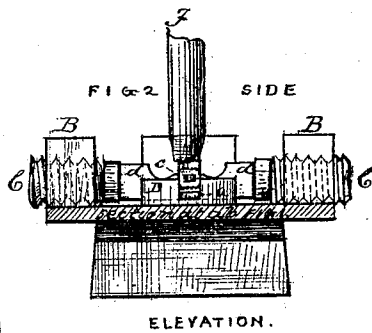
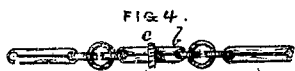
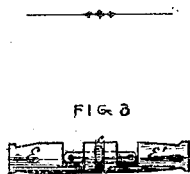
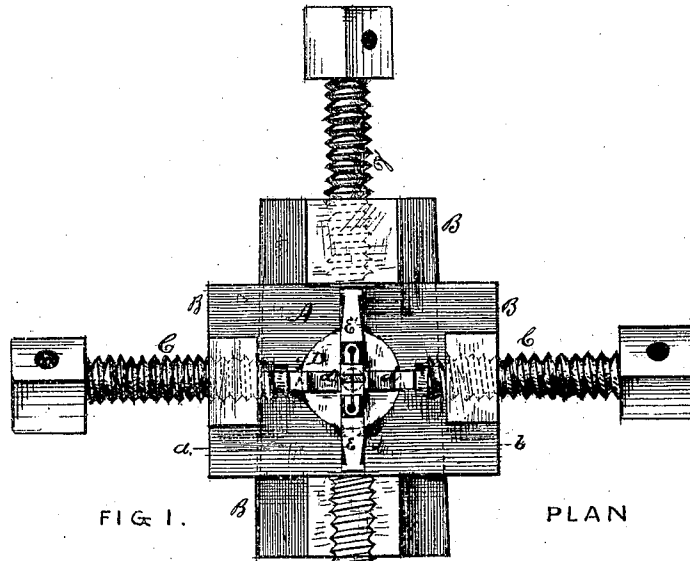


V. Drajer,

Ornamenting Chains.

No. 105054.

Patented July 5, 1870.



WITNESSES,

Edward C. Ames

Peter F. Hughes

INVENTOR.

Virgib. Drajer

United States Patent Office.

VIRGIL DRAPER, OF ATTLEBOROUGH, MASSACHUSETTS, ASSIGNOR TO
OSCAR M. DRAPER, OF SAME PLACE.

Letters Patent No. 105,054, dated July 5, 1870.

IMPROVED MACHINE FOR ATTACHING ORNAMENTS TO CHAIN-LINKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, VIRGIL DRAPER, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Devices for Attaching Ornaments to Chain-Links; and I do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof.

The improvement hereinafter described resides in a means whereby ring and band ornaments of various kinds used in the manufacturing jewelers' art may, by the operation of swaging, which gives form and character to such ornaments, be, at the same time, mechanically attached and secured to the particular article which they are intended to beautify.

In the drawing, an apparatus is shown specially adapted for use in applying the improvement in the ornamenting of chain-links.

Figure 1 is a plan.

Figure 2 is a sectional elevation.

Figure 3 exhibits, in detail, one of the parts to be referred to.

Figure 4 shows one of the completed links in a chain.

A is a bed-block, furnished with four ear-pieces, B, in sets of two, opposite to each other, through which screw-holes are tapped, to allow the introduction of clamp-screws, C.

A steel die-block, D, is let into the center of the bed-block, and divided into quadrants by two channels, which intersect each other at right angles, and in the line of the axes of the two sets of compressing-screws.

The length, depth, and width of one, at least, of these channels should be sufficient to receive the chain-link, or other article to be ornamented, and that one of the channels so to be used should be provided with a bed-die, *a*, as seen at fig. 2.

E E' are two holders for the link to be operated on, specimens of which links are seen at *b*, fig. 4, and are supposed to have been previously cut from sheet metal, or otherwise made by any of the known ways.

These holders are steel prismatic-shaped pieces, fitted to lie in one of the channels in the die-block D. Mortises are cut in their ends, equal, in their aggregate depth, to the length of the link, less the thickness of the ring or bar ornament, and so that, when the ring ornament which is to be swaged has been placed in its intended position on the link, the ends of the holders E E' shall abut against the sides of the blank for the ornament, and act as die-faces when the swaging operation is performed.

The link having been entered into the mortise of one of the holders, a ring previously prepared, and which is the blank for the ornament *c*, fig. 4, is slipped

onto the link, the depth to which the link enters the mortise constituting a convenient gauge to determine its position, and the remaining portion of the link is entered into the mortise of the other holder. The holders, with the link and the blank for the ornament being as shown at fig. 3, are then placed in their proper position in the bed-block, fig. 1, and the clamp-screws C are set up. The bottom edge of the blank for the ornament rests upon the top surface of the bed-die *a*, as seen at fig. 2. The compressing-dies *d d*, operated by the other set of clamp-screws, are made to bear against the ends of the blank, as seen at figs. 1 and 2. The blank so clamped, in connection with the link to which it is to be attached, is placed under the plunger F of a power press, and swaged. Its exterior outline will be determined by the shape of the several dies which, in combination with the plunger, act to form it, and, at the same time, it will, by compression, be made to gripe the link so firmly as to become mechanically attached thereto.

It will be well to punch the link with a slit or hole, wholly or partially through it, at the point where the ornament is to be applied, (and the drawing so represents the link as made,) the purpose of which is to enable the metal of the blank, by the swaging operation, to be crowded into the opening in the link, to absolutely insure its remaining fixed in its position.

Heretofore ornamental attachments of the character described have usually been secured in place by the aid of solder, after which operation the link requires to be cleaned and polished, the ornament itself being formed by a separate operation. By the use of the devices described, no solder is required, and the ornament can be applied to the link after the latter has been otherwise finished, and with great advantage in economy of labor and excellence of workmanship, it being formed into shape and secured in place by one single operation.

I do not claim, broadly, a bed-die, a punch, and compressing-dies, in combination with an interior "forming-die block," as such is comprehended by the claim in the Letters Patent granted to me February 26, 1865, and reissued to my assignee March 1, 1870; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The improvement in the devices for attaching ornaments to chain-links, which consists of the movable mortised link holders E E', compressing-dies *d d*, bed-die *a*, and plunger F, all in combination and operating to swage and attach the ornament to the chain-link, substantially as described.

VIRGIL DRAPER.

Witnesses:

EDWARD C. AMES,
PETER F. HUGHES.