

(No Model.)

I. W. HEYSINGER.  
PEN PULLER.

No. 445,673.

Patented Feb. 3, 1891.

Fig. 1.

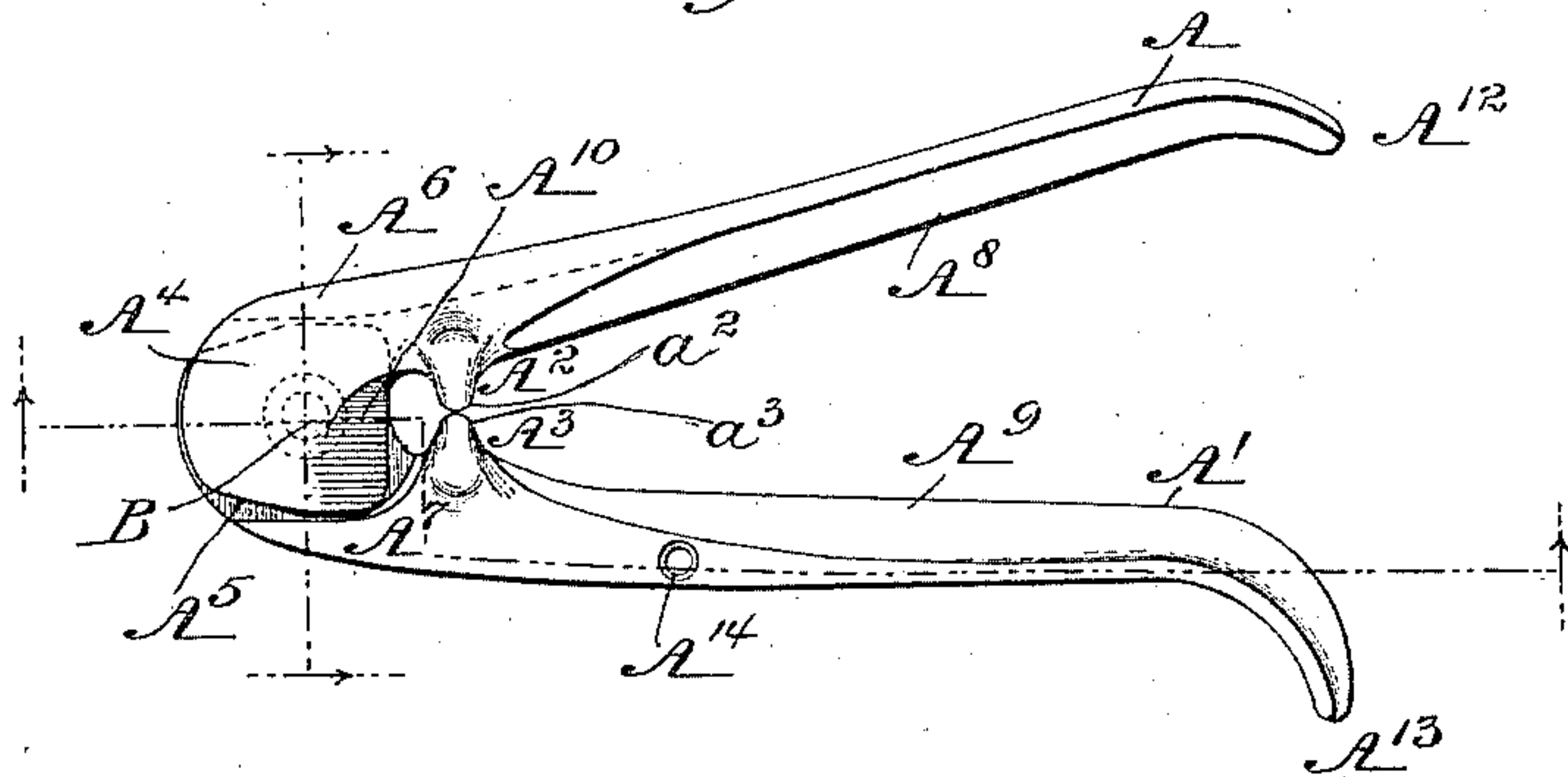


Fig. 2.

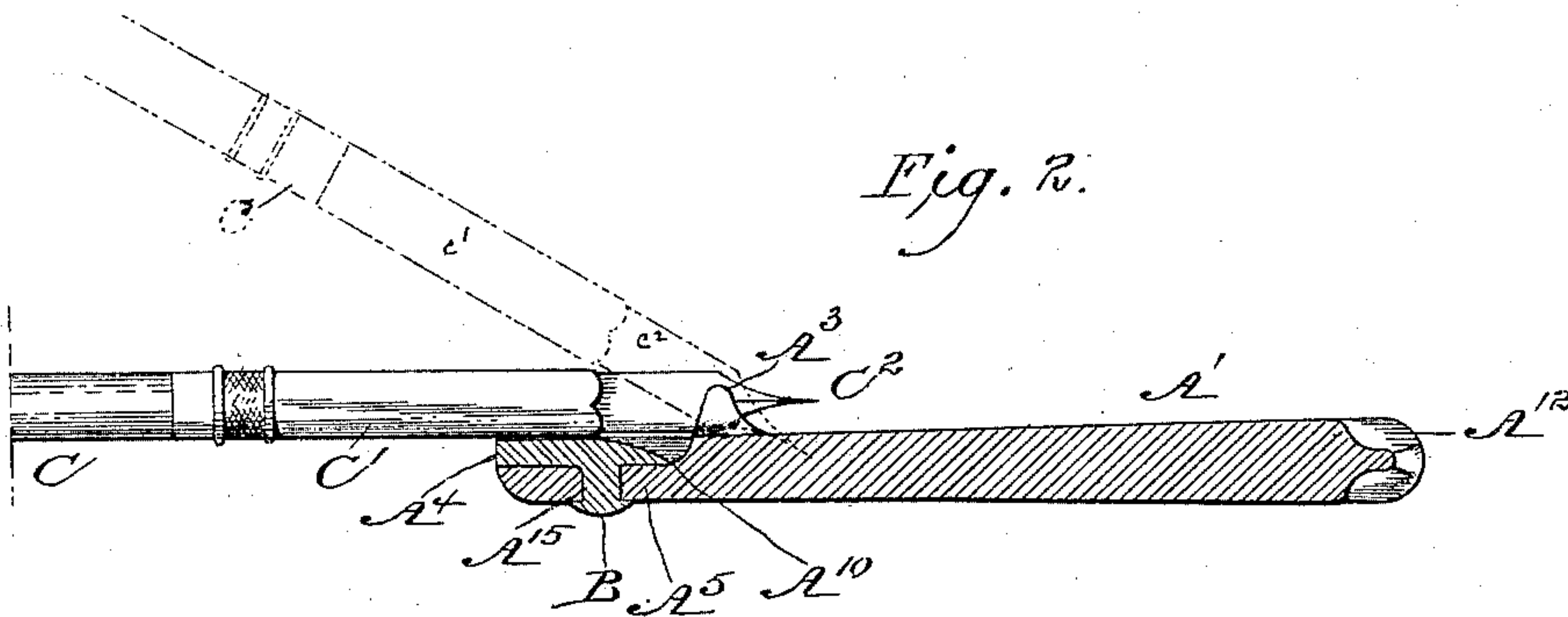
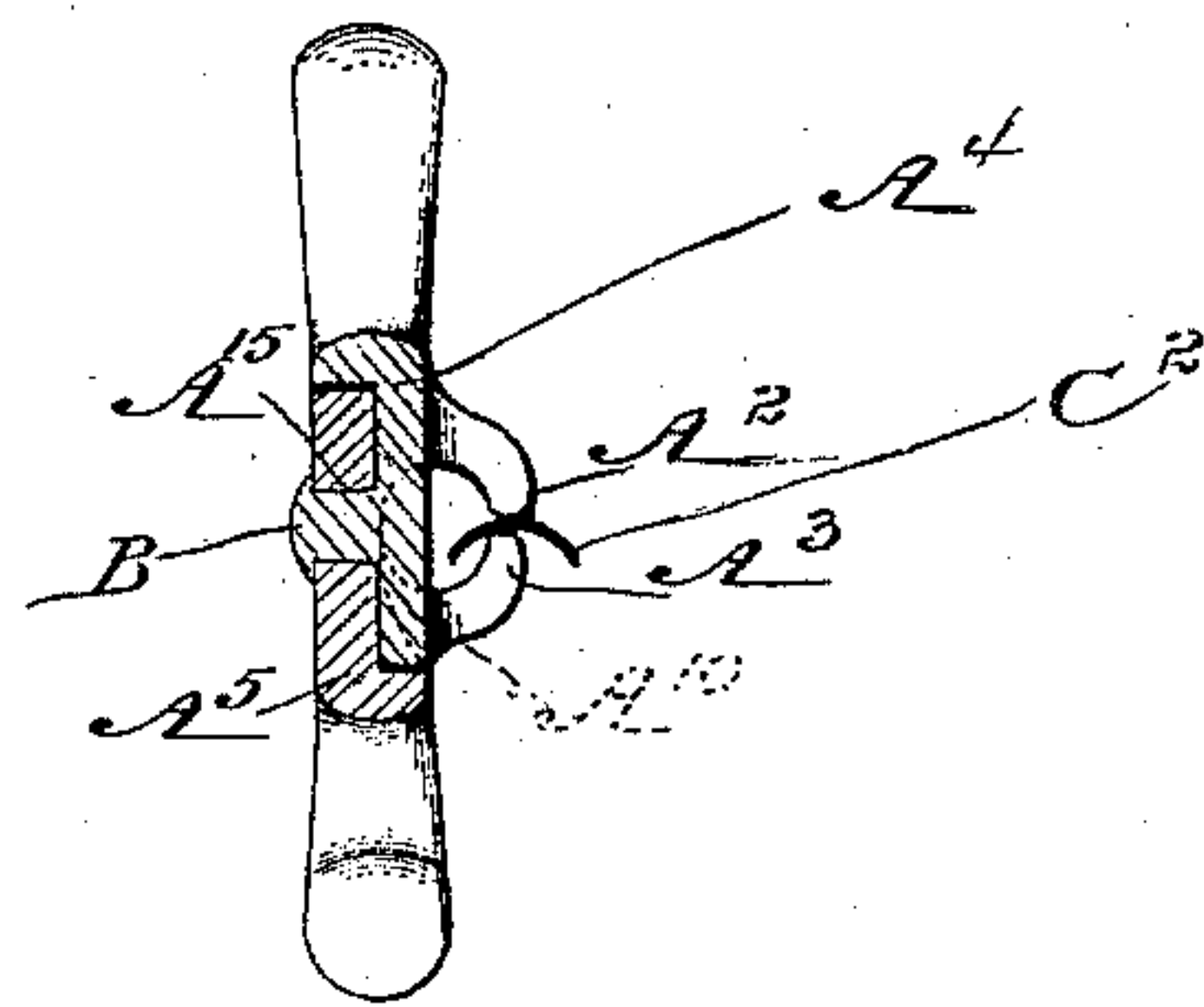


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## PEN-PULLER.

SPECIFICATION forming part of Letters Patent No. 445,673, dated February 3, 1891.

Application filed November 28, 1890. Serial No. 372,849. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC W. HEYSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have made a certain new and useful Improvement in Pen-Pullers, of which the following is a full, clear, and exact description, reference being had to the drawings which accompany and form a part of this specification, in which—

Figure 1 is a side view of the device which embodies my invention. Fig. 2 is a longitudinal transverse section through the jaws and one of the handles, and Fig. 3 a vertical section through the jaws and pivoted bearing where the two handles are attached to each other.

The lettering in all the figures is uniform.

My invention relates to the construction of a cheap and simple device by means of which steel pens and the like may be extracted from the pen-holders into which they have been previously inserted and in which they may have rusted fast which shall be simple in operation, compact in form, and more powerful and effective than other devices used for similar purposes.

My invention consists, substantially, of two handle-pieces A and A', of a form adapted to be grasped by the hand, as in forceps and the like, pivoted together at one end, the free ends grasped in the hand acting as levers to close the said arms upon each other. At the pivoted portion B, I expand the arms to form two face-plates A<sup>4</sup> and A<sup>5</sup>, which, engaging against each other when riveted up or otherwise attached by a screw or the like, prevent the arms A and A' from rotating upon their longitudinal axes. I prefer to terminate the arms A and A' with curved or downwardly-hooked extremities A<sup>12</sup> and A<sup>13</sup>, A<sup>12</sup> serving to give a rounded support to the palm of the hand of the operator and A<sup>13</sup> sustaining the pull by engaging against the rear side of the hand or the fingers beneath. Instead of these hooks, however, the ends may be left plain or formed into rings, as in scissors and like implements. Between the opposite pivoted face-plates A<sup>4</sup> A<sup>5</sup> and the handles A A', I form the clamping-jaws A<sup>2</sup> and A<sup>3</sup>. These, as shown in Figs. 2 and 3, spring out laterally

from the plane of the tool as a whole and terminate in pointed studs a<sup>2</sup> and a<sup>3</sup>. The jaws A<sup>2</sup> and A<sup>3</sup> are formed integral with the arms A and A', respectively, so that they form a rigid construction therewith, and the studs a<sup>2</sup> and a<sup>3</sup>, which terminate these jaws, are so constructed that they form close contact with each other as the handles A and A' are brought together or toward each other. The studs a<sup>2</sup> and a<sup>3</sup> are so constructed also that when a steel-pen or like thin curved blade is placed between them and the jaws closed the form of the terminal studs will be such as to fit into the concavity of the pen and rest upon its opposite convexity above, as shown in Fig. 3, without tending to split the said pen or distort it in shape as it is grasped and withdrawn from the pen-holder, or, if preferred, held fast to be inserted therein in the case of a new pen.

The pen-holder, it will now be seen, extends along the side of the tool, as shown in Fig. 2, while the projecting jaws extend over and grasp the pen, so that when the jaws are closed by compression upon the handles A and A' and rearward traction applied thereto (the pen-holder held securely in the other hand of the operator) the pen will be extracted from the pen-holder by a direct end pull and without injury to the pen itself.

It may be noted that pens often are so rusted in the holder that very considerable force is required to start them—much more than can be obtained by the use of ordinary flat-jawed or round-jawed pliers.

In inserting the pen between the jaws A<sup>2</sup> and A<sup>3</sup>, to avoid the necessity of special care in securing a direction of the pen-holder parallel to the implement, and to avoid the necessity, also, of prolonged lateral extension of the jaws A<sup>2</sup> A<sup>3</sup>, which tends to increase the twist leverage upon the pivot B, I chamfer away or otherwise form the face-plate A<sup>4</sup> upon the side toward which the jaws A<sup>2</sup> A<sup>3</sup> project, as shown at A<sup>10</sup>, so that the corner being beveled off will permit the pen to be inserted at an angle, as shown in the dotted outlines of Fig. 2 at c c' c<sup>2</sup>. When thus inserted, the pull for extraction will rotate the pen thus caught between the jaws A<sup>2</sup> A<sup>3</sup> upon the terminal studs a<sup>2</sup> a<sup>3</sup> as a pivot and the pen be ex-



tracted in the usual way. I sometimes form the jaws nearly in rear of the bearing B, having but a small lateral projection, the pen-holder occupying a diagonal position, as shown in Fig. 2 at c, while the pen is being extracted; but this construction, while adding strength to the joint, necessitates a diagonal pull of the hand and is not so convenient nor the pull so powerful, while the pen itself is likely to be injured in the withdrawal thereof.

To increase the strength of the tool at the bearing B, I form the ribs  $A^6$  and  $A^7$  along the upper and lower alternate margins of the face-plates  $A^4$   $A^5$ , which are so placed as to permit sufficient play for the jaws  $A^2$  and  $A^3$ , the required motion being but small. These ribs may be dispensed with, if desired. I prefer to work the jaws like the jaws of an ordinary pair of pliers; but, if desired, a spring may be interposed to hold the arms  $A$   $A'$  apart until closed by the pressure of the hand.

At  $A^{14}$  I show a screw-hole by means of which the device may be secured, one part being thus fixed to a desk or table, the upper jaw being movable, as shown in Fig. 1. In such case I dispense with the hook  $A^{13}$  and part of the arm  $A'$ , adapting the latter to its new function, as may be preferred, or it may be left adapted to both purposes, as shown in Fig. 1.

I usually cast my device in two parts subsequently pivoted together at B by a rivet or screw. When made of malleable iron, the rivet may be cast onto the part  $A^{12}$   $A^4$ , (which are formed integral with each other,) projecting to the rear and passing through the hole  $A^{15}$ , (see Figs. 2 and 3,) and headed up, as shown. In this way there will be no projecting head to interfere with the placing of the pen-holder along the front side or face, as shown in Fig. 2. When a separate rivet is used, it should be preferably countersunk upon its front face-plate.

It will be seen that the jaws  $A^2$  and  $A^3$  are placed so closely to the pivot B that a very powerful pressure may be produced thereupon by a slight pressure upon the handles, and also that by reason of the jaws being between the pivot and the handles the device is made more compact, smaller, and correspondingly stronger, while, by reason of the form and position of the jaws  $A^2$   $A^3$ , there is nothing in rear to engage against the point of the pen to injure it or prevent a proper grasp of the jaws against the surfaces of said pen.

The device, while exceedingly simple, is the result of considerable thought and experiment, the purpose in view being to render it simple, cheap, and efficient for all sorts of pens, and not only for extraction thereof, but for inserting the same in holders without injury thereto.

I do not confine myself to the precise construction herein shown, but vary the same, as would be done by any skillful mechanic, to suit special requirements without departing

from the principles of my invention, as shown, described, and claimed.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A pen-puller consisting of two arms  $A$   $A'$ , pivoted together at B, and having jaws  $A^2$  and  $A^3$  between said pivot B and said arms  $A$   $A'$  at their free ends, said jaws  $A^2$  and  $A^3$  projecting laterally and adapted to engage with a longitudinal object extended along the said arms and in front of said pivot, substantially as described.

2. In combination with the arm  $A$ , having laterally-projecting jaw  $A^2$  and face-plate  $A^4$ , the opposite arm  $A'$ , having projecting jaw  $A^3$  and face-plate  $A^5$ , together with the pivoted bearing B, said lateral jaws  $A^2$  and  $A^3$  adapted to engage against each other at the points thereof outside the general plane of said arms and said face-plates, substantially as and for the purposes described.

3. A pen-puller consisting of two arms free at one end and pivoted together at the other and adapted to open in a plane at right angles to said pivot, and a jaw upon each arm between said pivot and the free end thereof, said jaws projecting to the front and overhanging each other and adapted to make contact outside the plane of motion of said arms and said pivot, substantially as described.

4. In a pen-puller, the combination of two arms adapted to be operated by the hand, free at one end and pivoted together at the other, and two clamping-jaws provided with terminal studs rounded and pointed and adapted to engage with the concave and convex sides of a pen when the said arms are compressed together and grasp the same without injury to or distortion of shape of said pen, substantially as described.

5. As an article of manufacture, a device for extracting pens from pen-holders and for like purposes, consisting of the opposite handles  $A$  and  $A'$ , having curved ends  $A^{12}$  and  $A^{13}$ , both curved downward, face-plates  $A^4$  and  $A^5$ , pivoted together by the cross-pivot B, beveled surface  $A^{10}$ , and laterally-projecting opposite jaws  $A^2$  and  $A^3$ , having terminal grasping-studs  $a^2$  and  $a^3$ , said jaws located between said pivot and said handles, substantially as described.

6. In a pen-puller, the combination of movable arm  $A$ , having terminal pivot B, and lateral jaw  $A^2$  between said pivot and the free end of said arm, with the opposite jaw  $A^3$ , pivoted at B to said arm  $A$ , said jaw  $A^3$  provided with screw-hole  $A^{14}$  or similar means for attaching the same to a desk or table, substantially as described.

7. In a pen-puller, the combination of the opposite arms  $A$   $A'$ , free to be operated by the hand at one end and pivoted together at the other end, said arms having the opposite jaws  $A^2$  and  $A^3$  formed integral therewith, said jaws terminating in studs  $a^2$  and  $a^3$ ,



adapted to engage with each other when the  
said handles are made to approach each other,  
said studs so constructed as to grasp a pen  
by its concave and convex upper and lower  
5 sides and to permit the said pen to be swung  
around upon the contact-faces of said studs  
 $a^2$  and  $a^3$  as upon a pivot without injury to  
or distortion of said pen and without releas-  
ing the grasp upon the same, substantially as  
10 and for the purposes described.

8. As an article of manufacture, the pen-  
puller consisting of the handles A and A',  
face-plates A<sup>4</sup> and A<sup>5</sup>, and clamping-jaws A<sup>2</sup>  
and A<sup>3</sup>, the whole forming two separate parts

pivoted together at one end and said pivot 15  
B formed integral with one of said parts, the  
opposite face-plate pierced with the hole A<sup>15</sup>,  
said pivot adapted to pass through said hole  
and be headed up against the opposite side  
of said opposite face-plate, so as to give free 20  
clearance for a pen-holder C, when laid along  
said pen-puller, the pen C<sup>2</sup> extended forward  
between and adapted to be grasped by said  
jaws A<sup>2</sup> and A<sup>3</sup>, substantially as described.

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Witnesses:

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