(No Model.)

P. McCANN.

STRAIGHTENER FOR SWITCH RAIL RODS OR BRACES.

No. 487,958. Patented Dec. 13, 1892.

Fig. 1.

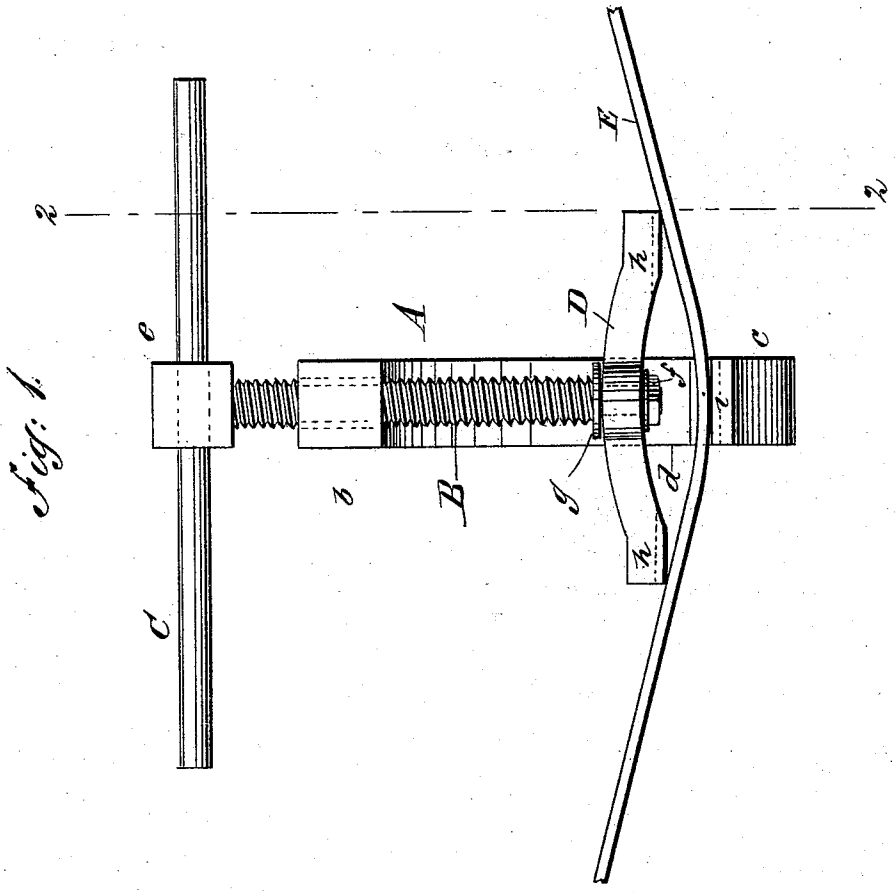
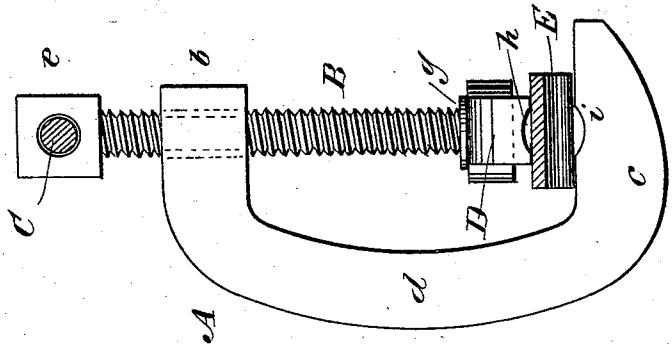


Fig. 2.



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STRAIGHTENER FOR SWITCH-RAIL RODS OR BRACES.

SPECIFICATION forming part of Letters Patent No. 487,958, dated December 13, 1892.

Application filed September 21, 1892. Serial No. 446,394. (No model.)

To all whom it may concern:

Be it known that I, PATRICK McCANN, of St. Ignace, in the county of Mackinac and State of Michigan, have invented a new and useful Improvement in Straighteners for Switch-Rail Rods or Braces, of which the following is a full, clear, and exact description.

This invention consists in an improved clamp for straightening metal rods, bars, or braces, but more particularly for straightening sliding switch-rail rods or braces on railroads, and the invention will here more especially be described with reference to these last-named rods or braces.

The object, utility, and advantages of the invention as applied to this particular use will be best explained by the following statement. The rods or braces which connect together the two rails that are used at a switch employed to make connection with two or more track-rails branching off from the switch—that is, any given switch—are not unfrequently bent out of shape and their utility destroyed by an engine running off one of the tracks where the sliding switch or switch-rails have failed or been neglected to connect with it, which causes the flange of the driving-wheels of the engine to bend out of shape said connecting rods or braces between the sliding switch-rails. When such an accident occurs, it is usual for two or three section-men on the railroad to proceed to the spot and take off the bent rods or braces and put on the switch-rails another set of straight rods or braces, while the injured or bent set are taken to the blacksmith-shop to be straightened. This ordinarily takes two or three men from two to three hours to replace the bent rods or braces with new or straight ones, and it takes the smith considerable time to straighten the bent rods or braces for future use. In all this there is great expense and loss of time and labor, besides the delay which ensues. My invention avoids this, and by it one man can straighten a whole set of rods or braces in a very short time—say ten minutes, more or less—without removing them from the rails and without causing any stoppage of trains, as under the old method was unavoidable.

The invention comprises a screw-clamp or straightener with attached turning or swinging pressure-foot, substantially as hereinafter described, and more particularly pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 represents a plan view of my improved clamp applied to straighten a sliding switch-rail rod or brace, and Fig. 2 a sectional side view of the same upon the line 2 2 in Fig. 1.

A is the body of the clamp, which is of ordinary general construction, it being formed with a jaw or head *b* and opposite jaw or foot-piece *c*, connected by a side arm *d*.

B is the clamping-screw, working through a screw box or thread in the head *b* and provided with a perforated head-piece *e*, through which a sliding rod or lever C is projected to work the screw. The inner end of the clamping-screw is constructed to form a spindle, on which is loosely fitted, so as to swing or turn, a crossing pressure-foot D, held onto the spindle by a nut *f*, a washer *g* also being applied to the spindle on the back or outer side of the pressure-foot at the inner or forward end of the thread on the clamping-screw.

The turning or swinging connection of the pressure-foot D is the leading feature of my improved clamp, and by it great facilities are offered for adjusting and operating on the rods or braces of a switch bent by the engine when running off the track.

E indicates such a bent rod or brace, which may be straightened without removing it by applying the foot-piece *c* of the clamp to one side of its bent portion and the pressure-foot D to the opposite side thereof and working down or forward said pressure-foot by the clamping-screw B till the rod or brace is straightened on or across the face of the foot-piece *c*, which is straight or flat. The pressure-foot D, which is of arched form, being concave on its inner face, but made with its opposite ends that do the pressing action straight, has or may have said ends grooved, as at *h*, and the foot-piece *c* of the clamp has a corresponding groove *i* to adapt the

clamp to straighten the rods or braces when of round shape in transverse section instead of flat.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A straightener for switch-rail rods or braces, consisting of the body A, provided with the head *b* and the foot-piece *c*, the clamping-screw B, working in the head *b*, and the presser-foot D, arched at its center and having straight ends, the said presser-foot being mounted loosely on the inner end of the screw with its concave inner face downward, substantially as described.

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Witnesses:
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