(No Model.)

J. C. TALIAFERRO.

MACHINE FOR FORMING GIBS OR FLANGES ON METAL BARS.

No. 438,364. Patented Oct. 14, 1890.

Fig. 1.

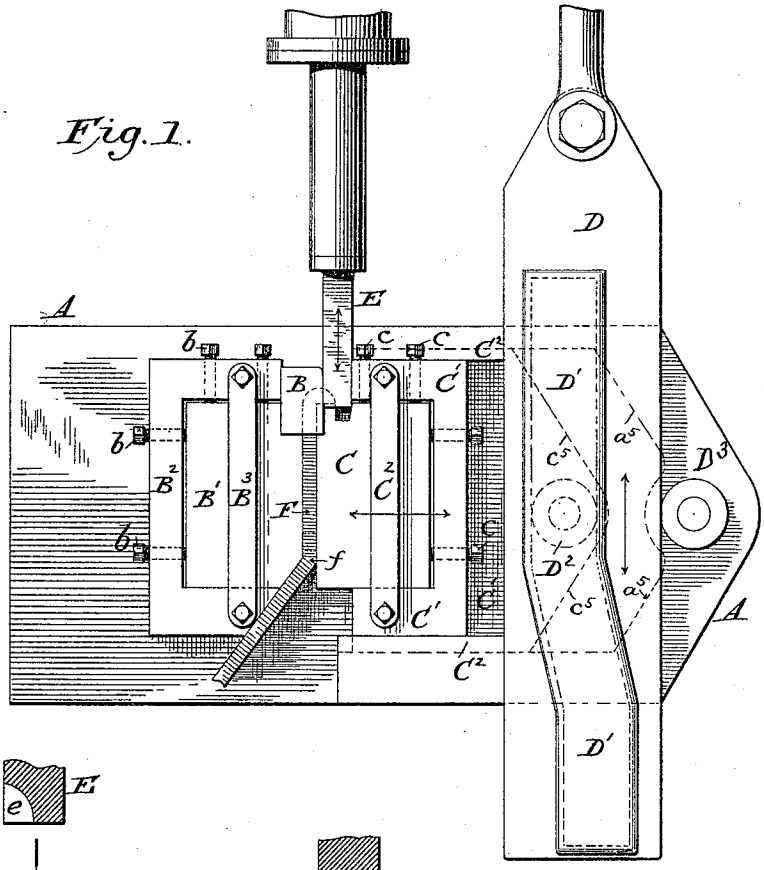


Fig. 2.

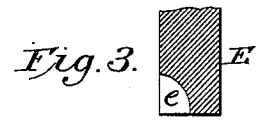
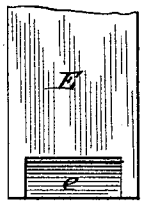


Fig. 3.

Fig. 4.

Fig. 5.



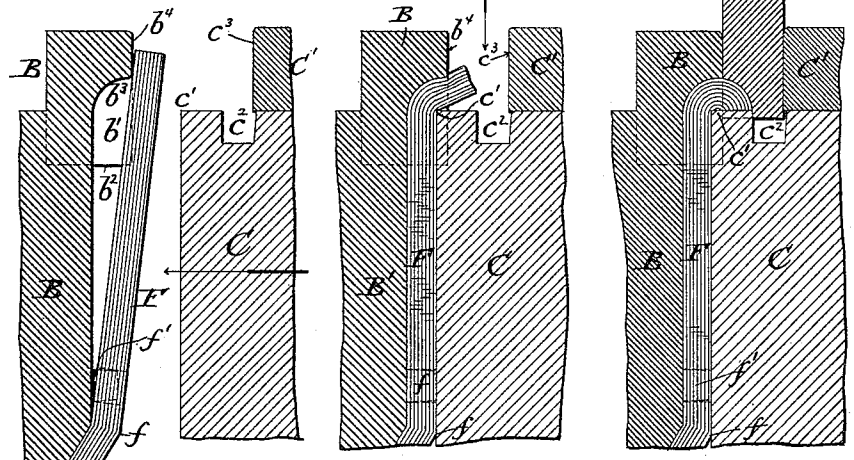


Fig. 6

Attest.

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MACHINE FOR FORMING GIBS OR FLANGES ON METAL BARS.

SPECIFICATION forming part of Letters Patent No. 438,364, dated October 14, 1890.

Application filed July 11, 1890. Serial No. 358,427. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TALIAFERRO, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Machines for Forming Gibs or Flanges on Metal Bars, of which the following is a specification.

My invention is especially designed for forming flanges or gibs on arched bars for railway-car trucks.

In carrying out my invention I place the straight end of a metal bar of suitable size and shape in front of a female die, then cause a suitably-shaped male die to press the end of the bar into the female die to bend the rod to the proper angle. I then cause a plunger carrying a recessed die to act upon the end of the bent portion of the rod to shear off superfluous metal and give it a symmetrical shape.

The apparatus preferably employed is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the apparatus; Fig. 2, a detail view in section of the several dies, showing the metal bar in the first position;. Fig. 3 is a similar view showing the dies and bar in the second position; Fig. 4, a similar view showing the dies and bar in the third or final position. Fig. 5 is a detail view of the recessed die or plunger, and Fig. 6 is an edge view of the arched bar with the gib or flange formed at one end.

Any suitable framing A may be employed, and the female die B is mounted in a die-block B′, which is secured by adjusting-screws b to a framing B^2. A tie-rod B^3 extends over the block B′ and secures together opposite sides of the frame B^2. The die B is formed with straight parallel sides b', is open at one end b^2, and its end b^3 is curved.

The die C is mounted and secured by set-screws c to a framing C′, and a tie-rod C^2 connects opposite sides of this frame. The frame C′, with the die, is adapted to slide in guides C^2 in the frame, and is moved toward and from the die B by a reciprocating plate D, having a cam-groove D′ in its under side, as indicated by dotted lines, in which a roller D^2, connected with the frame C′, travels.

D^3 is a guide-roller for the plate D. The dotted lines a^5 indicate the inner edge of the front end of the frame, and the lines c^5 indicate the end of the frame C′.

The die C at its inner end has a right-angular corner c', which is in line with that part of the die B where the curved end b^3 commences. This die is also formed with a recess c^3, for a purpose hereinafter described.

The plunger E is arranged to move at right angles to the direction in which the die C moves, and when moved inward passes between the inner face b^4 of the die B and the end c^3 of the frame C′. This plunger E is formed with a recess e, into which the end of the bar F extends when the plunger is moved to the position shown in Fig. 4.

The plunger E may be operated in any suitable way. The several steps of the process are shown in the drawings.

As shown in Fig. 2, the bar F, having first been bent to a proper angle at f, is placed in position in front of the die B. The plate D is then operated to force the die C against the bar F and compress it into the die B. At the end of its movement the parts will occupy the position shown in Fig. 3, and the bar F will have the shape shown in that figure. The plunger E is then moved inwardly, as indicated by the arrow, and shears off superfluous metal from the end of the bar F and bends it to a symmetrical shape, as shown in Fig. 4. That part of the plunger E in rear of the recess e extends into the recess c^2, so that the edges of the bar are formed truly.

The end of the bar F, it will be seen, is bent and made to rest upon the end c' of the die C, and is thereby made to extend at right angles from the main body of the bar. A guide-pin f' may be employed to hold the bar F in position between the dies.

I claim as of my own invention—

1. The combination, substantially as hereinbefore set forth, of the male die, the female die, means for moving one of said dies toward and from the other, and the recessed plunger movable in a direction at right angles to the direction of movement of the die.

2. The combination, substantially as hereinbefore set forth, of a female die having a curved recess, a male die having a right-angu-

lar corner, means for moving said die toward and from the female die, and a recessed plunger moving at right angles to the direction of said die, for the purpose specified.

3. The combination, substantially as hereinbefore set forth, of the stationary female die, the male die having a right-angular corner and a recess c^2 adjacent thereto, guides in which said die is mounted, means for moving said die toward and from the female die, and the recessed plunger, which moves toward and from said recess, further bends the end of the bar operated upon, shears off superfluous metal, and finishes the bar.

In testimony whereof I have hereunto subscribed my name.

JOHN C. TALIAFERRO.

Witnesses:
C. D. M. COBB,
J. W. CRAIG.