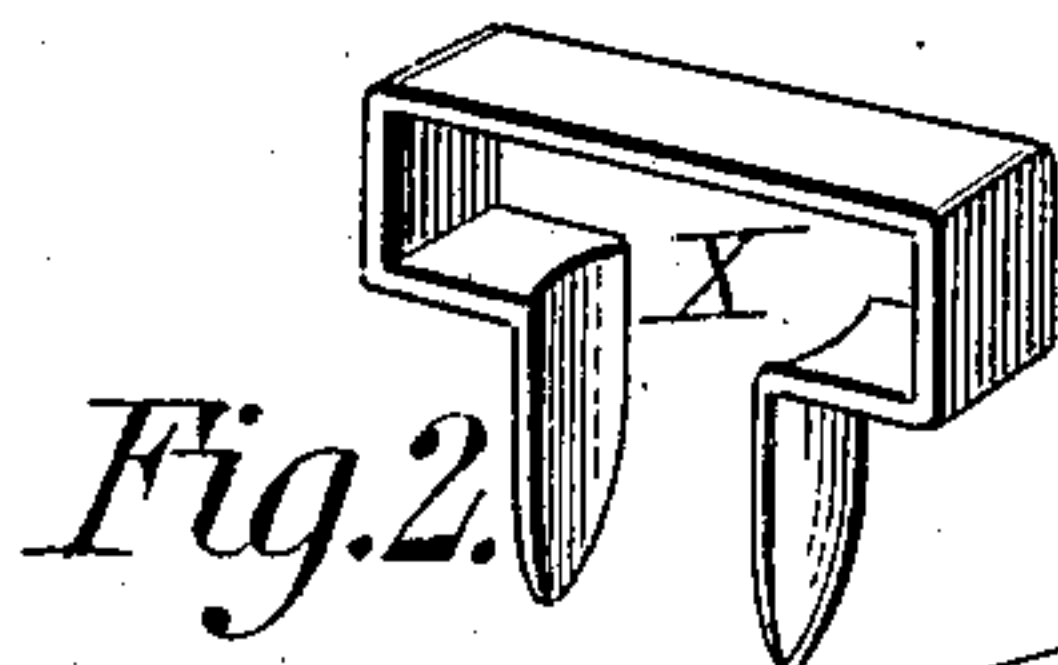
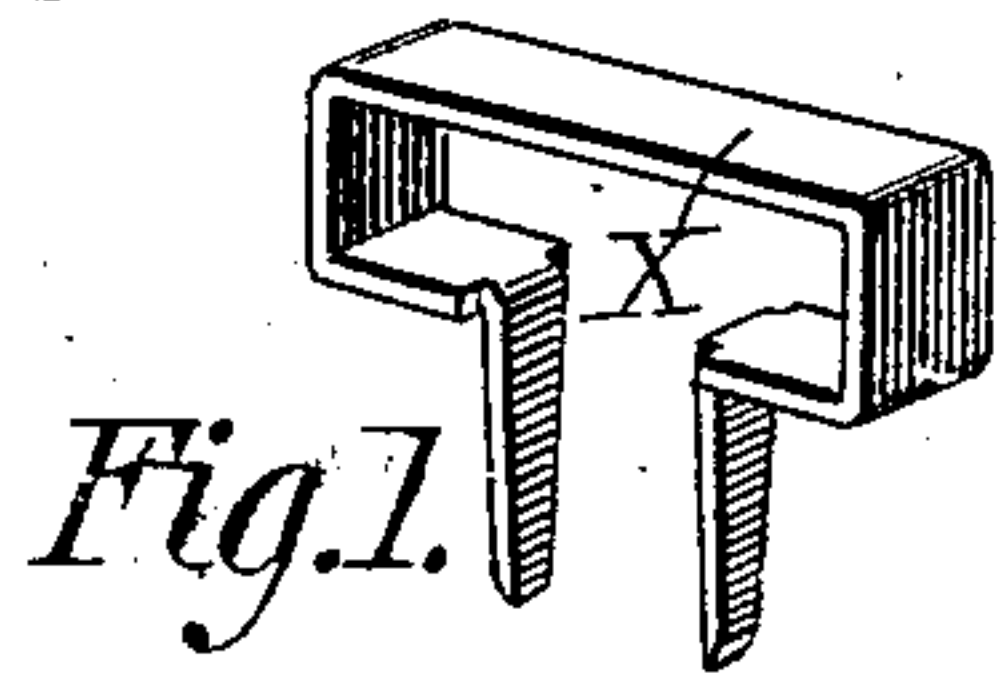


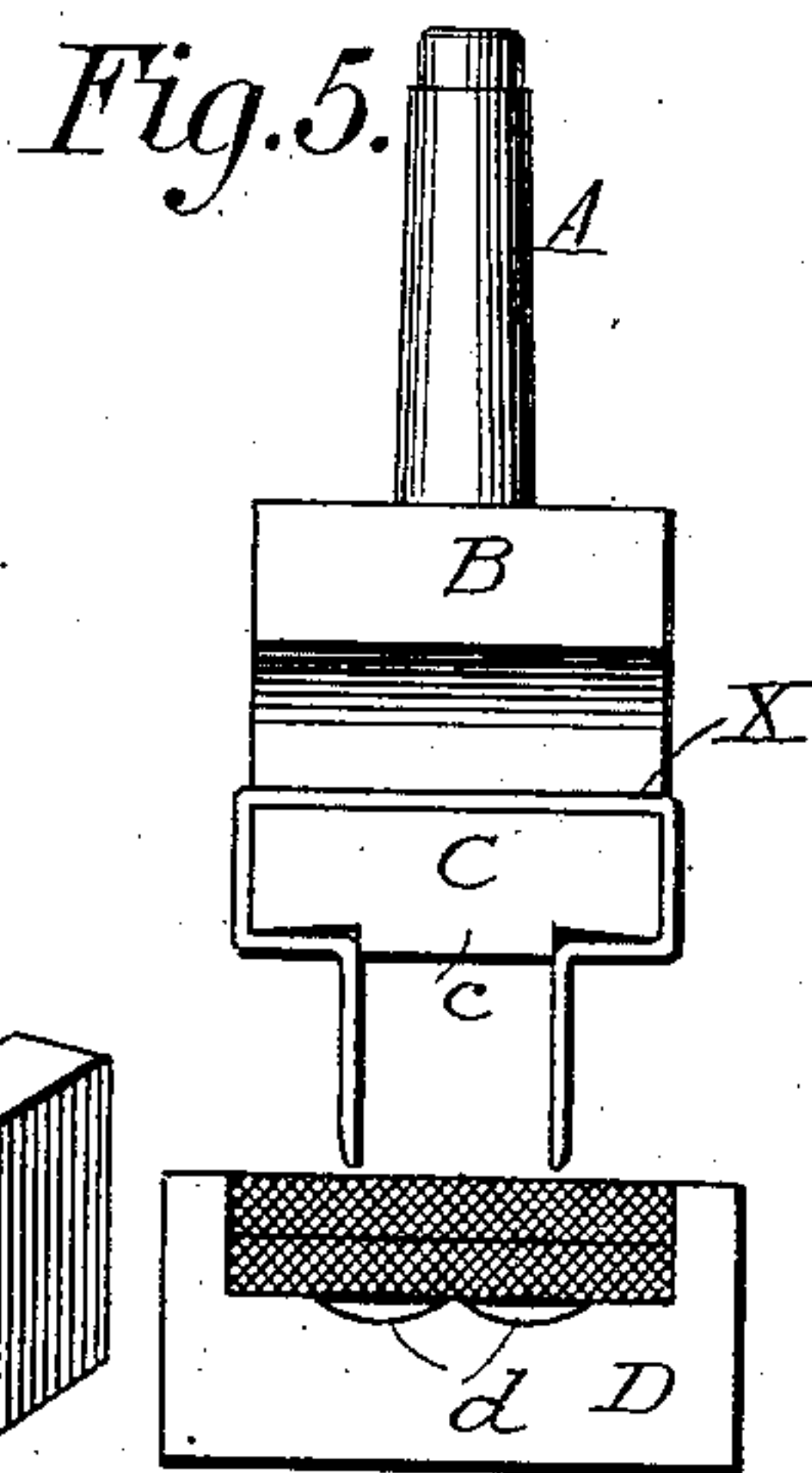
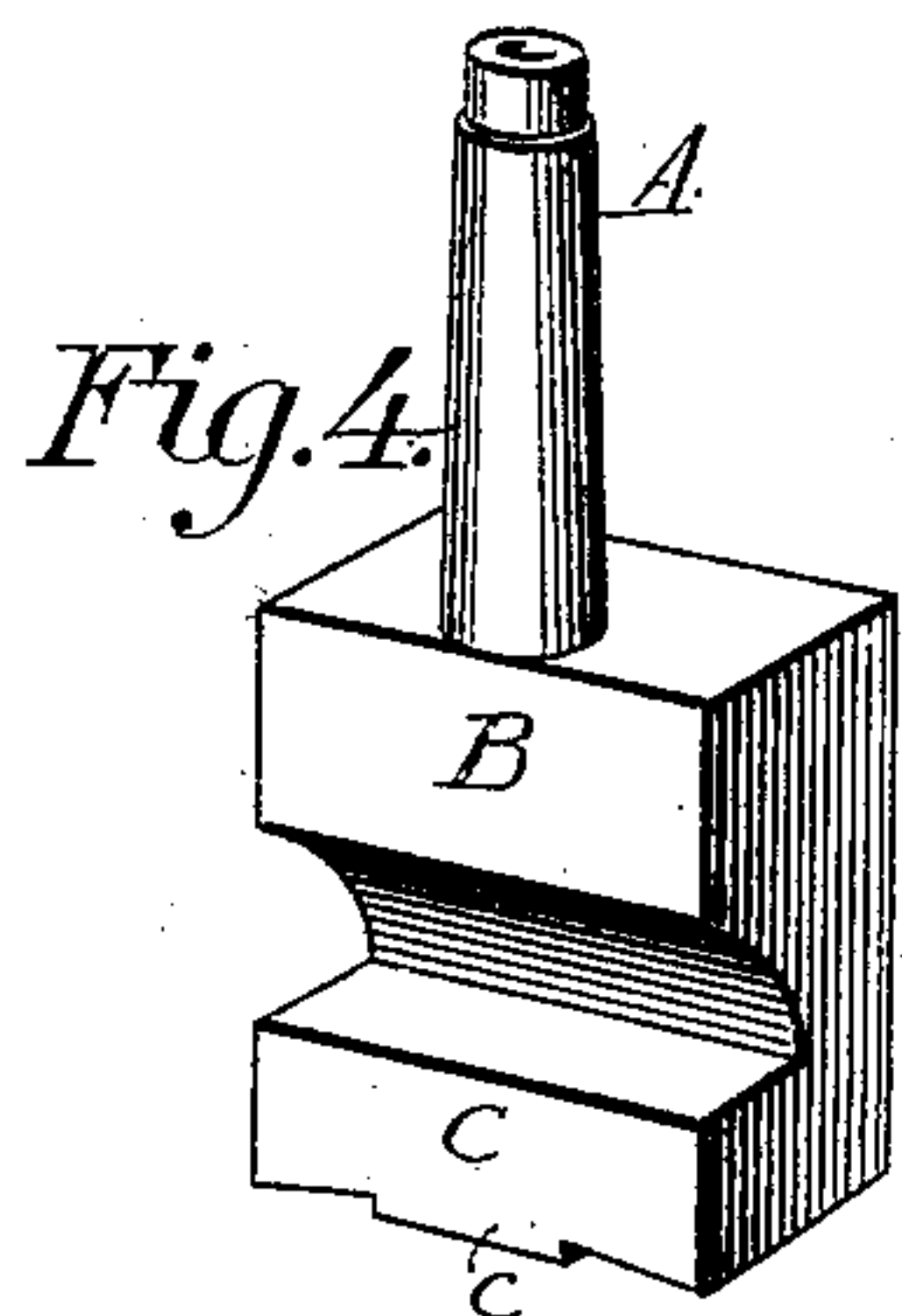
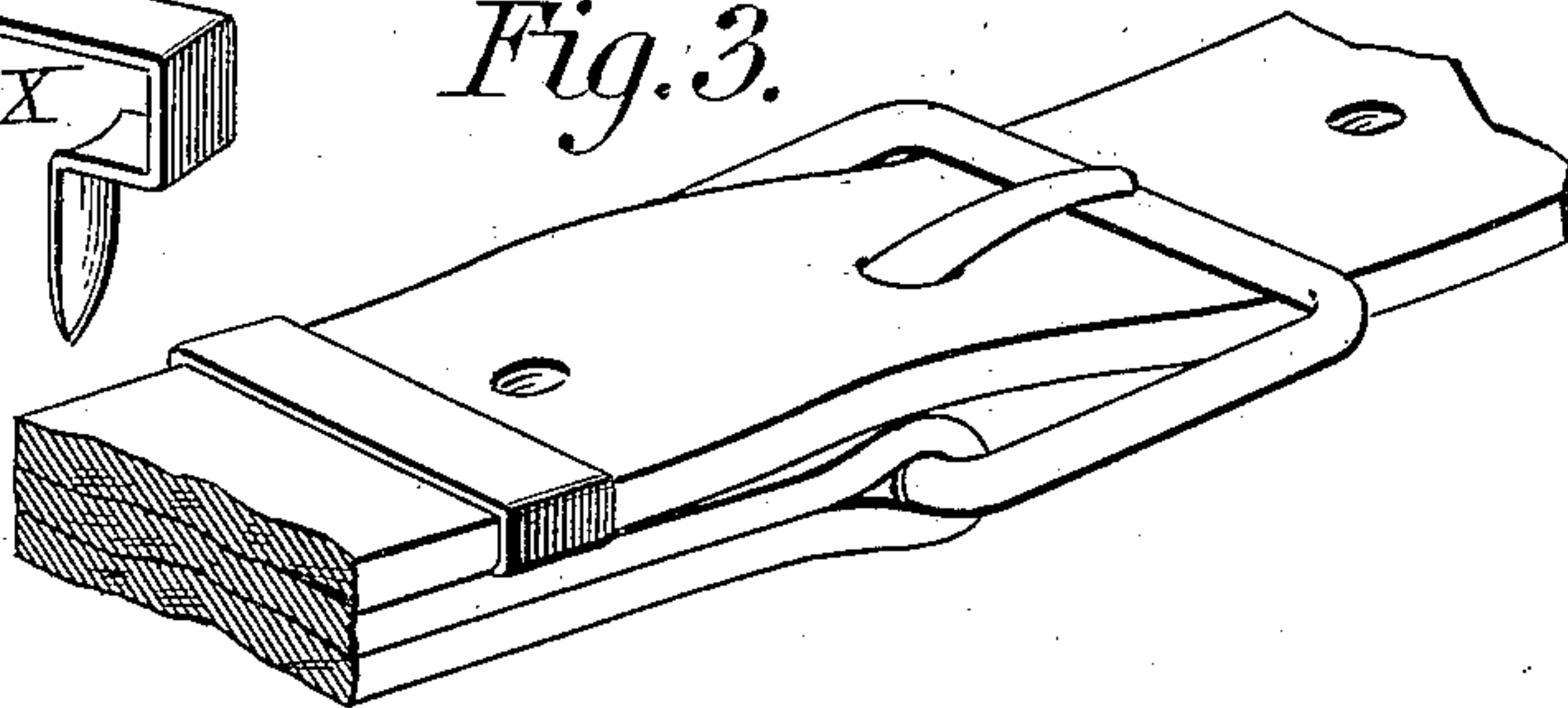
W. R. MEDEARIS.  
 TOOL FOR SETTING OR AFFIXING PRONGED LOOPS TO LEATHER OR OTHER MATERIAL.  
 APPLICATION FILED SEPT. 27, 1907.

903,747.

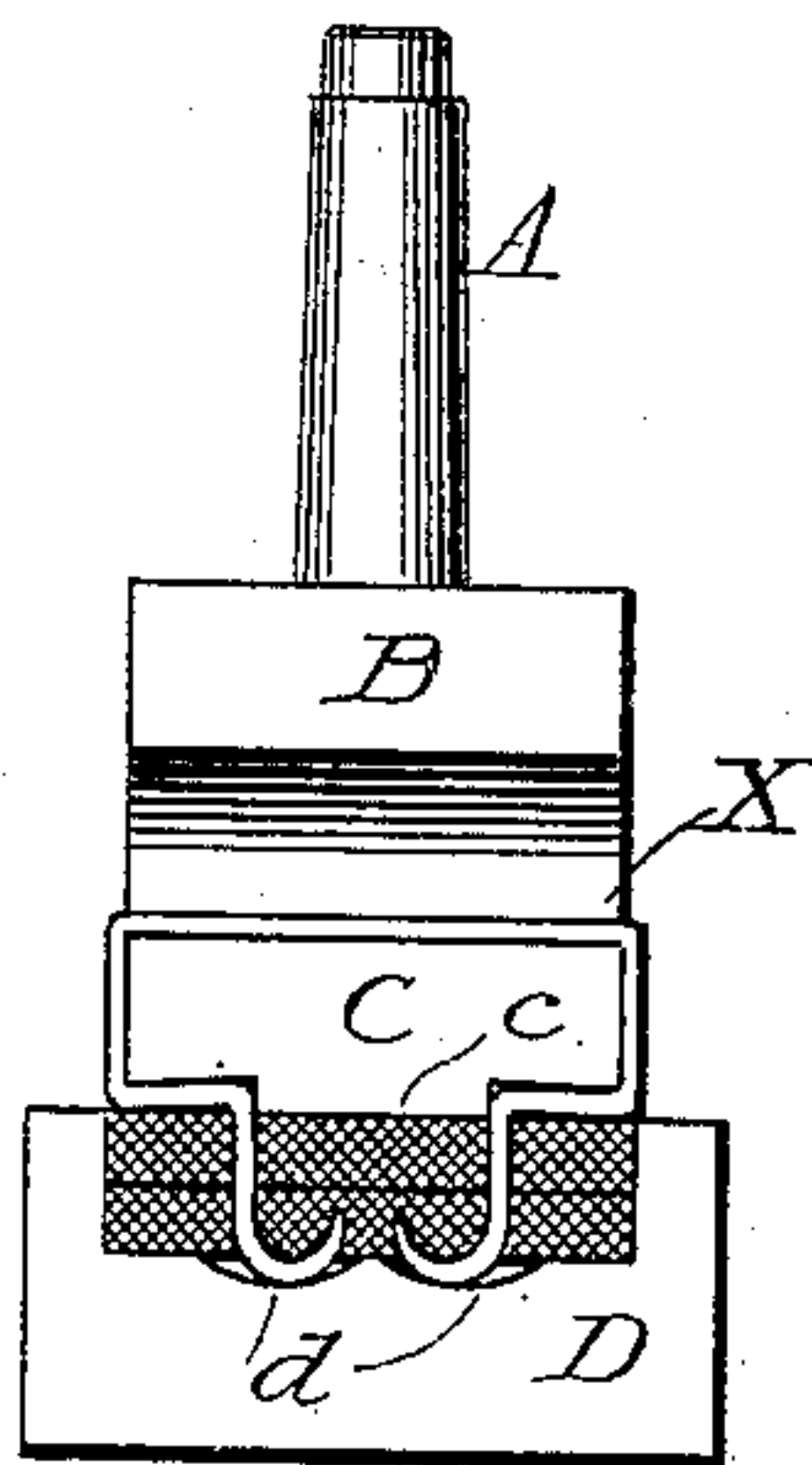
Patented Nov. 10, 1908.



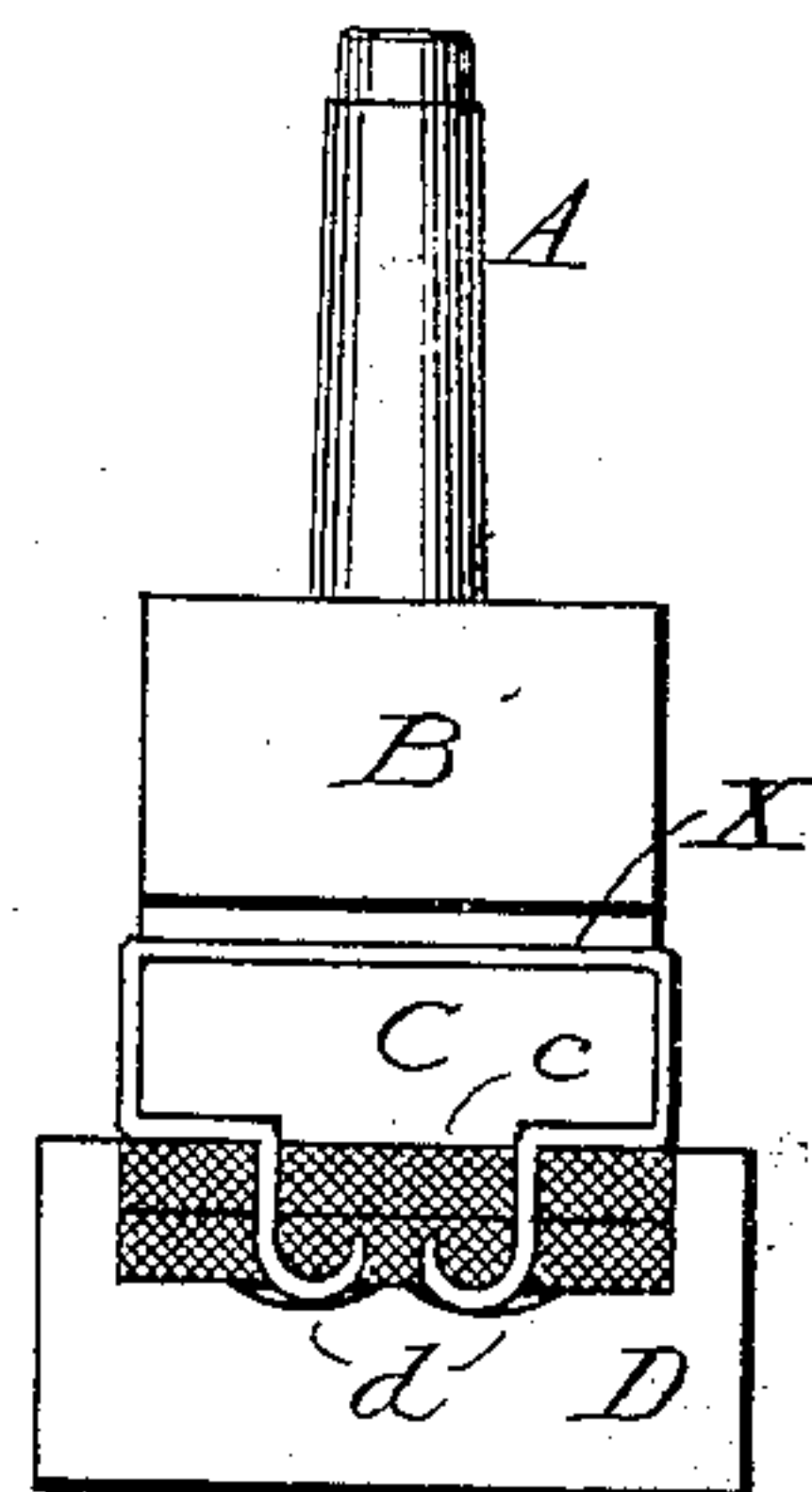
*Fig. 3.*



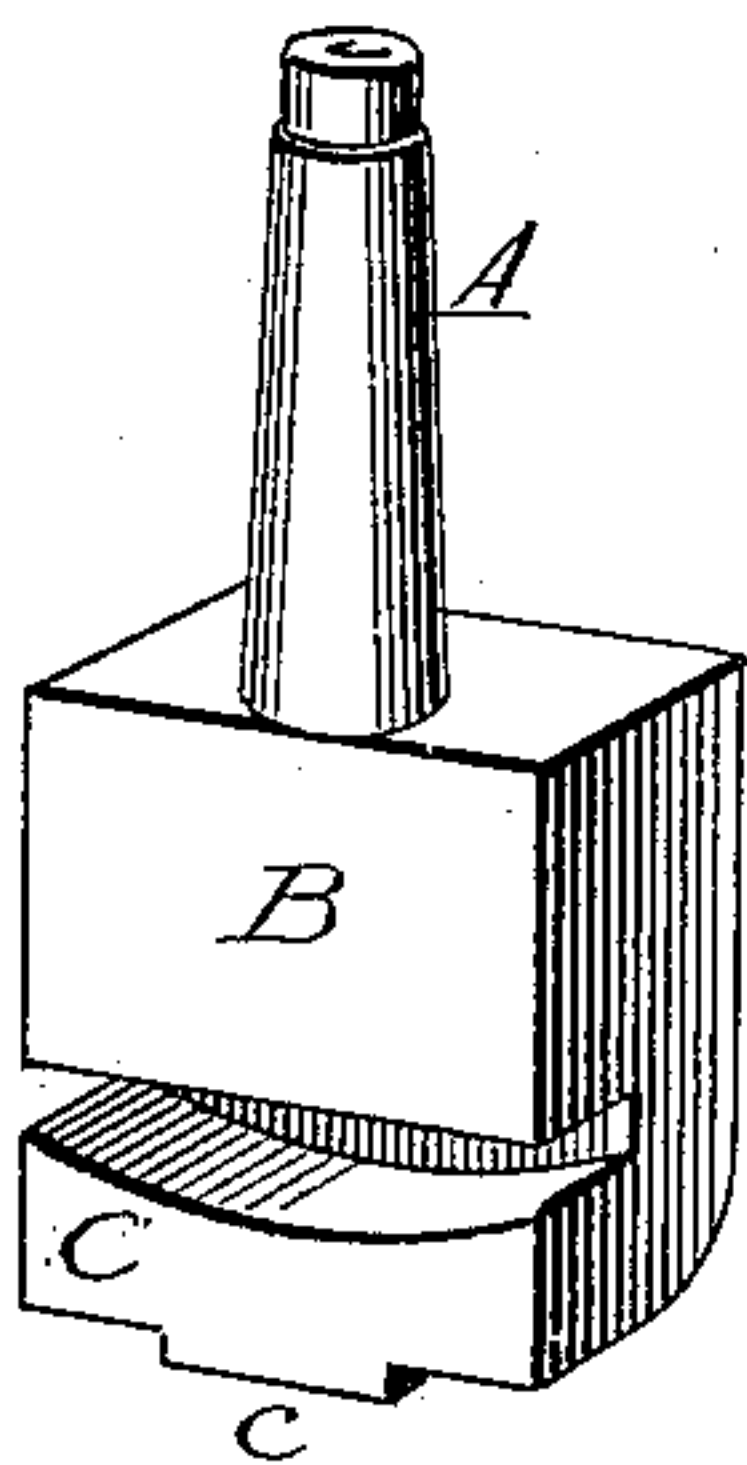
*Fig. 6.*



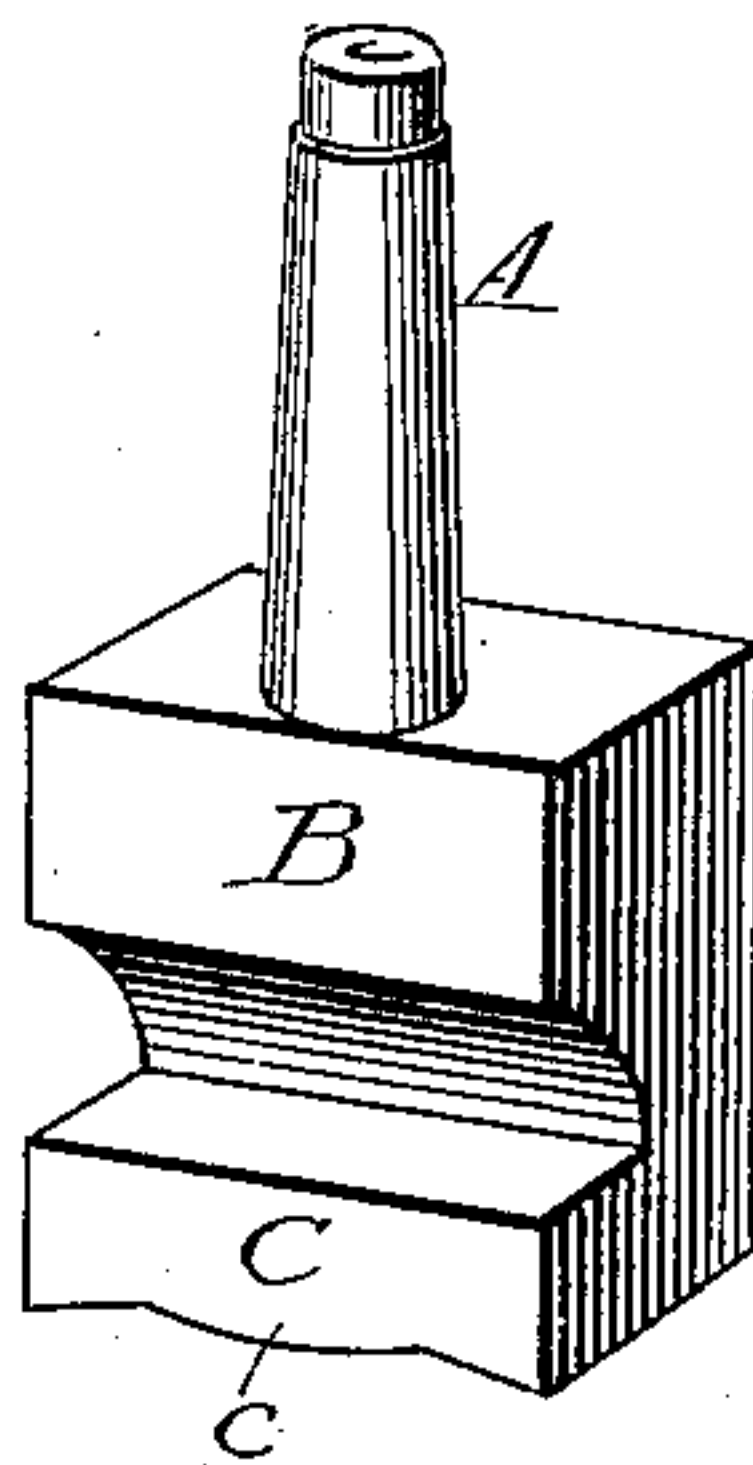
*Fig. 7.*



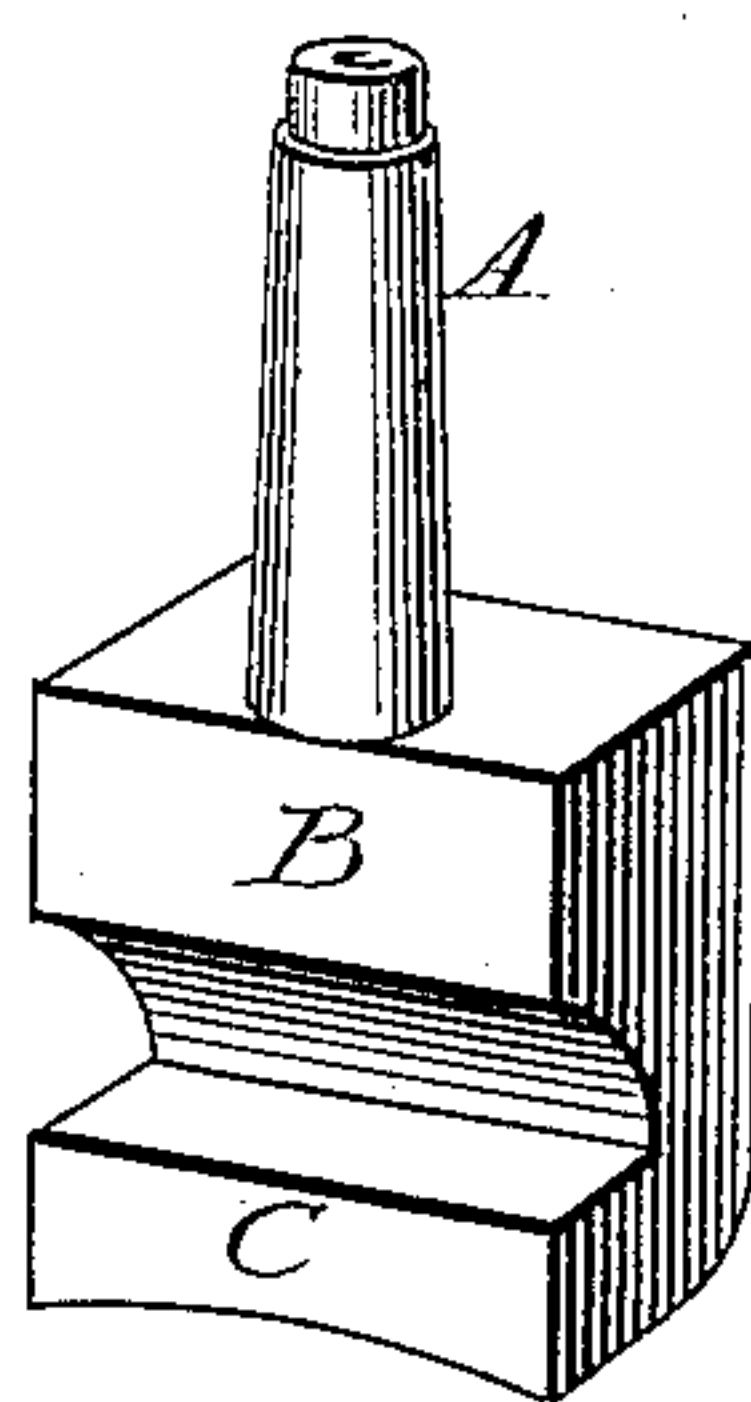
*Fig. 8.*



*Fig. 9.*



*Fig. 10.*



Inventor

Witnesses

*P. F. Barnes.*

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By

*Julian C. Powell*  
 his Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM ROBERT MEDEARIS, OF NASHVILLE, TENNESSEE, ASSIGNOR OF ONE-THIRD TO J. M. GRAY, JR., AND ONE-THIRD TO H. A. ELLERS, OF NASHVILLE, TENNESSEE.

TOOL FOR SETTING OR AFFIXING PRONGED LOOPS TO LEATHER OR OTHER MATERIAL.

No. 903,747.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed September 27, 1907. Serial No. 394,861.

*To all whom it may concern:*

Be it known that I, WILLIAM ROBERT MEDEARIS, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Tools for Setting or Affixing Pronged Loops to Leather or other Material; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to tools or devices for setting or affixing pronged loops of the herein described character to leather or other material.

The invention will hereinafter be first fully described by reference to the accompanying drawings, which constitute a part of this specification, and then more particularly pointed out in the appended claims.

Figures 1 and 2 of said drawings show different forms of loops, which it is the function of the tool to affix on a leather strap or other article of leather or other desired material. Fig. 3 shows a buckle-strap having one of such loops affixed thereon as the keeper for the free end of the strap which is engaged by the buckle. Fig. 4 is a perspective view of one form of tool embodying my invention, together with a preferred form of anvil which is used in conjunction with the tool. Fig. 5 is a front view of the subject-matter of Fig. 4, showing one of the loops placed in position on the tool, and showing in cross-section the doubled portions of a leather-strap to which the loop is to be affixed by driving its prongs through the leather and clenching or upsetting them. Fig. 6 is a front view similar to Fig. 5, but showing the tool at the completion of the loop-setting operation. Fig. 7 is a view like Fig. 6, but showing a modified form of tool. Figs. 8, 9, 10, are perspective views of other forms of the tool embodying my invention.

The character of loop referred to will best be understood by reference to Figs. 1 and 2. As will be seen, it is made from a sheet-metal blank or strip bent or formed into the shape of an open rectangular head or loop with depending tangs or prongs, the head of the loop overhanging or projecting beyond the prongs at both sides. The prongs may be flat, as in Fig. 1, or they may be curved

or rounded in cross-section, as in Fig. 2, to increase their strength and stiffness and cause them to upset or clench in the leather somewhat in the manner of a split tubular rivet.

The special purpose of this article is for use as a trap-loop or keeper in connection with a buckle or the like on harness or otherwise. In this connection, the loop may also serve as a rivet or fastener for uniting the strap on which it is mounted to another body, as to another strap, or more generally for uniting the doubled or folded portion of the strap which holds the buckle. For example, in the case of any ordinary buckle-strap, where the strap is doubled around the cross-bar of the buckle, the prongs of the loop may be inserted through the doubled or folded portion of the strap and upset or clench in the leather, thereby fastening the strap securely to the buckle and providing a loop or keeper to receive the free end of the companion strap which is engaged by the buckle and run through the loop, as shown in Fig. 3.

It is understood that the subject-matter of Figs. 1 to 3 inclusive is not a part of my present invention, but is illustrated to set forth the character of the loop-fastener.

In the operation of setting or affixing one of these loops or loop-fasteners to the leather or other material on which it is to be mounted, its prongs must be driven forcibly through the leather and upset or clenched in the usual way of setting a tubular rivet, staple, or other bi-pronged fastener, while at the same time the shape of the head or loop proper must be preserved; so that when the operation is completed, the loop will present a neat appearance without distortion or dents, and be in the correct shape to receive the strap which is to be run therethrough.

The main object of this invention is to provide a very simple, inexpensive, but thoroughly practicable and efficient tool for performing this operation.

The loop-setting tool is or may be operated either by a power press, or power hammer, or by manually delivered blows from an ordinary hammer, and it is used in conjunction with any suitable anvil to sustain the blow or pressure and cause the upsetting or clenching of the prongs when driven through the leather or other material and against such anvil.

In the drawings, the letter A denotes the



tool-shank rising or extending from the top of the stock or presser-block B. Said block B is preferably rectangular, its width from side to side being substantially equal to the inside length of the rectangular open head of the loop X. Near its lower end, the front face of said block is transversely slotted or cut away, leaving a projecting toe or foot portion C of such size and shape as to fit substantially within the open head of the loop which is to be attached on leather or the like; the said loop being placed on said toe C of the tool, as represented in Fig. 5. In other words, the stock or presser-block B has a substantially L-shaped foot, the toe or forward portion C of which sets within and holds the head of the loop-fastener.

In operation, the head of the loop being fitted on the foot portion C of the tool which is arranged over any suitable anvil, as indicated at D in Figs. 4 to 7, upon which anvil the leather or other material is placed, the tool is forced or driven down (either by a blow or pressure on the block), thus driving the loop-prongs through the material and against the anvil, which causes the upsetting or clenching of the prongs, as represented in Figs. 6 and 7. The loop-prongs are thus driven into the material by the pressure or blow imparted through the part C directly on the prongs (just as a nail is commonly driven by the blow of the hammer directly on the head of the nail), while the toe C also braces the head of the loop internally, obviating any tendency of the sides of the loop to move inward or together, and preserving the proper contour of the head of the loop and avoiding mashing, bending or denting under the pressure of the loop-affixing operation.

What I now believe to be the most efficient form of the toe C is shown in Figs. 4, 5 and 6. In this case, the under side of the toe is slightly inclined upwardly from opposite sides thereof to a medial slight bottom projection *c*, which latter is adapted to fit just between the prongs. Thus the opposite sides of the toe are thicker than directly over the prongs. By using this form, it will be seen that when the pressure is applied on the prongs, it will cause the lower sides of the head of the loop to hug close to the under side of the toe C, thereby making it impossible for the sides of the loop to spread outward or apart. The slight medial bottom projection *c*, coming just between the prongs where they join the head of the loop, also braces the prongs as they are driven into the material and against the anvil. Substantially the same principle is shown in Figs. 9 and 10, in modified forms; the medial projection *c* being omitted in Fig. 10. In Figs. 7 and 8 the toe is formed with said medial bottom projection but without the opposite inclines.

As will be seen, the upper or main portion of the tool-stock or presser-block B may be of any appropriate shape, the main feature being the foot portion or toe C which is formed to fit the inside of the head of the loop. While it is preferable that the entire inside of the loop should be filled by the toe, this is not essential, since the upper surface of the toe may be intermediately cut away, as shown in Fig. 8. But it will be observed in Fig. 8 that the toe fits substantially within the head of the loop, fitting within the four corners thereof and holding the loop rigid, and providing a solid drive or bearing on the under side of the loop directly over the prongs, which is of course essential. Obviously the form shown in Fig. 8 accomplishes the same purpose as the others and such a modification is to be regarded within the scope of my invention.

Where loops of different shapes and sizes are to be affixed to leather, as in the case of affixing loops to different sizes of buckles, straps, this may of course be done by means of different tools, which may be used interchangeably in the same press or machine. In this connection, it will be observed that the toe C is of course formed or shaped in accordance with the inside shape of the particular loop which is to be attached on the leather.

I do not intend to confine myself to a tool for attaching strictly rectangular headed loops, since in the case of a loop having a head with its sides curved more or less, or other than rectangular, the toe C of the tool will of course be correspondingly formed to fit therein.

While any suitable anvil may be employed in conjunction with the tool, I have illustrated as a preferred form an anvil D having its upper surface formed with concave recesses or grooves, as indicated at *d*, to deflect the points of the prongs inwardly and cause them to upset or bend upwardly so as to effectively clench in the leather or other material. The grooves may of course be formed to cause the prongs to deflect and upset outwardly. The anvil is shown also having upwardly extending sides which are merely for the purpose of holding the strap or straps in exact position when setting or affixing the loop thereto. These sides are desirable for this purpose, but they are not essential. Where the loops are to be affixed on a large surface of material, it will be necessary to employ an anvil without such extending or rising sides.

As previously stated, the tool may be operated by striking with a hammer, or by applying pressure by attaching the tool to the tool-holder of any suitable press or power machine, operated either manually or by foot power, or by a motor, as for example a riveting machine or a staple clenching ma-



chine. In the press, the anvil D would of course rest on the bed of the press below the tool, the shank A of which would be secured in the tool-socket of a vertical  
5 plunger-rod working in a guide therefor in the usual goose-neck standard of the press, the plunger-rod being operated by a lever or other suitable means in connection with the source of applying power.

10 It is not essential that the shank A or the driving end of the tool should be directly over the prongs, since the general form of the tool may be substantially L-shaped, the pressure or driving part not being directly  
15 over the prongs, though the construction shown is preferred.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

20 1. A tool of the character described, comprising a presser-block adapted to be operated by pressure or a blow thereon, and having a foot portion formed to fit within the head of a bi-pronged loop, the under side of  
25 said foot portion being slightly inclined upward from opposite sides thereof, substantially as and for the purpose described.

2. A tool of the character described com-

prising a presser-block adapted to be driven by direct pressure or blow thereon having a  
30 foot portion shaped to fit substantially within the head of a bi-pronged loop and to transmit driving pressure directly on the depending prongs of the loop, the under  
35 side of said foot portion having a medial slight projection adapted to set between and brace the prongs, said projection being a  
fixed and rigid part of said foot portion, substantially as and for the purpose de-  
scribed. 40

3. A tool of the character described comprising a presser-block having a foot portion shaped to fit substantially within the  
45 head of a bi-pronged loop, the lower side of said foot portion having a slight medial projection adapted to set between the prongs, the under surface of said foot portion being  
downwardly inclined from said medial pro-  
jection to opposite sides, substantially as and  
for the purpose described. 50

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM ROBERT MEDEARIS.

Witnesses:

D. V. PHELAN,

W. E. GILLENWATER.