

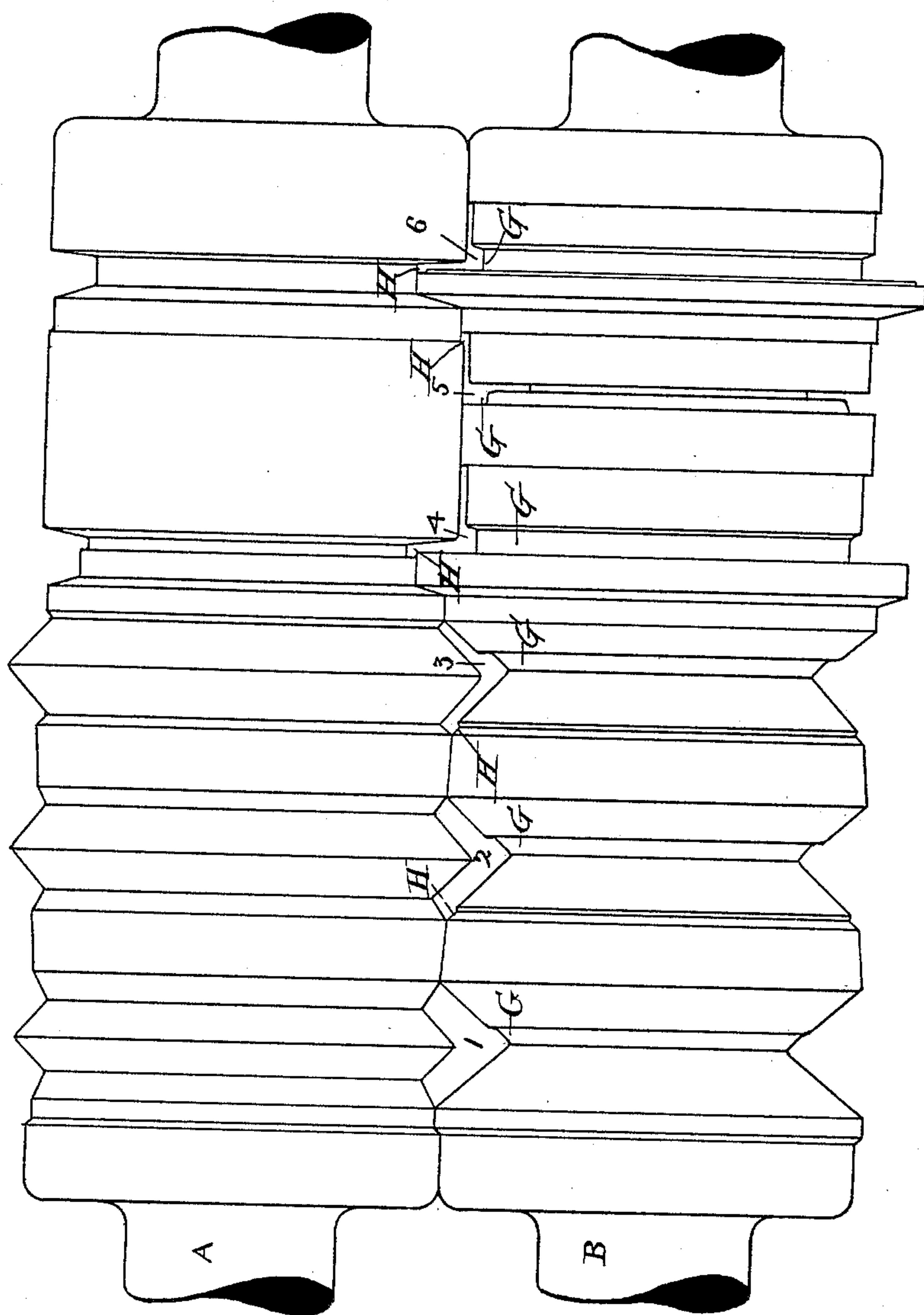
(No Model.)

E. SIMPSON.

MILL FOR ROLLING SIDE WEBBED GIRDER RAILS.

No. 394,023.

Patented Dec. 4, 1888.



Witnesses:
H. C. Evans,
Francis P. Kelly,

Inventor:
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Atty.

UNITED STATES PATENT OFFICE.

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

MILL FOR ROLLING SIDE-WEBBED GIRDER-RAILS.

SPECIFICATION forming part of Letters Patent No. 394,023, dated December 4, 1888.

Application filed February 15, 1888. Serial No. 264,138. (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 useful Rolls for Rolling Side-Webbed Girder-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 set of rolls for facilitating the rolling of side-webbed girder-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 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 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 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.

It will be observed that in passes Nos. 1, 2, and 3 the formation of the head portion G is commenced by oblique action on one of the angular sides of the respective passes, whereas in passes Nos. 4, 5, and 6 the formation of this head portion is finished by vertical action. In passes Nos. 2 and 3 the formation of the side lug, H, is commenced by similar roll ac-

tion to that which forms the head portion, and, as also in the case of the head, the formation of this lug portion H in passes Nos. 4, 5, and 6 is finished and perfected by direct vertical action of the rolls.

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 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 evident that the rolls can, if desired, be made three-high instead of two-high, as shown.

I do not limit myself to the exact number of oblique or vertical passes. The oblique passes give the most rapid reduction, the vertical passes the most perfect finish. While the relative numbers of the oblique and vertical passes shown are considered the best, it would be possible to change the relative numbers of each to secure the desired result.

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

The combination of rapidly-reducing oblique passes with the truing-up right-angled passes, as shown, from figures 1 to 6, inclusive, substantially as set forth.

EDWARD SIMPSON.

Witnesses:

F. P. BOWMAN,
A. MONTGOMERY.