

No. 629,413.

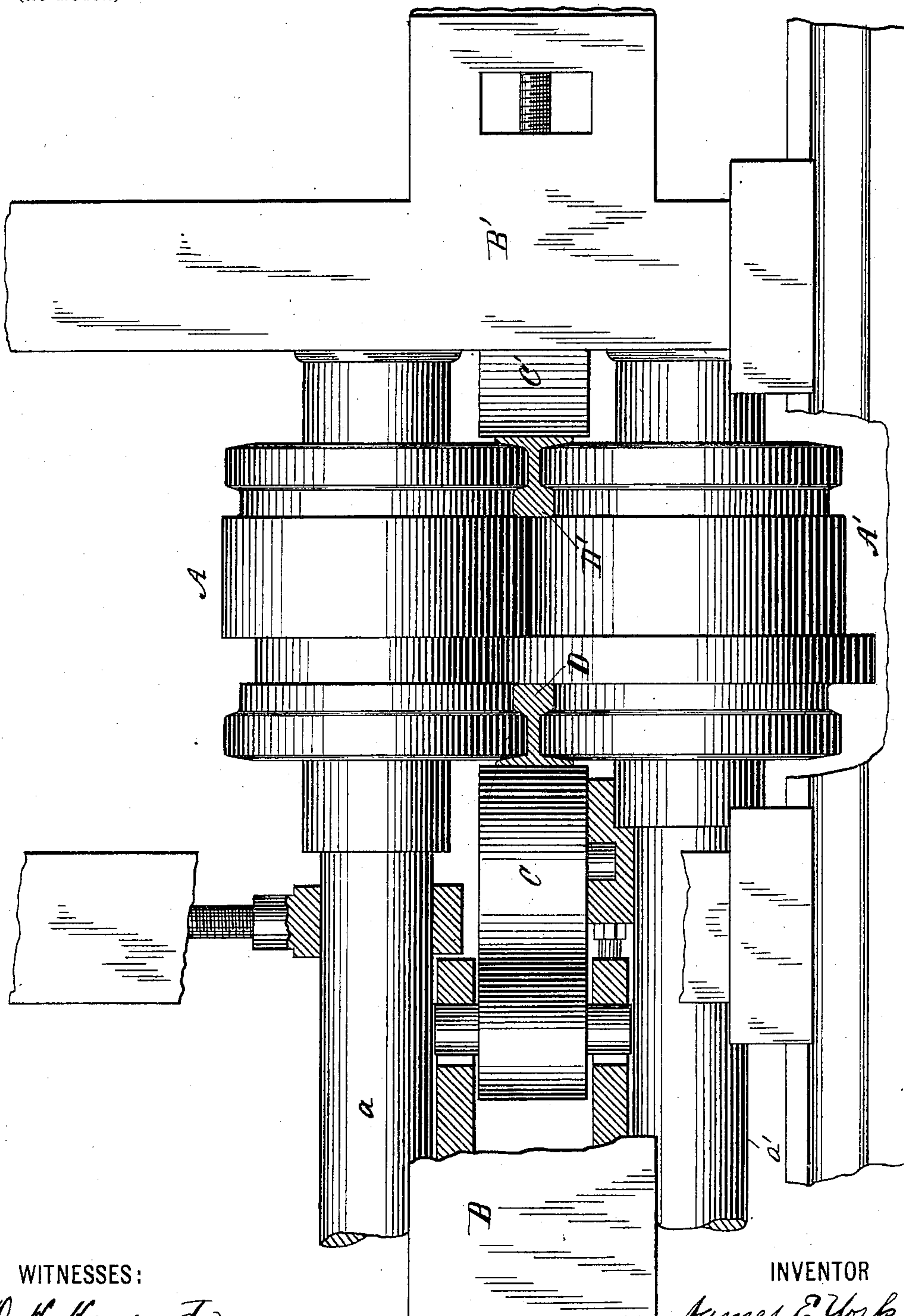
Patented July 25, 1899.

J. E. YORK.

METHOD OF REROLLING RAILS.

(Application filed Mar. 6, 1897.)

(No Model.)



WITNESSES:

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JAMES E. YORK, OF DULUTH, MINNESOTA.

METHOD OF REROLLING RAILS.

SPECIFICATION forming part of Letters Patent No. 629,413, dated July 25, 1899.

Application filed March 6, 1897. Serial No. 626,225. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES E. YORK, of Duluth, in the county of St. Louis and State of Minnesota, have invented a certain new and
5 useful Improvement in Methods of Rerolling Rails, of which the following is a specification.

The present invention relates to a method of rerolling rails, whereby a railroad-rail of any shape is rerolled and reduced in the head
10 and web portion to a desired standard section without narrowing the flange.

Heretofore it has been customary in the rerolling of rails to subject all portions of the rail alike to a reducing operation, which necessarily reduces the width of the flange. It
15 is very undesirable in practice to reduce the width of the flange, for the reason that thereby the stability of the rail is impaired. In order, however, to reroll a rail from a larger cross-sectional area to a smaller cross-sectional
20 area, it is necessary that the rolling and lengthening of the section should be proportionate to the cubic contents of the section operated upon, so that it will come out of the
25 roll-passes straight.

In the drawing I have shown part of an apparatus designed to effect the object of the present invention.

Referring to said drawing, A A' represent
30 upper and lower horizontal rolls, respectively, adjustably mounted on shafts *aa'*. Journaled in the housings B B' are vertical rolls C C', which are also adjustably mounted. The rolls A and A' are provided, in connection
35 with the two vertical rolls, with two passes D and D', the pass D being a closed pass, so far as the parts operating upon the head and

web are concerned, and the pass D' an open pass—that is, one in which half of the section of the head and web is formed in each of the
40 rolls.

The operation is as follows: A worn rail is subjected to the heat of a suitable furnace until a proper temperature is arrived at, which, preferably, is about a red heat, when
45 it is passed between the rolls through the first pass D, the vertical roll exerting its rolling action upon the base of the flange without any action tending to narrow the flange. The rail is then run through the pass D', where
50 the finishing process takes place, the action in this pass being similar to that in the action of pass D. By this means it will be seen that the head and web portion of the rail are subjected to a reducing action in all directions,
55 while the flange is only subjected to an action which thins it down without any reduction in its width. By this means is produced a rail which conforms to some standard section smaller than its original size, but having a
60 flange of substantially its original width.

What is claimed as new is—

The process of rerolling rails, which consists in subjecting the same to the action of
65 heat, then reducing the section in all directions, except laterally across the flange, substantially as specified.

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

JAMES E. YORK.

Witnesses:

ERNEST HOPKINSON,
ANTHONY GREF.