

No. 714,602.

Patented Nov. 25, 1902.

W. NEUENDORFF.  
STAMPING OR PUNCHING TOOL.

(Application filed Apr. 11, 1902.)

(No Model.)

Fig. 1,

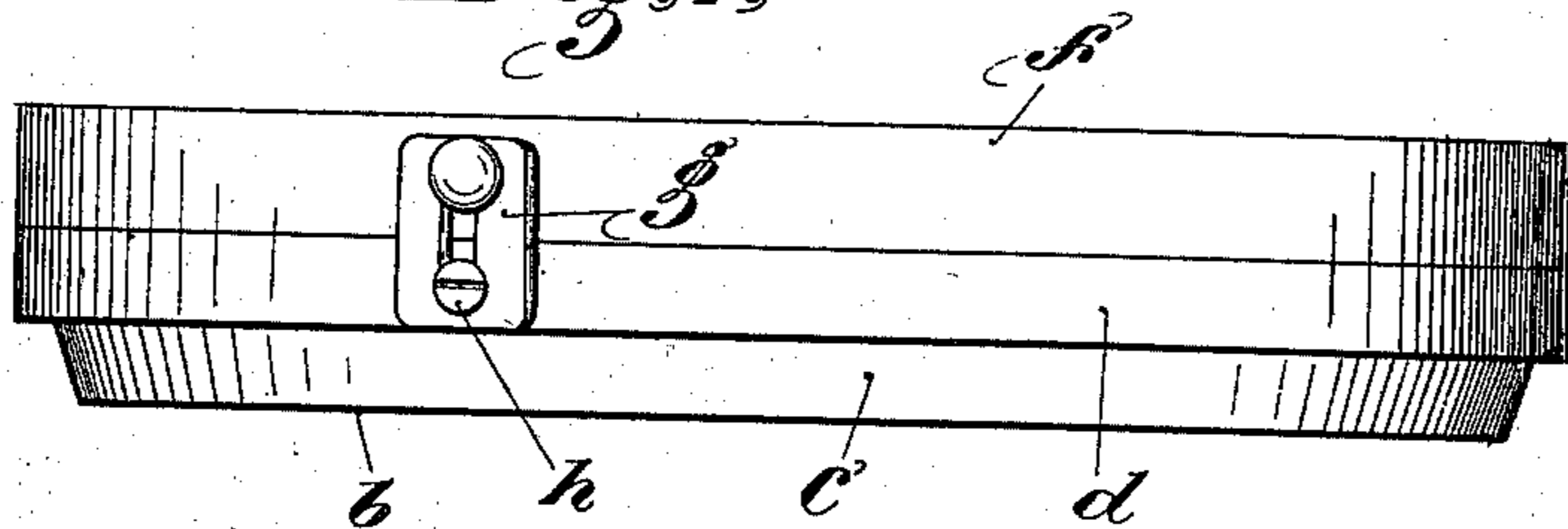


Fig. 2,

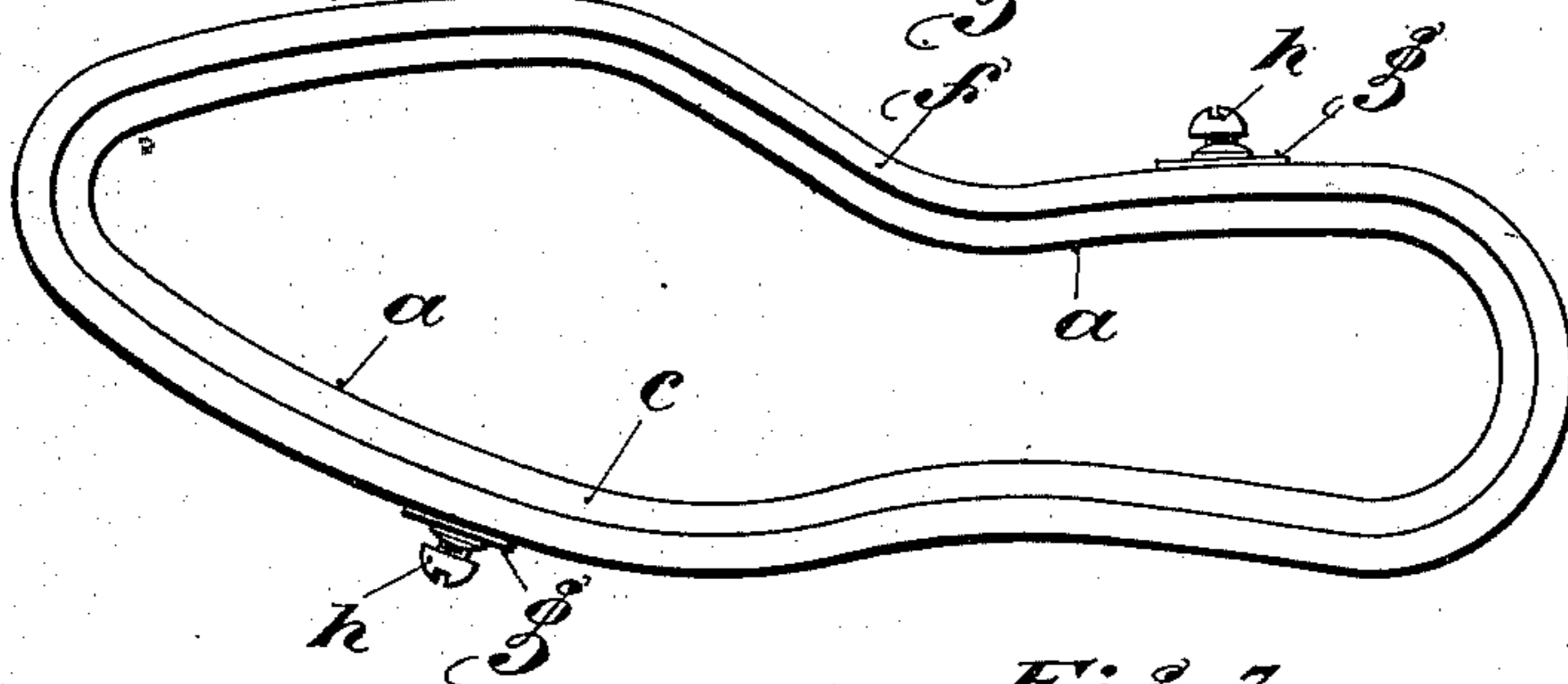


Fig. 3,

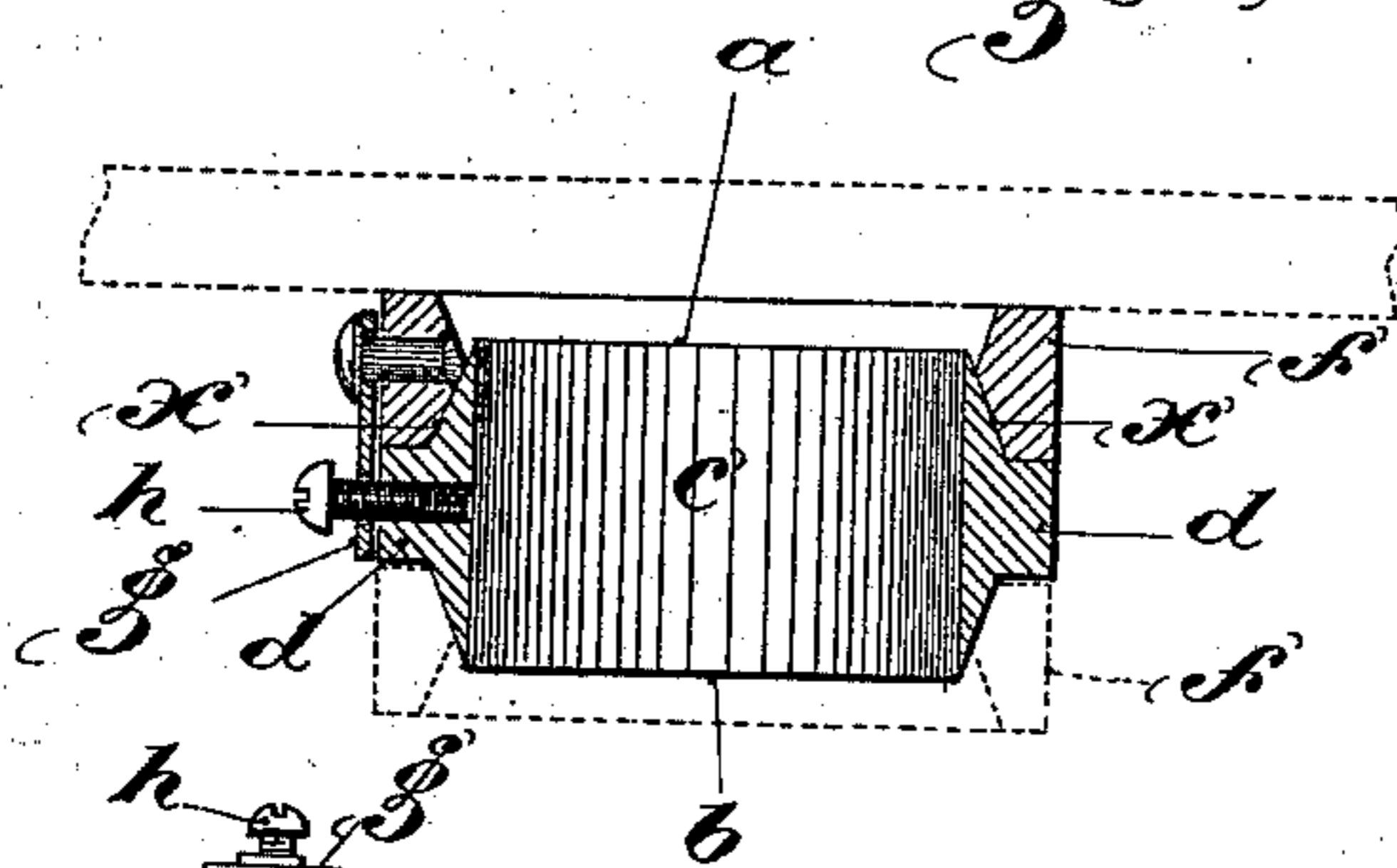


Fig. 4,

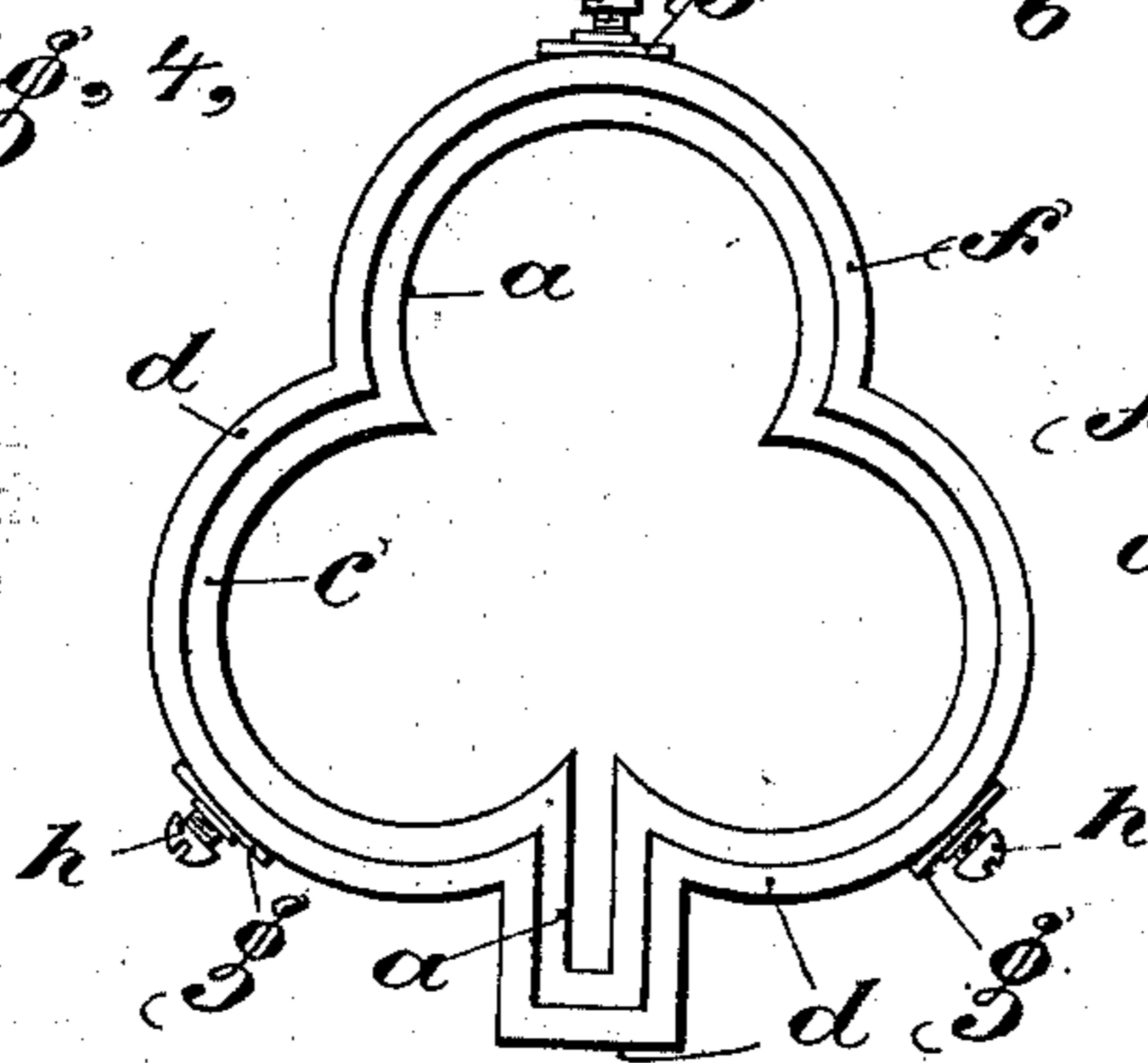
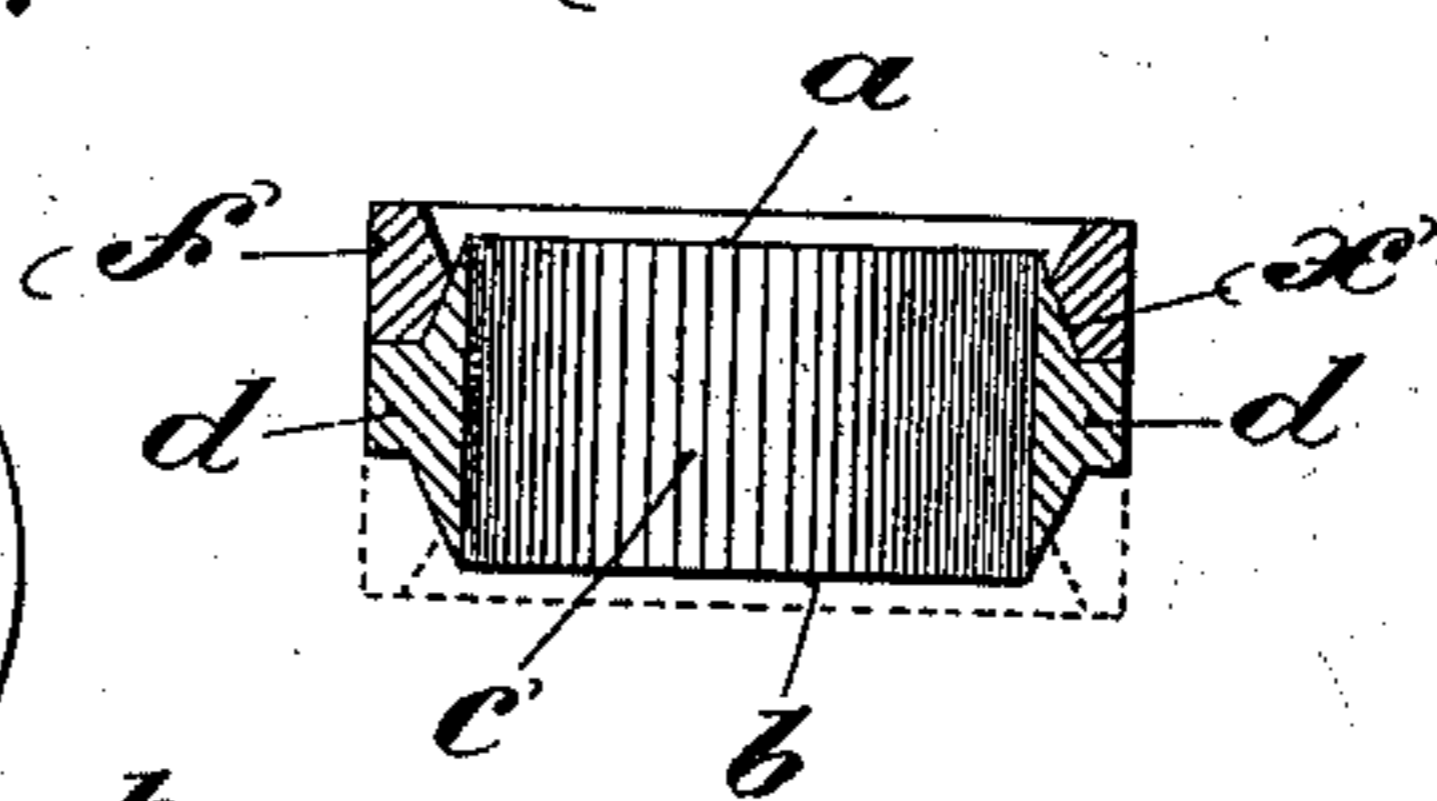


Fig. 5,



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# UNITED STATES PATENT OFFICE.

WILHELM NEUENDORFF, OF ERFURT, GERMANY.

## STAMPING OR PUNCHING TOOL.

SPECIFICATION forming part of Letters Patent No. 714,602, dated November 25, 1902.

Application filed April 11, 1902. Serial No. 102,479. (No model.)

*To all whom it may concern:*

Be it known that I, WILHELM NEUENDORFF, manufacturer, a subject of the King of Prussia, residing at Erfurt, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in or Relating to Stamping or Punching Tools, of which the following is a specification.

My invention relates to a stamping or punching tool adapted for any purpose for which such tools can be used and in view of tools of a similar kind, essentially characterized by its being provided with two cutting edges, each of which can be used separately. The contour of the cutting edges can vary according to the purpose for which the tool is to be used in order to cut out articles of various patterns—such as, for instance, the soles and upper-leather parts of boots and shoes, and sheets, cards, or the like in paper industries, as well as various patterns or shapes for use in drapery and millinery. As this new stamping or punching tool is provided with an upper and a lower cutting edge, much material is saved, as it is not necessary to use steel of an equal-sized cross-section, as is the case with one-edged cutting-tools, by the use of which almost half of the material is wasted by the grinding of the cutting edge to the full width of the flat steel. In this manner two tools can be made of the same quantity of steel, which tools, owing to their stable attachment to their frame, present a larger pressing-face, and owing to their prominent wedge form are not liable to bend during the punching operation, as so often occurs with tools of this kind hitherto used.

In the accompanying drawings, Figures 1, 2, and 3 show a two-edged punching-tool for the production of non-symmetrical boot and shoe soles in elevation, plan view, and cross-section, respectively. Figs. 4 and 5 show a punching-tool according to the present invention, which is modified for the punching of sheets in the paper or the like.

The cutter *c*, preferably constructed from sheet or profile steel, is provided with an upper cutting edge *a* and a lower cutting edge *b* and has upon the central portion of its widest part and in rigid connection thereto or integral therewith a frame or projection *d*,

which serves as an abutment for the holder or frame *f*. This frame *f* is of such dimension that it extends beyond the upper cutting edge. The cross-section of the frame *f* is straight on its outer, upper, and lower sides and wedge-shaped on its interior, with the object of supporting with its lower wedge-face the cutter *c* as much as possible against lateral strain, thereby preventing the active edge from slipping and at the same time increasing the pressing-surface of the punch or cutter, and thus bringing the pressure-points as much as possible into a vertical plane parallel to the cutting edge.

The pressure-frame *f* is provided with slots *g*, by means of which it can be detachably secured to the frame *d* by means of suitable screws *h*. The pressure-frame *f* and cutter *c* can be of any convenient height, according to the thickness of the material to be punched. As the tool can be used on both sides and the pressure-frame *f* therefore be attached so as to cut with the upper as well as with the lower cutting edge, it results that on cutting non-symmetrical forms the parts are always obtained equal, which was not possible with the tools hitherto used. On cutting straight or symmetrical soles or forms the tool according to the present invention has the advantage that when one of the cutting edges becomes blunt or damaged the other cutting edge can be immediately used, while with tools of previous construction the grinding and exchanging of the cutter caused inconvenient and often expensive delays. Moreover, on cutting non-symmetrical forms it is not necessary to exchange the cutter, as both parts can be cut with the same tool by simply reversing the position of the latter and using both cutting edges, which have precisely the same contours, with the only exception that, for instance, for boots and shoes one cutting edge has the necessary contour for the left foot and the other cutting edge for the right foot.

I claim—

A punching or stamping tool for all purposes the cutting edges of which have any convenient form characterized by an upper cutting edge *a* a lower cutting edge *b* and a frame *d* arranged between the cutting edges

attached to the outer face of the cutter and adapted to receive a pressure-frame  $f$  of internally wedge-shaped cross-section which frame being easily detachable and made of  
5 any convenient height and shape bears with its lower inner wedge-face  $x$  against the beveled face of the inoperative upper cutter part thereby securing the cutting edges of the operative part of the knife and preventing them  
10 from slipping and from bending and also

serving to equally distribute the pressure by increasing the pressing-surface.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILHELM NEUENDORFF.

Witnesses:

JOSEPH NICOLAS,  
FRITZ SCHNELL.