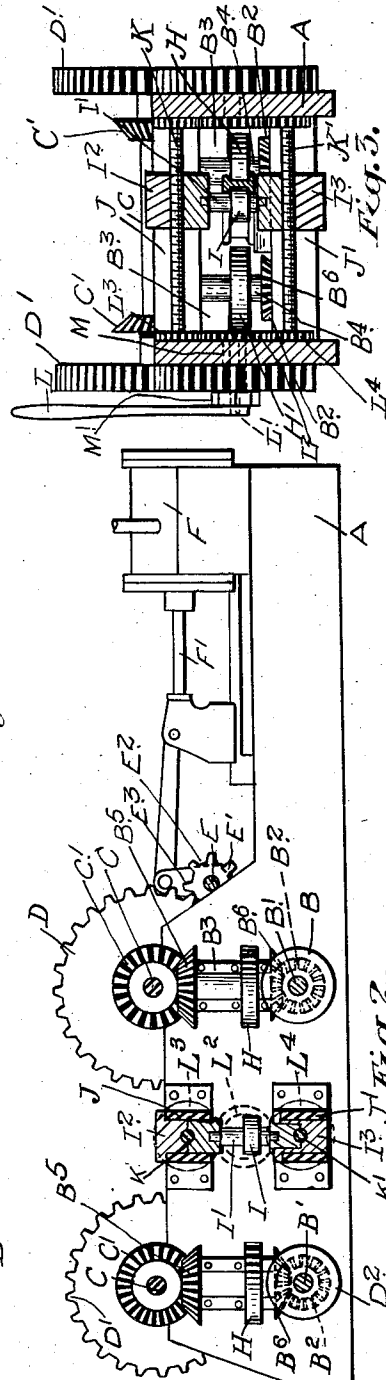


1,024,829.

[illegible]

Witnesses.
A. J. S. Young.
C. H. Chamberlain



Invercor.
J. H. Cassidy.
By
Geo. W. Fullerton

UNITED STATES PATENT OFFICE.

JOHN HUNTER CASSIDY, OF SAULT STE. MARIE, ONTARIO, CANADA.

RAIL-BENDING MACHINE.

1,024,829.

Specification of Letters Patent.

Patented Apr. 30, 1912.

Application filed July 14, 1911. Serial No. 638,468.

To all whom it may concern:

Be it known that I, JOHN HUNTER CASSIDY, of the town of Sault Ste. Marie, in the district of Algoma, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Rail-Bending Machines, of which the following is the specification.

My invention relates to improvements in rail bending machines and the object of the invention is to devise a simple form of machine which will bend a rail to any desired curve as it passes over the track laying machine to its place of deposit, and it consists essentially of a pair of vertically disposed rollers designed to bear against one side of the rail and an adjustable roller designed to be forced against the opposite side of the rail at a point between the aforesaid rollers so as to give the desired bend to the rail, and means for driving the rollers so as to gradually feed the rail through the machine as hereinafter more particularly explained by the following specification.

Figure 1, is a general perspective view of my machine. Fig. 2, is a longitudinal section. Fig. 3, is a cross section.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the main frame of the machine supported upon a suitable portion of the track laying machine (not shown).

B are rollers journaled on shafts B' and on which are mounted the gear pinions B².

B³ are journal brackets secured to the main frame A and B⁴ are vertical shafts journaled therein.

B⁵ are bevel gears secured to the top of the shaft B⁴.

B⁶ are bevel gears secured to the bottom of the shaft B⁴ and meshing with the bevel gear B⁵.

C are cross shafts upon which are mounted bevel gears C' meshing with the bevel gears B⁵.

D are gear wheels mounted on each end of the shaft C.

E is a supplemental shaft mounted in bearings E' and on which are mounted pinions E².

E³ are crank arms secured to the end of the shaft E.

F are suitably operated cylinders and pistons, the piston rods F' of which are connected to the cross heads F² connected by links F³ to the crank arms E³. By this

means when the pistons of the cylinder F are reciprocated they rotate the shaft E and through the pinions E² and gear D drive the shaft C and also the shaft B' by means of the bevel gears C', B⁵, B⁶ and B².

G are intermediate gears mounted upon suitable studs and serving to drive the gear wheels D' from the gear wheels D. The gear wheels D' drive a roller D² similar to the roller B and through a similar driving connection.

H are vertical rollers mounted upon the shaft B⁴ on one side of the machine and H' are vertical rollers mounted upon the shaft B⁴ on the opposite side of the machine.

I is an adjustable roller mounted upon a vertical shaft I' journaled in slide blocks I² and I³. The slide blocks I² and I³ are mounted upon cross guide-ways J and J'.

K and K' are threaded shafts extending through the blocks I² and I³ and operated in unison by means of the operating lever L mounted upon the stud L'.

M is a sleeve surrounding the stud L' to which is secured the ratchet M' and to the opposite end of which is secured the gear wheel L² meshing with the gears L³ and L⁴ on the shafts K and K' respectively. The lever L is also provided with a dog L⁴ engaging with the ratchet wheel M'.

It will thus be seen that by operating the lever L the threaded spindles K and K' may be rotated so as to adjust the blocks I² and I³ and the roller I supported thereby to any desired position against the side of the rail so as to force the rail into the required curve. The rail is then passed through the machine so as to curve the rail equally from end to end. Of course, it will be understood that if it is desired to give a right or left hand curve to the rail all that it is necessary to do is to either insert the rail between the adjustable roller I and the rollers H or the adjustable roller I and the rollers H' according to the direction of the desired curve.

What I claim as my invention is.

In a rail bending machine, the combination with the main frame connected immediately of its length by upper and lower cross projecting guide-ways, and a block held between each of the upper and lower projecting guide-ways, of a vertical spindle journaled between the said guiding blocks, a roller mounted thereon and designed to bear against one side of the rail, threaded

spindles journaled to the main frame and extending through the projecting guide-ways and threaded through the blocks, an operating ratchet and lever, suitable gears
5 connecting the ratchet and lever to said spindles so as to operate the threaded spindles in unison, a rail supporting roller journaled in the main frame to the front and rear of the aforesaid roller, suitably
10 journaled vertical spindles also located to

the front and rear of the aforesaid roller, and rollers journaled thereon designed to bear against the opposite side of the aforesaid rail, and means for driving the supporting roller and feeding roller in unison, 15 as and for the purpose specified.

JOHN HUNTER CASSIDY.

Witnesses:

V. McNAMARA,
ALEX MORISON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
