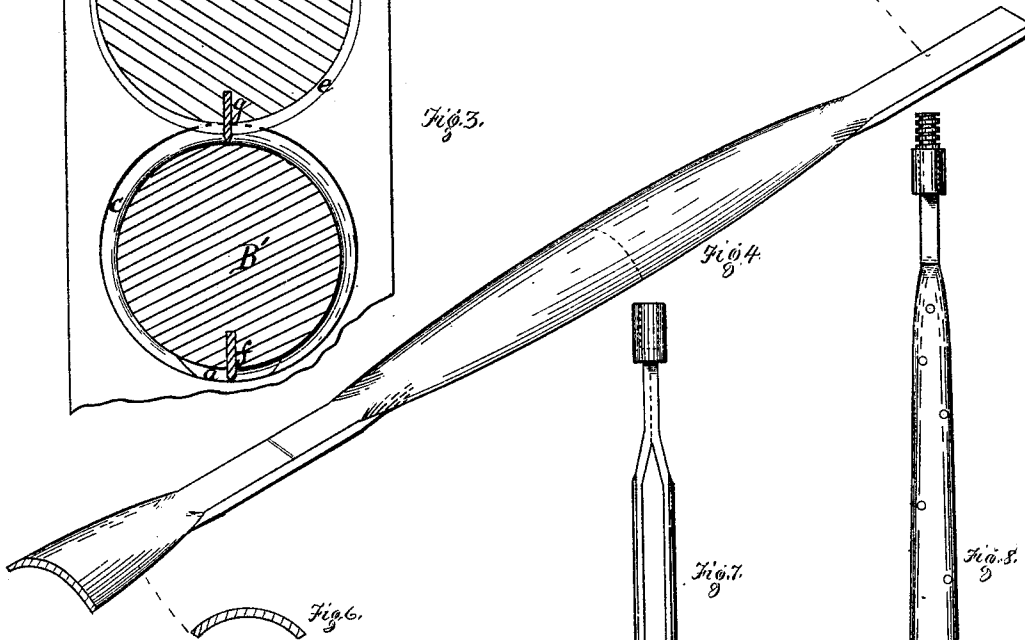
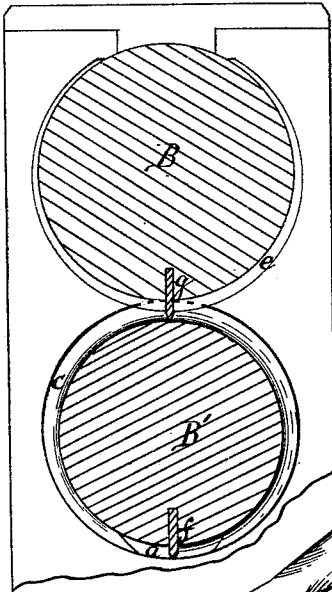
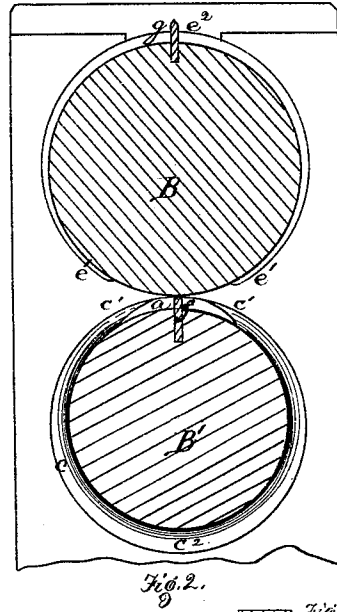
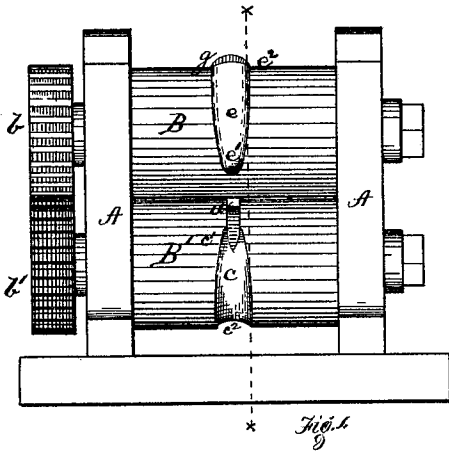


L. ROGERS.

ROLLING SUCKER-ROD JOINTS.

No. 180,930.

Patented Aug. 8, 1876.



WITNESSES.

Richard
James I. Ray

INVENTOR.

Luman Rogers
By Bakewell & Ken
Atty's

UNITED STATES PATENT OFFICE.

LUMAN ROGERS, OF PITTSBURG, PA., ASSIGNOR TO ROBERT G. GILLESPIE.

IMPROVEMENT IN ROLLING SUCKER-ROD JOINTS.

Specification forming part of Letters Patent No. **180,930**, dated August 8, 1876; application filed June 22, 1876.

To all whom it may concern:

Be it known that I, LUMAN ROGERS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rolling Sucker-Rod Joints; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a front elevation of a pair of rolls employed by me in carrying out my invention. Fig. 2 is a transverse section of the same, the rolls being in the position they occupy at the commencement of the pass. Fig. 3 is a similar section, the rolls being in the position they occupy when one-half of a revolution or pass has been accomplished. Fig. 4 is a perspective view, and Figs. 5 and 6 sectional views, of a blank as produced by the rolls. Figs. 7 and 8 are views of sucker-rod joints, said figures being here introduced for the purpose of more clearly defining the invention.

Like letters refer to like parts wherever they occur.

My invention relates to the manner of and apparatus for manufacturing sucker-rod joint-iron.

Heretofore, in the manufacture of sucker-rod joints, it has been customary to forge out separate blanks, each equal to half the joint, and then to weld two of such blanks together, forming a thread upon one, as at Fig. 8, and welding a thimble upon the other, as at Fig. 7, thus producing the two parts of the coupling. The main objection to such method of manufacture is the time and labor involved in forging out the blank, and the lack of correspondence in the blanks, which increases the subsequent labor of finishing the joint.

The object of my invention is to reduce the time and labor involved in the production of the blank, and to obtain blanks of uniform size, thus facilitating the subsequent work upon the joint. This I accomplish by means of rolls, one of which is grooved to form the convex portion of the blank, and the other is provided with a tongue or partial collar, which forms the concavity of the blank, the operation of the rolls being such that a bar of proper cross-section,

and whose length is a multiple of the blank to be produced, will be transformed into a series of uniform blanks, having a flat portion and a concavo-convex portion of greater width than the flat portion, but of diminished thickness.

I will now proceed to describe my invention specifically, so that others skilled in the art to which it appertains may be enabled to apply the same.

In suitable housings A I journal a pair of rolls, B B', provided with pinions *b b'*, or otherwise geared to revolve in unison. In one of said rolls, preferably the lower, is formed a groove, rectangular, as at *a*, and elliptical, as at *c*, the elliptical portion of the groove gradually increasing in width from the points *c'* to the point *c''*, which latter indicates the widest portion of the groove. Upon the opposite roll is formed an elliptical tongue or partial collar, *e*, the width and height of which increases gradually from the points *e'* to the center or point *e''*, that portion of the roll between the extremities of the tongue *e* being plain, as shown. The rectangular groove *a* and the tongue *e* may be divided at mid-length by creasers *f g*, for creasing the bar as it passes through the rolls.

In producing the blanks I take a bar, rectangular in cross-section, and, when the rolls are in the position shown in Fig. 2, feed the end of the bar between the rolls and against the creaser *f*. The bar, in its passage through the rolls, is transformed, by the elliptical tongue and groove and the rectangular groove, into a series of concavo-convex forms, which diminish in thickness and increase in width, said forms joined or connected by sections of the original bar, and the whole marked off into sections by means of the creasers, each section being made up of a rectangular portion and a concavo-convex portion.

The blanks thus produced may be separated from the bar, welded, and finished in the usual manner, but with much less labor, owing to the uniformity and correspondence of the blanks.

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

1. The pair of rolls, one having the taper-

ing groove, and the other the elliptical tongue, substantially as and for the purpose specified.

2. The combination of the rolls B B', one having the elliptical and rectangular groove, and the other the elliptical tongue, substantially as and for the purpose specified.

3. The rolls B B', provided with the elliptical and rectangular groove *a c*, the tongue *e*, and the creasers *f g*, substantially as and for the purpose specified.

4. The continuous bar herein described,

composed of a series of rectangular and concavo-convex portions, corresponding to blanks for sucker-rod joints, substantially as and for the purpose specified.

In testimony whereof I, the said LUMAN ROGERS, have hereunto set my hand.

LUMAN ROGERS.

Witnesses:

J. AGNEW,
JAMES GILLISPIE.