

(No Model.)

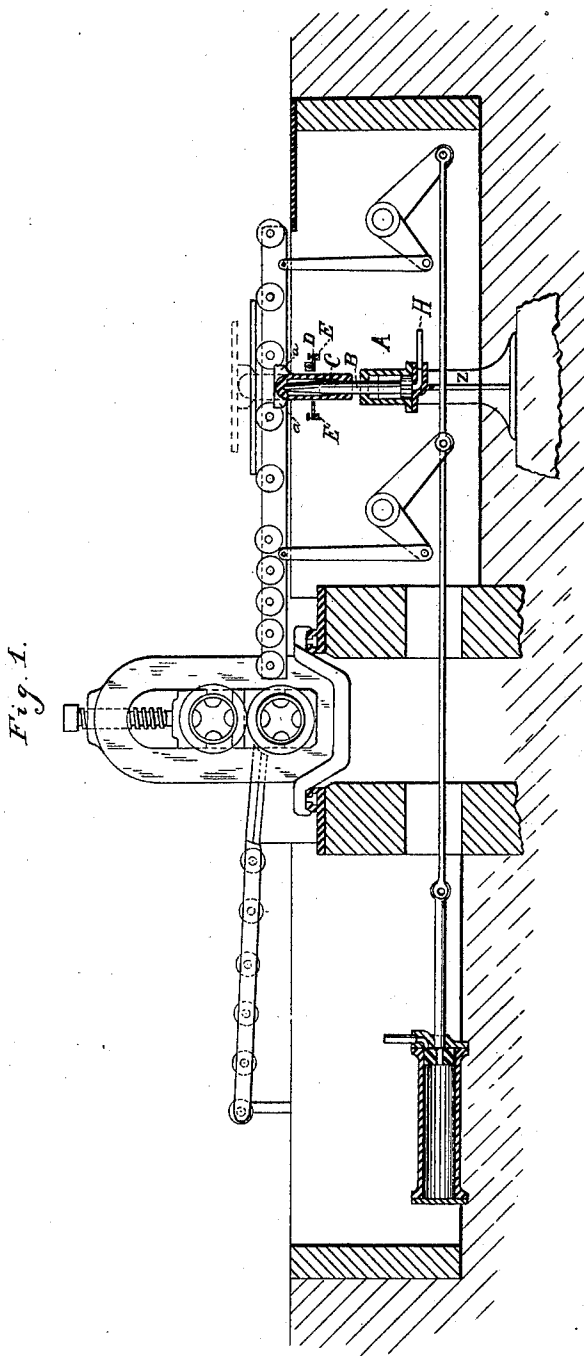
2 Sheets—Sheet 1.

S. T. WELLMAN.

ROLLING MILL.

No. 277,815.

Patented May 15, 1883.



WITNESSES

C. H. Davis

W. Engel

Samuel T. Wellman INVENTOR

By Leggett & Leggett ATTORNEYS

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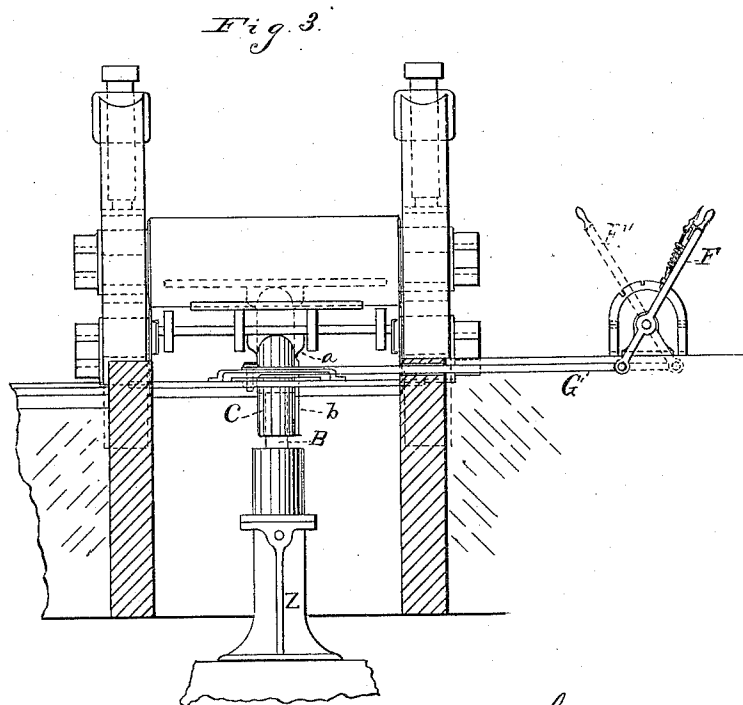
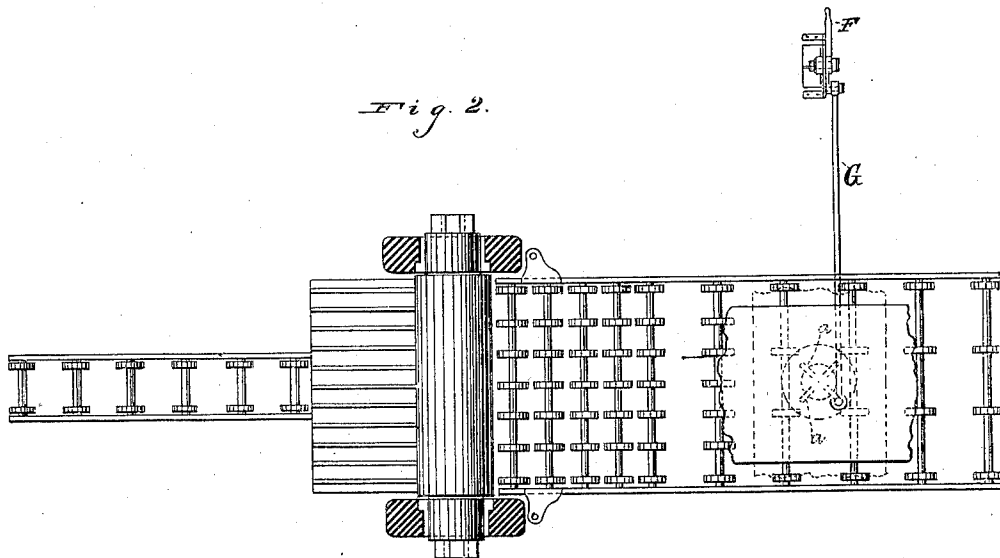
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C. H. Dorer.

C. A. Frye.

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By Leggett & Leggett ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL T. WELLMAN, OF CLEVELAND, OHIO.

ROLLING-MILL.

SPECIFICATION forming part of Letters Patent No. 277,815, dated May 15, 1883.

Application filed June 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. WELLMAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mills for Rolling Plate Metal; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in mills for rolling plate metal; and it consists, principally, in a suitable mechanical apparatus whereby the plate, after it has been rolled out to a length that will make the required width, can be given a quarter-turn, for the purposes hereinafter specified.

I do not limit myself to any exact form or construction of this plate-turning mechanism; but I shall describe a form of mechanism which I have found practically effective.

In rolling large plates, after the piece has been rolled out to a length that will make the required width of plate, it must be turned one-quarter of a circle upon its table. This heretofore has been accomplished by means of hooks, tongs, and the like in the hands of several men, and the heavier the plate the greater has been the number of assistants required in handling it.

I have designed my invention for the purpose of saving by far the greater portion of this costly labor and process, and at the same time to do the work more quickly and easily.

In the drawings, Figure 1 is a view in side elevation of one embodiment of my invention. Fig. 2 is a plan view of the device shown in Fig. 1. Fig. 3 is a view in end elevation of said device.

A, Figs. 1 and 3, is a steam or hydraulic cylinder supported beneath the table by the stand Z. B is its piston, resting and pivoted upon the top of which is the casting or sleeve C, which, in the present device, is provided with four wings, *a a*. (See Fig. 2.)

Upon one side of the sleeve C is formed a spline or feather, *b*. This sleeve fits loosely in the plate D, so that it may rise and fall without moving said plate up or down. The plate D rests upon bars E, which reach across the pit; and said plate is constructed to be rotated

in ninety degrees of a circle by means of a lever, F, which is connected to the plate by the rod G.

The operation of my device as thus far specified is as follows: The plate, when it is rolled out the required length is run upon the table until it comes over the cylinder A, the center of the plate being as nearly as possible over the center of the cylinder. The plate is moved by revolving rollers in the table through any suitable mechanism. The machinery for doing this is not shown in the drawings and forms no part of my present invention, and it may therefore be of any desired kind. When the plate has reached the proper position on the table, force (water, steam, or other agent) is applied to the cylinder through the pipe H by means of any suitable valve or throttle, (not shown,) which valve may be operated by the same attendant who operates the lever F. The steam or water forces up the piston in the cylinder and lifts the plate from the table, so that it rests upon the supporting-wings *a a*. To the supporting-wings or supplemental table *a a* a rotary movement is now imparted until the plate has been turned ninety degrees of a circle, and this is done, as already specified, by operating the lever F, which is thrown into the position shown at F'. The water or steam is now allowed to escape from the cylinder A, and the piston and supplemental table are lowered, thus allowing the plate to again rest upon its table proper, which table can now be raised in the usual manner and the plate passed over the top roller of the mill and the rolling process proceeded with in the usual manner until the plate is rolled to the required thickness.

What I claim is—

1. The combination, with the table of a rolling-mill, of a supplemental table constructed and arranged to receive the plate as it is delivered from one set of rolls, and mechanism for raising, turning, and lowering the supplemental table and depositing the plate in its turned position upon the table proper, substantially as set forth.

2. The combination, with a set of rolls and an adjustable table, of a supplemental table constructed and arranged to receive the plate as it is delivered from one set of rolls, a cylin-

der and piston for raising the table, and mechanism for turning the table and lowering the same to deposit the plate in its turned position on the table proper, substantially as set forth.

- 5 3. The combination, with a set of rolls and an adjustable table, of a supplemental table, a piston, cylinder, plate, and lever for raising, turning, and lowering the supplemental table, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL T. WELLMAN.

Witnesses:

JNO. CROWELL, Jr.,
CHAS. A. FRYE.