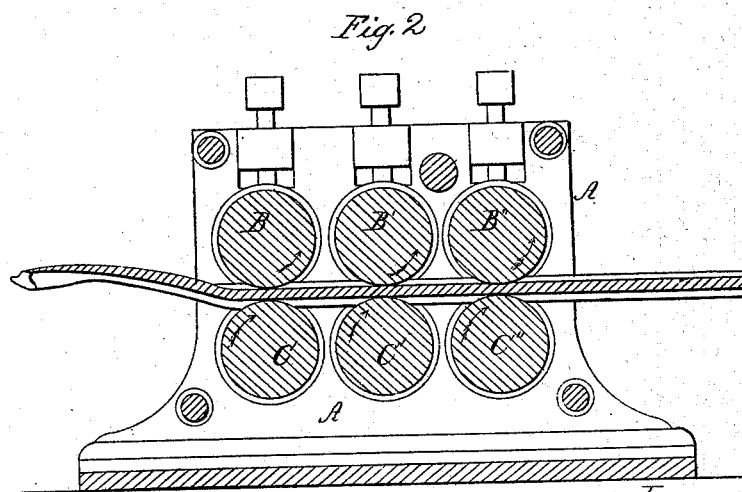
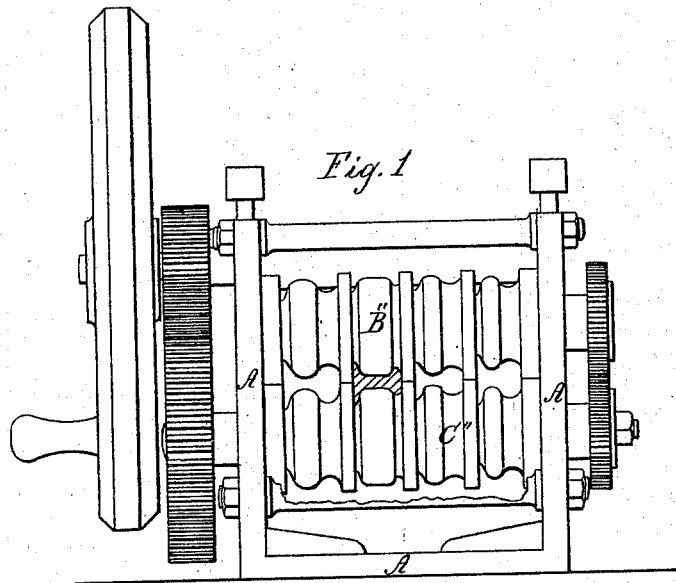


J. JOHNSTON.
STRAIGHTENING RAILS OF RAILROADS.

No. 47,208.

Patented Apr. 11, 1865.



Witnesses
W. Albert Steel,
W. Delaney.

Inventor
Henry Henson
Atty for J. Johnston
B

UNITED STATES PATENT OFFICE.

JOHN JOHNSTON, OF ALEXANDRIA, VIRGINIA.

STRAIGHTENING RAILS OF RAILROADS.

Specification forming part of Letters Patent No. 47,208, dated April 11, 1865.

To all whom it may concern:

Be it known that I, JOHN JOHNSTON, of Alexandria, Virginia, have invented a Machine for Straightening Rails; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention, consists in the use, for straightening rails, of three or more pairs of rollers having depressions and projections conforming to the shape of the rails, the rollers themselves, as well as the depressions and projections of the several pairs, being arranged in respect to each other as set forth hereinafter, so that after passing the crooked rails between the system of rollers they will be perfectly straight.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side view of my machine for straightening rails, and Fig. 2 a longitudinal section.

A is the frame of the machine, in which turn the journals of the three upper rollers, B, B', and B'', and those of the three lower rollers, C, C', and C'', these rollers being so geared together as to revolve in the direction pointed out by the arrows, Fig. 2. The rollers are so arranged that a line drawn through the centers of the upper series shall be exactly parallel with a line drawn through the center of the lower series, and so that the center of each of the upper rollers shall be in the same vertical line as the center of one of the lower rollers. All the rollers are made exactly alike, such depressions and projections being turned in each as will conform to the shape of the

rail to be straightened, the depressions and projections of one pair of rollers being in the same horizontal line with those of the other rollers.

Many plans have been resorted to for straightening rails, and much difficulty has been experienced in procuring proper apparatus for quickly straightening the rails of roads which have been damaged by raiding parties of the enemy—levers and wrenches, demanding the assistance of many men, having been hitherto used for the purpose.

It will be evident that however much a rail may be twisted it must, on being passed between the rollers described above, while in a heated state, become perfectly straight and out of twist.

When the rails are not bent to an excessive extent, there will be no necessity for heating them before they are subjected to the rollers.

I am aware that tubes and bars of iron have been heretofore straightened by passing them between ground rollers. I therefore limit my claim to, and desire to secure Letters Patent for—

The use, for straightening rails, of three or more pairs of rollers having depressions and projections conforming to the shape of the rails, the rollers themselves, as well as the said depressions and projections of the several pairs, being arranged in respect to each other, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN JOHNSTON.

Witnesses:

CHAS. E. FOSTER,
HENRY HOWSON.