

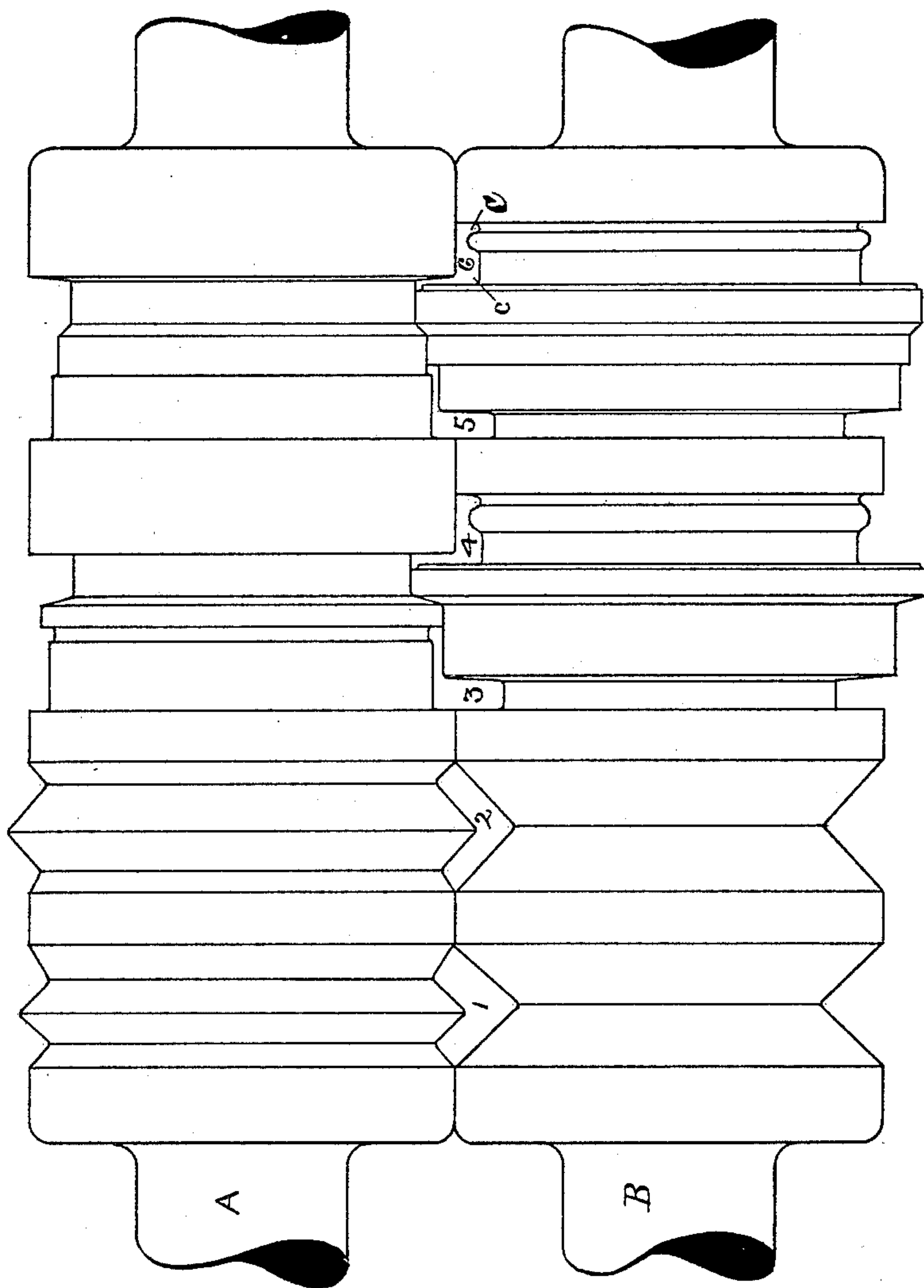
(No Model.)

E. SIMPSON.

MILL FOR ROLLING SIDE FLANGED GROOVED RAILS.

No. 394,022.

Patented Dec. 4, 1888.



Witnesses:

H. C. Evans,
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UNITED STATES PATENT OFFICE.

EDWARD SIMPSON, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
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MILL FOR ROLLING SIDE-FLANGED GROOVED RAILS.

SPECIFICATION forming part of Letters Patent No. 394,022, dated December 4, 1888.

Application filed February 15, 1888. Serial No. 264,137. (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
5 and useful Rolls for Rolling Side-Flanged Grooved Rails, which invention is freely set forth and illustrated in the following specification and accompanying drawing.

The object of this invention is to provide
10 a set of rolls for facilitating the rolling of side-flanged grooved 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,
15 and then particularly set forth in the claim.

In the accompanying drawing the figure shows in front elevation a pair of rolls, the letter A indicating the top roll and B the bottom roll. Said rolls are provided with six
20 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 No. 1, is then entered therein, and, having
25 been rolled through the same, is next successively rolled in each of the following passes, being finished in the last or final pass, No. 6.

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

30 It will be noted that the projection C, which forms the groove in the finished rail, is of smaller proportions than the guard shown in the finished section shown in my application Serial No. 264,136, herewith filed, and that,

moreover, it is level, or nearly so, with the head *c* of said finished section, necessitating a modification of passes, as shown, between the two applications. For it will be seen that in passes Nos. 1 and 2 there is no offset provided for the initial formation of the guard,
40 both groove and guard being formed entirely in passes Nos. 4 and 6. Thus, whereas four passes are required to form the groove and super-elevated guard in said application Serial No. 264,136, but two passes only form the
45 groove in this application.

I do not limit myself to the exact number or disposition of passes shown, as the number of passes and their distribution into roughing or reducing and finishing passes is to a certain extent arbitrary, being influenced by the
50 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 evident that the rolls can, if desired, be made
55 three-high instead of two-high, as shown.

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

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

EDWARD SIMPSON.

Witnesses:

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