

(No Model.)

W. S. REED.
STOCK FEEDING DEVICE FOR MACHINES.

No. 431,173.

Patented July 1, 1890.

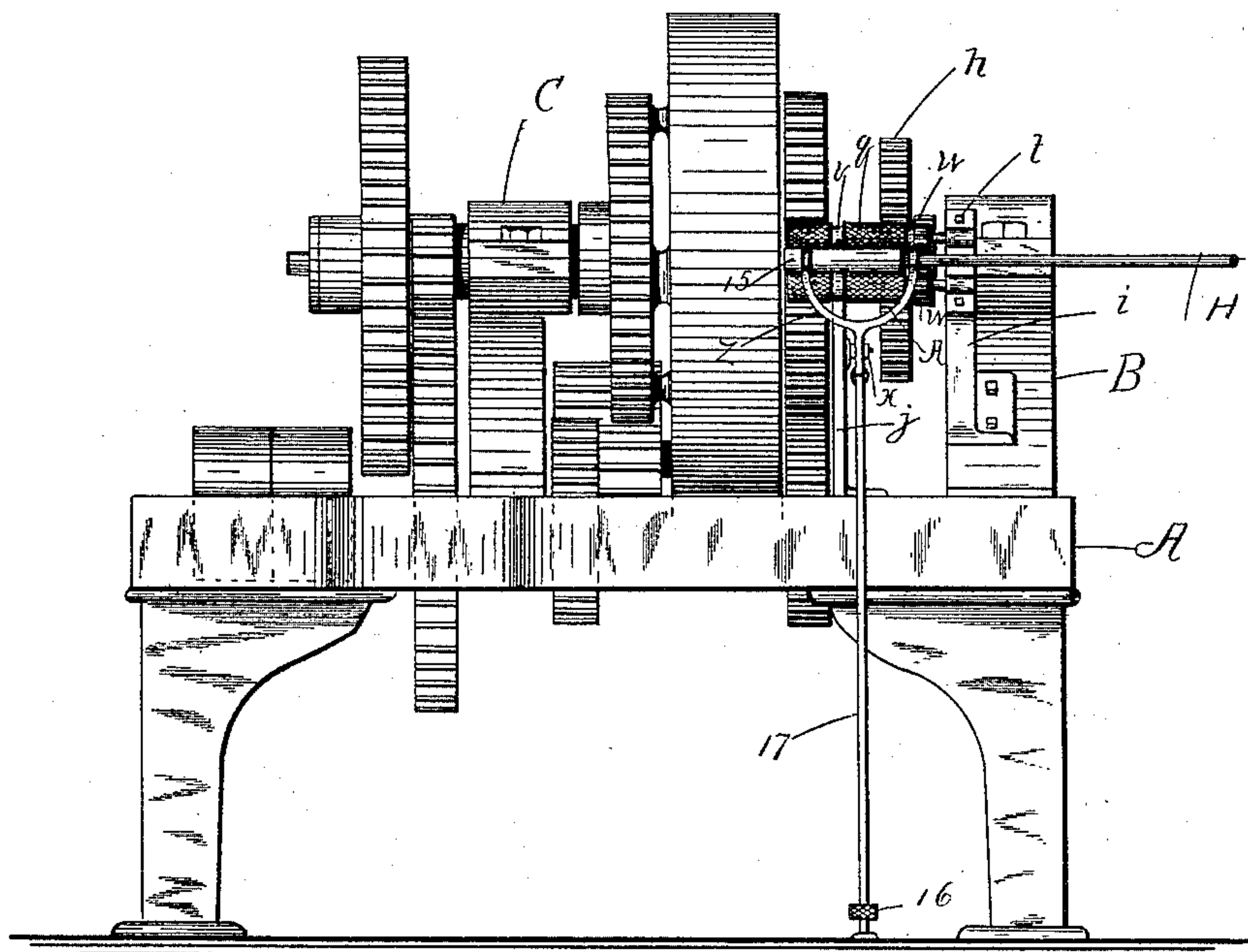


Fig. 1.

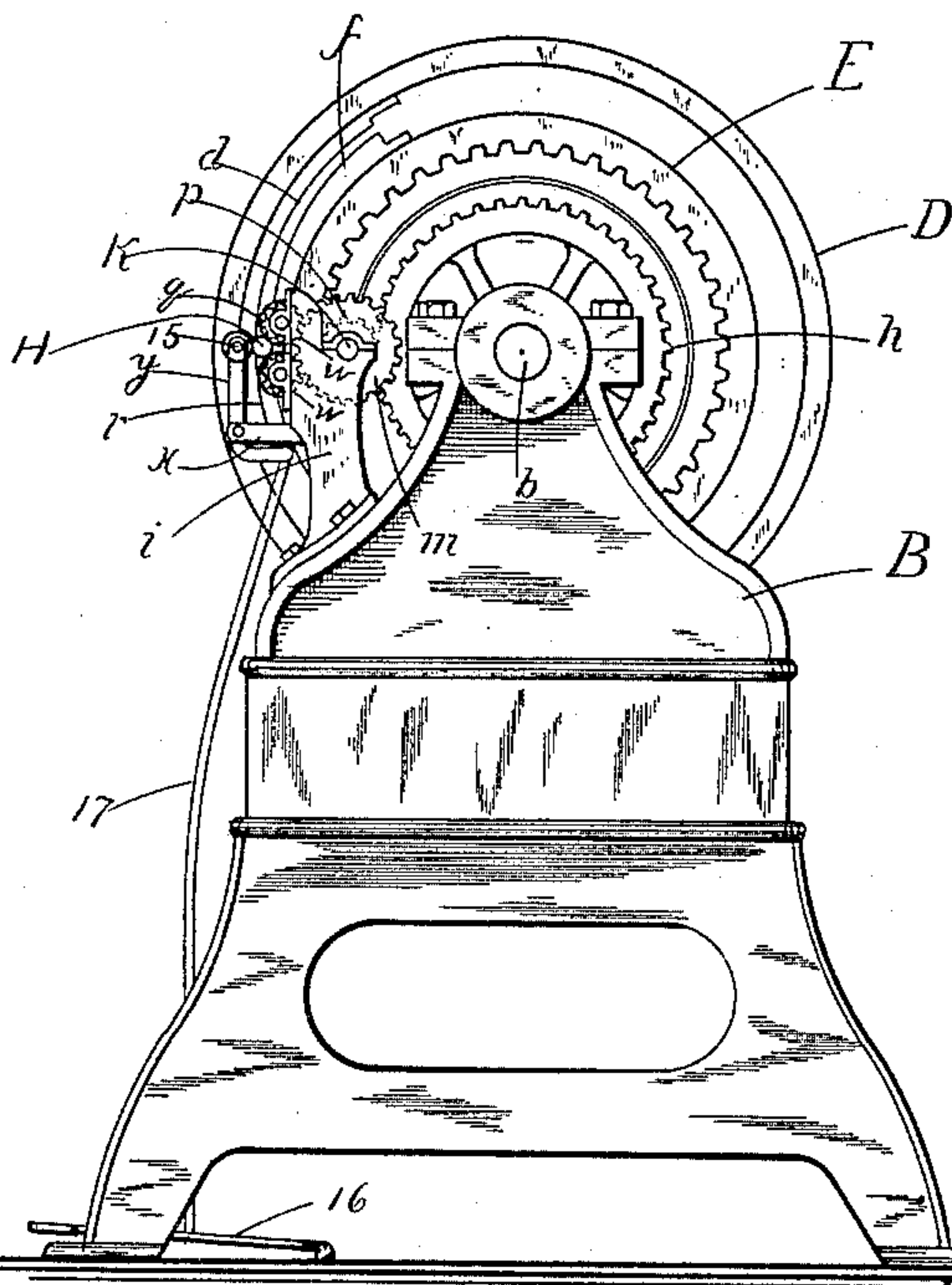


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE

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STOCK-FEEDING DEVICE FOR MACHINES.

SPECIFICATION forming part of Letters Patent No. 431,173, dated July 1, 1890.

Application filed March 14, 1890. Serial No. 343,882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. REED, of Leominster, in the county of Worcester, State of Massachusetts, have invented certain new and useful Improvements in Stock-Feeding Devices for Machines for Making Rolled Forgings, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a rolling-machine, showing my improvement in use; and Fig. 2, an end elevation of the same.

Like letters and figures of reference indicate corresponding parts in both figures of the drawings.

My invention relates especially to means for rotating the "stock" or metallic bar from which rolled forgings are made and while in process of formation between the dies, it being especially applicable for use with the rolled-forging machine shown and described in Letters Patent of the United States granted to Charles E. Gould, numbered 385,752, dated July 10, 1888, wherein vertical rotary forming-dies are employed.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the bed of the machine, and B C vertical standards thereon, in which the main shaft *b* is journaled. The forming-dies *d f* are respectively secured on the inner face of a cylinder D and disk E, disposed on the shaft and connecting mechanism. A gear *h* is disposed on the shaft. A vertical bracket or standard *i* is secured to the standard B, and upon the bed A a vertical standard *j* is disposed between the gears *g h*. A horizontally-arranged shaft *k* is journaled in the standards *i j* and bears a gear *m* and pinion *p*, said pinion meshing with the gear *h* on the main machine. Two rolls *q r* are journaled at one end in bearings *t* in the standard *i*, the bodies of said rolls being supported in suitable bearings *v* in the standard *j*. Said rolls are disposed in the

same vertical plane and have their faces or surfaces corrugated or indented. The shaft of each roll is provided with a pinion *w*, which meshes with the gear *m*. A horizontal arm *x* projects outwardly from the standard *j*, and pivoted in said arm there is a bell-crank lever *y*, the vertical arm *z* of said lever being forked, as shown in Fig. 1. Journaled in the arms thus formed there is a horizontal roll 15, arranged in the same horizontal plane as the line of contact of the rolls *q r*.

A treadle 16 is hinged below the frame of the machine, and an arm 17 connects said treadle with the short arm of said bell-crank lever.

It is not deemed essential in the present application for the purpose of illustrating the uses of my improvement to describe the construction or operation of the main portion of the machine.

The dies *d f* have a vertical rotary and reciprocating movement, and the bar H, from which the forging is formed, is inserted horizontally between said dies. Considerable difficulty has heretofore been experienced in supporting said bar in the proper position, and it has, moreover, been found that by rotating the same much more perfect work could be effected.

In my improvement the gear *h*, while the main machine is in operation, imparts a rapid rotary movement to the corrugated rolls *q r*. The bar H, being inserted between the dies in the usual manner, is in engagement with the surfaces of said rolls. The treadle 16 is now depressed, drawing down the short arm of the bell-crank lever *y* and throwing the smooth roll 15 inward against said bar, thereby holding it firmly in position. The bar being thus forced against the revolving corrugated rolls, a rapid rotary movement is imparted thereto, which greatly facilitates the action of the dies upon said bar H. The forging is thus formed. By releasing the treadle 16 said bar may be moved forward between the dies and the operation repeated.

Having thus explained my invention, what I claim is—

1. A feed device for rolled-forging machines, comprising two corrugated rolls geared to the die mechanism, a smooth roll mounted in a

pivoted journal, a treadle mechanism for forcing said roll into engagement with the stock, whereby it may be held between said rolls, and a rotary movement imparted thereto, substantially as described.

2. A rotary stock-feed for rolled-forging machines, comprising companion rolls mounted in the same plane and actuated by the driving mechanism of the machine, and a smooth roll mounted in pivoted journals and adapted to hold the stock in engagement with said companion rolls, substantially as described.

3. In a device of the character described, the rolls *q r*, mounted on the body of the machine and actuated by the driving mechanism thereof, in combination with the roll 15, mounted in pivoted journals, substantially as and for the purpose set forth.

4. In a stock-feeding device for rolled-forging machines, a series of roughened or corrugated rolls journaled on the machine-body adjacent to the forming-dies and actuated by the driving mechanism thereof, in combination with a pivoted clamping-roll and mechanism for forcing said roll against the stock.

5. In a machine for making rolled forgings, the rolls *q r*, journaled on the machine-frame and geared to the die-driving mechanism, combined with the clamping-roll 15 on the lever *y*, the rod 17, and treadle 16, for actuating said lever, all being arranged to operate substantially as and for the purpose set forth.

WILLIAM S. REED.

Witnesses:

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