

Candee & Taylor.

Die for Making Axle-Nuts.

Patented Jun. 2, 1868.

N^o 78,576.

Fig: 1.

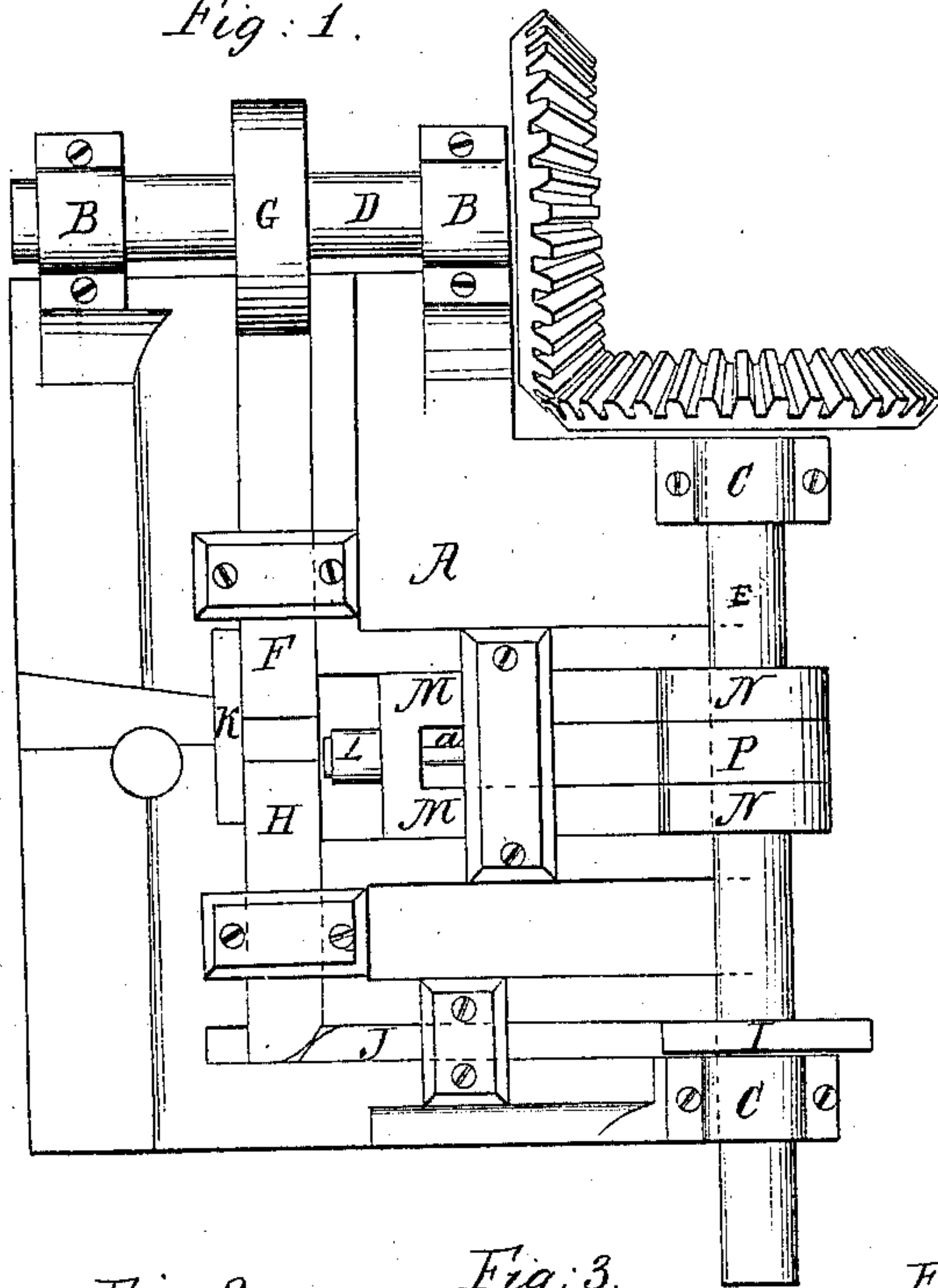


Fig: 7.

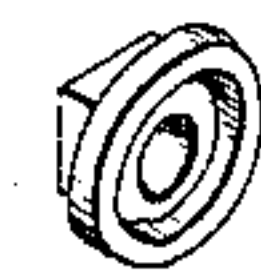


Fig: 8.



Fig: 2.

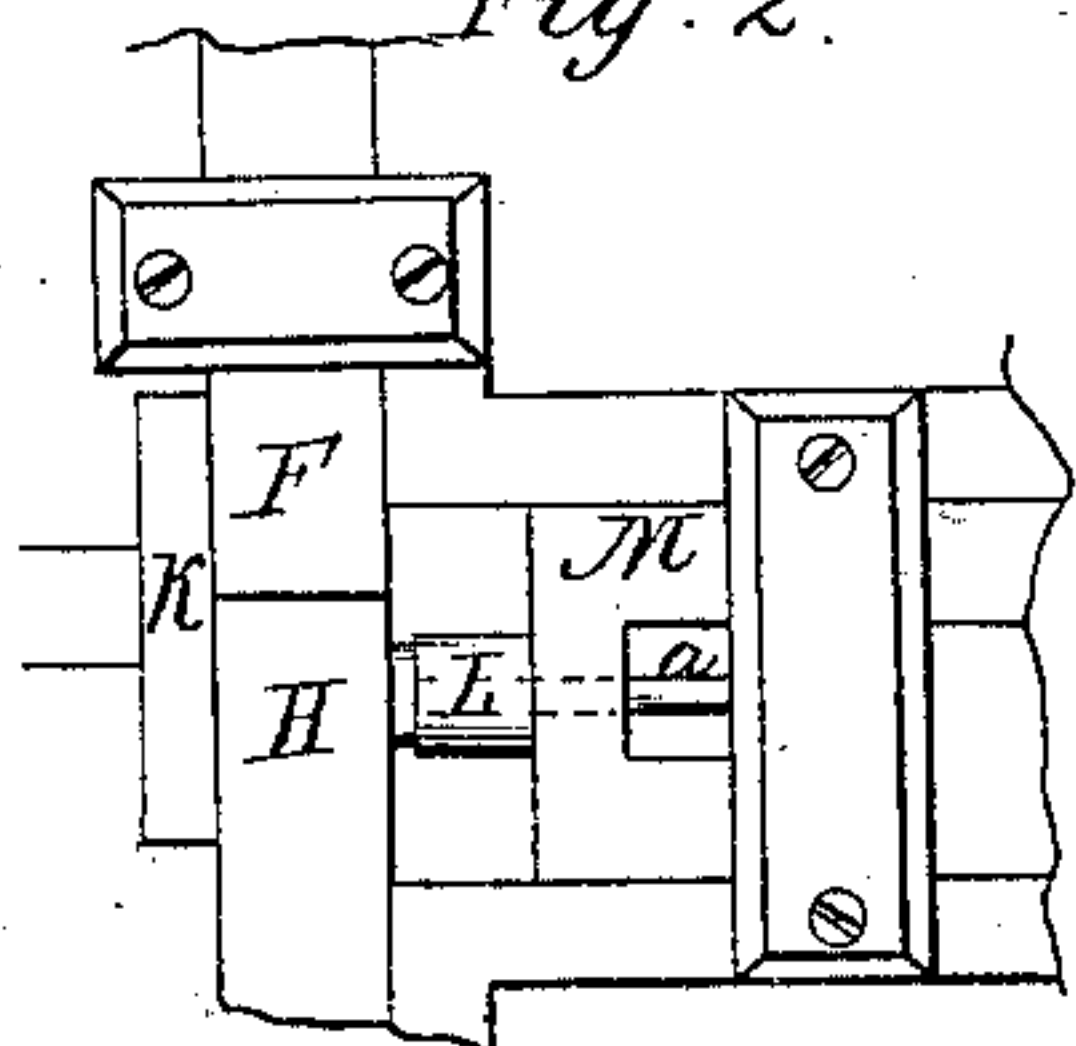


Fig: 3.

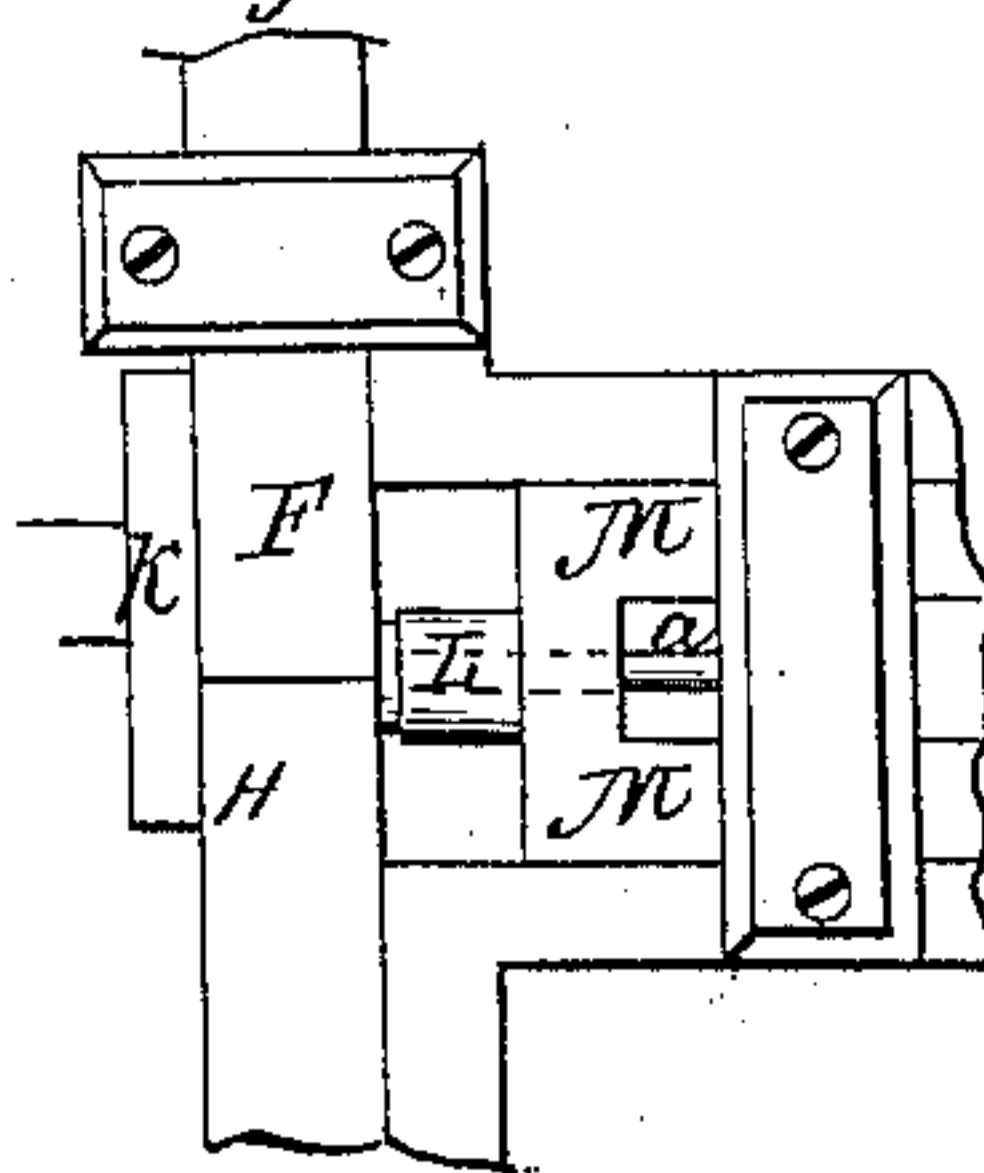


Fig: 4.

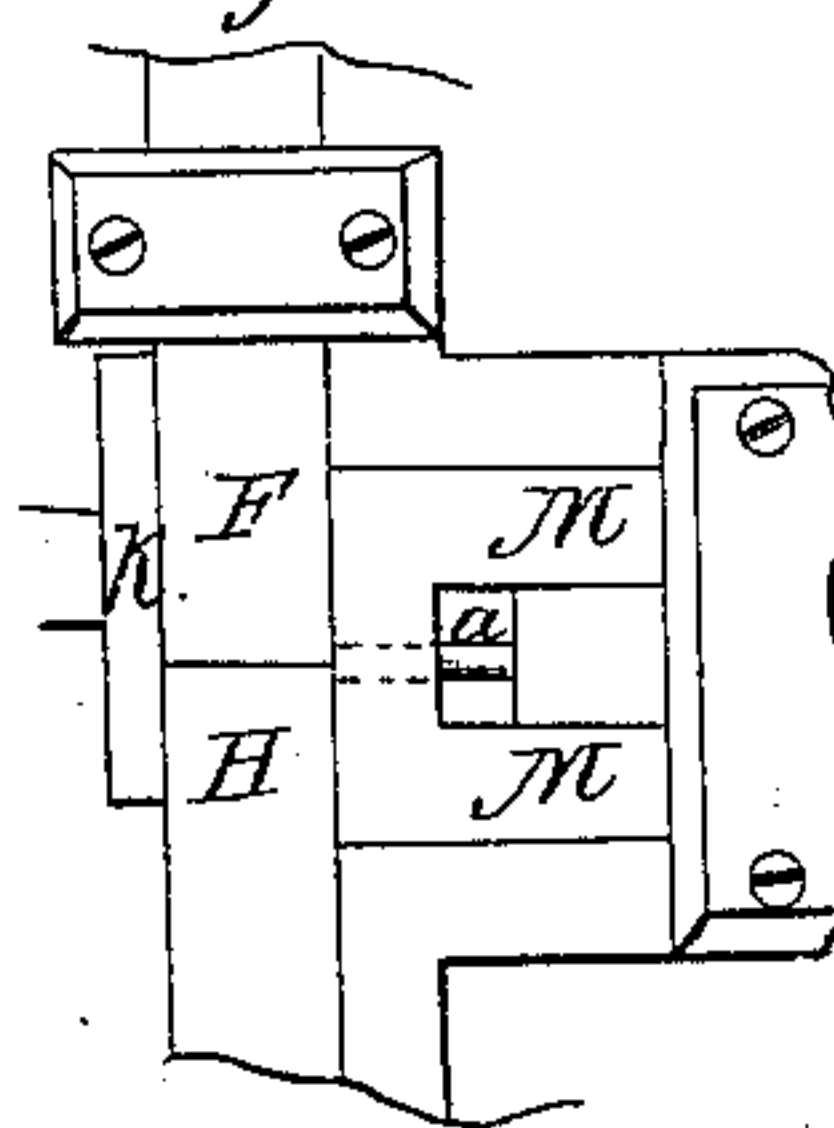


Fig: 5.

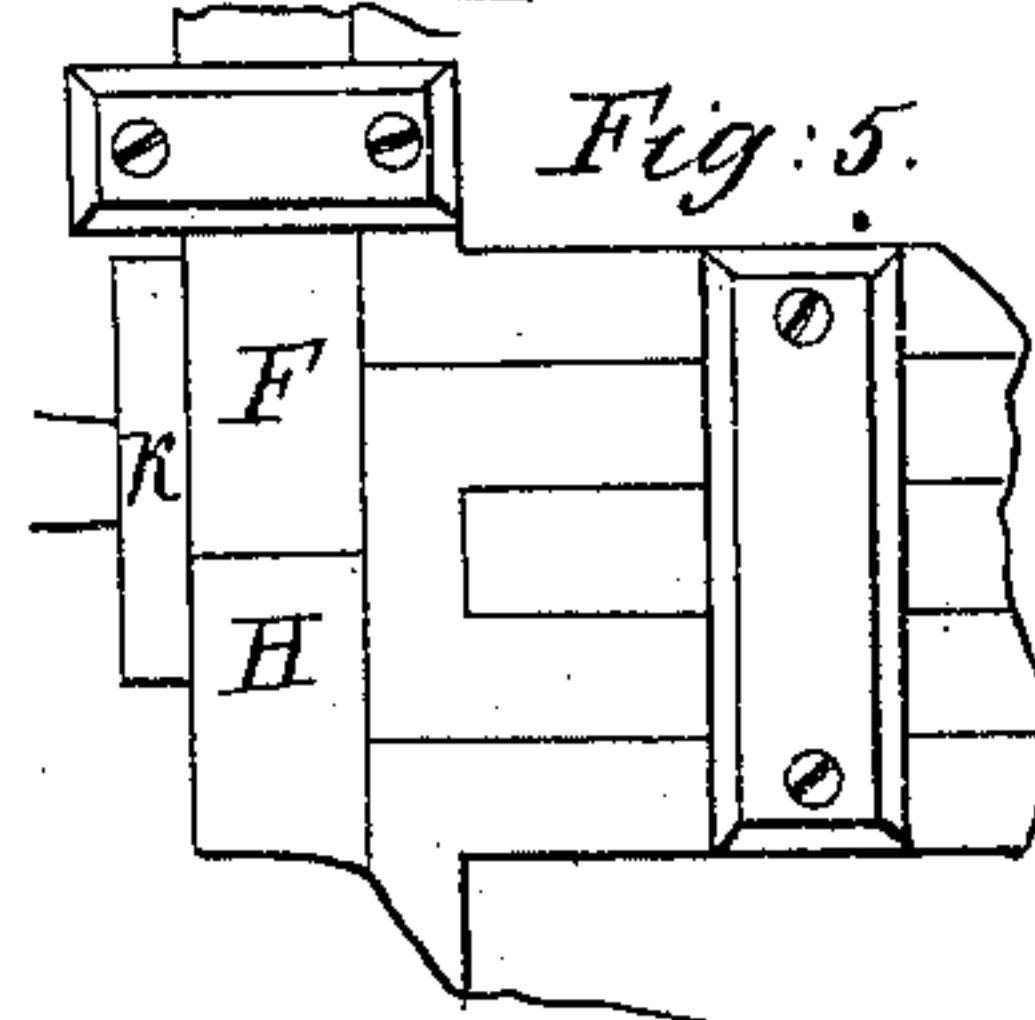
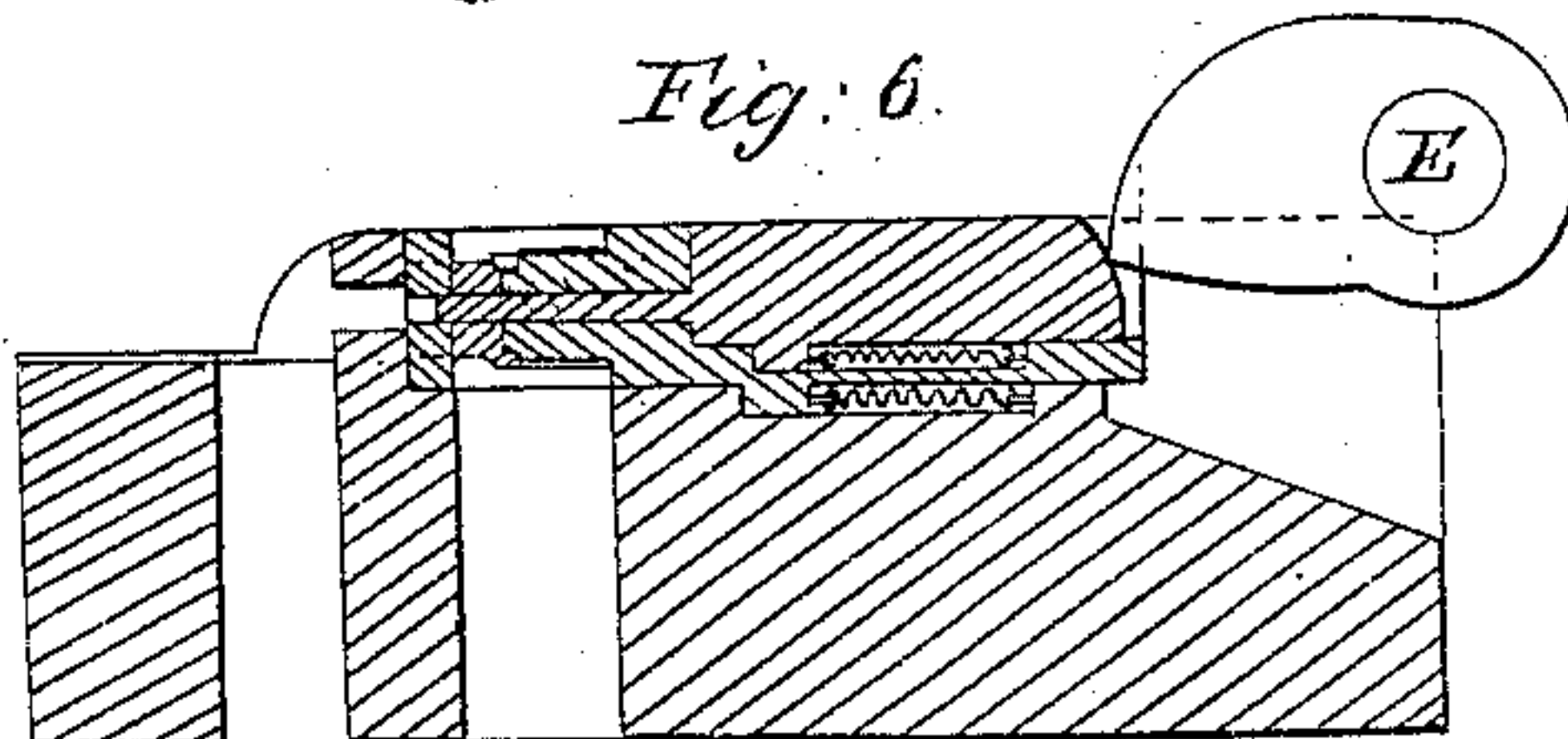


Fig: 6.



Witnesses;
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A. B. CANDEE, OF HAMDEN, AND L. S. TAYLOR, OF SOUTHTON, CONNECTICUT, ASSIGNORS TO AETNA NUT COMPANY.

Letters Patent No. 78,576, dated June 2, 1868.

IMPROVED DIES FOR MAKING AXLE-NUTS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, A. B. CANDEE, of Hamden, in the county of New Haven, and L. S. TAYLOR, of Southington, in the county of Hartford, and State of Connecticut, have invented a new Improvement in Machine for Making Axle-Nuts; and we do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view,

Figures 2, 3, 4, and 5, detached views to illustrate the operation,

Figure 6, transverse section through the dies, and in

Figures 7 and 8, perspective views of axle-nuts, such as are manufactured by this machine.

This invention is designed for the manufacture of the nuts which are used upon the outer end of carriage-axles, for the purpose of securing the wheel thereon, and the invention consists in the arrangement of a pair of dies which receive and cut off the blank from the bar of heated metal, and transfer the said blank to a position opposite the requisite punches, and by the operation of which said punches the nut is formed in the same die which transfers the blank.

To enable others to construct and use our improvement, we will proceed to describe the same as illustrated in the accompanying drawings.

A is the bed-plate, supporting, in bearings B B and C C, two shafts D and E, at right angles to each other, and the two geared together, so as to revolve at equal velocities.

F is one part of a die, operated by a cam, G, on the shaft D.

H is the other part of the same die, operated by a cam, I, on the shaft E through a rod, J, working against the outer end of the die H.

The die is formed or attached to the inner end of what are termed dies F and H, and are arranged so that when in the position as seen in fig. 1, the heated bar is placed before the die F through a block, K; then, as the machine is in operation, the die H moves up to and grasps the rod between the two dies F and H; then the said two dies advance together to the position in fig. 3, cutting off the blank from the bar as it bears against the opening through the block K. Having been thus cut and transferred to this point, there is arranged, at right angles to the said two dies, a punch, L, fixed to a slide, M, operated by a cam, N, the said punch L being constructed so as to give to the inner end of the nut the proper form, as seen in fig. 7 or 8; and the said punch, moved forward into dies F and H, forces the metal into the said dies to form the exterior of the nut; then a punch, *a*, within the punch L, is forced forward by a cam, P, and pierces the nut; then, the punches retreating, the dies open, and discharge the completed nut, receive a new blank, and operate as before described.

The cut-off block K is arranged so as to be removed, as occasion may require, for repairs, or when it has become worn by the cutting off of the blanks against its inner surface.

Having thus fully described our invention, what we claim as new and useful, and desire to secure by Letters Patent, is—

The combination of the cut-off block K, gripping-dies F and H, die L, and punch *a*, all constructed, arranged, and operating in the manner substantially as described.

A. B. CANDEE,
L. S. TAYLOR.

Witnesses:

JOHN E. EARLE,
A. J. TIBBITS.