

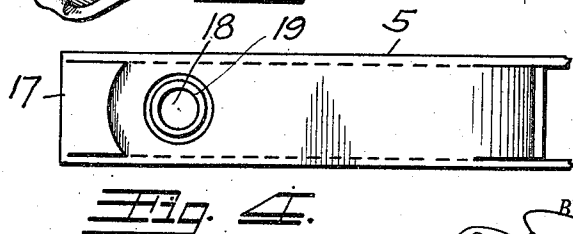
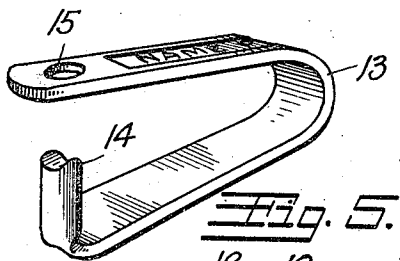
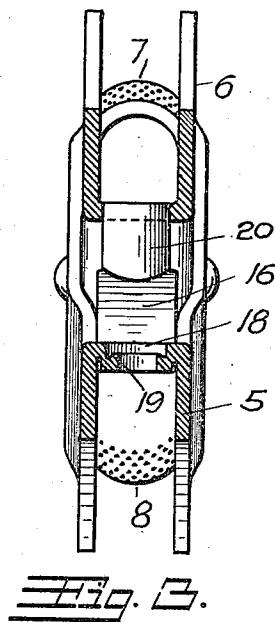
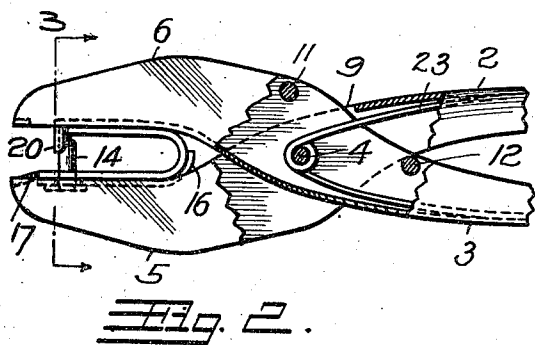
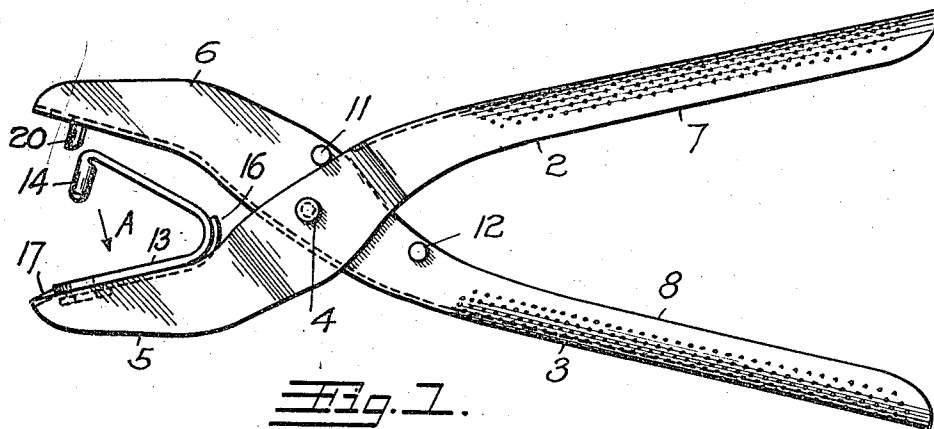
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1,482,290

P. F. ELZI

BENDING TOOL

Filed Feb. 2, 1921



INVENTOR.

Peter F. Elzi

BY

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UNITED STATES PATENT OFFICE.

PETER FRANK ELZI, OF DENVER, COLORADO.

BENDING TOOL.

Application filed February 2, 1921. Serial No. 441,824.

To all whom it may concern:

Be it known that I, PETER FRANK ELZI, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Bending Tools, of which the following is a specification.

This invention relates to bending and riveting tools for ear tags of the type shown and described in my application for Patent No. 362,440, filed March 1, 1920, and its primary object resides in providing a hand-operated tool of simple construction which may be employed to attach a tag of the above described character to the ear of an animal in a single operation and without tearing or otherwise injuring the flesh.

With this object in view, my invention consists in the construction and arrangement of cooperating parts shown in their preferred form in the accompanying drawings in the various views of which like parts are similarly designated, and in which—

Figure 1 represents a side elevation of the tool in the open position with an ear tag of the above mentioned type in place thereon;

Figure 2, a sectional elevation of the jaws of the tool in the position they occupy after the operation of bending and riveting the tag is completed;

Figure 3, a section taken on the line 3—3, Figure 2, drawn to an enlarged scale;

Figure 4, an enlarged fragmentary face view of one of the jaws of the tool, looking in the direction of the arrow A, Figure 1, and

Figure 5, a perspective view of the tag drawn to an exaggerated scale.

Referring to the drawings, the tool is composed of two crossed members 2 and 3 pivotally connected by a pin 4 to provide cooperating jaws 5 and 6 and lever handles 7 and 8.

The members 2 and 3 are preferably made of channelled metal and one of them has in the web between its flanges a slot 9 through which the other passes.

Studs 11 and 12 projecting laterally from the inner member of the tool at opposite sides of the slot through which it passes, limit the relative movement of the members in both directions by engagement with the edges of the other member, and a spring 23 arranged between the members and coiled around the pivot pin normally holds the

members in the position in which their jaws are separated to receive the tag between them.

The ear tag for the operation of which the present invention is particularly adapted, consists, as shown in Figure 5 of the drawings, of a U-shaped clip 13 of pliable metal provided with a combined punch and rivet pin 14 set at right angles to one of its ends and having at its opposite end an aperture to admit the end of the pin when the sides of the tag are pressed together.

The pin has in its end an indentation which forms a sharp cutting edge adapted to perforate the ear of an animal to which the tag is applied and to be subsequently clinched over the edge of the aperture at the under side of the tag.

Of the two oppositely disposed jaws of the tool one has at opposite ends of its face, two shoulders 16 and 17 which define a seat for the tag between them and prevent longitudinal displacement of the same.

The shoulder 17 at the forward end of the jaw engages the free end of the member of the tag in which the aperture is formed, and the shoulder 16 at the opposite end of the same is curved to fit upon the bent portion of the tag by which its members are connected.

The jaw has, furthermore, between its shoulders an opening 18 disposed for axial alignment with the aperture of the tag and provided interiorly with a circular flange 19 which in the operation serves as an abutment shoulder for the sharp edge of the pin of the tag after it has passed through the aperture.

The inner portion of the countersunk opening of the jaw is sufficiently large to freely admit the end of the pin of the tag and the outer portion of the same inside the flange 19 provides for the discharge of the piece of the ear punched out by the perforating action of the pin.

The other jaw of the tool has at its end, a lip 20 concaved at its inner side to engage the longitudinal surface of the pin of the tag positioned between shoulders of the other jaw, both the lip 20 and the curved shoulder 16 being preferably formed integral with the respective jaws by cutting and bending a portion of the face-wall thereof.

In the operation of the tool, the tag is placed with its apertured member upon the

jaw 5, as shown in Figure 1 of the drawings.

After the ear of the animal to which the tag is to be applied, has been inserted between the diverging members thereof, the jaws are forced together by pressure upon the lever handles.

The closing movement of the members of the tag causes the pin to punch a piece out of the ear of the animal and force it into and through the opening in the jaw 5, and the subsequent engagement of the sharp cutting edge of the pin with the abutment shoulder 19 of the opening, clinches the same around the aperture of the tag upon the under side thereof, and thereby fastens the tag securely to the ear.

The shoulders of the jaw 5 between which the tag is positioned, prevent its longitudinal displacement and the engagement of the lip 20 of the other jaw with the longitudinal surface of the pin of the tag, guides it into and through the aperture and prevents its possible deformation by the applied pressure.

Having thus described my invention what I claim and desire to secure by Letters-Patent is:

1. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws one of which has an opening for alinement with the aperture of a tag placed between them, and a shoulder in said opening to engage with the end of the rivet pin passed through said aperture when the jaws are closed together.

2. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws one of which has an opening for alinement with the aperture of a tag placed between them, and a flange in the opening to engage with the end of the rivet pin passed through said aperture when the jaws are closed together.

3. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws one of which has an opening for alinement with the aperture of a tag placed between them, and a shoulder in said opening to en-

gage with the end of the rivet pin passed through said aperture when the jaws are closed together, and the other of which has a lip adapted to engage the longitudinal surface of the pin.

4. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws one of which has an opening for alinement with the aperture of a tag placed between them, and a shoulder in said opening to engage with the end of the rivet pin passed through said aperture when the jaws are closed together, and the other of which has a concave lip adapted to fit upon the longitudinal surface of the pin.

5. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws, one of which has a seat for a tag placed between them, an opening for alinement with the aperture of the same, and a shoulder in said opening to engage with the end of the rivet pin passed through the aperture when the jaws are closed together.

6. A tool for applying ear-tags consisting of a U-shaped clip having at its ends, a sharp-edged rivet-pin and an aperture to pass the same comprising cooperating jaws one of which has shoulders adapted to engage opposite ends of a tag placed between them, an opening for alinement with the aperture of the tag, and a shoulder in the opening to engage with the end of the rivet pin passed through the aperture when the jaws are closed together.

7. A tool for applying ear tags consisting of a substantially U-shaped clip having its ends spaced apart, a sharp-edged cylindrical rivet pin carried by one end and adapted to engage through an aperture formed in the other end, comprising cooperating jaws, one jaw having a seat therein for the reception of the apertured end of a tag and an opening for alignment with the aperture thereof, and means surrounding the said opening for swaging over the sharpened edges of the rivet pin after the latter have been passed through the said aperture.

In testimony whereof I have affixed my signature.

PETER FRANK ELZI.