

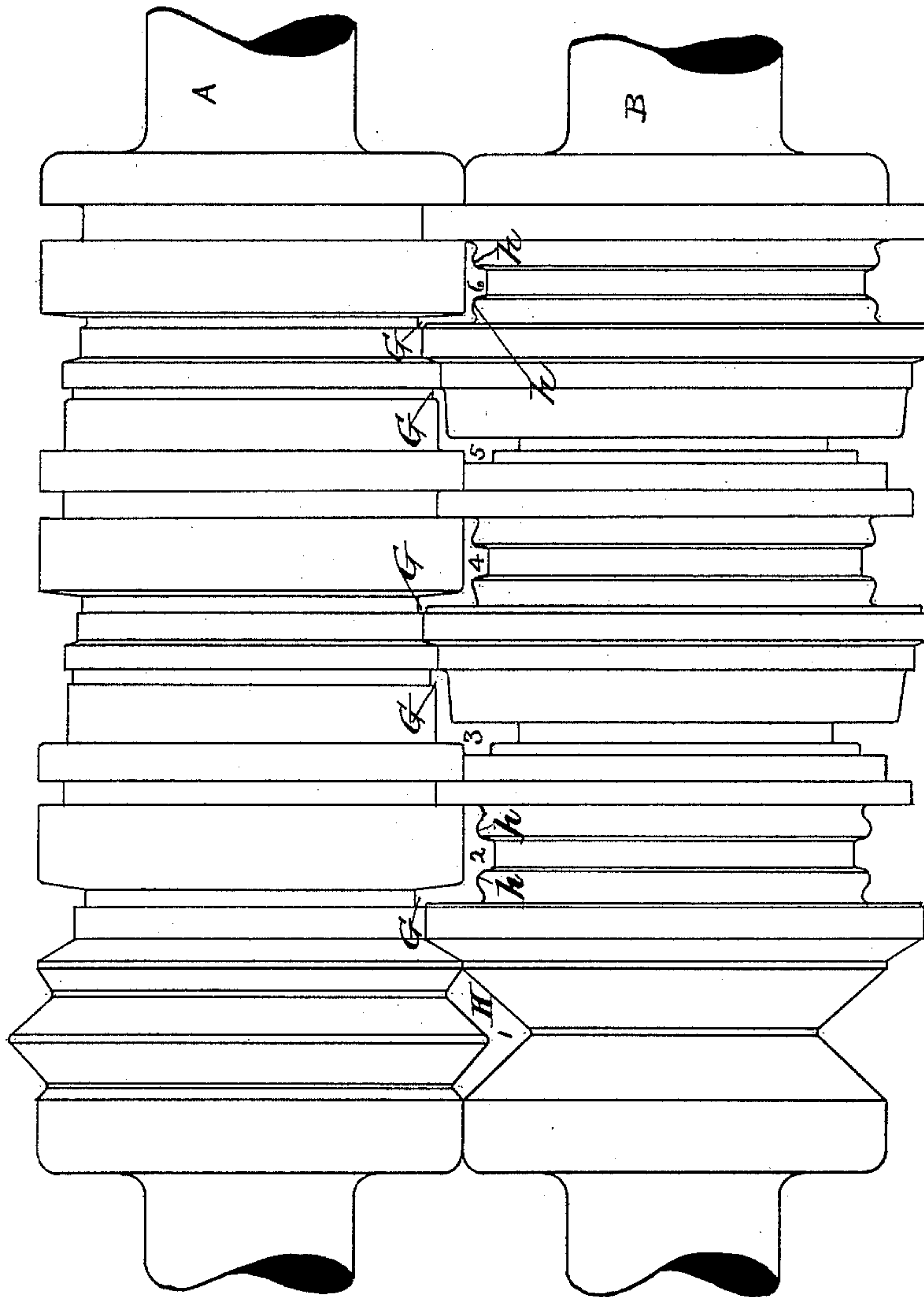
(No Model.)

E. SIMPSON.

MILL FOR ROLLING SIDE FLANGED CENTER BEARING RAILS.

No. 394,024.

Patented Dec. 4, 1888.



Witnesses:
H. C. Evans.
Francis P. Reilly.

Inventor.
Edward Simpson.
By R. H. Voorhees.
Atty.

UNITED STATES PATENT OFFICE.

EDWARD SIMPSON, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
JOHNSON STEEL STREET RAIL COMPANY, OF KENTUCKY.

MILL FOR ROLLING SIDE-FLANGED CENTER-BEARING RAILS.

SPECIFICATION forming part of Letters Patent No. 394,024, dated December 4, 1888.

Application filed February 15, 1888. Serial No. 264,139. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SIMPSON, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented new and
5 useful Rolls for Rolling Side-Flanged Center-Bearing Rails, which invention is fully set forth and illustrated in the following specification and accompanying drawing.

The object of this invention is to provide a
10 set of rolls for facilitating the rolling of side-flanged center-bearing rails having a cross-section, indicated by the last or final pass shown in the accompanying drawing.

The invention will first be described in detail, and then particularly set forth in the
15 claims.

In the accompanying drawing the figure shows in front elevation a pair of rolls, the letter A indicating the top roll and B the
20 bottom roll. Said rolls are provided with six passes, numbered accordingly 1 2 3 4 5 6.

The bloom having been first reduced to any shape of cross-section suitable to enter pass 1, is then entered therein, and, having been
25 rolled through the same, is next successively rolled in each of the following passes, being finished in the last pass, 6.

It will be observed that in the oblique pass 1 excessive draft is put upon the side H. That in passes 2, 4, and 6, which are right-
30 angled passes, the distinctive function is the formation of the side grooves, *h h*, said side grooves not being acted upon directly in passes 3 and 5, which are also right-angled
35 passes. The piece of metal is alternately

quarter-turned from passes 2 to 6, inclusive. In all the passes from 2 to 6, inclusive, the action of the rolls is direct in the formation of the side lugs, G. The rail is delivered from the finishing-pass 6 in a reversed position. 40

The rolls may be mounted in any suitable housings of well-known construction.

I do not limit myself to the exact number or disposition of passes shown, as the number of passes and their distribution into roughing 45 or reducing and finishing passes is to a certain extent arbitrary, being influenced by the length and diameter of the rolls, a light train of rolls calling for more passes with lighter draft than a heavy roll-train. It is also evi- 50 dent that the rolls can, if desired, be made three-high instead of two-high, as shown.

Having thus fully described my said improvement as of my invention, I claim—

1. A set of rolls for rolling side-flanged center-bearing rails provided with passes, substantially as hereinbefore described, having the conformations indicated in the accompanying drawing by the numbers from 1 to 6, inclusive, substantially as and for the pur- 55 poses set forth. 60

2. A set of rolls for rolling side-flanged center-bearing rails provided with right-angled passes, of which the alternate passes have direct grooving action upon the rail, substantially as set forth. 65

EDWARD SIMPSON.

Witnesses:

A. MONTGOMERY,
F. P. BOWMAN.