

G. K. DEARBORN.

MACHINES FOR ROLLING AXLES.

No. 178,838.

Patented June 20, 1876.

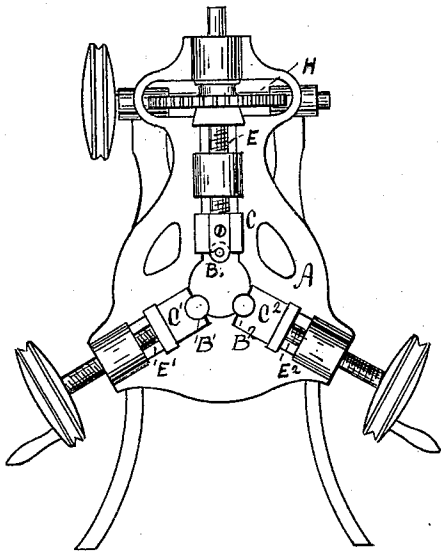


Fig. 1.

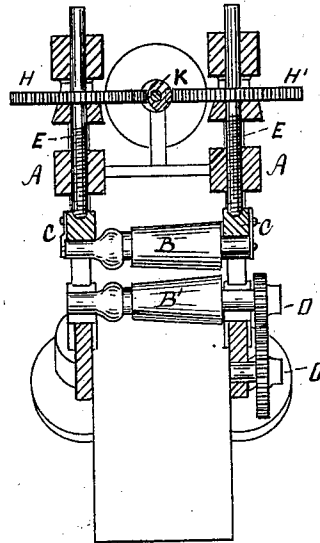


Fig. 2.

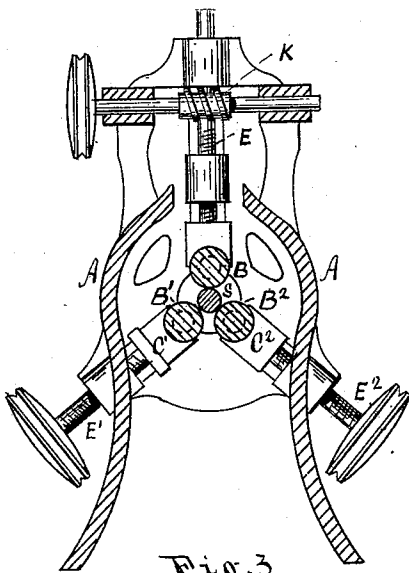


Fig. 3.

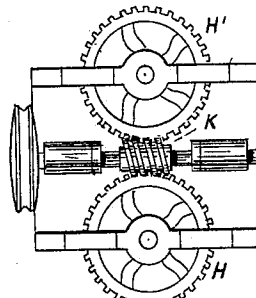


Fig. 4.

Witnesses

Frank Parker
H. Evans

Inventor

Gilbert K. Dearborn
per William Edson Atty

UNITED STATES PATENT OFFICE.

GILBERT K. DEARBORN, OF SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR ROLLING AXLES.

Specification forming part of Letters Patent No. **178,838**, dated June 20, 1876; application filed November 9, 1875.

To all whom it may concern:

Be it known that I, GILBERT K. DEARBORN, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Machine for Rolling Axles, of which the following is a specification:

The nature of my invention consists in combining rollers of a peculiar pattern, in such a manner that the axle to be formed may be inserted longitudinally between them, and be acted upon while in this position. In the process of rolling, the axle being formed revolves on its longitudinal axis, which is parallel to the axes of the rollers which form it.

Figure 1 is a front elevation of my machine. Fig. 2 is a vertical section of the same. Fig. 3 is a cross vertical section of the same. Fig. 4 is a plan, showing the top of the machine.

Let A represent the frame of the machine, in which I hang three rollers, B B¹ B², the form of which is shown in Fig. 2 at B and B¹, said rolls being so formed that the space between them, as shown in Fig. 2, will agree with the shape required for the axle. These three rolls are hung in housings C C¹ C², which slide in ways made in the frame A, as shown in Figs. 1 and 3, and are moved toward or away from a common center by the screws E E¹ E², each roll having a screw at each end. The screws E E for the upper roll B are operated by the worm K and the gears H H',

Figs. 2 and 4, so as to move with uniformity. The sets of screws for operating the rolls B¹ and B² may be connected together by chain-belts or by gears, or, in fact, by any suitable mechanical device. The rolls B B¹ B² are driven by suitable gears D D, Fig. 2.

To use my invention I proceed as follows: The iron blank from which I propose to make the axle is heated to the proper temperature, and, the rolls B B¹ B² being set properly for beginning work, is inserted between the rolls, as shown at S, Fig. 3, the blank being parallel to the rolls; then, as the rolls revolve, the iron revolves with them, and is rounded off. While the rolling process is going on the rolls are brought nearer together, and the axle is reduced to the proper shape and size.

This process produces a perfect-shaped axle, which does not require any after-finish.

I claim as my invention—

In a machine for rolling axles, the combination of the three rolls B B¹ B², formed as shown, with the adjusting-screws E E¹ E², the worm K, and the gears H H', all connected so as to operate substantially as described, and for the purpose set forth.

GILBERT K. DEARBORN.

Witnesses:

WILLIAM EDSON,
H. EVANS, Jr.