

No. 624,404.

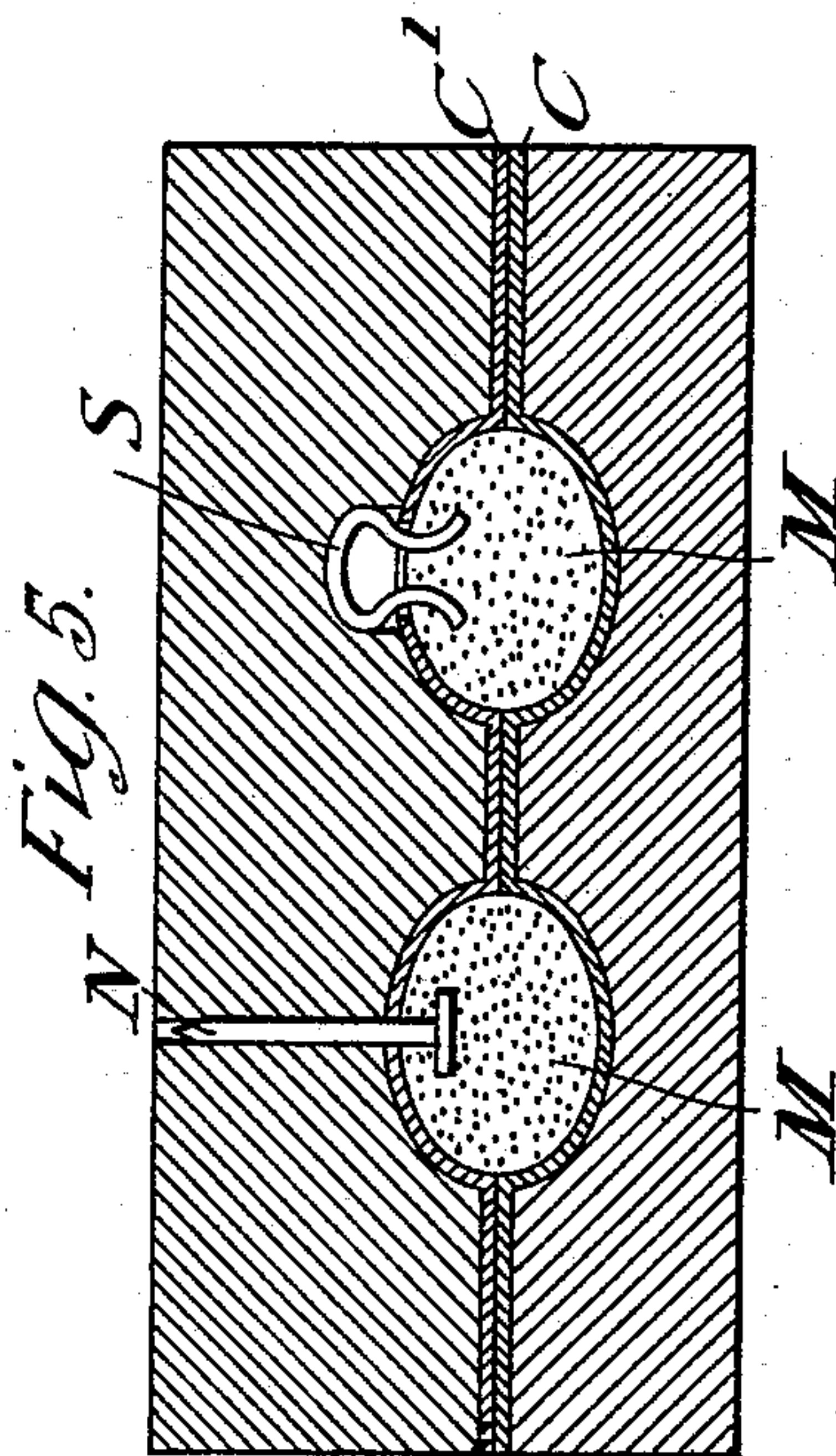
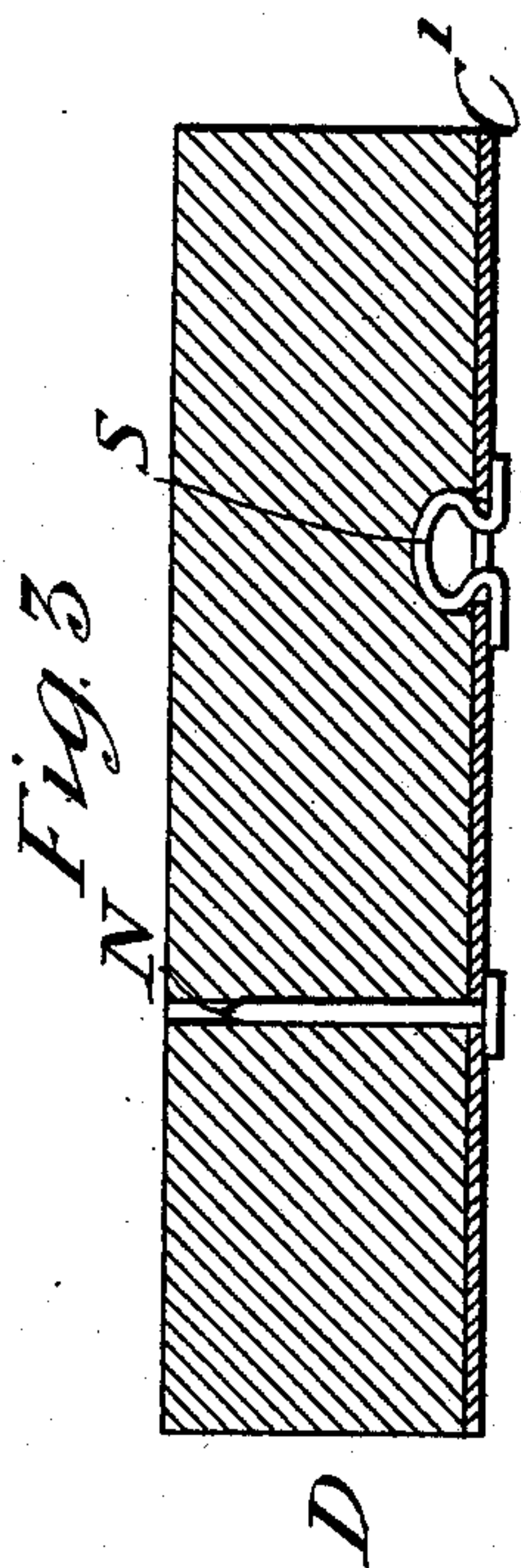
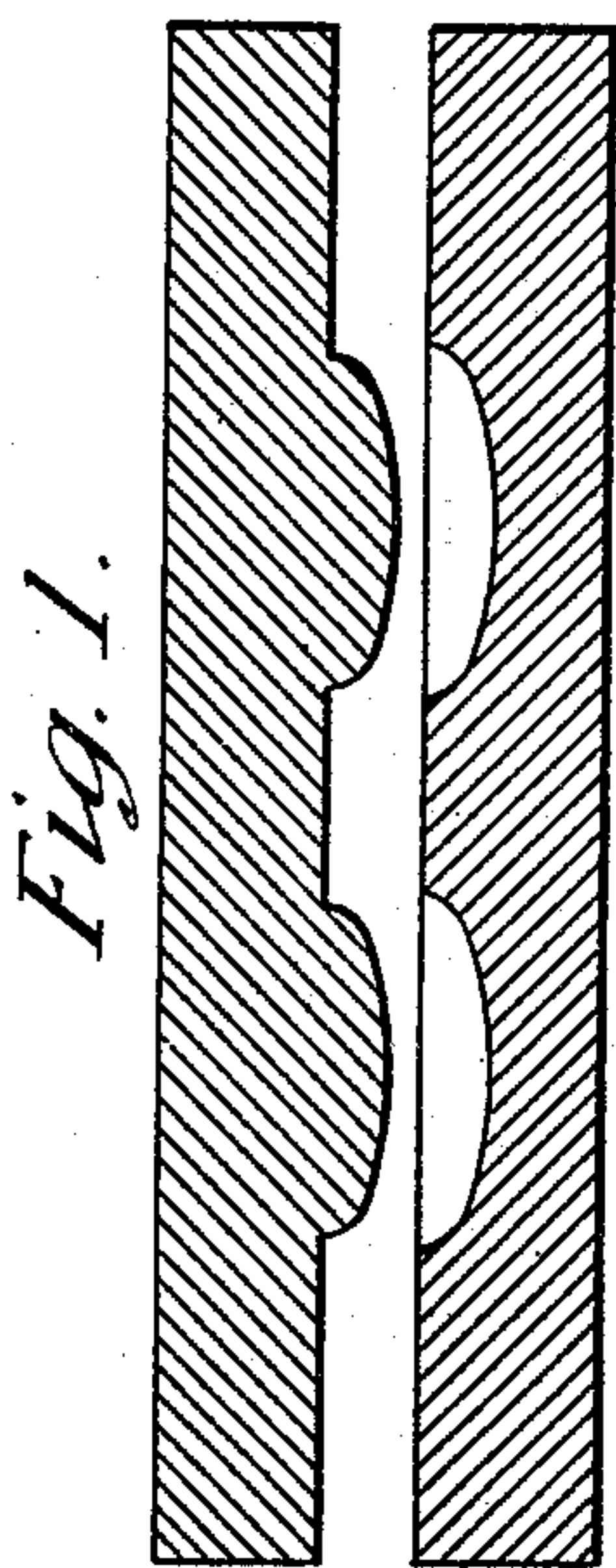
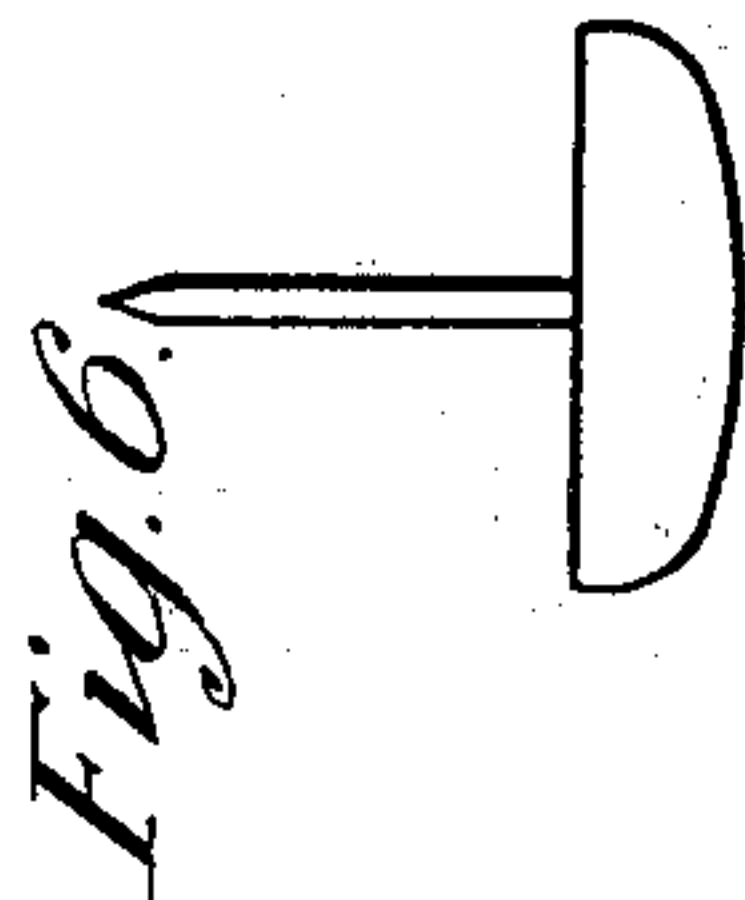
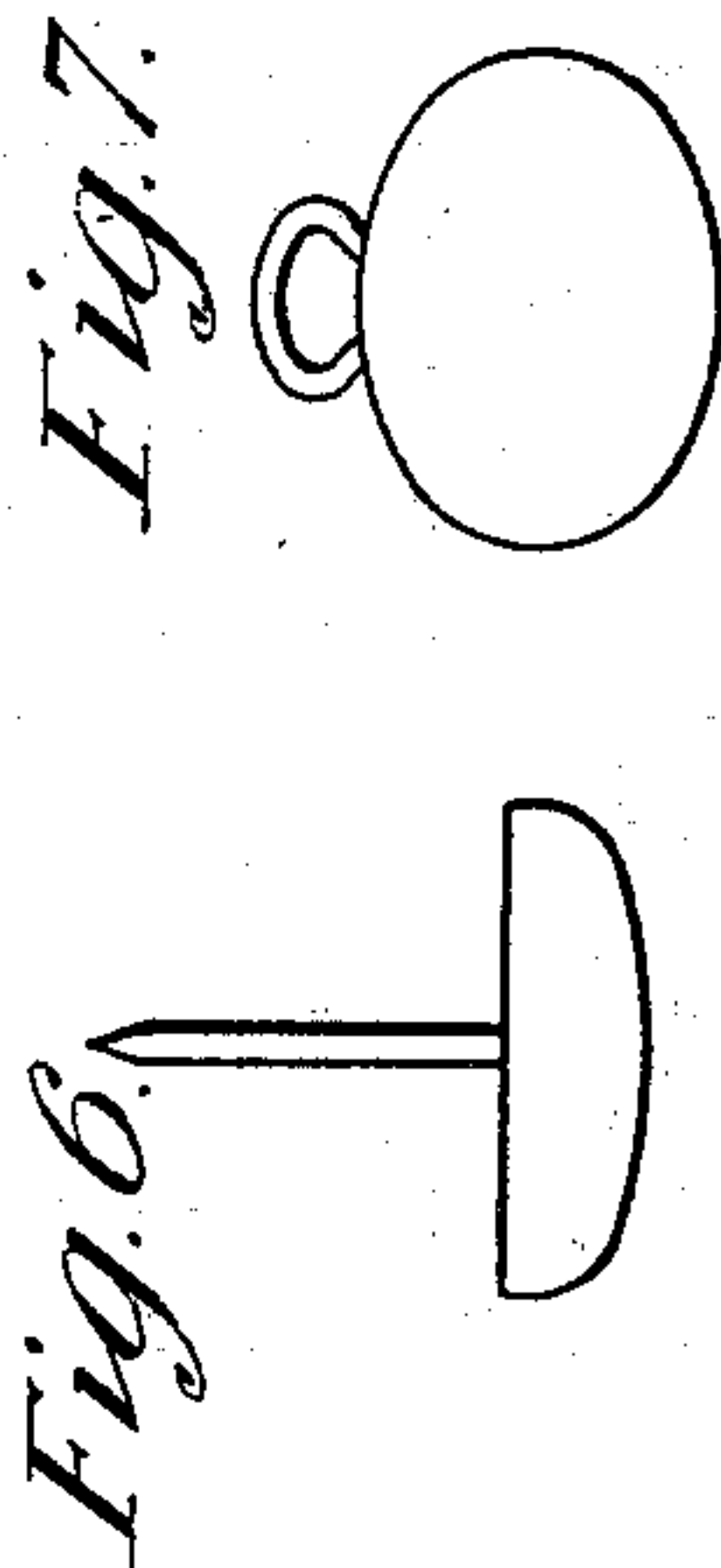
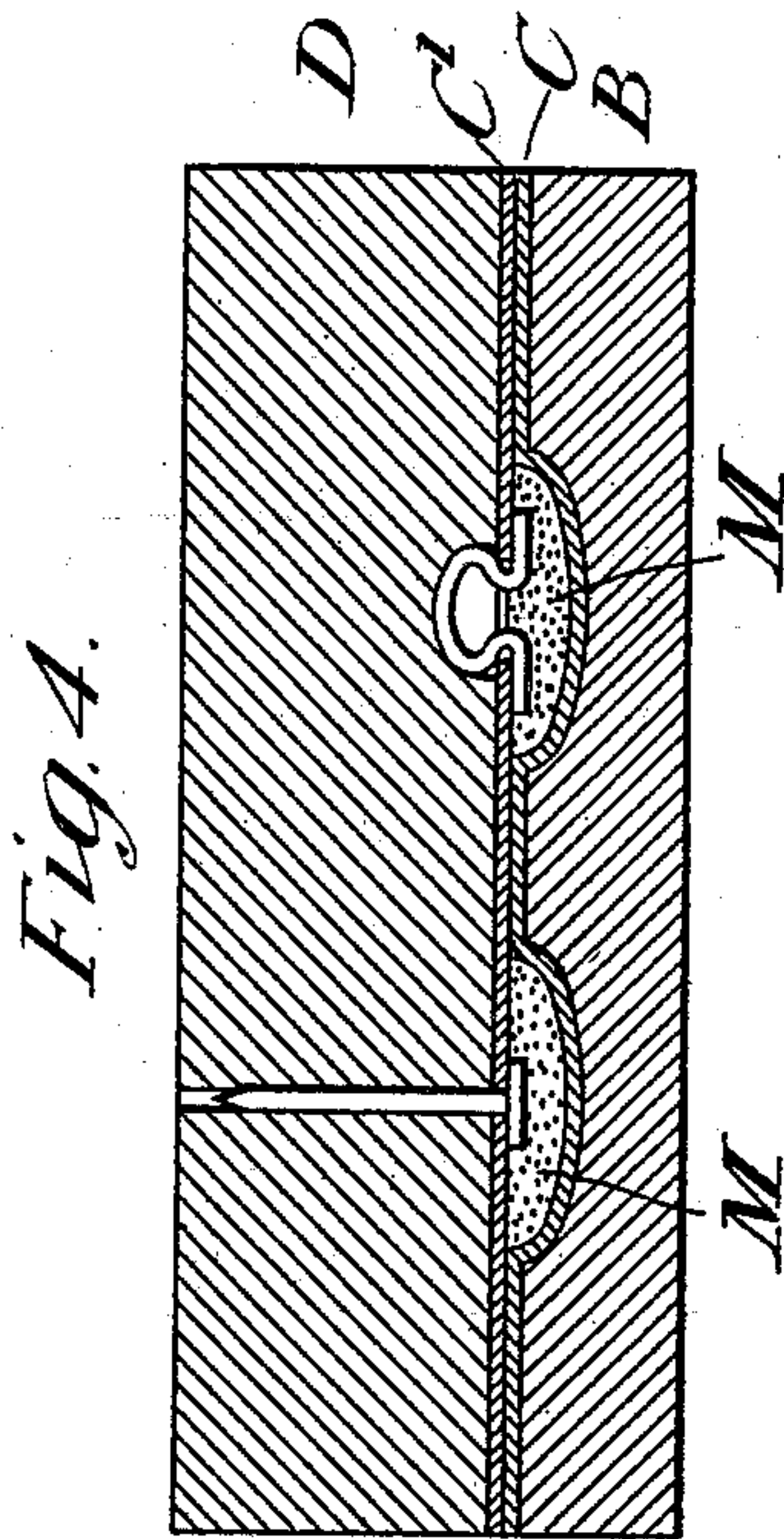
Patented May 2, 1899.

J. A. & A. L. THIERRY.

METHOD OF FORMING HEADED ARTICLES OF MANUFACTURE.

(Application filed Jan. 24, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JULES A. THIERRY AND ALFRED L. THIERRY, OF LONDON, ENGLAND.

METHOD OF FORMING HEADED ARTICLES OF MANUFACTURE.

SPECIFICATION forming part of Letters Patent No. 624,404, dated May 2, 1899.

Application filed January 24, 1898. Serial No. 667,755. (No model.)

To all whom it may concern:

Be it known that we, JULES ALPHONSE THIERRY and ALFRED LEON THIERRY, subjects of the Queen of Great Britain, residing at 292 Regent street, in the city of London, England, have invented certain new and useful Improvements in Methods of Forming Headed Articles of Manufacture, of which the following is a specification.

Our invention resides in an improved method of forming headed articles of manufacture—such as shoe-buttons, upholstery-nails, hat-pins, and the like—the same being carried out in the manner hereinafter described and claimed.

In the drawings, wherein our invention is illustrated in connection with the manufacture of a nail-head, Figure 1 is a section of the pair of dies first employed. Fig. 2 is a section showing the celluloid in the lower of the two dies. Fig. 3 is a section of the second upper die holding a nail to be headed or a shank for a button. Fig. 4 is a section showing the die shown in Fig. 3 applied to that shown in Fig. 2. Fig. 5 shows the dies modified to form nail-heads or buttons round on both sides. Fig. 6 is a side view of a nail with a head formed by employing the dies shown in Fig. 4, and Fig. 7 is a side view of a button formed by employing the dies shown in Fig. 5.

Between die-plates A and B, such as are shown in Fig. 1, we place a thin sheet of celluloid softened by heat or by impregnating it with alcohol or other solvent. On pressing the dies together the celluloid C is molded into the recesses of the die B, as shown in Fig. 2. We provide another die D, having holes to receive the shanks N of nails or pins to be headed or the shanks S of buttons, these shanks being placed in the holes after a thin sheet C' of celluloid, which has corresponding holes through it, has been placed on the face of the die D. The hollows in the celluloid C being filled with cheap material M, such as cement, coarse pulp, disks of pasteboard, wood, or other material of little value, the faces of the celluloid sheets C and C' are brushed over with solvent or preferably dissolved celluloid and then are pressed together, as shown in Fig. 4, causing the sheets to adhere as if they formed one sheet of double thickness in all the parts between the molds.

The drawings Figs. 1 to 4, inclusive, are

suited for flat-sided nail-heads, such as are shown in Fig. 6, or for flat-sided buttons. When round heads or round buttons, as shown in Fig. 7, are required, an upper die E, Fig. 5, is employed, having recesses into which the celluloid C' is pressed, and in this case the cheap material M is filled partly into the recesses of both sheets of celluloid, which are caused to cohere, as described with reference to Fig. 4.

Although in order to simplify drawings and description we have shown dies of comparatively small size, each for a single nail and a single button, it is to be understood that these dies may be plates of considerable area, with a number of the recesses and corresponding punches arranged in rows at equal intervals over the surface of the plates. It is also to be understood that some of these die-plates may be adapted for nails or pins only and some for buttons only. When the celluloid sheets have been caused to cohere, as above described, each pair forming a single sheet, with the heads and buttons projecting on the one side or on both sides, this sheet is subjected to the action of revolving cutters which cut round the edges of the heads or buttons, separating them from the sheets, and these edges can be afterward trimmed by subjecting the heads or buttons to revolving polishers or pressing them between suitable dies.

Having thus described the nature of this invention and the best means we know of carrying the same into practical effect, we claim—

The method of forming headed articles, which consists in softening a sheet of celluloid and molding a depression therein, inserting in said depression a valueless filling material, applying a second sheet of previously-softened celluloid containing a shank to the softened sheet containing the depression, forcing said sheets into close contact until their adjacent surfaces adhere to each other, and finally cutting and polishing the projecting side edges of said sheets.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JULES A. THIERRY.
ALFRED L. THIERRY.

Witnesses:

OLIVER IMRAY,
JNO. P. M. MILLARD.