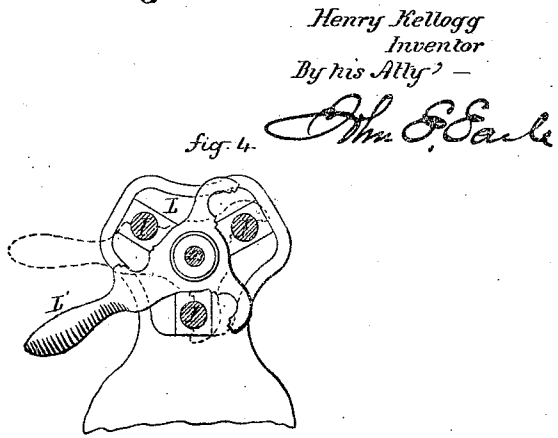
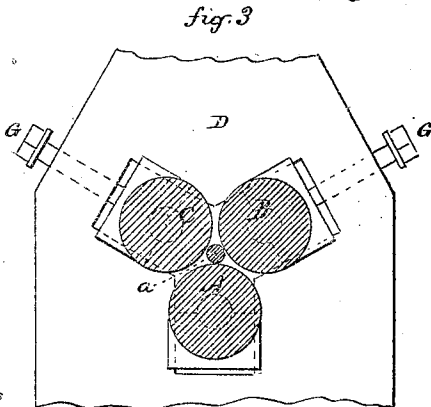
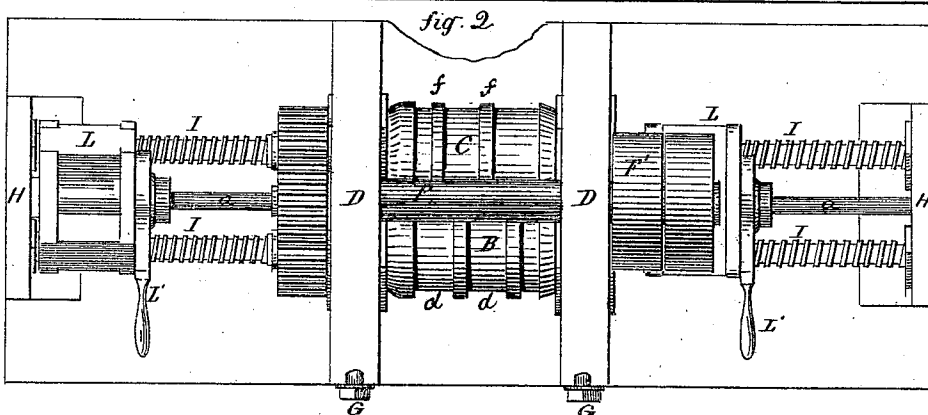
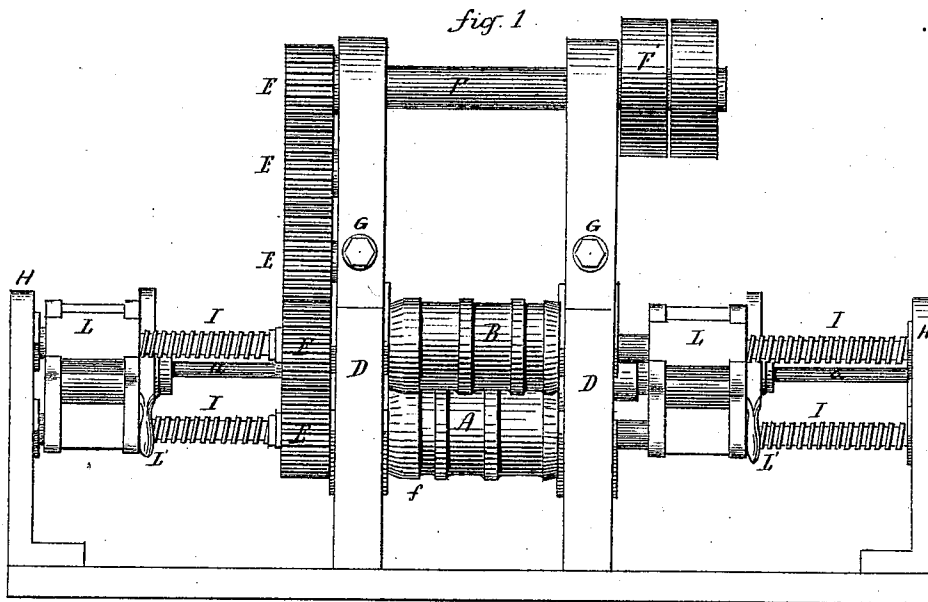


H. KELLOGG. Metal Rolling Machines.

No. 133,453.

Patented Nov. 26, 1872.



Henry Kellogg
Inventor
By his Atty -

Wm. S. Earle

Witnesses
John W. Shumway
a. j. Tully

UNITED STATES PATENT OFFICE.

HENRY KELLOGG, OF MILFORD, CONNECTICUT.

IMPROVEMENT IN METAL-ROLLING MACHINES.

Specification forming part of Letters Patent No. 133,453, dated November 26, 1872.

To all whom it may concern:

Be it known that I, HENRY KELLOGG, of Milford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Apparatus for Rolling Shafting; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view; Fig. 2, a top view; and in Figs. 3 and 4, transverse sections, illustrating my invention.

This invention relates to an improved mechanism for the manufacture of shafting and for analogous purposes; the object being to produce shafting or rods perfectly round and with a smoothly-finished surface; and the invention consists in the arrangement of three rolls to receive the rods or bars to be rolled between them and in a line parallel with the axis of the said rolls, and combined with a mechanism, more fully hereinafter described, to properly guide and feed the rods to be rolled to the said rolls; and also in constructing said rolls with alternate annular grooves and projections, the grooves on one corresponding with the projections on the other, for the purpose of straightening the rod passing between the said rolls.

A B C represent the three rolls, arranged in a frame, D, and coupled together by a chain of gears, E, and to the driving-shaft F, on which are arranged pulleys F', through which power is communicated to cause the rolls to revolve simultaneously. The ends of the rolls are slightly chamfered, as denoted in Figs. 1 and 2, and are made adjustable by set-screws G, so as to be set in the relation to each other required for the diameter of the shafting when finished. The shaft, upon which the rolls are respectively arranged, extends through and to other bearings H, to support the extended shafts. These shafts are threaded to form screws I, and on the screws, at each end, are arranged head-blocks L, which are bored out so as to slide freely over the screws. On each head-block is ar-

ranged a lever, L', fitted, as seen in Fig. 4, to be swung around and engage with all the screws, as denoted in broken lines, Fig. 4. When thus engaged the head-blocks will be moved by the screws. Disengaged, the screws have no effect upon the head-blocks.

The shaft to be rolled is passed in through one of the head-blocks to the rolls, the head-block being thrown out from the rolls; then power applied to cause the rolls and screws to revolve, and the said head-block engaged with the screws. The shaft will be fed into the rolls, passing longitudinally between them, (a, Fig. 3, representing the shaft,) and thus continue until the head-block has run up to the rolls, or its full extent. Then the head-block is disengaged and moved back to take a second hold on the shaft. It will be understood that the shaft is secured in the head-block, so as to be forced forward as the head-block moves, then feeding again, until the shaft extends through, so as to enter the head-block on the opposite side. Then the two head-blocks (should the shaft be of sufficient length) are applied, and aid in feeding and properly guiding the shaft.

The result of this operation is that the shaft passes from the machine rolled to an exact and even diameter, and with a most perfectly-finished surface. This object is accomplished by rolls having a smooth surface, but is facilitated, and the straightening insured, by the construction of the surface, as denoted by the drawing—that is to say, on two of the rolls are formed annular grooves *d*, and on the other corresponding projections *f*, the projections being slightly narrower than the grooves. These, working together, serve to straighten the shafting, upon the principle of wire-straightening, the ends of the roll being left smooth, for a short distance at the end, sufficient to give the final surface to the shaft.

If desirable, a noduled or botryoidal surface, as described in my application B, for a similar invention, filed in even date herewith, may be given to the rolls.

I claim as my invention—

1. In a mechanism for rolling rods or bars, consisting of the arrangement of three rolls to act longitudinally or axially upon the said rods

or bars, I claim the threaded shafts I, head-blocks L, and levers L', for connecting or disconnecting the said head-blocks with or from the said shafts, substantially as described.

2. In a mechanism for rolling rods or bars, consisting in the arrangement of three rolls to act longitudinally or axially upon the said rods or bars, I claim the said rolls constructed

with alternate annular grooves and projections, substantially as and for the purpose specified.

HENRY KELLOGG.

Witnesses:

J. H. SHUMWAY,
A. J. TIBBITS.