

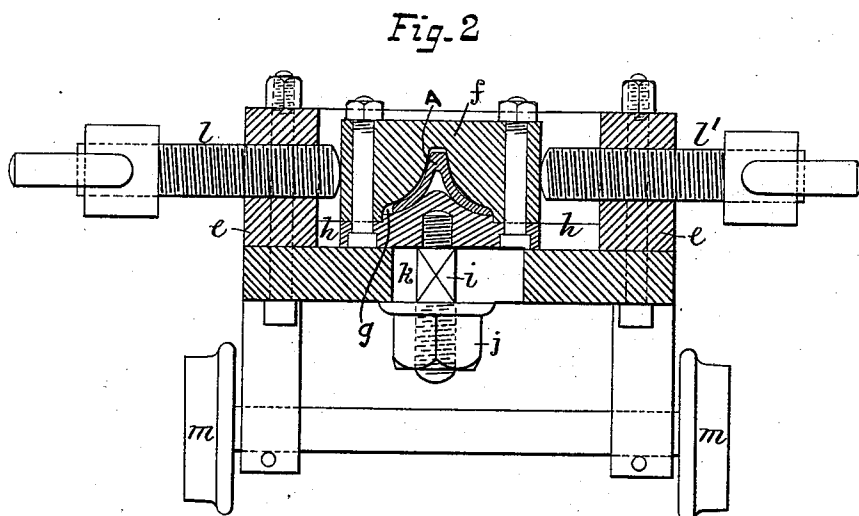
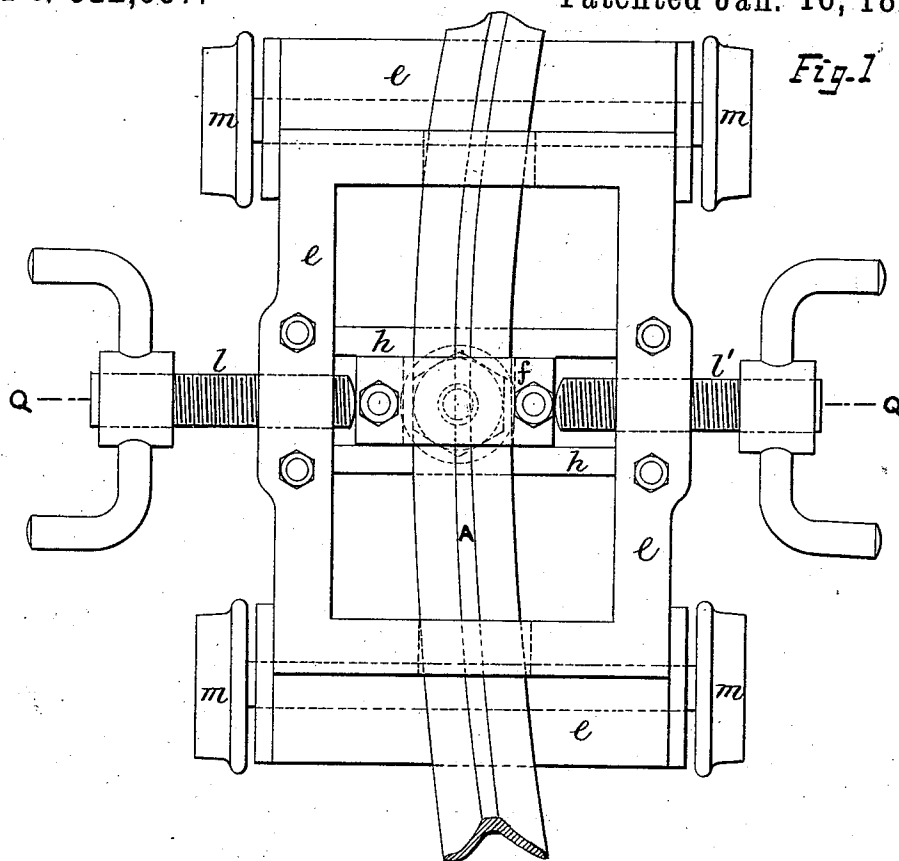
(No Model.)

2 Sheets—Sheet 1.

J. E. BILLUPS.
RAIL BENDING PRESS.

No. 512,857.

Patented Jan. 16, 1894.



Witnesses
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E. H. Shurtwaut

Inventor:
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By *Richardson*
His Attorney.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4 Patented Jan. 16, 1894.

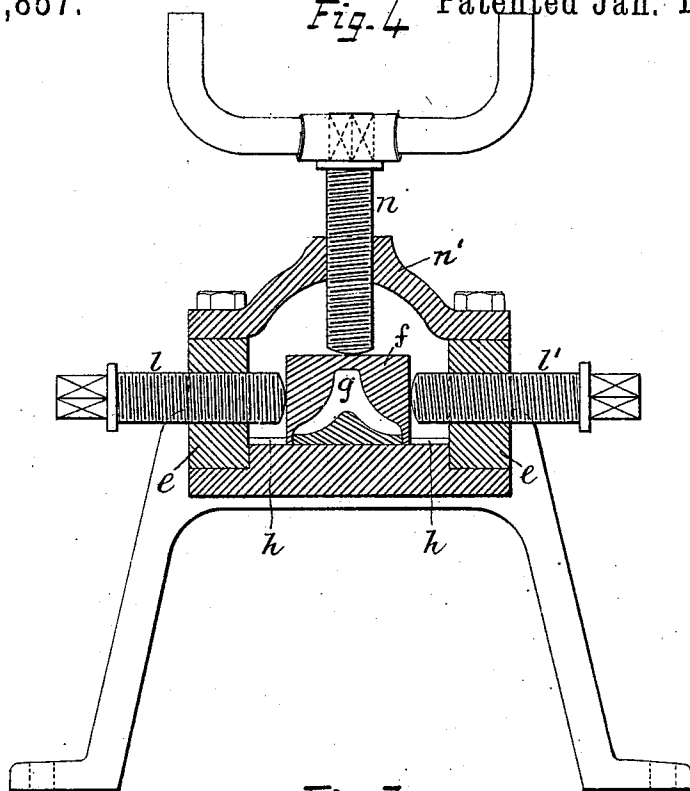
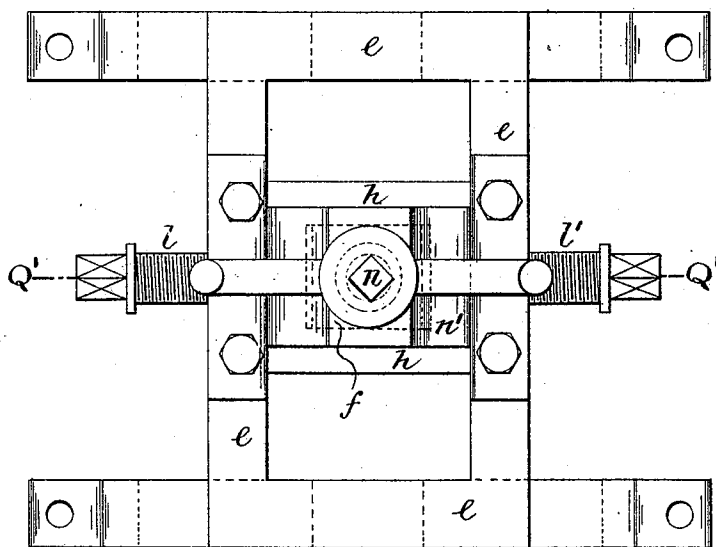


Fig. 3



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UNITED STATES PATENT OFFICE.

JONATHAN E. BILLUPS, OF CARDIFF, ENGLAND.

RAIL-BENDING PRESS.

SPECIFICATION forming part of Letters Patent No. 512,857, dated January 16, 1894.

Application filed May 9, 1893. Serial No. 473,631. (No model.) Patented in England December 1, 1890, No. 19,575; in Belgium September 7, 1891, No. 96,300; in Transvaal December 11, 1891, No. 306; in Cape Colony December 29, 1891, No. 728; in France March 11, 1892, No. 220,069, and in Argentine Republic June 10, 1892, No. 1,162,

To all whom it may concern:

Be it known that I, JONATHAN EDWIN BILLUPS, a subject of the Queen of Great Britain and Ireland, and a resident of Cardiff, in the county of Glamorgan, Wales, England, have invented certain new and useful Improvements in Rail-Bending Presses, (for which I have obtained patents in the following countries, viz: Great Britain, No. 19,575, bearing date December 1, 1890; France, No. 220,069, bearing date March 11, 1892; Belgium, No. 96,300, bearing date September 7, 1891; Cape Colony, No. 728, bearing date December 29, 1891; South African Republic, (Transvaal,) No. 306, bearing date December 11, 1891, and Argentine Republic, No. 1,162, bearing date June 10, 1892,) of which the following is a specification.

The object of my invention is the construction of an improved form of press for bending the "Barlow" and similar sections of rail. The "Barlow" rail requires no sleepers, forming in itself a continuous sleeper and rail combined and for this reason is particularly applicable for use in hot climates and for the construction of railways through wild and thinly populated country. Hitherto difficulty has been found in bending the "Barlow" rail without bulging and distortion, but by the use of my improved press such difficulty is overcome.

Referring to the drawings which form part of this specification, Figure 1 is a plan of my improved press for bending the "Barlow" and similar sections of rail. Fig. 2 is a sectional elevation through Q Q in Fig. 1. Fig. 3 is a plan of a modified form of my improved press, and Fig. 4 is a cross-section through Q' Q' in Fig. 3.

Similar letters of reference denote similar parts throughout the drawings.

In Figs. 1 and 2 *e* is a strong rectangular box or casing, having an aperture in each end of the same shape as the rail section.

f is a block, also provided with a similar aperture *g* and capable of sliding transversely between guides *h h* on the bottom of the box. It is prevented from rising by a stud *i* screwed into its under side passing through a slot *k* and provided with a washer and nut *j*. Two

powerful horizontal screws *l l'* pass through tapped holes in each side of the box *e* and bear against the ends of the block *f*.

The rail *A* being inserted in place in the apertures in the ends of the box *e* and the block *f*, any required amount of curvature may be given to it by slackening the screw *l* to act as a stop, and then screwing in the other screw *l'*, till the block *f* abuts against the stop screw. The screw *l'* is then slackened, the rail pushed a little farther through the press and the screw *l'* again tightened, this process being repeated till the whole of the rail, or as much of its length as may be necessary has been bent to the required curvature.

If the rail has to be bent in the opposite way to that shown in the drawings then the screw *l'* will act as the stop screw while the screw *l* becomes the bending screw. The use of the block *f* with its specially shaped aperture *g* and the specially shaped apertures in the ends of the box *e*, effectually prevents any bulging or distortion of the rail.

The block *f* as shown most clearly in Fig. 2, is preferably made in two pieces united by bolts for convenience of construction, but it may be formed in one piece, if desired.

The press may be fitted with wheels *m* to enable it to travel along the line or it can be arranged to bolt to a foundation, as shown in Figs. 3 and 4.

In Figs. 3 and 4 a box or casing *e*, block *f* and screws *l l'* are employed as before, but in place of the stud *i* with nut *j* for holding down the block *f*, a vertical screw *n* is provided, passing through a bridge piece *n'* and bearing on the top of the block with sufficient pressure to keep it down while permitting it to slide under the action of the screws *l l'*.

In place of forming the apertures to receive the rail in the box *e* directly in the substance of the box, such apertures may be made in removable blocks, so that by changing the said blocks and the block *f*, the same press may be employed to bend rails of various sizes and sections.

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

1. In combination, a sliding block *f* having

an aperture to receive the rail, the guides for the block, the means for adjusting the block, the stop and the box for inclosing and holding said block, the walls of which extend
5 about it and have bearings for the adjusting means and stop respectively, said box walls having also openings for the passage of the rail to be bent, substantially as described.

2. In a rail bending press, a box or casing
10 *e*, having apertures in the ends to receive the rail, and fitting its section, a central block *f* having a similar aperture *g* and sliding in guides *h h* transversely to the rail, held from
15 rising by a stud *i* with nut *j* passing through slot *k*, and actuated by horizontal screws *l l'*, one of said screws serving as a stop screw, according to the direction in which the rail is to be bent, substantially as described.

3. In a rail bending press, a box or casing
e, having apertures in the ends to receive the 20 rail and fitting its section, a central block *f*, having a similar aperture *g* and sliding in guides *h h* transversely to the rail, held from rising by a screw, and actuated by horizontal screws *l l'*, one of said screws serving as a 25 stop screw, according to the direction in which the rail is to be bent, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

J. E. BILLUPS.

Witnesses:

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