No. 648,915. Patented May 8, 1900.

J. R. BLAKESLEE.

FORGING ROLLS.

(Application filed June 23, 1899.)

(No Model.)

Fig. 1.

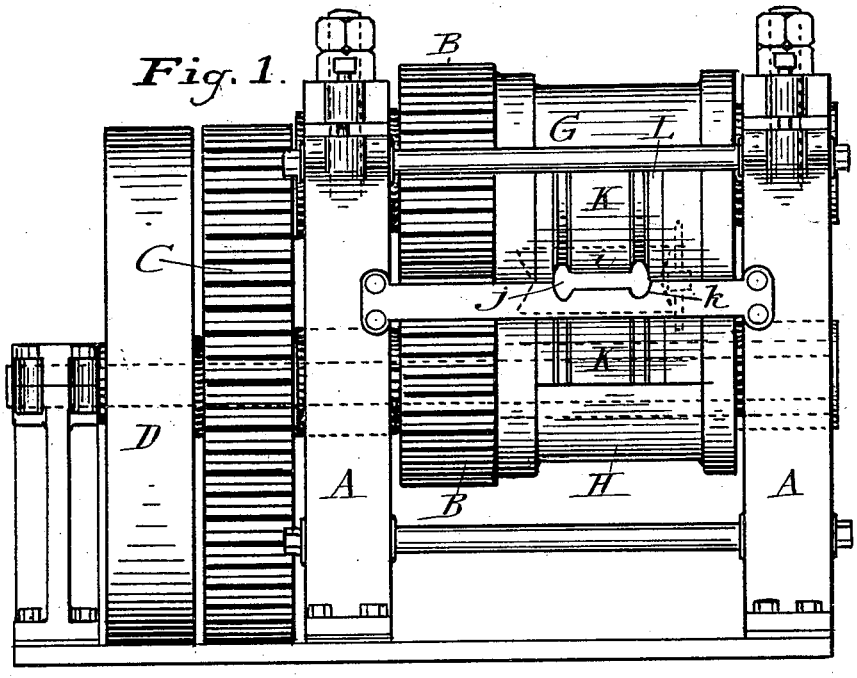


Fig. 4.

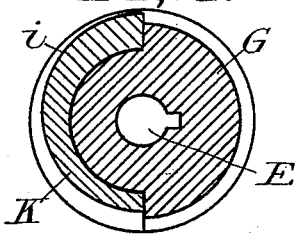


Fig. 2.

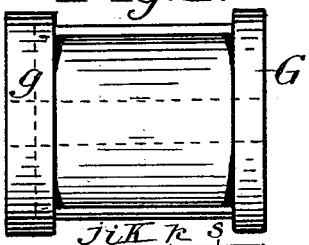


Fig. 7.

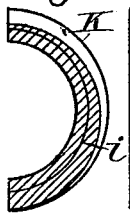
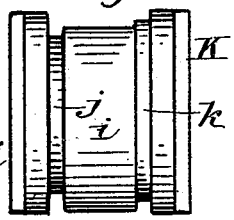


Fig. 6.



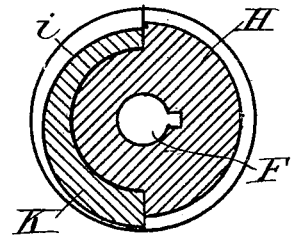


Fig. 5.

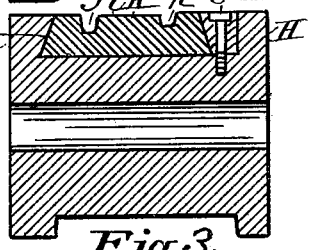


Fig. 3.

Fig. 8.

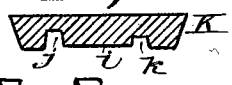


Fig. 9.

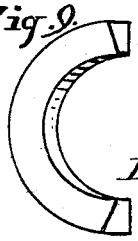


Fig. 10.

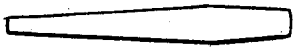


Fig. 11.

Witnesses,

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Harley D. Bogumil

Inventor.

John R. Blakeslee.

By Geo. W. Tibbitts Attorney.

UNITED STATES PATENT OFFICE.

JOHN R. BLAKESLEE, OF CLEVELAND, OHIO.

FORGING-ROLLS.

SPECIFICATION forming part of Letters Patent No. 648,915, dated May 8, 1900.

Application filed June 23, 1899. Serial No. 721,659. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BLAKESLEE, a citizen of the United States of America, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Forging-Rolls, of which the following is a specification.

This invention relates to forging-rolls; and it consists in the new construction and combination of forging-dies with roller forging-mills, the nature, operation, and purpose of which will fully appear from the subjoined description when considered in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a machine having my improvements embodied therein. Fig. 2 is a side elevation of the die-holding cylinder. Fig. 3 is a longitudinal section of the same, showing the die in place. Figs. 4 and 5, respectively, are cross-sections of a pair of said cylinders and dies. Fig. 6 is a face view of the die. Fig. 7 is a cross-section of the same. Fig. 8 is a longitudinal section of the same. Figs. 9 and 10, respectively, are side and edge elevations of the beveled half-ring used for securing the die to the cylinder. Fig. 11 represents one of the bars produced by these dies.

The purpose of these rolls is to produce taper-sided bars.

A A are the housings and supports for the rolls. B B are the gears connecting the two rolls. C is the main gear, and D is the driving-pulley for applying power for operating the rolls. In these respects the machine does not differ from those now used.

Instead of the solid rolls I provide shafts E and F and upon them place die-holding cylinders G H. In one side of the cylinders are made recesses *g h* for receiving the dies. One end of said recesses is made with an under bevel.

K in Figs. 1, 3, 4, 5, 6, 7, and 8 represents the dies. They are made with eccentric faces *i* in their middle parts and with eccentric grooves *j* and *k* at the sides of said faces, one of which, *k*, is shorter than the other for rolling the short taper seen on the bar, Fig. 11. The ends of the dies are beveled to fit the bevel in the recesses in the cylinders. L represents half-rings having one side beveled to fit the beveled ends of the dies. When the dies are placed in the recesses in the cylinders, one of these rings is put in with them at one end and is fastened in by screws *s s*.

This machine is for rolling tapered brake-levers for railway-cars, such as shown in Fig. 11.

The working is as follows: The operator takes a blank bar of iron and first passes it into the groove *j* between the dies and allows it to pass as far as the first stop for rolling the long taper. Next he removes the bar and passes it between the flat faces *i* of the dies to flatten the part thickened by the first rolling. Next he again removes the bar and reverses it end for end and passes it into groove *k* and rolls the short taper and again passes it between the flat faces *i* to flatten down any undue thickness. The ends may then be sheared off and the bar straightened between straightening-rolls.

Having described my invention, what I claim is—

In forging-rolls, the combination of cylinders G H having recesses *g h*, dies K having eccentric faces *i* and eccentric grooves *j k*, at the sides of said faces, beveled half-rings L adapted for securing the dies in the said recesses *g h*, said cylinders and dies mounted, respectively, on the shafts E F, constructed and operating substantially as and for the purpose set forth.

Signed by me at Cleveland, Ohio, this 20th day of June, 1899.

JOHN R. BLAKESLEE.

Witnesses:

GEO. W. TIBBITTS,

H. D. BOGRAND.