

No. 858,686.

PATENTED JULY 2, 1907.

DE WITT C. VAN VALER.
MACHINE FOR TEMPERING AND SHAPING GOLD PENS.

APPLICATION FILED AUG. 16, 1906.



Fig. 2.

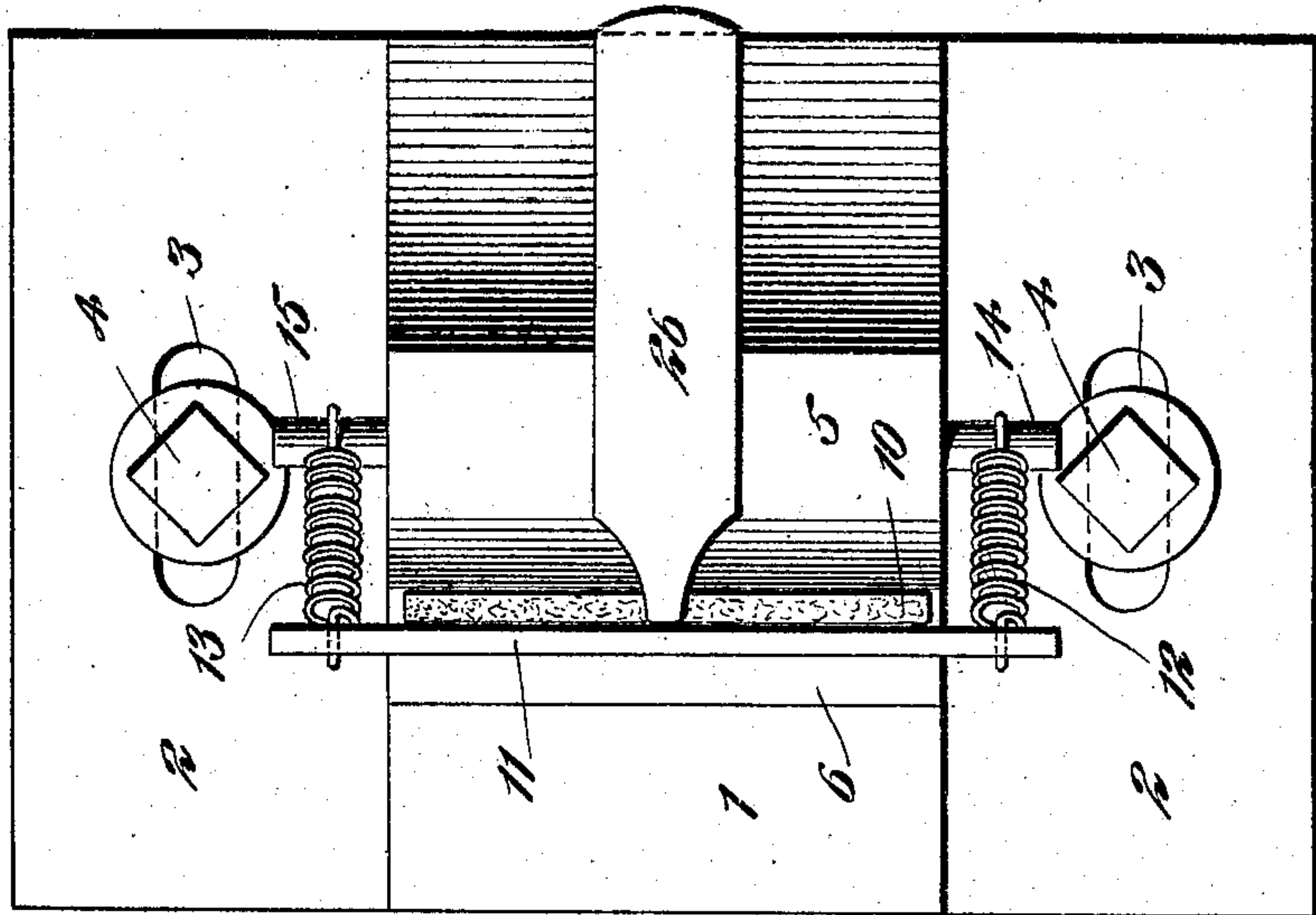


Fig. 4.

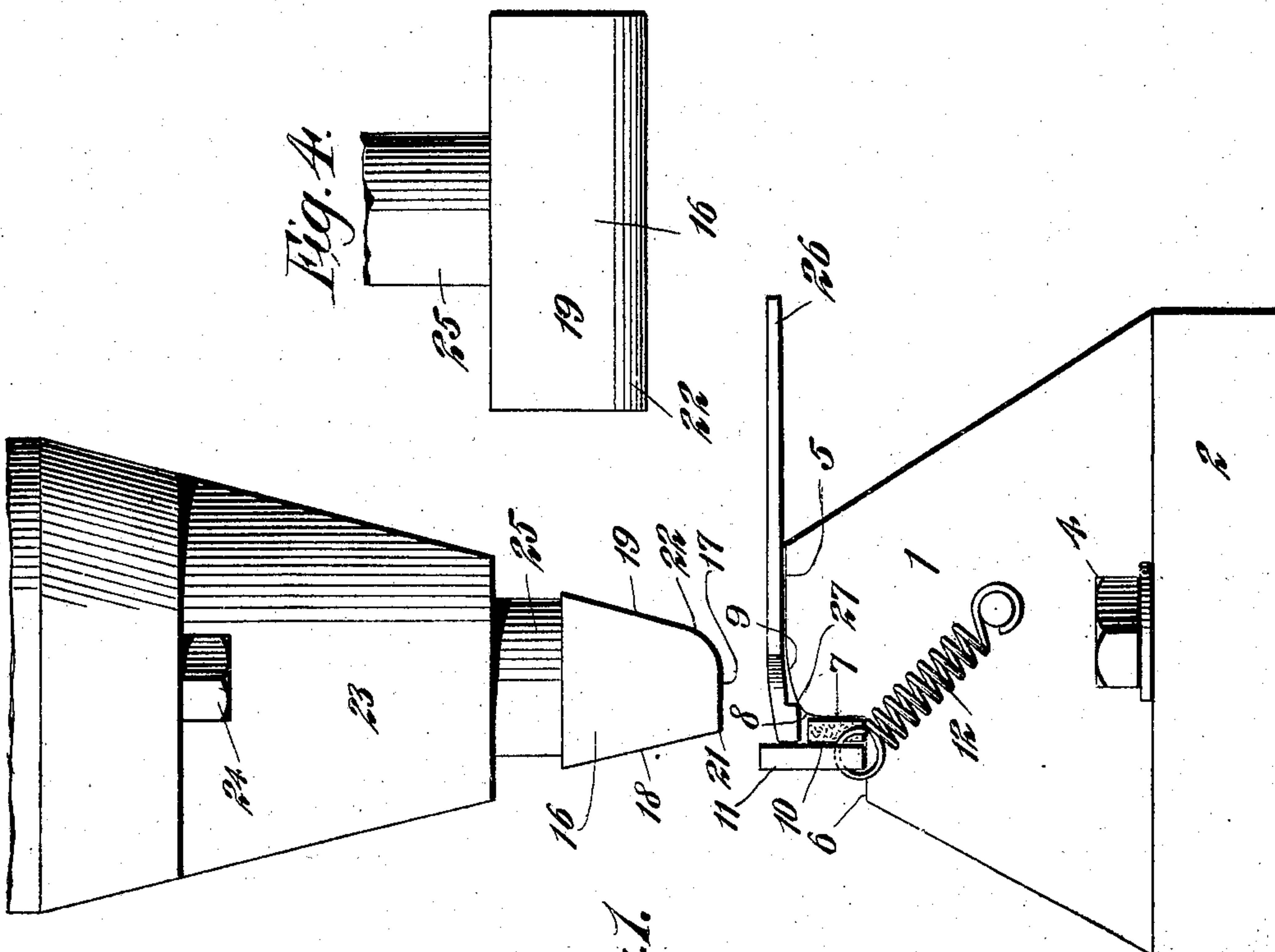


Fig. 1.

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MACHINE FOR TEMPERING AND SHAPING GOLD PENS.

No. 858,686.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed August 16, 1906. Serial No. 330,919.

To all whom it may concern:

Be it known that I, DE WITT COMPTON VAN VALER, a citizen of the United States of America, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Machines for Tempering and Shaping Gold Pens, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact specification.

My invention relates to a machine for tempering and forming pens, particularly gold pens having iridium or like points and its object is to provide a machine to take the place of hand-work, to increase the uniformity of the product and to insure the protection of the iridium or like point during such operation.

In carrying out this invention I make use of a shaping block or anvil preferably formed with a stepped portion, the upper step of which is shaped to conform to the shape desired to be imparted to one side of the pen point. This upper surface or step is preferably a plane surface having a slight curve at and near its edge. I also provide a hammer and means for forcing it towards the anvil preferably forming it with a tapered head having a plane lower surface, with a straight edge and a curved edge. The straight edge may best be located to one side of the upper step before described. To protect the iridium point I prefer to locate, in the angle of the stepped anvil, a protecting body or block preferably having its upper surface below the plane of the upper stepped surface and formed of some softer material than the anvil, preferably of leather. I also prefer that this protecting body be of a width slightly less than the width of the blank formed upon one end of the pen and carrying the iridium, so that the excess portion of said blank may be nicely curved by the upper step's curved surface to gradually mold into the shank of the pen. To secure uniformity of product, I provide a registering means, preferably a bar of lead held by springs resiliently against the protection body and preferably extending above the plane of the upper stepped surface, so that a workman may present a blank to the anvil's upper surface with the point always at uniform distance from the edge of the same.

A preferred embodiment of my invention is set forth in the following specification and in the accompanying drawings, in which

Figure 1 is a side elevation of my improved apparatus. Fig. 2 is a plan of the same with the hammer removed. Fig. 3 is a side elevation of the blank as it comes from the apparatus, and Fig. 4, is a view of the right face of the hammer shown in Fig. 1.

On the drawings 1 is the anvil having a base 2 provided with slots 3 through which pass bolts 4 to fasten it in place. The anvil 1 is formed with two tapered sides, one terminating in the upper stepped surface 5

and the other in the lower stepped surface 6. The riser 7 between the two stepped surfaces may form a right angle with the lower surface and the upper part of the riser may be curved as at 8, which curve together with the curve 9 of the surface 5, is secured by bolts 24, in position above the anvil, into which the piston stem 25 of the hammer may pass. Although I have here shown the hammer as of the hydraulic class I do not limit myself to so operating it.

The pen blank 26, before undergoing the operation of this machine, is flat and bluntly pointed and is provided with a blank at one end of greater thickness, carrying the point of iridium and making a projection thereon having a more or less pronounced heel 27. The blank carrying the iridium from its toe to its heel is preferably of greater length than the width of the protecting leather body. The heel thus rests upon the curved part of the anvil, when its toe abuts against the registering bar. The pen is held in this easily adjusted position by the workman and the hammer caused to descend pressing firmly against the pen and shaping the iridium point and blank from that shown in Fig. 1 to that shown in Fig. 3 and tempering the pen. The leather beneath the point protects it from injury and from becoming broken or injured, which must be assured. The curved corner of the hammer prevents the marring of the pen shank and the resiliently held registering rod is not allowed to harm the point, for it is yieldingly held in position.

Having now fully described my invention, what I claim as new herein and desire to secure by Letters Patent, is:—

1. A machine for tempering and forming the end of a pen such as herein described consisting of a single stepped shaping anvil, a hammer adjacent thereto above and slightly projecting over the step, the faces of the hammer and anvil being configured in accordance to the desired shape of the pen, a registering bar free of the hammer and higher than the face of the anvil, said registering bar being yieldingly held toward the anvil.

2. A machine for tempering and forming the end of a pen such as herein described consisting of a stepped shaping anvil, a hammer adjacent thereto, the faces of the hammer and anvil being configured in accordance to the desired shape of the pen, a point protecting body composed of a substance softer than the anvil, in the angle of the step and adapted to support the point when the hammer is upon the pen.

3. A machine for tempering and forming the end of a pen such as herein described consisting of a stepped shaping anvil, a hammer adjacent thereto, the faces of the hammer and anvil being configured in accordance to the desired shape of the pen, a protecting body for the pen point below the plane of the block, and in the angle of the step, and adapted to support the point when the hammer is upon the pen.

4. A machine for tempering and forming the end of a pen such as herein described consisting of a stepped shaping anvil, a hammer adjacent thereto, the faces of the hammer and anvil being configured in accordance to the

desired shape of the pen, a protecting body for the pen point below the plane of the anvil, and in the angle of the step, and a yielding bar in front of the protecting body and bearing against it.

5 5. A machine for tempering and forming the end of a pen such as herein described consisting of a stepped shaping anvil, a hammer adjacent thereto, the faces of the hammer and anvil being configured in accordance to the desired shape of the pen, a protecting body for the pen
10 point below the plane of the block and in the angle of the step, said body being formed of leather.

6. In a device of the kind herein specified, a supporting anvil having a stepped upper surface, a curved forward edge to the upper step thereof, a yielding protecting body
15 in the angle of the lower step and of less height than the upper step and of a width slightly less than the blank carrying the iridium or like point to be acted upon, in combination with a hammer above said anvil.

7. In a device of the kind herein specified, a supporting
20 anvil having a stepped upper surface, a curved forward edge to the upper step thereof, a yielding protecting body in the angle of the lower step and of less height than the upper step and of a width slightly less than the blank carrying the iridium or like point to be acted upon, in
25 combination with a hammer above said anvil, and a registering bar occupying in part at least a position slightly above the plane of said upper step.

8. In a device of the kind herein specified, a supporting
30 anvil having a stepped upper surface, a curved forward edge to the upper step thereof, a protecting body in the angle of the lower step and of less height than the upper

step and of a width slightly less than the blank carrying the iridium or like point to be acted upon, in combination with a hammer above said anvil, and a registering bar
35 occupying, in part at least, a position slightly above the plane of said upper step, and means for yieldingly holding said bar toward said step.

9. In a device of the kind herein specified, a supporting anvil having a stepped upper surface, a curved forward edge to the upper step thereof, a protecting body in the
40 angle of the lower step and of less height than the upper step and of a width slightly less than the blank carrying the iridium or like point to be acted upon, in combination with a hammer above said anvil, said hammer having a flat surface adjacent to the step and a curved edge away
45 from the step.

10. In a device of the kind herein specified, a supporting anvil having a stepped upper surface, a curved forward edge to the upper step thereof, a protecting body in the
50 angle of the lower step and of less height than the upper step and of a width slightly less than the blank carrying the iridium or like point to be acted upon, in combination with a hammer above said anvil, and a registering bar slightly above the plane of said upper step, resting upon
55 said lower step and yieldingly held toward said upper step.

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

DE WITT COMPTON VAN VALER.

Witnesses:

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J. M. HOWARD.