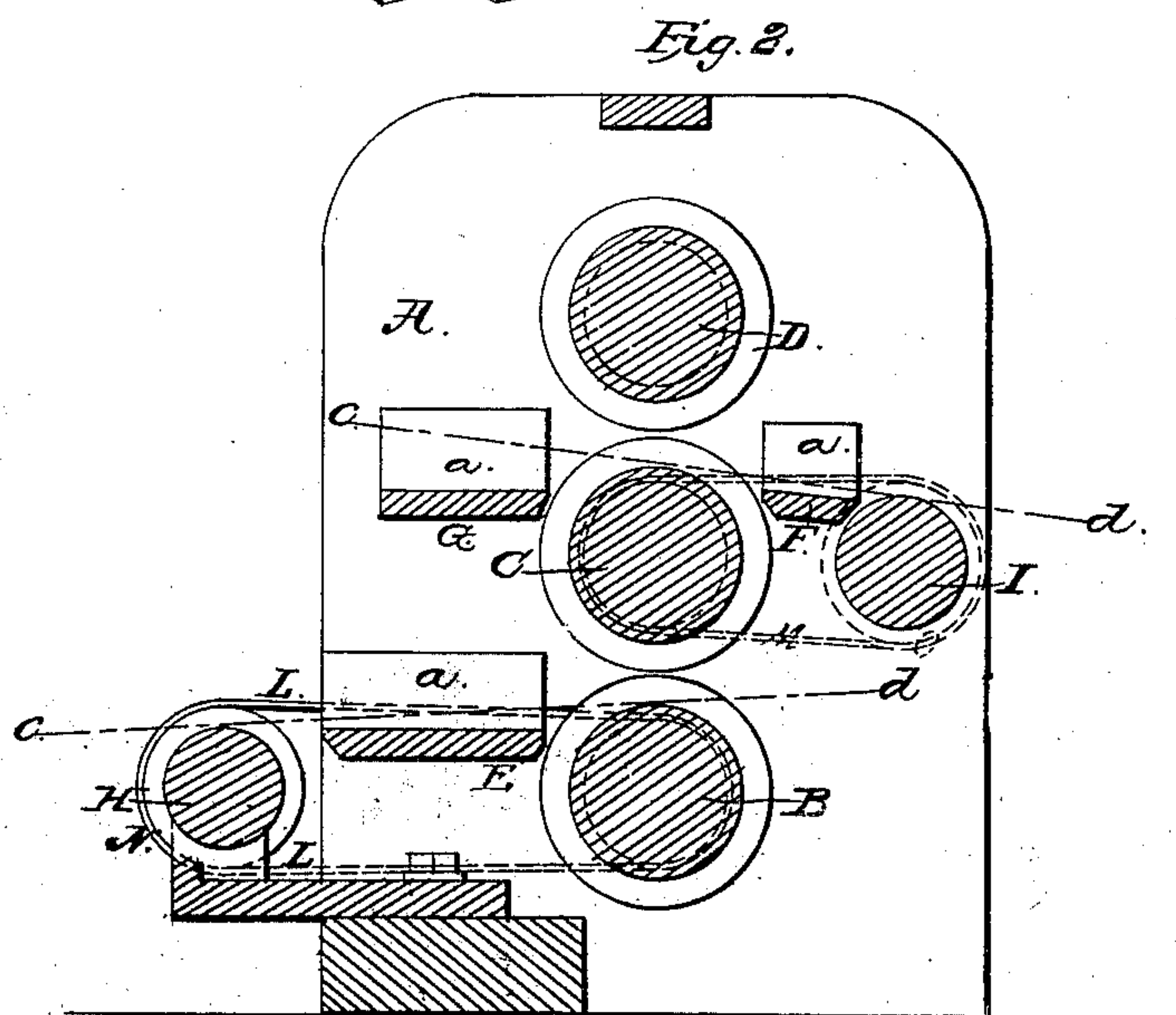
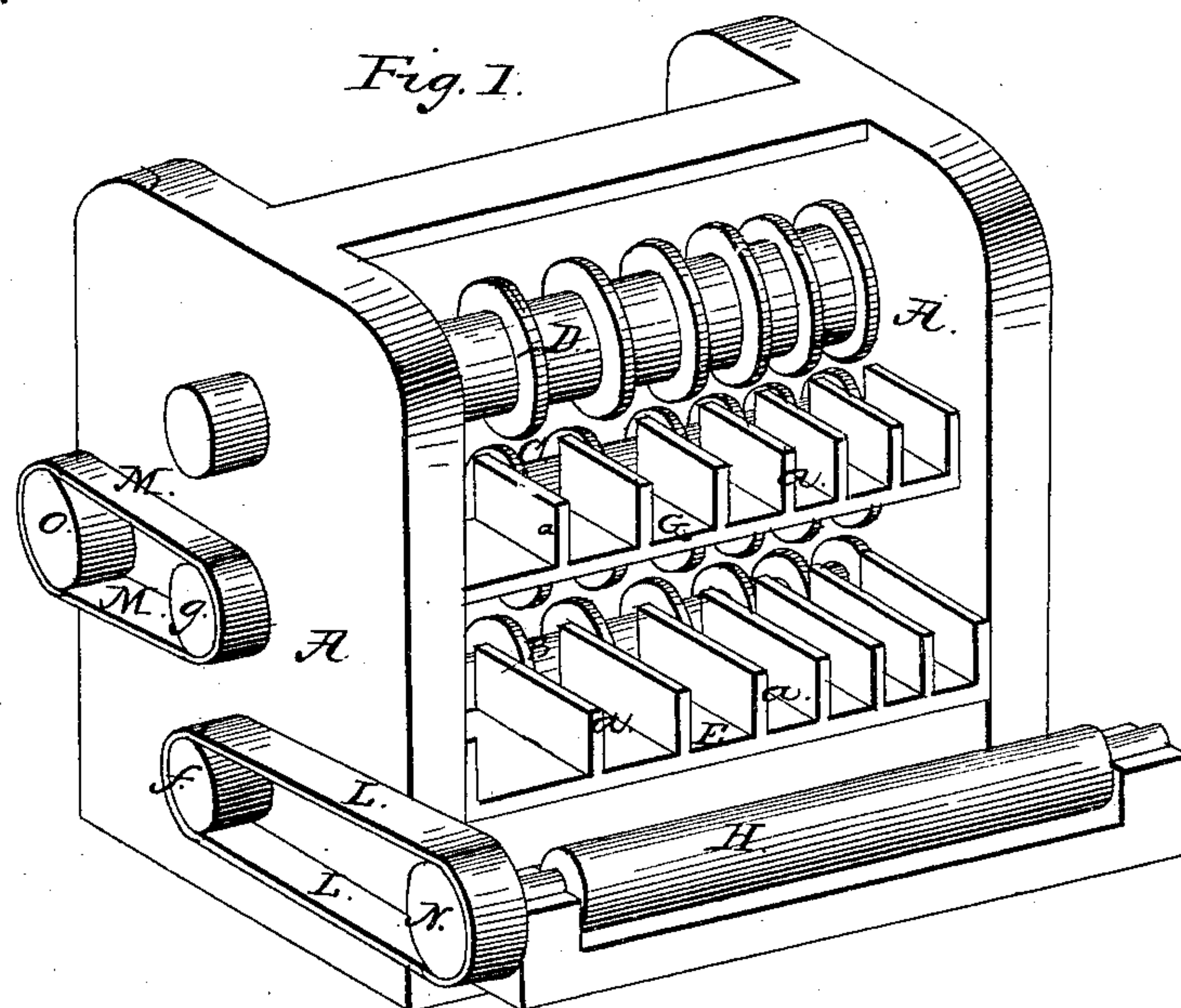


J. & G. FRITZ.
MANNER OF FEEDING UP THE PILE TO DRAWING OR FORMING ROLLERS
IN MAKING HEAVY IRON BARS OR BEAMS.

No. 25,565.

Patented Sept. 27, 1859.



Witnesses:

E. Cohen
J. Hirsch.

Inventors:

John Fritz
George Fritz
per their attorney, H. B. Haughton.

UNITED STATES PATENT OFFICE.

JOHN FRITZ AND GEORGE FRITZ, OF JOHNSTOWN, PENNSYLVANIA.

ROLLING-MILL.

Specification of Letters Patent No. 25,565, dated September 27, 1859.

To all whom it may concern:

Be it known that we, JOHN FRITZ and GEORGE FRITZ, of Johnstown, in the county of Cambria and State of Pennsylvania, have
5 invented certain new and useful Improvements in the Manner of Carrying in the Pile to Rolling Mills for Rolling Heavy Iron Bars or Beams; and we do hereby declare that the following is a full, clear, and
10 exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a perspective view of a set of drawing and forming rolls. Fig. 2
15 represents a vertical cross section through the same.

The nature of our invention consists in providing drawing and forming rolls for rolling heavy iron bars or beams, with feed
20 rollers which turn with a positive motion imparted to them by means of belts and pulleys, cogged gearing, or other mechanical devices, and which carry or feed the iron to the rolls, when placed on the same, thus dispensing with the necessity of pushing the
25 iron toward the rolls by hand and consequently facilitating the work of feeding in the pile.

To enable others skilled in the art to make
30 and use our invention, we will proceed to describe its construction and operation.

A represents the heavy iron frame which supports the journal boxes of the rolls.

B, C and D represent the rolls for rolling heavy iron bars or beams and which are
35 of the usual construction of "three high rolls." They are formed with grooves according to the shape of the bars to be rolled.

E, F and G represent guide plates the
40 partitions, *a*, of which stand opposite the tongues of the rolls and thus cause the pile to enter the proper grooves of the rolls.

H and I are two cylindrical rolls which are mounted in front of their respective
45 guide plates E, F and in such a manner that the bar, when in contact with said feed roll, and the roll which draws or forms the iron, may clear the guide plates as represented by the red lines *c* and *d*. The rolls H and
50 I may have a positive motion imparted to them by means of the belts L, and M, which pass respectively around their pulleys N and O, and the journals *f*, *g* of the rolls B and C, from which they receive their revolving motion, the revolution of the rolls
55 H, and I, being in the same direction of those of their respective rolls B, and C, or

in other words the feeding rolls rotating in the same direction as their respective drawing or forming rolls.

The operation of the machine is as follows. Motion being imparted to the various rolls the end of the heated pile is placed upon the feed roll I, which carries it on to the forming roll C, and through between the
60 rolls C and D whence it passes out between the partitions of the guide plate G, until its end drops over the edges of said plate and down on to the plate E. The top line of the feed roll H, being above the level of the
65 plate E the pile is fed to the roll B, and passed between the rollers B, C, in a manner similar to that above mentioned.

The application of the feed rollers as described to rolling mills effects great advantage
75 in the feeding in of the pile to the latter. In the arrangement as used heretofore the pile as it escaped from the forming rolls was allowed to fall upon a truck, buggy, or carriage which was placed in front of the
80 rolls, and this carriage with the heavy bar on it had to be pushed by hand toward the rolls, which is very laborious, while under our arrangement this labor is performed automatically by the feed rolls which carry the
85 pile forward rapidly into the rolls, which alone is of great importance, as the rolls will take the piece much better when it comes into them with force, than they will, when it comes against them slowly as when
90 actuated by manual labor only.

We do not confine our invention to the particular arrangement herein described, as the feed rolls may be driven by any known
95 mechanical device suitable to the purpose, provided they turn in the direction to carry the material to the drawing or forming rolls.

Having thus fully described our invention what we claim therein as new, is—
100

The application to each of the pairs of drawing or forming rolls, of a feed roll such as described and driven by gearing or other
105 machinery and turning in the same direction with said drawing or forming rolls, for the purpose of carrying and feeding into them the pile or bar of heavy iron, substantially as described.

JOHN FRITZ.
GEORGE FRITZ.

Witnesses:

JAMES PURSE,
JACOB C. HORNER.