

(No Model.)

2 Sheets—Sheet 1.

S. V. HUBER.
APPARATUS FOR BOSHING BARS, &c.

No. 585,868.

Patented July 6, 1897.

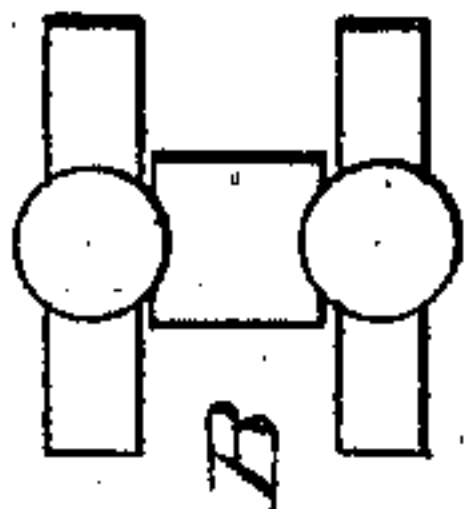
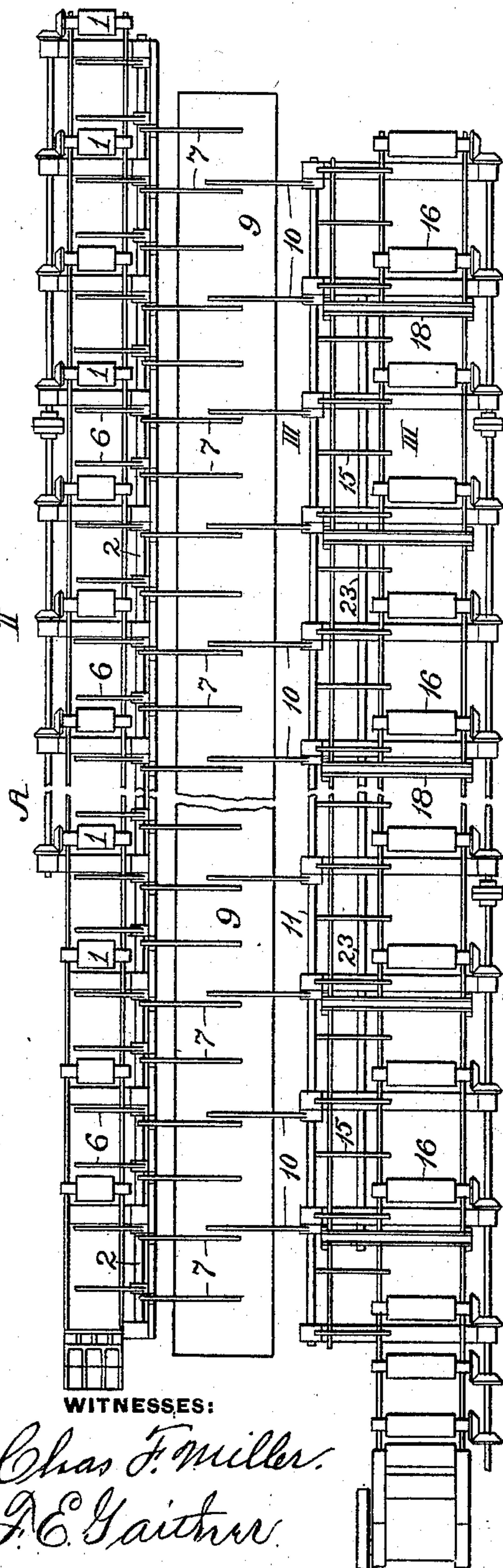


FIG. 1.

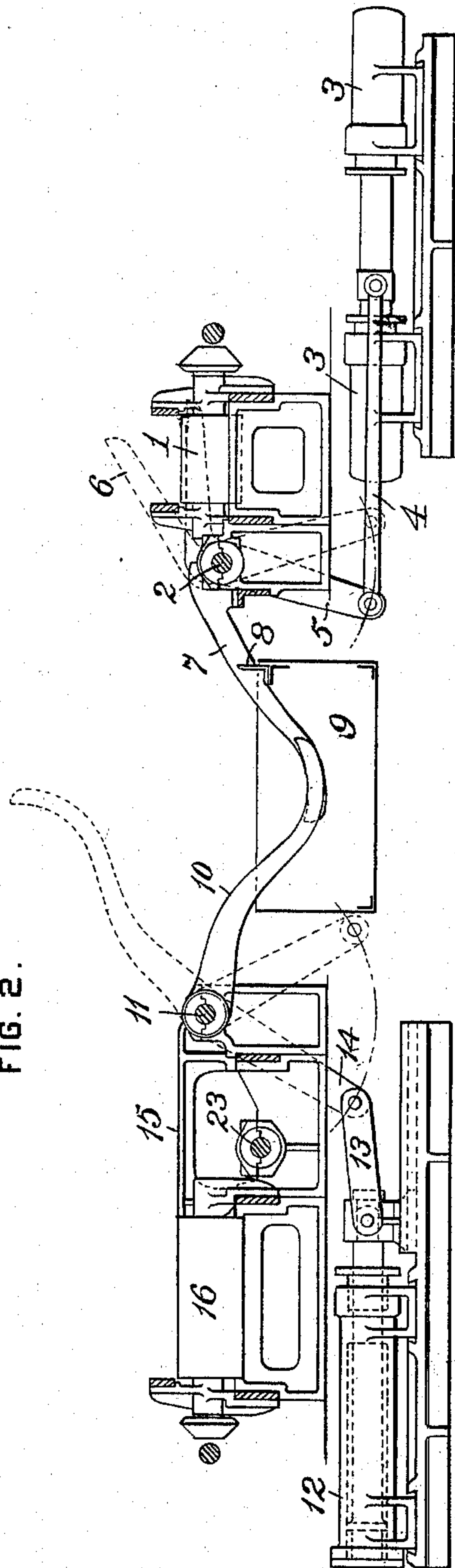
II



WITNESSES:

Chas F. Miller.
J. E. Gaither.

FIG. 2.



INVENTOR.

Seigmund V. Huber
by Dennis S. Wolcott
Att'y.

(No Model.)

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FIG. 3.

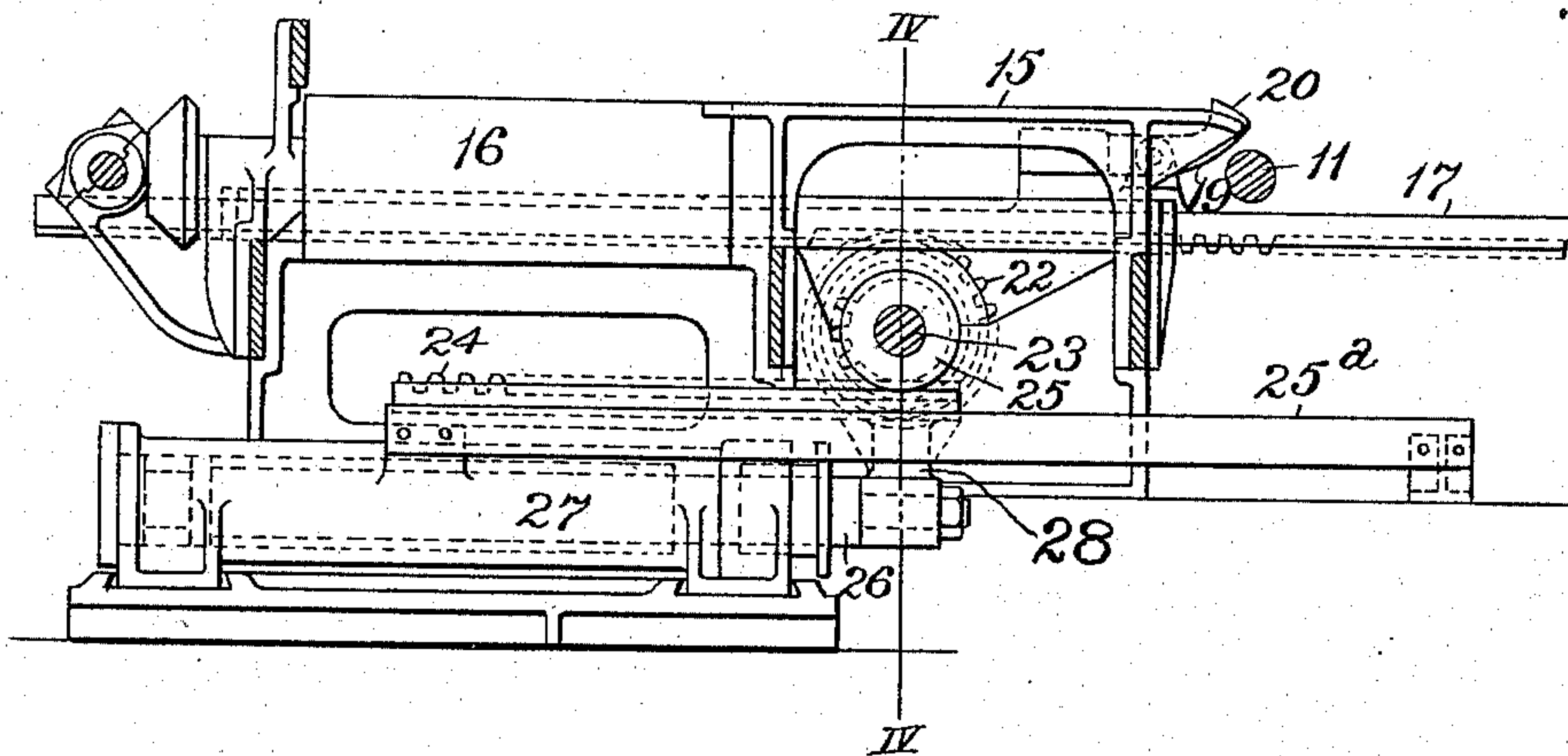
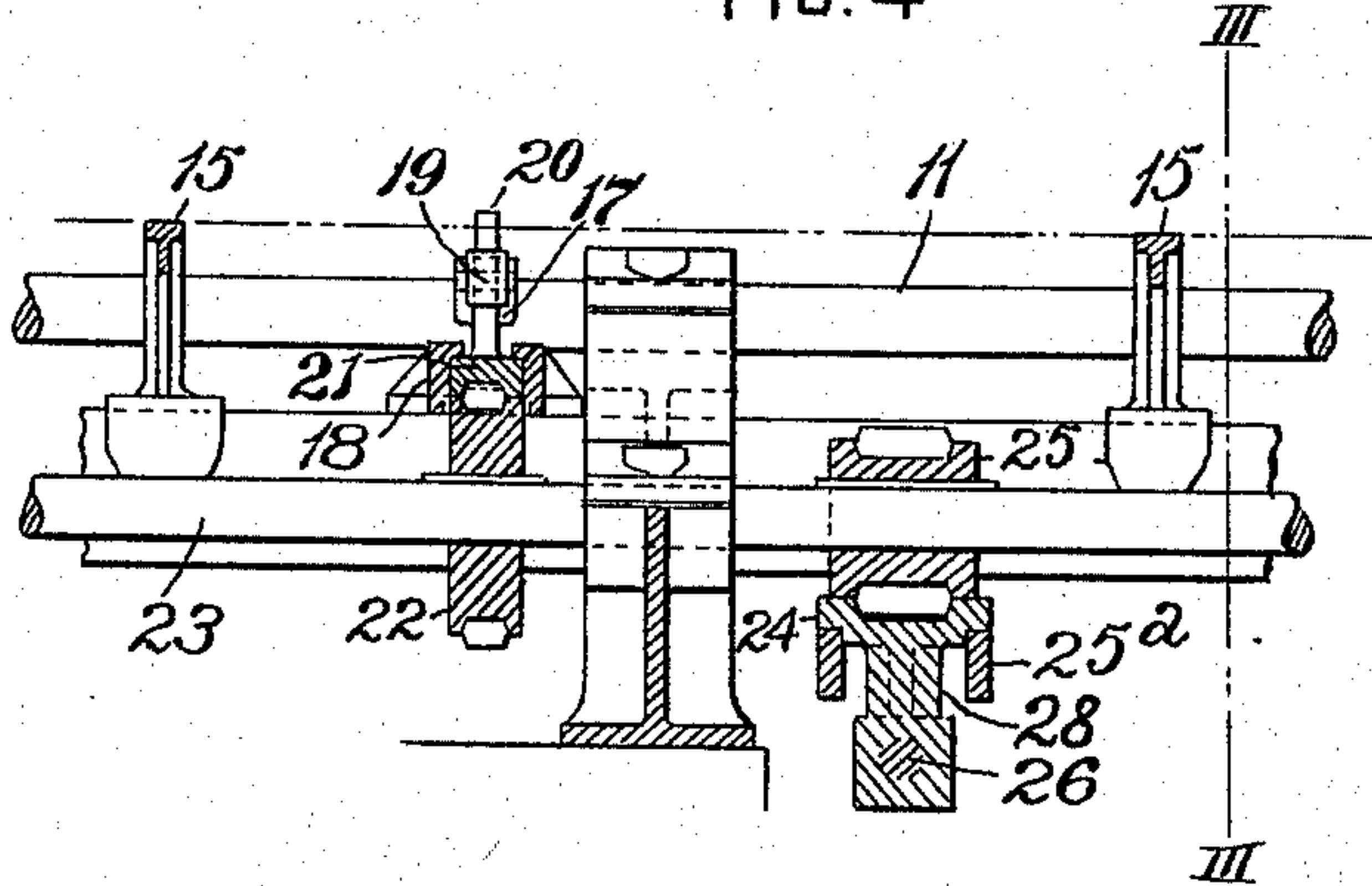


FIG. 4



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UNITED STATES PATENT OFFICE.

SIGMUND V. HUBER, OF YOUNGSTOWN, OHIO.

APPARATUS FOR BOSHING BARS, &c.

SPECIFICATION forming part of Letters Patent No. 585,868, dated July 6, 1897.

Application filed December 28, 1896. Serial No. 617,175. (No model.)

To all whom it may concern:

Be it known that I, SIGMUND V. HUBER, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented or discovered certain new and useful Improvements in Apparatus for Boshing Bars, &c., of which improvements the following is a specification.

The invention described herein relates to certain improvements in rolling-mill machinery, and has for its object a construction and arrangement of mechanical devices whereby a bar, &c., may be lifted from the receiving or catcher's table of a finishing or bull-head mill, shifted laterally into a bath or boshing tank, raised and shifted laterally onto supporting-skids, and then transferred onto the feed-rollers of a shear or other mechanism.

The invention is hereinafter more fully described and particularly claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of my improved mechanism. Fig. 2 is a sectional elevation, the plane of section being indicated by the line II II, Fig. 1. Fig. 3 is a sectional elevation in the plane of the line III III, Fig. 1; and Fig. 4 is a transverse section, the plane of section being indicated by the line IV IV, Fig. 3.

In the practice of my invention a feed-table A, having positively-driven feed-rollers 1, is arranged on the delivery side of the finishing or bull-head rolls B in such relation to such rolls that the article operated on by said rolls will be fed onto the feed-rollers. Along one side of this feed-table is mounted a shaft 2, adapted to be rotated by any suitable means—as, for example, by fluid-pressure cylinders 3, having their piston-rods connected by a pitman 4 to the outer end of an arm 5, which is keyed to the shaft 2. On the shaft are keyed a series of arms 6, which in normal position will lie slightly below the upper surfaces of the feed-rollers 1, as clearly shown in Fig. 2. These arms are adapted, when the shaft 2 is rotated, to lift a bar or other article lying on the rollers above the guides along the ends of the rollers to such a height that the bars, &c., will slide down the arms onto the inclined skids 7. These skids are supported at one end by suitable brackets on the sides of the frame of the table A, and also by clamps 8,

secured to one side of the trough or boshing-tank 9, and are of such length as to project down below the surface of the water contained in the tank. It is preferred to so bend the outer ends of the skids that they will form in the tank approximately horizontal supports for the bar.

The bars are lifted from the skids by means of arms 10, secured on the shaft 11, and so shaped that when in normal position, as shown in Fig. 2, their outer ends will overlap and lie parallel with the lower ends of the skids 7. The arms are raised to the inclined position shown by dotted lines in Fig. 2 by any suitable means—such, for example, as that shown, and consisting of a fluid-pressure cylinder 12, having its piston-rod connected by a link 13 to an arm 14, keyed to the shaft 11. When the arms 10 are raised to the position shown in dotted lines, the bar or other article will slide laterally down the arms onto the storage-table, which is formed by a series of horizontal bars or skids 15, as clearly shown in Figs. 1, 2, and 3.

A feed-table provided with positively-driven rollers 16, adapted to feed a bar or other article to the shear or other mechanism for operating on the bars or other articles, is arranged parallel and preferably closely adjacent to the storage-table. In order to shift the bars or other articles from the storage to the feed table, a series of horizontal slides 17 are arranged in guideways 18, which are secured intermediate of and approximately parallel with the skids 15 and feed-rollers 16, as shown in Figs. 1 and 3. Dogs 19 are pivoted to the slides 17, and have at one end a toe or projection 20, which in normal position of the dog will project slightly above the upper surfaces of the skids and feed-rollers. The dogs are held in normal position by means of weights or other suitable devices on the opposite end thereof, as shown in Fig. 3. Rack-bars 21 are secured to or formed on the under sides of the slides 17, and are arranged to intermesh with a corresponding series of gear-wheels 22, keyed on the shaft 23. This shaft is rotated by means of a rack-bar 24, intermeshing with the pinion 25 on the shaft. The rack-bar is reciprocated back and forth on guideways 25^a by means of the piston 26 of the fluid-pressure cylinder 27,

the rack-bar being secured or connected to the piston by means of an arm 28, as shown in Fig. 3.

As bars or other articles pass onto the receiving-table A they are lifted by the arms 6 until the latter attain a sufficient inclination to cause the bars to slide down the arms or skids 7 into the boshing-tank. A bar may be immediately removed from the tanks by the arms 10, or a number of bars may be allowed to collect upon the skids 7 before removing them from the tank.

It will be observed by reference to Fig. 2 that the arms 10 will serve as stops to prevent bars sliding off of the skids 7. By raising the arms 10 to the position shown in dotted lines the bars lifted thereby will slide down upon the storage-table, from which they may be removed singly or collectively by means of the transfer mechanism, consisting of the slides 17 and dogs 19. In case any bars should be delivered onto the storage-table while the transfer mechanism is at the left the dogs 19 will be depressed on the return of the transfer mechanism to the right by contact with such bars and will assume normal position as soon as the dogs have passed to the right beyond bars lying on the storage-table.

I claim herein as my invention—

1. In a rolling-mill plant, the combination of a receiving-table, a boshing-tank arranged alongside of said table, inclined skids extending from the table to the tank, pivotally-mounted arms and means for moving the arms from a position beneath the plane of movement of a bar, &c., on the table into or approximately in alinement with the skids, substantially as set forth.

2. In a rolling-mill plant, the combination of a receiving-table, a boshing-tank arranged parallel or approximately parallel with the table, inclined skids extending from the table into the tank and having their lower ends shaped to stop and hold a bar in the tank, pivotally-mounted arms, and means for moving the arms from a position beneath the line of a bar, &c., on the table into or approximately into alinement with the skids, substantially as set forth.

3. In a rolling-mill plant, the combination of a storage-table, or supports, a boshing-tank arranged parallel or approximately parallel with the table, pivotally-mounted arms having their outer ends shaped to receive and support a bar, and means for raising the arms from the tank to such a height or inclination that the bars will slide along the arms onto the storage-table or supports, substantially as set forth.

4. In a rolling-mill plant, the combination of a feed-table, a storage-table or supports, a boshing-tank, the tables and tank being arranged parallel or approximately parallel, with each other, pivotally-mounted arms having their outer ends shaped to receive and support a bar, means for raising the arms from the tank to such a height or inclination that the bars will slide along the arms onto the storage-table, and means for shifting the bars from the storage-table onto the feed-table, substantially as set forth.

In testimony whereof I have hereunto set my hand.

SIGMUND V. HUBER.

Witnesses:

DARWIN S. WOLCOTT,
F. E. GAITHER.