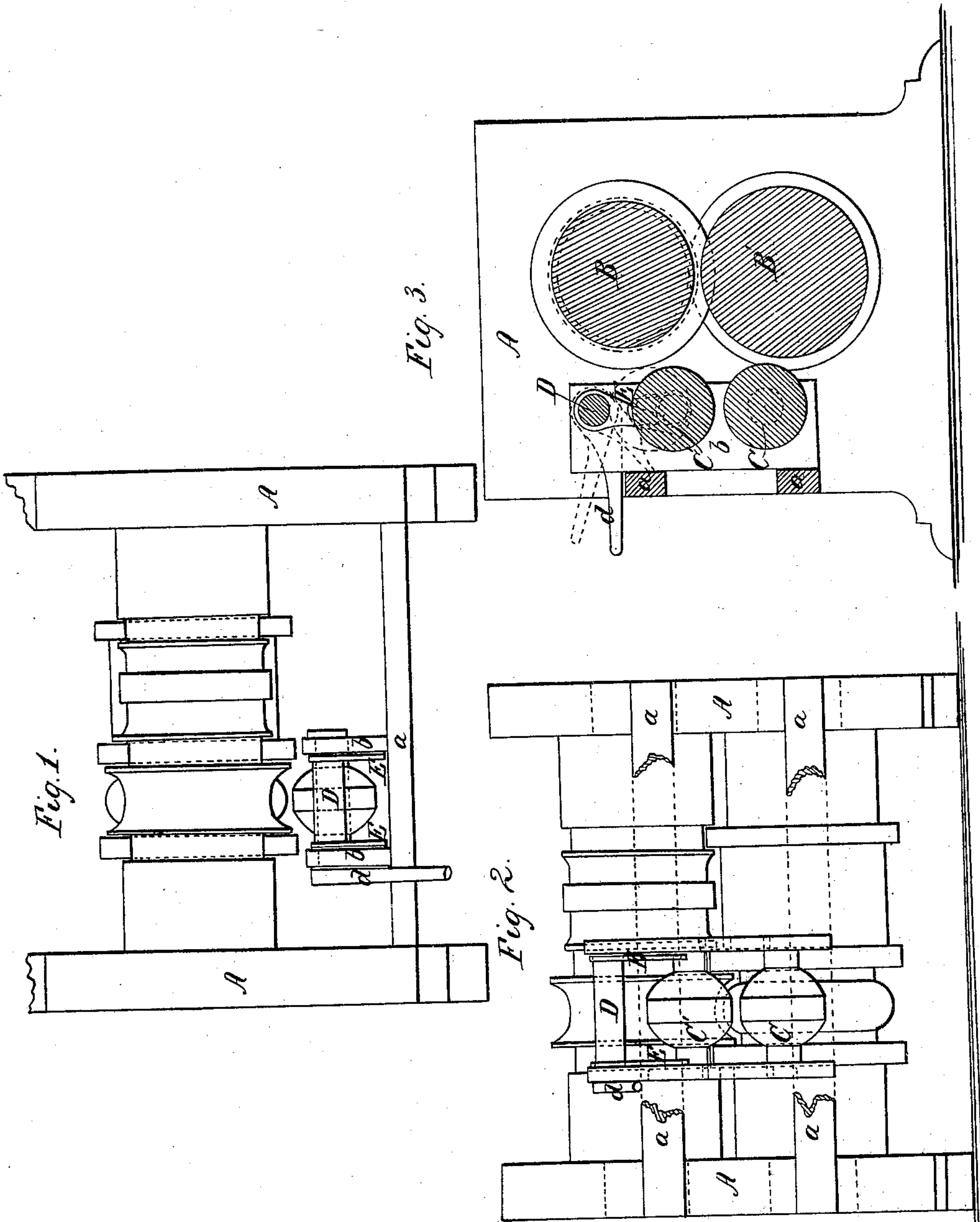


*D. Eymon.*

*Rolling Railroad Chains.*

*N<sup>o</sup> 99,868.*

*Patented Feb. 15, 1870.*



*Witnesses;*  
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# United States Patent Office.

DAVID EYNON, OF RICHMOND, VIRGINIA.

Letters Patent No. 99,868, dated February 15, 1870; antedated February 7, 1870.

## IMPROVED MACHINE FOR ROLLING RAILROAD-CHAIRS.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, DAVID EYNON, of Richmond, in the county of Henrico, and State of Virginia, have invented a new and useful Improvement in Rolling Apparatus for Rolling Chairs for Railroads; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 represents a plan view of the apparatus with my improvements attached.

Figure 2, a front elevation of the same.

Figure 3, a vertical transverse section of the same, in which the red outlines indicate the positions of the lever, stays, and upper additional straightening roller at the time when the bar of iron is nearly out of the large rollers.

My invention relates to an improvement in rolling apparatus for rolling chairs for railroads; and

It consists in hanging the upper straightening roller in such a manner that it may have a vertical bodily movement, and in providing means by which this roller may be held down to its work during a portion of the operation, as hereinafter more fully explained.

The following description will enable those skilled in the art to make and use my invention.

A A in the drawings represent the frame, in which are the bearings of the grooved rollers B and B'; its sides are connected by bars, *a a*, which have at the proper points the vertical flanges or standards *b* and *b'*, in which the journals of the additional straightening rollers work.

B and B' represent rollers to which motion is imparted in any well-known manner, and which have on their surfaces a series of grooves and elevations for shaping a heated bar of iron by passing it through them successively to a chair for railroads.

At a certain stage of the operation the bar is bent to a concavo-convex form, after which its base is again straightened by passing it through the large rollers and the additional straightening rollers C and C' at the same time.

C and C' represent the straightening rollers which are arranged in rear of the grooved rollers opposite the proper groove, and have their bearings in the flanges or standards *b b'*.

Heretofore these rollers had a revolving motion only, and from that fact were practically useless and had to be set aside. Then the iron would not flatten out properly in the flattening grooves, and many of the chairs would crack at base from end to end, involving much loss. To overcome this difficulty, I propose to hang the upper straightening roller C' in such

a manner that it may have also a vertical bodily movement, and slide up when the bar is nearly out of the large rollers, thus releasing it from all pressure. To this end, I place the journals of this roller C' in vertical slots in the standards *b b'*, in such a manner that when it is in its lowest position it is at the proper distance above the lower roller C which has a revolving motion only. The vertical slots in the standards are long enough to allow the necessary movement to the roller C'.

D represents a shaft which has its bearings in the standards *b b'* vertically above the straightening rollers; on one of its ends a hand-lever, *d*, is firmly secured to it by which it is turned.

E E represent braces which are firmly secured to the shaft D laying against the inner sides of the standards, and having the form shown in fig. 3 of the drawings. They are made of such length that their claw-shaped ends will lay on the upper surface of the journals of the roller C' in its lowest position, holding the latter firmly down when turned down by the hand-lever.

The operation is as follows:

The hand-lever being turned down, as indicated by the black outlines in fig. 3 of the drawings, brings the claw-shaped ends of the braces down on the journals of the upper straightening roller, holding it firmly down to its work until the heated bar of iron is nearly out of the large grooved rollers, when the hand-lever is thrown up, as indicated by the red outlines in the same figures, which removes the braces from the journals of the upper roller and allows it to slide up in the slots of the standards, thus releasing the bar from all pressure, when it may be taken out and again passed through the large grooved rollers until it is finished.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. In a machine for rolling railroad-chairs, constructed substantially as described, the combination of the forming rolls B B' with the straightening rolls C C' when one of the straightening rolls has a vertical bodily movement, as and for the purpose set forth.

2. In combination with the straightening rolls C C', the shaft D, braces E E, and lever *d*, as and for the purpose set forth.

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

DAVID EYNON.

Witnesses:

JOHN H. BAPTIST,  
LAWRENCE CUSHING.