

M. HOAGLAND.

Disc-Rolls for Rolling Shaftings.

No.155,799.

Patented Oct. 13, 1874.

FIG. 1.

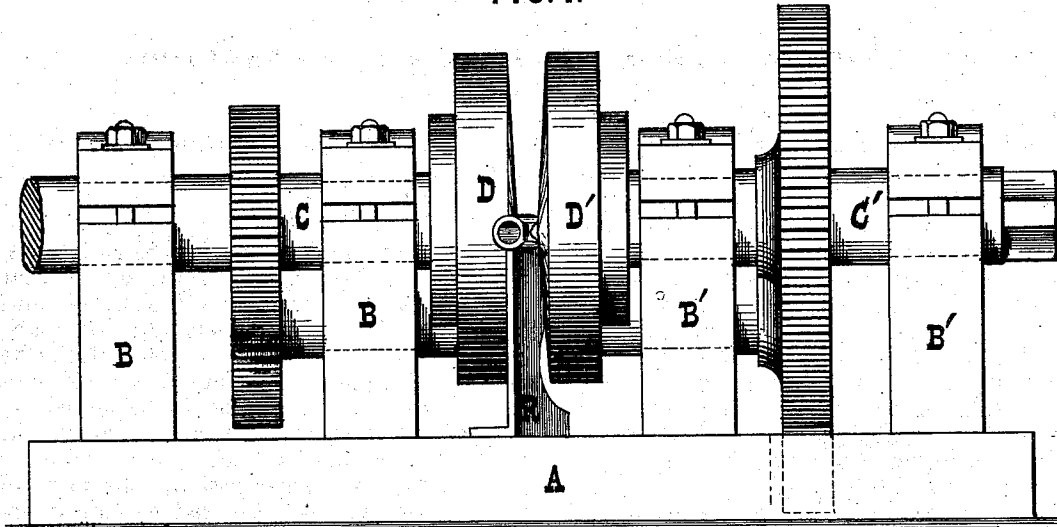
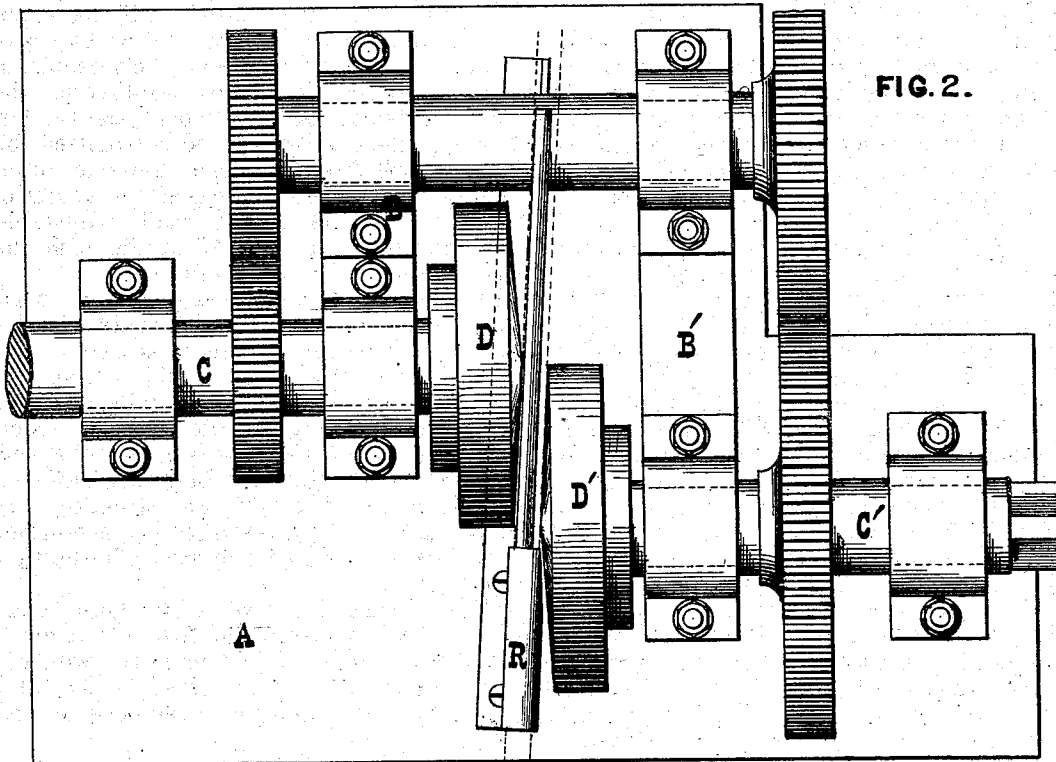


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MAHLON HOAGLAND, OF ROCKAWAY, NEW JERSEY.

IMPROVEMENT IN DISK-ROLLS FOR ROLLING SHAFTING.

Specification forming part of Letters Patent No. **155,799**, dated October 13, 1874; application filed June 25, 1874.

To all whom it may concern:

Be it known that I, MAHLON HOAGLAND, of Rockaway, Morris county, New Jersey, have invented Improvement in Rolls for Rolling Cold Shafting; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of my machine, and Fig. 2 a top view.

My invention relates to that class of rolling-machines known as disk-rollers, and is used to roll bars of iron, steel, or other metals into what is known in the trade as "cold-rolled shafting." My invention consists in forming the rolling-surfaces of the disks conical, and placing them in such a position that the rear surface of one roll will operate against the forward surface of the opposite roll, the rolls revolving in the same direction with the same velocity.

In the drawings, A represents the base upon which the housings B and B' are placed. Journalled into the housings B and B' are the shafts C and C', each carrying upon its end, and formed solid therewith, a disk-roller, D and D', having a conical face, as shown. The rolls D D' are made equal and alike in all their parts, and are hung in their bearings the same, except that the rear half of one bears against the forward half of the other, and as they revolve, as a whole, in the same direction, the halves which operate together move in opposite directions. These rolls are connected (or may be separate) by suitable gearing, to move at any given velocity in the same direction, and may be made to be adjustable apart by any suitable mechanism. Between the rolls, and secured to the base A, is a rest and guide, R, for guiding the bars to be rolled. This rest is made of sufficient height to allow the bar to be rolled to pass between the rolls a sufficient distance below their center to feed it at a proper velocity, which will hereafter be explained. The rolls D and D' are cast in one piece with the shafts C and C'. As great solidity and perfection are necessary in the construction of these rolls, I find that I can make them more durable and perfect by casting them in one piece.

The operation of my machine is as follows: Power having been applied to the shaft C', the rolls, by their gearing, are revolved in the same direction; and, having been adjusted apart, by any means not shown, a rod sufficiently heated is placed in the guide R, and, when it is advanced sufficiently far to be seized by the rolls, it is revolved by the action of the rolls, one carrying one side down, while the other carries the other side up, the parts of the rolls acting upon the rod moving in opposite directions. If the rod enters between the rolls below their center it will be fed, of course, in the direction the lower halves of the rolls move, and if above their center, in an opposite direction, or in the direction the upper halves of the rolls move; and the farther from their center the rod is admitted the faster it will feed. I prefer, however, to introduce the rod below, but near the center of the rolls. The rest may be made adjustable in height, so as to increase or diminish the speed of the feed if it is desired.

The advantages arising from my improved rolls are, that I can use the centers of the rolls and apply much greater power in proportion to the size of the machine than can be used upon the plain-faced rolls, and run them at a much higher rate of speed, which is very desirable; also, casting the rolls and shafts in one piece insures great perfection of mechanism, and durability and strength.

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

The combination of two conical-faced disk-rolls of equal diameter, and geared to revolve in the same direction, and arranged with respect to each other as described, so that the apex of one will bear against the periphery of the other.

The above specification of my said invention signed and witnessed at Rockaway this 8th day of June, A. D. 1874.

M. HOAGLAND.

Witnesses:

EDMOND H. TUTTLE,
PETER GLAUNAN.