

EDWARD THOMAS.

Improvement in Metal Rolling Mills.

No. 123,746.

Patented Feb. 13, 1872.

Fig. 1.

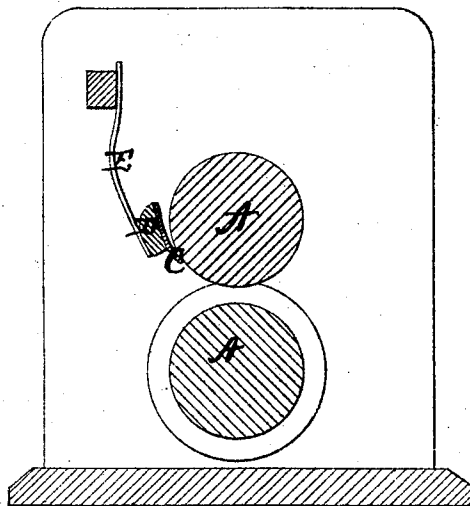
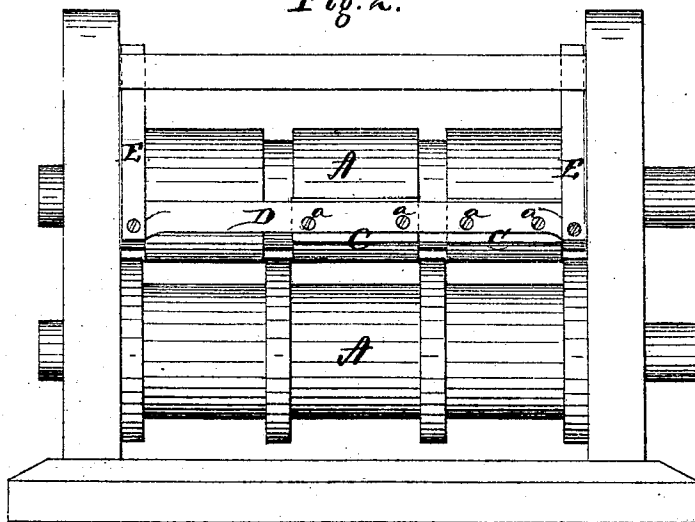


Fig. 2.



Witnesses:

C. L. Ewert.
J. L. Curand

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per Alexander Murray
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UNITED STATES PATENT OFFICE.

EDWARD THOMAS, OF NEWCASTLE, PENNSYLVANIA.

IMPROVEMENT IN METAL-ROLLING MILLS.

Specification forming part of Letters Patent No. 123,746, dated February 13, 1872.

To all whom it may concern:

Be it known that I, EDWARD THOMAS, of Newcastle, in the county of Lawrence and in the State of Pennsylvania, have invented certain new and useful Improvements in Scraper for Roughing-Rolls; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

Great difficulties have been heretofore experienced in drawing the scale from the rolls for rolling sheet and plate metal, so that the sheet and plate metal which passes through the roughing-rolls may be kept clean, and when it reaches the finishing-roll it is devoid of scale. Heretofore various attempts have been made to accomplish the above results. Usually the devices employed have been adapted to be used with the finishing-rolls. It is well known that the sheet or plate metal for making nails, &c., is first passed through the roughing-rolls at a white heat, and from thence through the finishing-rolls at about a cherry heat. Should scales be upon the roughing-rolls as the metal plate passes through the mill, they will be embedded into the plate and tenaciously adhere to such an extent that the finishing-rolls will not remove them, so that the plate, when thus finished, will be imperfect, and cannot be made to produce a good surface, or, when made into nails or other articles, will not only injure the machinery, but produce inferior quality of article. My invention is intended to obviate these difficulties; and consists in the arrangement of a scraper in contact with the roughing-rolls, for rolling sheet and plate metal, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a transverse vertical section, and Fig. 2 a side view of a pair of roughing-rolls with my scraper attached.

A A represent a pair of roughing-rolls for nail-plate, boiler-plate, or any other kind of sheet and plate metal. C C represent the scrapers, which may be made of wrought-iron, steel, soft or chilled cast-iron, and are attached to a bar, D, either stationary or adjustable, by means of screws *a a*, as shown in Fig. 2. The bar D is held by means of springs E E, so as to bring the scrapers against the rolls; or the same may be accomplished by a lever or other suitable means.

The application of the scrapers will effectually remove the scale or slag from the rolls, whereby the appearance of the metal is greatly improved, and a better article may be produced therefrom.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement, with a pair of roughing-rolls for sheet and plate metal, of one or more scrapers, C, held in contact with the surfaces of the rolls by a spring or lever, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of August, 1871.

EDWARD THOMAS.

Witnesses:

GEO. W. MILTON,
A. B. PATTON.