(No Model.)

D. A. RITCHIE.

MACHINE FOR TRIMMING ELBOW BLANKS.

No. 432,564. Patented July 22, 1890.

Fig. 1.

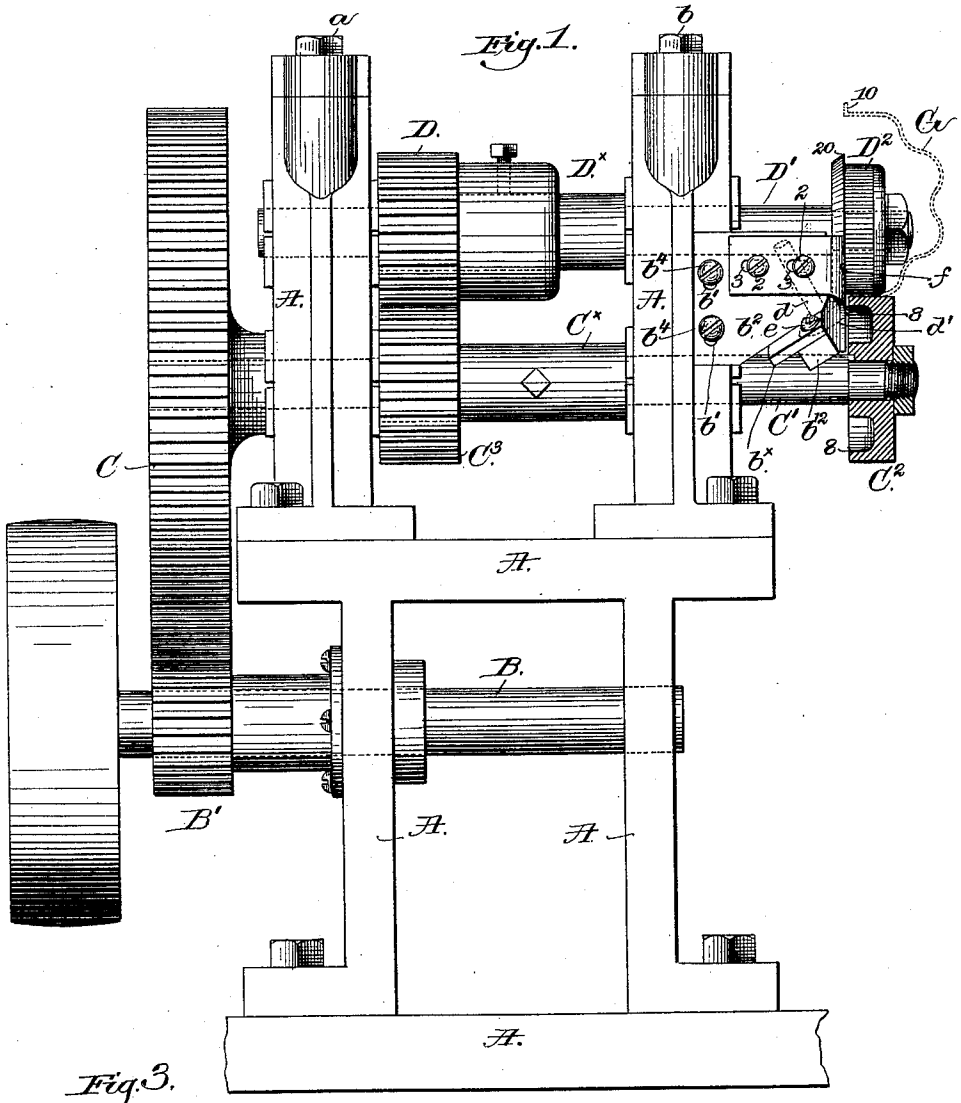


Fig. 3.

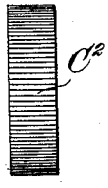
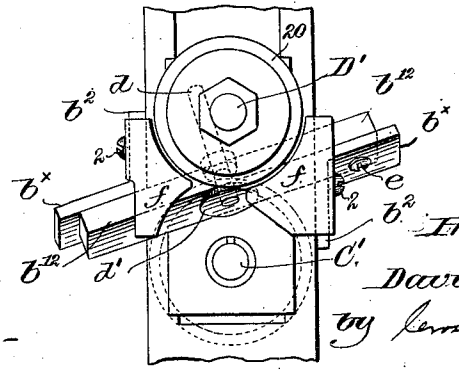


Fig. 2.



Witnesses.
John F. C. Brinkerhoff
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID A. RITCHIE, OF CAMBRIDGE, MASSACHUSETTS.

MACHINE FOR TRIMMING ELBOW-BLANKS.

SPECIFICATION forming part of Letters Patent No. 432,564, dated July 22, 1890.

Application filed November 9, 1889. Serial No. 329,802. (No model.)

To all whom it may concern:

Be it known that I, DAVID A. RITCHIE, of Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Machines for Trimming Elbow-Blanks, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

In the manufacture of the elbow described in United States Patent No. 342,465, granted to me on the 25th day of May, 1886, it is necessary to trim evenly the projecting arc-shaped flanges of the blank before putting them together and interlocking them to complete the seam.

The machine made the subject of this invention has been devised to trim the arc-shaped edges of the flanges extended from the edges of the molded halves of the elbow.

My invention consists, essentially, in the combination, with feed-rolls, of a cutter to trim the flanged edges extended down at one side of one of the said rolls, as will be described.

Figure 1, in side elevation, represents a machine embodying my invention; Fig. 2, a partial front elevation of the machine, shown in Fig. 1, the feed-wheel C^2 being supposed to be removed in order to show the cutter back of it, the position of the said wheel being, however, indicated by dotted lines. Fig. 3 is a detached view of the feed-roll C^2.

The frame-work A, of suitable shape to sustain the working parts, has proper bearings for the various shafts employed.

The main shaft B, driven in any suitable manner, has a pinion B′, which engages a toothed gear C, fast on a sleeve $C^\times$, which in turn is fast on the shaft C′, to the front end of which is secured by a spline or otherwise the feed-roll C^2. The shaft C′ has fast on it a gear C^3, which engages a gear D, fast on a sleeve $D^\times$, fast on the shaft D′, to the front end of which shaft is fastened the feed-wheel D^2. The sleeves $C^\times$ $D^\times$ are employed to give additional rigidity to the parts, all as usual, and the screws *a b*, provided to adjust the bearings for the upper shaft D′.

At each end of the frame-work I have secured in an adjustable manner, by screws b^4, stands b^2, each provided with a like ear $b^\times$, the said ears having attached to them, by like screws *e*, a bearing b^{12}, which receives the shaft *d*, (shown by dotted lines,) the said shaft being inclined with relation to the axis of rotation of the shaft C′, and being provided at its lower end with a disk-like or rotating cutter *d′*, the edge of which (see Fig. 1) is so set as to co-operate with the edge 8 at the inner side of the feed-wheel C^2, the said edge 8 forming the second member of a cutting mechanism. The bearing b^2 has secured to it at opposite sides, by screws 2 in slots 3, the shanks of suitable like gages *f*, which serve to keep the flange 10 of the elbow blank or half G (shown by dotted lines, Fig. 1) in contact with the inner side of the wheel C^2, and at opposite sides the point where the flange is to be trimmed. The wheel D^2 has a flange 20, which overlaps the edge of the wheel C^2 and acts to keep the flanged part 13 of the pipe closely against and about the right-angled edge of the said wheel C^2, just at the cutting-point, the said flange, by its co-operation with the wheel C^2, preventing any crinkling or breaking of the said flange during the trimming operation. The peripheries of the wheels C^2 and D^2 will in practice be milled or scored, as shown by the wheel D^2, to aid in feeding the pipe, the said milling also aiding in smoothing any small wrinkles or imperfections in the blank passing between the said rolls, should said imperfections exist.

In operation the flanged blank G is inserted between the two feed-wheels, as in Fig. 1, with the flange 10 against the inner edge of the wheel C^2, and the machine is started. The feed-wheels in their rotation feed the blank longitudinally, and the flange 10, drawn between the inner edge of the wheel C^2 and the cutter *d′*, causes the cutter to be rotated, so

that it, co-operating with the edge 8, shears or trims the flange evenly or of uniform width.

I claim—

1. In a machine for trimming shaped elbow-blanks, the feed-wheel C^2, having the edge 8, and the wheel D^2, combined with the cutter d', to operate substantially as described.

2. In a machine for trimming shaped elbow-blanks, the feed-wheel C^2, having the edge 8, and the wheel D^2, having the flange 20, combined with the cutter d' and with a gage, to operate substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID A. RITCHIE.

Witnesses:
GEO. W. GREGORY,
E. J. BENNETT.