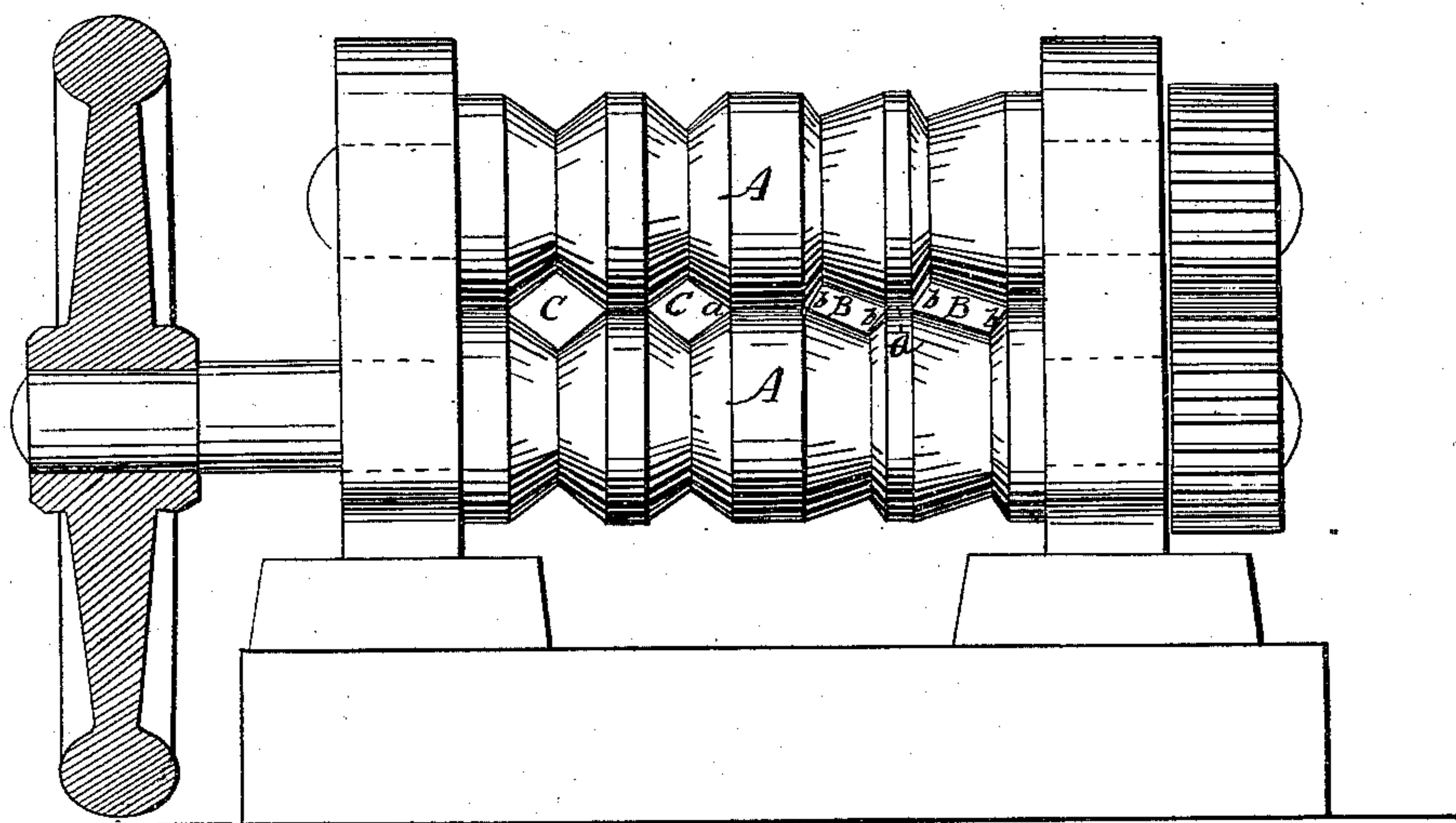


*W. Field.*  
*Rolling Metal.*  
*No 42,360.* *Patented April 19, 1864.*



Witnesses:

*Charles D. Smith*  
*Charles Du Bois*

Inventor:

*Wm Field*  
*By Munroe & Co*  
*Attorneys*

# UNITED STATES PATENT OFFICE.

WILLIAM FIELD, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN ROLLING METALS.

Specification forming part of Letters Patent No. 42,360, dated April 19, 1864.

*To all whom it may concern :*

Be it known that I, WILLIAM FIELD, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Rolling Flat Bar-Iron and other Metals; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing, which makes part of this specification, and represents a front elevation of a pair of rolls illustrating my invention.

A detrimental feature in iron and other metal formed into flat bars by the means hitherto employed has resulted from the imperfect manner in which the rolls act upon the edges and corners of the bar being rolled.

The object of my invention is to perfect the formation of the bars, and to this end the present invention consists in a peculiar manner of forming the grooves through which the iron is passed, whereby the metal is acted upon with equal effect at all points, as will be hereinafter fully explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, A A may represent a pair of rolls, which may be journaled, rotated, and made adjustable in customary manner. B B represent grooves through which the metal is passed to be pressed into the desired shape. The form of these respective grooves is clearly illustrated in the draw-

ing. Each groove instead of constituting two right angles has the figure of a right-angled triangle the hypotenuse of which is in the plane of the joint *a*, between the rolls A A, the relative perpendiculars *b b* of the angular grooves B B being made to occupy opposite positions, so that when placed in contraposition with each other they will form an oblong rectangular groove in oblique position. It will be seen that the metal being passed through these grooves is acted upon with equal force at all points, thus rolling the edges in as smooth and even a manner as the upper and under surfaces, producing sharp, well-defined, and regular corners, which is impossible in rolling bar-iron in the manner as heretofore practiced.

The invention is simple and has been found unfailing in its operation.

It will be noticed that I limit my claim to rolling and finishing flat bars of iron or other metal. The preparatory rolling of the metal may be effected in the grooves as represented at C C, in the ordinary square grooves, or in grooves of any other suitable form.

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

The method hereinbefore described for rolling flat bar-iron or other metal.

WM. FIELD.

Witnesses :

CHARLES A. LAKE,  
MENZIES SWEET.