(No Model.)

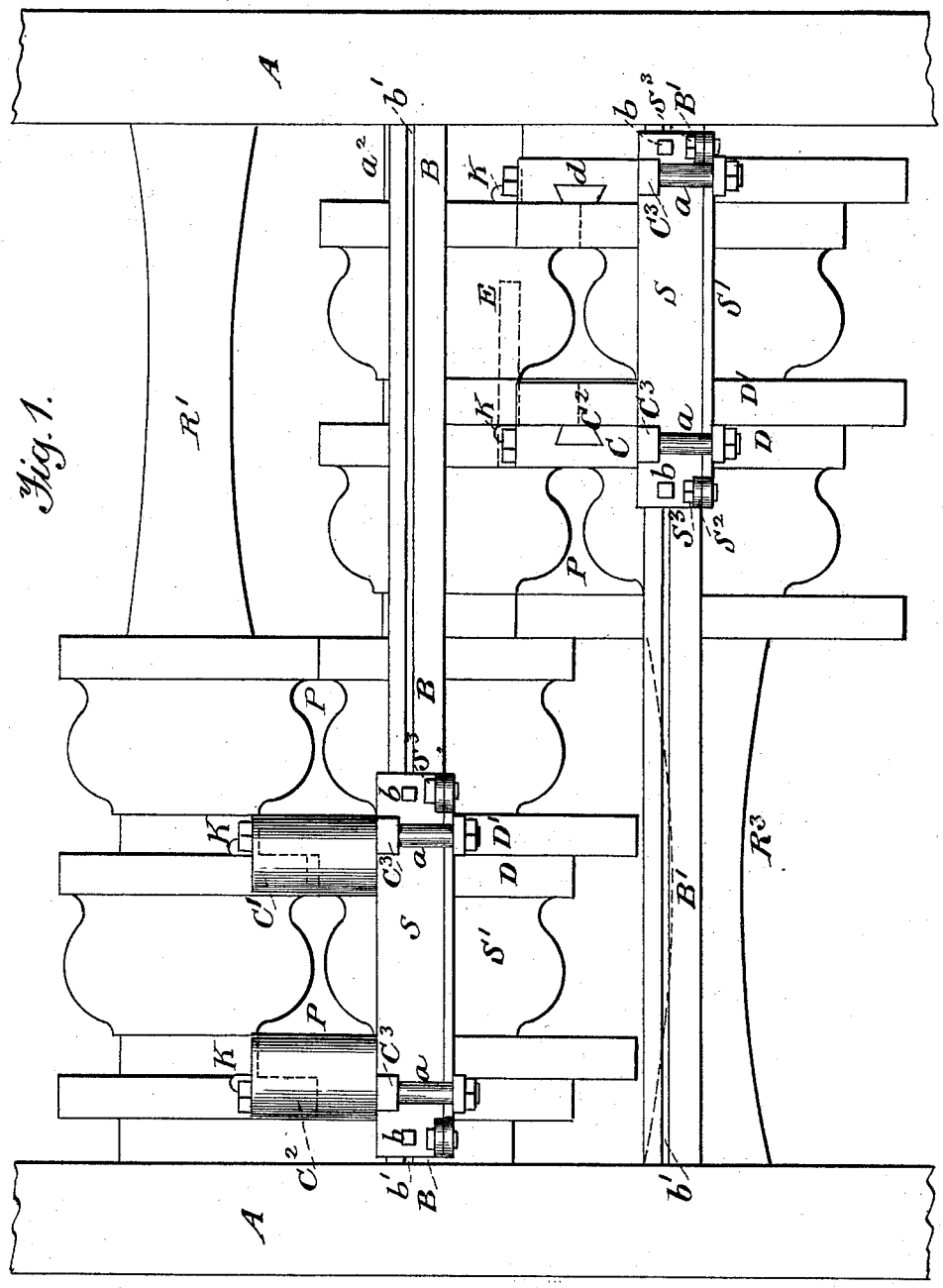
2 Sheets—Sheet 1.

J. W. WALSH.

ROLLING MILL GUIDE.

No. 385,434. Patented July 3, 1888.

Fig. 1.



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Inventor.
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

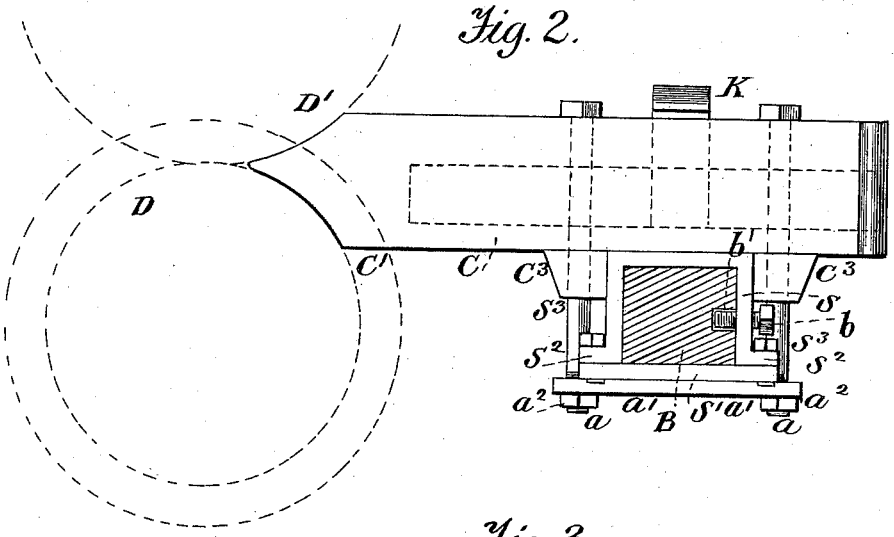

Fig. 3.

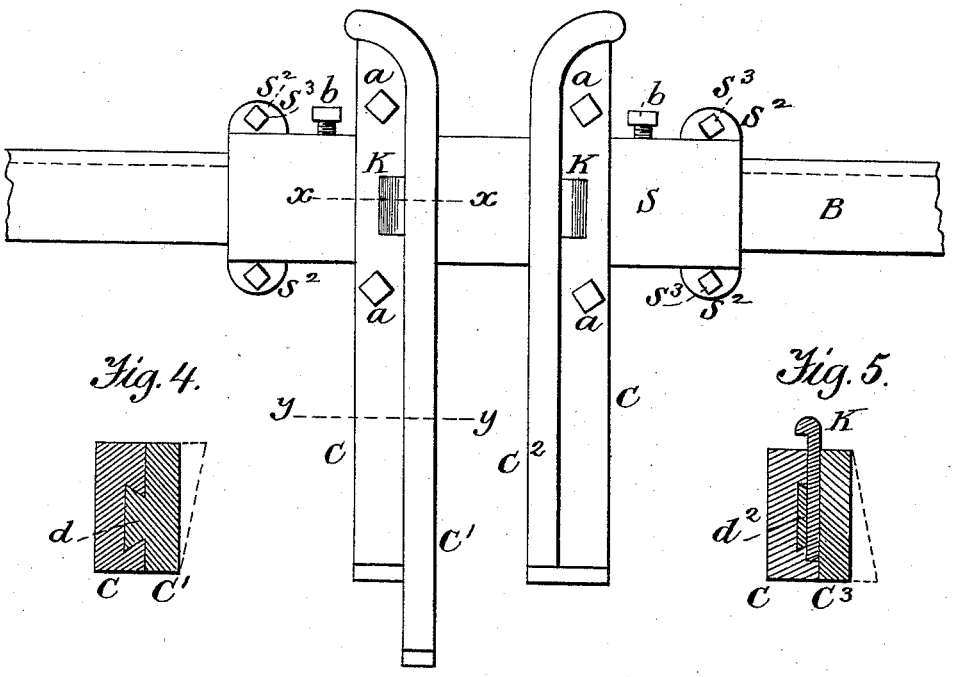

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN W. WALSH, OF TROY, NEW YORK, ASSIGNOR TO MARY ELIZABETH WALSH, OF SAME PLACE.

ROLLING-MILL GUIDE.

SPECIFICATION forming part of Letters Patent No. 385,434, dated July 3, 1888.

Application filed November 18, 1887. Serial No. 255,534. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. WALSH, a resident of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Rolling-Mill Guides; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in rolling-mill guides; and it consists of the novel construction and combination of parts hereinafter described, and pointed out in the claims.

The objects of the invention are pointed out in connection with the following description of my preferred mechanism, in which—

Figure 1 of the drawings is a front elevation of a portion of a rail-rolling mill showing my improved device in position to guide the rails. Fig. 2 is a side view of my improved device, the relative position of the rolls being indicated by the broken curved lines. Fig. 3 is a top plan view of the parts shown in Fig. 2. Fig. 4 is a cross-sectional view of one of the sides of the guides, taken at broken line Y Y in Fig. 3. Fig. 5 is a view similar to that shown in Fig. 4, taken at the broken line X X in Fig. 3.

A A are the housings, and $R' R^2 R^3$ are respectively the upper, middle, and lower rolls of a "three-high mill." The crane-bars B B', supported at each end by the housings, support the guides which form the subject of my invention, and serve to guide the rails, plates, bars, or other product of the finishing-rolls of a rolling-mill on their way to and from the passes P between the rolls.

As heretofore constructed, the sides forming the guides have been separately bolted to their supporting-bar, called "crane-bar," and whenever it was desired to change the guides from one pass to another much time was necessarily consumed in loosening, adjusting, and securing the guides upon the crane-bar.

I make use of a sleeve, S, preferably opened on one side, movable longitudinally on the crane-bar, and secured thereon by means of the plate S', covering the open side and secured to the ears S^2, projecting from the sleeve, by means of screws or rivets S^3.

The sides C of the guide are provided on their lower side with the guide-lugs C^3, located to receive the sleeve between them, as shown in Fig. 2, and with apertures passing down through the lugs adapted to receive the bolts *a*, by means of which and the clip *a'* and nuts a^2 the sides are firmly secured to the movable sleeve. The sleeve is provided with one or more set-screws, *b*, adapted to fit and travel longitudinally of the slot *b'* in the bar when the sleeve is moved, and to hold the sleeve in any desired position upon the bar.

To change the sides from one pass to another, it is only necessary to loosen the set-screws, slide the sleeve to the desired position, and tighten the screws. As the adjustment of the two sides relatively to each other and angularly to the crane-bar is not disturbed, very little time or skill is required to properly make the change. I also provide a detachable face-plate, C' and C^2, for the sides, which can be slid to and from the pass, and quickly withdrawn and another substituted in its place, when desired. The plate and sides have a dovetail tongue and groove, *d*, (shown in Figs. 4 and 5,) which secures them together, and the plate is prevented from sliding when adjusted upon the side by means of a key, K, adapted to be inserted in a slot in the tongue when registering with a similar slot in the flanges forming the groove.

I have shown the face plate C' longer than the plate C^2, which adapts the guide to a train of rolls having passes for railway-rails, and grooves and collars on the rolls, substantially as shown in Fig. 1, wherein the collar D adjacent to the pass is smaller in diameter than the collar D', which requires the face-plate on that side of the pass to project farther in between the rolls, as indicated partly by dotted lines in Fig. 2.

In transferring guides whose sides have the face-plate adjustable, as I have described, from one pass to another past a projecting collar it is only necessary to withdraw the key and slide the plate back flush with the side, where-

upon both can be easily moved with the sleeve past the projecting collar D' to the desired pass.

It sometimes happens that the rails are twisted or bent a little as they emerge from the passes, and it was customary heretofore to loosen up the sides, one or both, and put wedges or props under one edge to cause them to incline in the proper direction to true up the rail.

I am able to easily and quickly provide for such emergencies by having face-plates of different forms, whereby one of the proper form to accomplish the desired result can be quickly and securely substituted.

I have indicated by dotted lines in Fig. 4 a plate beveled so as to be thinner on the lower edge, and in Fig. 5 so as to be thinner on the upper edge.

By substituting the proper plate the rail can be diverted to the proper course.

By having the face-plate detachable I am able to substitute thicker or thinner face-plates, thus accommodating the guide to passes of different widths without disturbing the adjustment of the sides upon their supporting-sleeve.

One of the sides may have a flange, E, projecting laterally over the course of the rail, as shown by dotted lines in Fig. 1, to prevent the rails from leaving the guide.

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

1. A guide for rolling-mills, consisting of two sides bolted to a common sleeve adjustable longitudinally upon the crane-bar, substantially as described, and for the purposes set forth.

2. In a guide for rolling-mills, the combination, with a side plate, of a face-plate secured to the side plate and adjustable longitudinally thereon, substantially as described, and for the purposes set forth.

3. In a guide for rolling-mills, the combination, with a side plate, of a face-plate connected therewith by tongue and groove extending longitudinally of the plates, and a key fitting a vertical slot in said tongue and groove, substantially as described, and for the purposes set forth.

4. In a guide for rolling-mills, the combination, with a side plate, of a detachable face-plate beveled to present an inclined face, substantially as described, and for the purposes set forth.

In testimony whereof I have hereunto set my hand this 14th day of November, 1887.

JOHN W. WALSH.

Witnesses:
GEO. A. MOSHER,
CHAS. L. ALDEN.