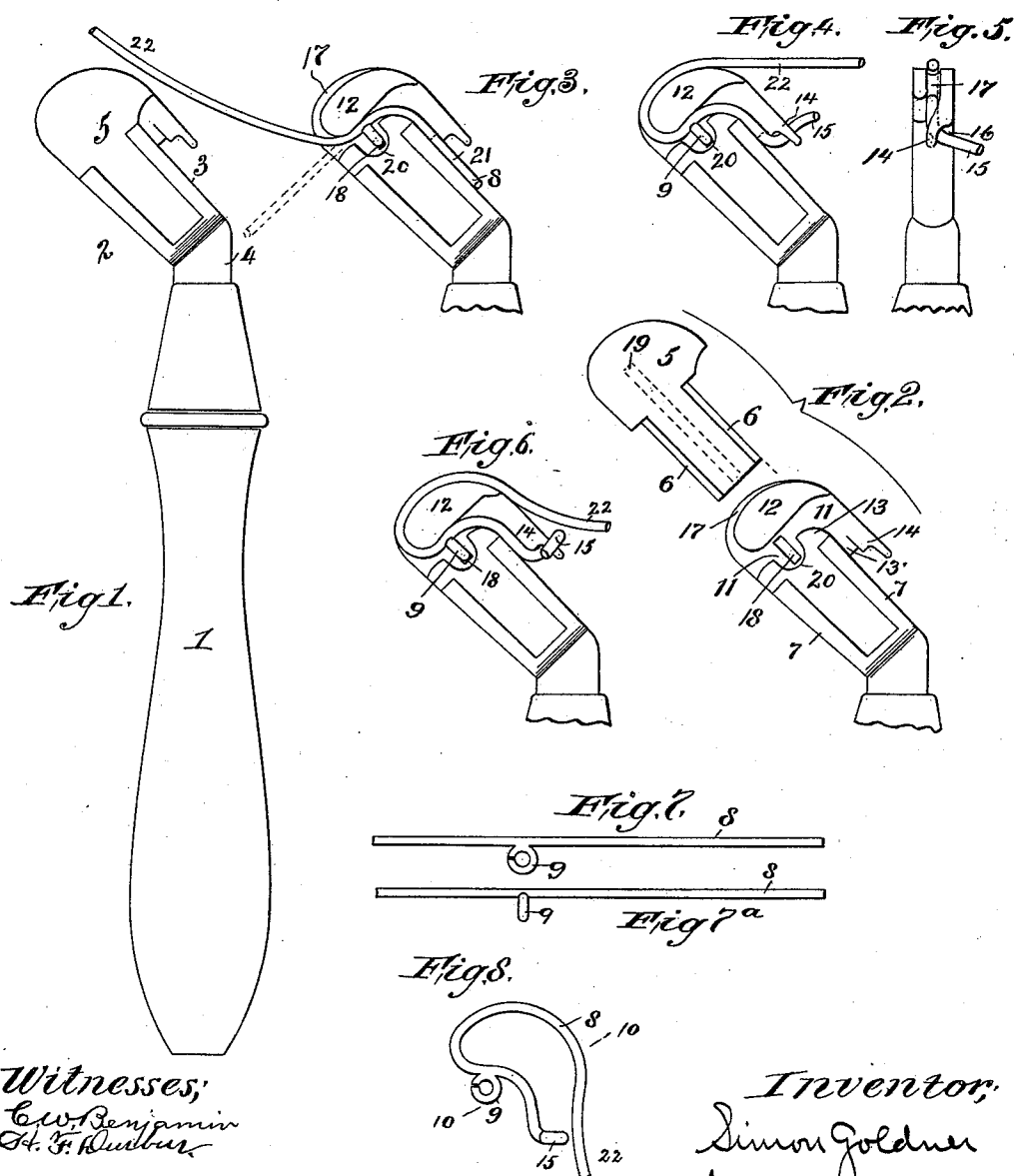


(No Model.)

S. GOLDNER.
DEVICE FOR MAKING EAR WIRES.

No. 447,405.

Patented Mar. 3, 1891.



UNITED STATES PATENT OFFICE.

SIMON GOLDNER, OF BROOKLYN, NEW YORK.

DEVICE FOR MAKING EAR-WIRES.

SPECIFICATION forming part of Letters Patent No. 447,405, dated March 3, 1891.

Application filed October 27, 1890. Serial No. 369,439. (No model.)

To all whom it may concern:

Be it known that I, SIMON GOLDNER, a subject of the King of Roumania, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Device for Making Ear-Wires, of which the following is a specification.

My invention has reference to the manufacture of that part of an ear-ring which is passed through the ear, and which supports the pendant, being known as the "ear-wire."

So far as I know, prior to my invention ear-wires have been made by disposing the wire into the proper shape by hand, the workman using a pair of pinchers to give it the proper contour. This process is a slow one, requiring skillful manipulation, and consequently a comparatively high rate of wages to the workman. There is, further, no guaranty that each pair of ear-wires will be identical in contour or proportion, and the manipulation of the wire by hand tends to more or less injure the goods, and in fine work great care has to be taken that this does not occur. In my invention these objections are entirely removed; and my invention therefore consists of a device by which the ear-wire can be disposed in its proper shape by hand entirely, tools other than the mandrel being only required for unimportant steps in the manufacture of this article.

My invention, besides consisting of the mandrel or device by which the ear-wires are uniformly disposed into the required shape, consists, further, of the method of so disposing the wire, said method comprising several distinct steps. I obtain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my device; Fig. 2, a like view showing a removed part of the device detached. Figs. 3, 4, 5, and 6 are descriptive views illustrating the various steps in the process of forming the ear-wire. Figs. 7 and 7^a illustrate the wire prior to the process of forming it, and Fig. 8 the completed article.

My device consists, essentially, of two parts, the same being the handle 1 and the head 2. The head is composed of a mandrel 3 or series of operative surfaces hereinafter explained, and shank 4, by which it is secured to the

handle 1. The head is also provided with a sliding portion 5, having its edges 6 beveled, whereby it will be held in the guides 7 of the head.

Before describing my device in detail it will be well that the article subject to manipulation be thoroughly understood. By reference to Fig. 7 it will be seen that the wire from which the ear-wires are formed consists, essentially, of the two parts 8 and 9, the bar 8 being cut to any desired size, and the loop 9 secured to it at its proper place, by which the pendant of the ear-ring is secured. The loop 9 in Figs. 7 and 8, it will be seen, is secured to the bar 8 in the same horizontal plane, while it may also be secured to the bar 8, as shown in Fig. 7^a, in which the loop 9 has been secured to the bar 8 transversely to its horizontal plane, these changes being merely of desire on the part of the manufacturer.

In Fig. 8 is shown the completed ear-wire, which consists, essentially, of two parts, that part approximately above the line 10 encompassing the lobe of the ear, and which I term the "lobe-section," and that part of it below the line 10 being the securing end of the ear-wire.

Reference will now be had to the device itself. In order that the ear-wire may be given the proper conformation, the device must have a portion upon which the ear-lobe section of the ear-wire can be formed. It must have means whereby the loop on the securing end of the ear-wire can be shaped. It must have a conformation approximating with the conformation to be given to the ear-wire as a whole, and, further, it must be adapted to receive bars provided with loops disposed as shown in Figs. 7 and 7^a, or in any other desired manner. To this end I remove a portion of the head, as clearly shown at 11, Fig. 2. The removal of this portion of the head leaves what I call the "lobe" portion 12, by which the lobe-section of the ear-wire is formed. This cutting away also forms the shoulder 13 and a straight bed 13'. At 14 is produced a lug upon which the fastening-loop 15 of the ear-wire is formed. This lug or projection 14 has an angular face 16, against which the bar rests while the loop 15 is being formed. Therefore it will be seen that the head of the device consists in a se-

rics of operative surfaces, all being given a certain inclination or conformation which will produce the desired conformation to the ear-wire. This operative surface comprises, essentially, the ear-lobe former 12, the shoulder 13, the head 13', the inclined head 16, and lug 14. The upper surface of the lobe-former 12 does not extend flush with the top of the device, and this leaves a groove 17, in which the bar 8 lies while being formed.

At 18, Fig. 2, is a groove cut in the head, the loop 9, Fig. 7^a, being adapted to be passed therein, and a corresponding groove 19 is cut in the sliding cover 5, so as to pass over the said loop 9 when the bar 8 is placed in position in the tool. The concave portion 20 is also formed in the head for the same purpose in relation to the loop 9, Fig. 7. That loop lying flush with the inner surface of the tool requires no corresponding groove in the sliding cover 5.

Of course it will be seen that various changes and alterations may be made in what I term the "operative surface" of the tool, in order that various shapes or conformations may be given to the ear-wire, and I therefore do not limit myself to the conformation of those parts as herein shown.

The operation of the device is as follows, and I will describe such operation with reference to the bar 8, Fig. 7^a, having the transversely-disposed loop 9 thereon. The cover 5 is removed from the tool, and the bar 8 is laid across the cut-away portion, the loop 9 lying within the groove 18. The cover is then placed upon the tool, and in this position the bar 8 is held firmly within it, the groove 19 of the cover 5 passing over the loop 9 and retaining it in its proper position, so that when the ear-wire is completed the pendant, which is to be attached to the loop 9, will hang in its proper position. The first operation is to bend down the end of the wire upon which the securing-loop is to be formed, as shown at 21, Fig. 3. The operator then draws the bar 8 over the lobe-former 12, as shown at 22, Fig. 6. He then bends the end 21 of the bar 8 over the lug 14, it bearing against the inclined surface 16, and, turning it almost completely around, the lug 14 forms the fastening-loop 15, as shown in Fig. 6. A slight pressure on the end 22 of the bar will then bring it to the shape shown in Fig. 6, in which it is shown as being completed. The cover is then removed and the ear-wire taken out. Of course any of these steps, as enumerated heretofore, may be reversed—that is, one may be done before the other without departing from the spirit of my invention.

Instead of the sliding cover 5, a cover may

be hinged to the head of the tool and fastened tightly down upon it, after the bar 8 has been inserted, the object of the cover 5 being simply to retain the bar 8 in position while it is being formed.

The head 2 is shown as extending diagonally from the handle, and although I do not limit myself to such, yet the position of the same greatly facilitates the manipulation of the bar or wire during the forming process.

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

1. In a device for forming ear-wires, the combination of the head 2, having an ear-lobe former 12, shoulder 13, inclined head 16, and lug 14, comprising an operative surface coinciding with the contour of the article to be produced, and means for confining the said article within the device, substantially as described.

2. In a device for forming ear-wires, the combination of the head 2, having an ear-lobe former 12, shoulder 13, inclined head 16, and lug 14, a recess 18, and a removable cover 5, having a longitudinal groove 19, aligning with the recess 18, substantially as described.

3. In a device for forming ear-wires, the combination of the head 2, having an ear-lobe former 12, shoulder 13, inclined head 16, lug 14, a recess 20, and a removable cover 5, fitting flush over said recess, substantially as described.

4. In a device for forming ear-wires, said device consisting of a handle, a head secured to the handle, said head being provided with a series of shaped or configured surfaces conforming in aggregated outline to the shape of the article to be produced, in combination with a cover removably secured to the head aforesaid, whereby the article is held within the said head while it is being shaped, substantially as described.

5. In a device for forming ear-wires, said device consisting of a handle 1, a head 2, extending diagonally from said handle and provided with a series of shaped or configured surfaces, comprising the ear-lobe former 12, shoulder 13, inclined head 16, and lug 14, which conform in aggregated outline to the shape of the article to be produced, in combination with the cover 5, removably secured to the head 2, substantially as described.

Signed at the city of New York, county of New York, and State of New York, this 23d day of October, 1890.

SIMON GOLDNER.

Witnesses:

B. T. VETTERLEIN,
H. F. DURBUR.