Dec. 17, 1929. A. DINKLAGE 1,740,158

TOOL FOR APPLYING AND REMOVING ANCHORING DEVICES

Filed June 24, 1925

Fig. 1.

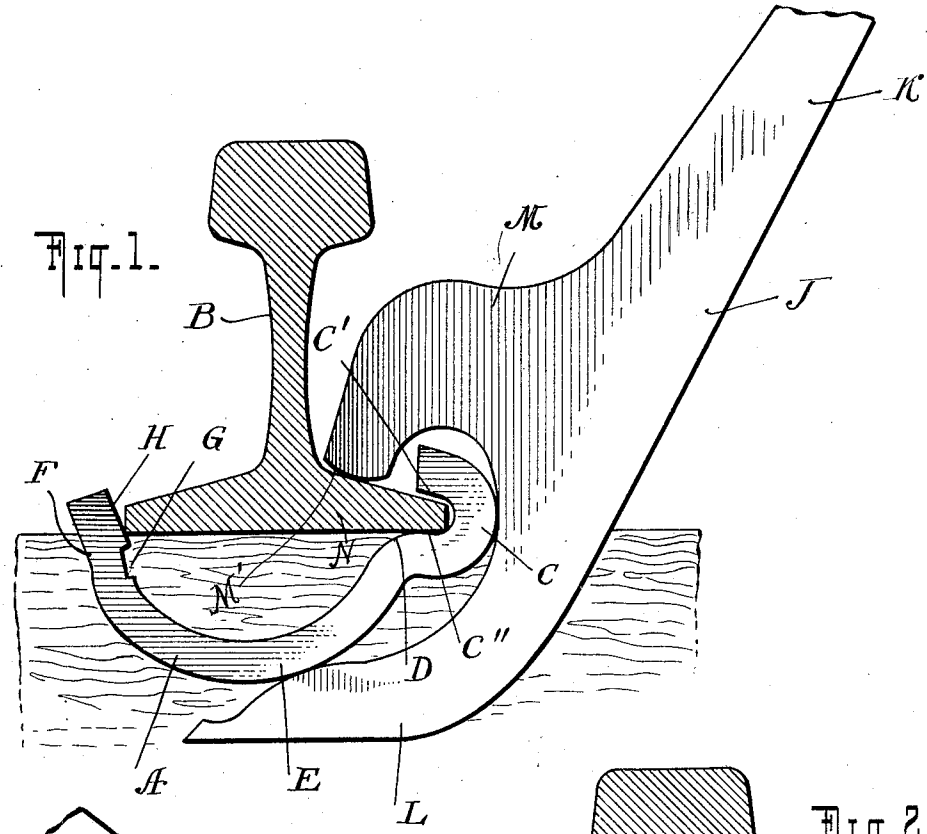
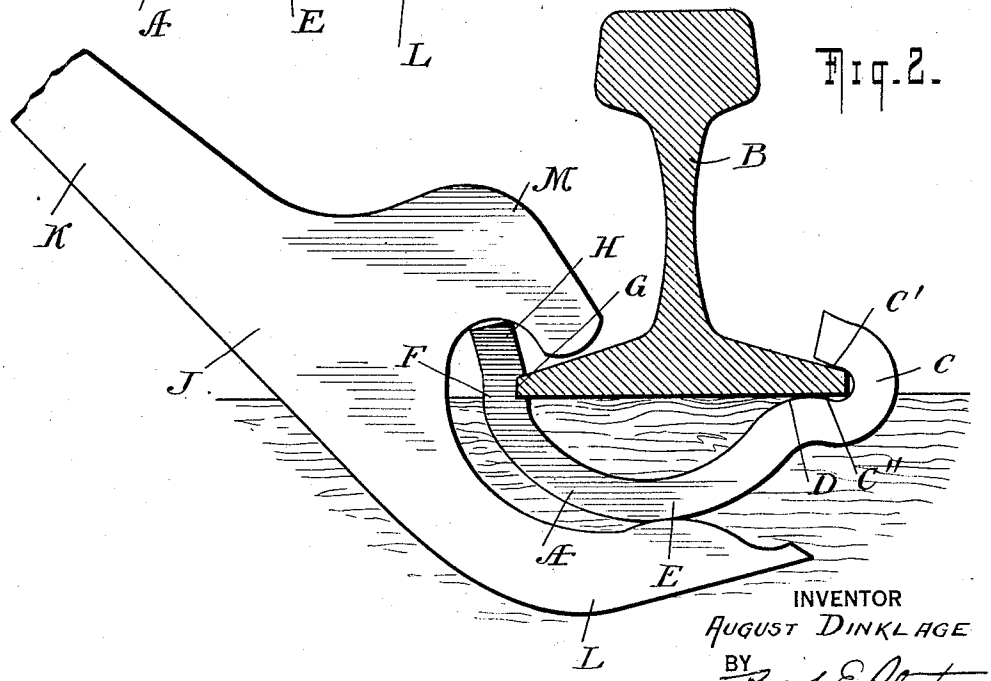


Fig. 2.



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TOOL FOR APPLYING AND REMOVING ANCHORING DEVICES

Application filed June 24, 1925. Serial No. 39,232.

This invention relates to tool for applying and removing anchoring devices and has more special reference to an instrumentality for applying a rail anchor to a track rail.

In its more comprehensive aspect the invention relates more especially to a tool for applying and removing a rail anchor of the type which is sprung over the rail more particularly a one piece rail anchor.

In my Patent No. 1,527,427, dated February 24, 1925, for anchoring devices, I disclose a single piece anchor for the removal and application of which to a track rail the present tool is more especially designed and which is illustrated in the drawing for the purpose of affording a clear understanding of the underlying principles of the invention so that they may be readily understood by those skilled in the art, and is not intended as limiting the invention either to the specific form of tool or the particular type of rail anchor with which the tool may be used.

In said drawing:—

Fig. 1 is a side elevation of the invention showing the tool in operative position to spring a rail anchor on the rail, and

Fig. 2 is a side elevation of the invention showing the tool in operative position to remove a rail anchor from a track rail.

Continuing now by way of a more detailed description, a rail anchor or check indicated in its entirety by A and consisting of a single bar of somewhat resilient material is adapted to be applied to a track rail B of the conventional type. One end of this check A comprises a hook shaped end C, having opposed jaw faces C′ and C″ which are spaced apart a sufficient distance to receive the edge of the rail flange and yet located sufficiently close together so that the jaws C′ and C″ will lock with the rail on rotation of the end C. The reentrant portion of the hook end C is also of sufficient depth so that an appreciable portion of the rail edge is engaged to obviate any danger of damaging the rail. In order to accomplish the rotation of the end C and the locking of the check to the rail the lower leg or jaw face C″ of the hook end is carried downwardly or bent away from the rail base and forming at the bent portion a ridge or fulcrum D, which is adapted to abut against the rail base when the check is in applied position. The extended portion of the downwardly bent part of the jaw face C″ forms a yoke E which serves among other purposes as a lever arm to rotate the hook end C and clamp the rail edge between the jaw C′ and the fulcrum D when the yoke E is carried upwardly. In order to facilitate the application of the check to the rail and to economize material the yoke E is bowed in the manner shown, thereby bringing the end of the yoke remote from the hook end C into close proximity with the rail base and at the same time providing an easily manipulated portion between the opposed rail engaging ends to allow the ends to be spread for the purpose of seating the rail in the check. The end of the bowed portion or yoke E opposite to the rail engaging jaw C has an upstanding arm or latch member F with a reentrant part or rail receiving notch G, which is adapted to receive and seat one side of the rail base the seating of the rail base in the notch G, locking the fulcrum D against the rail base. The inner face of the arm F is in turn tapered in the manner indicated to form a cam face H for preliminary engagement with the rail and to spring the jaw outwardly when an upward pressure is applied to the bowed yoke as will be readily apparent from an inspection of the drawing. The distance between the lower edge of this cam face H and the effective rail receiving recess in the hook end C is less than the width of the rail base so that after the rail base has been snapped downwardly over the lower edge of the cam face and seated in the indent the separation of the check and rail under ordinary operating conditions is impossible, the jaw faces C′ and C″ firmly locking the check to the rail and when abutting against a stationary part of the road bed effectually checking creep.

The device for applying this rail anchor to the rail comprises a forked member indicated in its entirety by J and having a manipulating handle K which is of such length as to provide sufficient leverage to overcome the resistance of the check to distortion. A lower

fork part or tine L projects forwardly a sufficient distance so that when the arcuate portion between the tines abuts against the hook end of the check, it underlies the downwardly bowed portion of the check and in such position as to exert vertical and lateral thrust, the translated thrust serving to firmly hook the end over the rail base edge and to snap the cam face over the rail edge. An upper fork tine M overhangs the lower tine and has a dependent fulcrum M′ which is adapted to abut against the top of the rail flange N. The abutting end of this fulcrum is preferably arched to provide a rolling contact when the tool is manipulated. While the fork tine or arm M is shown as abutting against the rail flange, the arm might also be arranged to overhang the rail head as will be readily understood.

In using the tool to apply a rail anchor of the type illustrated the tool is arranged as shown in Fig. 1, with the lower tine abutting against the bowed portion of the check. On clockwise rotation of the lever arm J, the coaction between the translated thrust of the tine and the cam face H spreads the jaws and permits the base of the rail to seat itself in the rail base receiving indent G in which position the anchor is securely locked to the rail. While in Figure 1 I have shown the fork tine M as engaging the flange of the rail, it may alternatively be engaged with the end of jaw C to remove the anchor similar to its engagement with the end of jaw F as shown in Figure 2.

In removing the anchor the tool is reversed to the position shown in Fig. 2, the lower tine L in the instance pressing upwardly to spread the jaws and the upper tine M pulling the jaw away from the opposed jaw to release the jaw from the locking indent and also moving the jaw downwardly so that the check is released from the rail.

When I speak in my claims of the exterior face of a rail anchor, I mean the face which is on the opposite side of the anchor from the face which is adjacent to the rail base.

It is claimed:—

1. A tool for applying and removing rail anchors which comprises a dependent fulcrum portion adapted on rotation of the tool to engage a rail flange at a point above the base and spaced from a further depending portion which presents a surface adapted to abut against an extremity of the anchor on rotation of the tool, and a tine projecting in the same plane as the fulcrum portion and adapted to engage a rail anchor at a point below the base.

2. A tool for applying and removing rail anchors which comprises a dependent fulcrum portion adapted on rotation of the tool to engage a rail flange at a point above its base and spaced from a further depending portion which presents a surface adapted to abut against an extremity of the anchor on rotation of the tool, and a tine projecting in the same plane as the fulcrum portion, and having an arcuate face, adapted to engage the anchor at a point below the base.

3. A tool for applying and removing rail anchors which comprises a dependent fulcrum portion adapted on rotation of the tool to engage a rail flange at a point above its base and spaced from a further depending portion which presents a surface adapted to abut against an extremity of the anchor on rotation of the tool, and a tine projecting in the same plane as the fulcrum portion, and having an arcuate face, adapted to engage a rail anchor at a point below the base, and means to rotate the tool.

4. A tool for applying and removing rail anchors such as comprise a member at each end for engaging the opposite flanges of a rail and an intermediate portion spaced from the rail, said tool comprising a bar having a forwardly projecting fork tine or extension on one side near the working end, and a prolongation beyond said tine curved toward the tine, the parts being so shaped and proportioned that the tine may engage either end of the anchor and serve as a fulcrum thereagainst while the curved prolongation engages the spaced portion of the anchor to tend to flatten the same for either applying said anchor to or prying it off said rail.

Signed at the city of New York in the county of New York, this 4th day of December, 1924.

AUGUST DINKLAGE.