rail of the track when in the operating position. For this purpose a three point clamp is provided for the rail head having the clamps 71 and 72 opposite the drill, these clamps support the screw 77 the vertical height of which is adjustable in a slot as shown in Fig. 2. The opposite side of the rail head is engaged by a toothed member 81 engaging the head on the side and beneath. This member is adjustably secured to the cleat 80 by the screws 78, in the slot 79, Fig. 2. This cleat is secured to shaft 73 to which the sockets 74 and 75 are secured. Handle 76 in socket 74 may be used to clamp the rail and can be latched in position by spring rack 82 secured to the frame engaging the notch 83 secured to the handle. This handle may be placed in socket 75 when the machine is operated from the opposite side and rack 82 is provided to latch it in position similarly to rack 82.

Having thus described my invention, I claim:

1. In a track drilling machine in combination, a horizontal cylinder located on one rail of said track, a drilling mechanism arranged to drill the web of said rail, said drilling mechanism connected with said drilling machine through said cylinder and a rack and pinion movement incorporated in said cylinder for feeding said drill to said rail.

2. In a track drilling machine, in combination, a drilling machine including a motor resting upon one rail of said track and having a transverse cylinder, a drilling mechanism arranged to drill the web of said rail and having a member operatively connected with said cylinder, means connecting said motor with said drilling mechanism through said cylinder and means for rotating said mechanism about the axis of said cylinder.

3. In a track drilling machine, in combination, a drilling machine including a motor resting upon one rail of said track and having a transverse cylinder, a drilling mechanism arranged to drill the web of said rail and having a member operatively connected with said cylinder, means connecting said motor with said drilling mechanism through said cylinder and means for positioning said drill relative to said rail by rotating said mechanism relative to said machine.

4. In a track drilling machine, in combination, a drilling machine resting upon a rail of said track, a drilling mechanism having a horizontal shaft rotatively connected with said drilling machine, said drilling mechanism driven through said horizontal shaft, a fixed locking ring associated with said machine and means for latching said shaft to said ring.

5. In a track drilling machine in combination, a horizontal cylinder located on one rail of said track, a drilling mechanism arranged to drill the web of said rail, said drilling mechanism connected with said drilling machine through said cylinder, means for adjusting the position of said drill relative to said rail and means for feeding said drill through said cylinder.

6. In a track drilling machine, in combination, a drilling machine located above the rail of said track and having a transverse cylinder, a drilling mechanism arranged to drill the web of said rail and operatively connected with said cylinder, the driving shaft of said drilling mechanism located in the axis of said cylinder whereby said mechanism may be rotated relative to said machine while said drill is running.

7. In a track drilling machine, in combination, a drilling machine including a motor located on a rail of said track, a depending arm carrying a drill, said arm slidably and rotatively connected with said machine, means operatively connecting said motor with said drill and means whereby said arm may be rotated and slidably moved while said drill is running.

8. In a track drilling machine, in combination, a drilling machine located above the rail of said track, and having a transverse cylinder, a drilling mechanism arranged to drill the web of said rail and operatively connected with said cylinder, means for feeding said drill to said rail by sliding said member in said cylinder and means for rotating said mechanism about said cylinder as an axis.

9. In a track drilling machine, in combination, a drilling machine on the rail of said track having a cylinder located transversely above said rail, a drilling mechanism arranged to drill the web of said rail and having a member working within said cylinder, a spring associated with said cylinder and said member and arranged to hold said drill away from said rail.

10. In a track drilling machine, in combination, a drilling machine resting upon one rail of said track, a drilling mechanism centered in said machine and arranged to drill the web of said rail, said mechanism slidably connected with said machine and rotative about said centre, and a spring to hold said drilling mechanism away from said rail.

Signed at New York in the county of New York and State of New York this 10th day of February A. D. 1929.

EDWARD A. EVERETT.