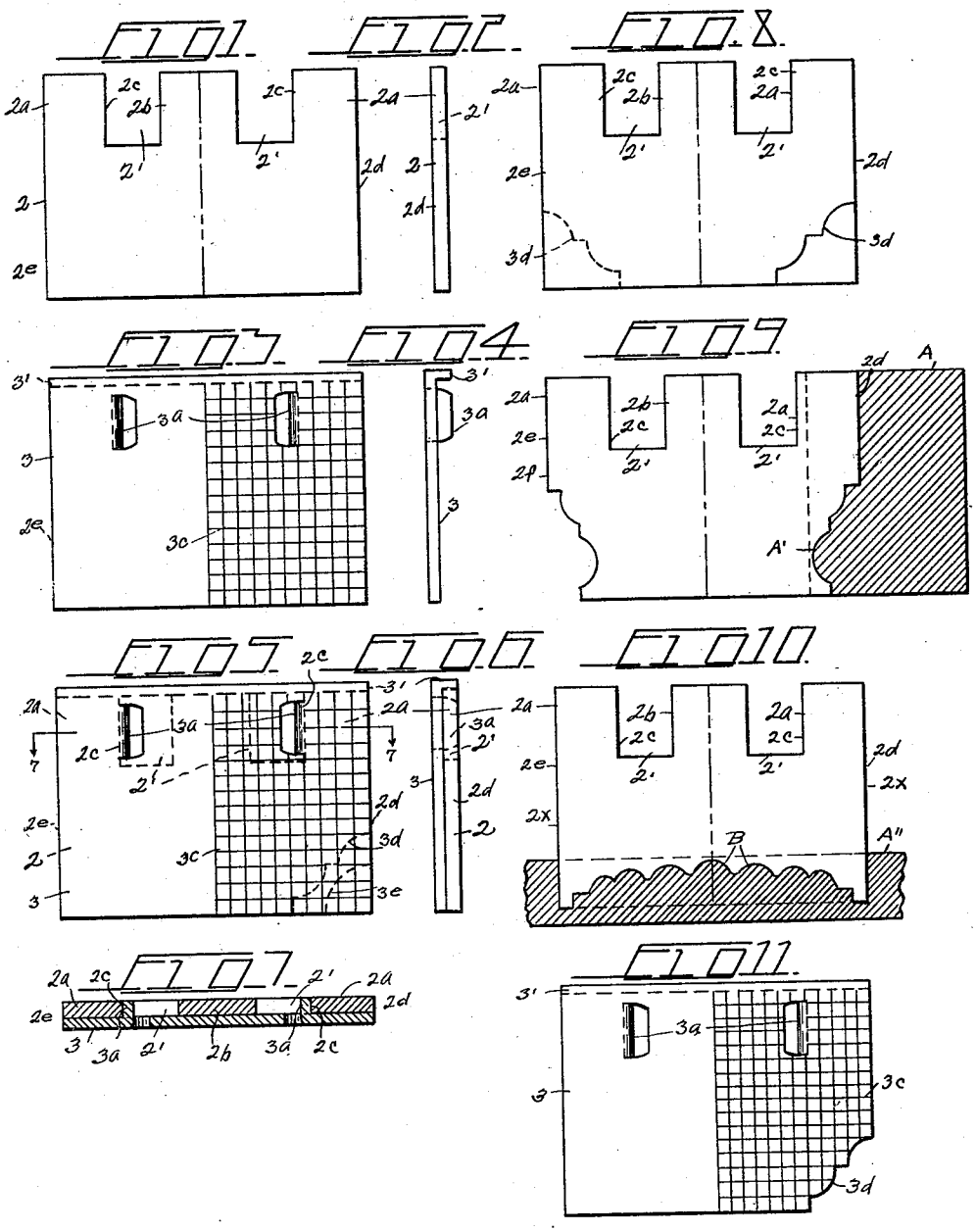
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TEMPLATE FOR TOOL DESIGNING

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TEMPLATE FOR TOOL DESIGNING

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This invention relates to means for designing and laying out rotatable shaping tools having plane rectangular bodies and whose end and bottom edges may be utilized for effecting shaping cuts, and has for its object to provide a novel template, having the same length, breadth and area as the tool blanks, upon which the design for a tool may be first laid out by inscribing the pattern and then cutting away portions of one end and the bottom edge. The top edge of the template may be formed with a right angle flange that overlies the top edge of the tool blank, and adjacent said flange the body of the template may be formed with lugs or ears to engage sockets in the tool blank for holding the template and blank in coincidence while the pattern for the tool is being traced and inscribed on one face of the blank. After the pattern is inscribed upon one end of the tool blank, the template may be reversed and mounted upon the opposite face of the blank, to enable the tool-maker to trace and inscribe the pattern upon the opposite end portion of the blank, after which the blank may be cut away by a profiling tool, ground, and finally sharpened to conform to the said pattern. By this method and means of designing, laying out, and transferring the patterns, shaping tools of this particular type may be truly balanced, and readily and accurately conditioned for performing plain, as well as ornamental shaping work.

The various features and parts of the invention will be understood from the detailed description which follows, and by reference to the accompanying drawing, in which—

Figure 1 is a side elevation of a shaping tool blank, to which my improvement is applied. Fig. 2 is an end elevation of the same. Fig. 3 is a front side elevation of the template blank showing the profile markings, and the retaining flange and lugs. Fig. 4 is an end elevation of the same. Fig. 5 is an elevational view showing the blank template mounted upon and inter-locked with the tool blank, also showing patterns for different styles of shaping, inscribed upon the checker field. Fig. 6 is an end elevation of the same. Fig. 7 is a horizontal section taken on line 7—7 of Fig. 5, showing the lugs in the retaining position. Fig. 8 is a side elevation of a tool blank showing a pattern traced from a prepared template. Fig. 9 is a side elevation of a similar tool blank, having its opposite ends cut to a modified pattern, in the act of shaping a piece of work. Fig. 10 is still another tool blank, whose bottom edge is formed to shape a rosette, the ends of this tool being formed to effect plain cuts. And Fig. 11 is a front face view of the template, showing the lower right corner cut away to the shape of the pattern outlined in Figs. 5 and 8.

In the drawing, 2 represents a plane rectangular tool blank having its top edge slotted at 2′ to provide upwardly facing tongues, as 2*a*—2*b*. 3 represents the plane rectangular body of the template having the same length and breadth but preferably being of thinner gage than the blank 2, so that when the template is mounted upon the blank, the said parts exactly coincide or register, except at the top where the template is formed with a right angle flange 3′, that is adapted to overlie the top edge of the blank 2 for preventing gravitative movement of the template relatively to the blank. Below the flange 3′, the body 3 is provided with similar lugs or ears 3*a*, which are punched and bent to form stops that project beyond the rear face of the body, the same as the flange 3′. The lugs 3*a* are disposed perpendicular to the plane of the flange 3′ and are spaced to correspond to the spacing of the edges 2*c* of the tongues 2*a* to prevent lateral or endwise movement of the parts 2 and 3 (see Figs. 5 and 7). Substantially one-half of the area of one plane face of the template is stamped or otherwise scored with a checker pattern 3*c* simulating the ordinary profile paper employed by engineers and others for accurately laying out various designs, as may be understood by the ornamental patterns shown at 3*d* and 3*e* in the lower right corner of Fig. 5. In practice, the tool designer inscribes the template 3 with a pattern for a new tool, for example, as shown at 3*d* in Fig. 5. His next step is to cut away the template 3 along this inscribed line, as shown in Fig. 11. The tem-

plate may then be mounted, as shown in Fig. 5, upon a tool blank, to enable the designer to trace and inscribe the pattern 3*d*, for example, upon the right end, as 2*d*, of the blank, as shown by the full lines in Fig. 8. He next removes, reverses and mounts the template upon the opposite face of the tool blank and repeats the tracing and inscribing of the same pattern on the latter face, as shown by the dotted lines in Fig. 8. The template may then be laid away for future use. The tool blanks are finally operated upon by a profiling tool, ground, and sharpened ready for effecting shaping cuts according to the various patterns, as may be understood by consulting Fig. 9. In the latter view, the tool 2*f* is fashioned to effect a slightly modified cut, as compared with Fig. 8, but the principle involved is substantially the same. The tool in Fig. 9 is shown in the act of shaping a piece of work, as A, to impose an integral molding, as A′ along one corner of the work. Fig. 10 shows a tool 2*x* which has been fashioned to shape a rosette, as B, the pattern for the rosette having been originally laid out upon the checker portion of a template (not shown), and afterwards transferred to the tool, as explained. In the tool 2*x*, however, the ends 2*d*—2*e* are preferably left plain, and may be sharpened in order to facilitate sinking the tool into wood or other material A″, in which the rosette is formed.

In practice, the tool blanks 2, as well as the template blanks 3, are prepared, and supplied to the users, by the manufacturer of the shaping machines, and the users ordinarily do their own tool designing and conditioning, as explained. By this arrangement, the manufacturers of furniture, planing-mill products, or the like, may create regular or special designs, and the templates therefore may be kept in stock, and may be used repeatedly, for reproducing the various shaping patterns.

Having thus described my invention, what I claim, is—

1. A template for transferring shaping patterns to tool blanks comprising a plane rectangular body, a portion of one plane face of said body being inscribed with a checker arrangement of lines, one edge of said body being bent and adapted to overlie the corresponding edge of a tool blank, said body below said bend being formed with lugs adapted to cooperate with said bent edge for interlocking the template and tool blank for effecting the registering of said parts when they are brought together.

2. A template for laying out shaping patterns to be transferred to plane tool blanks, comprising a plane sheet metal body, having substantially one-half of one of its plane faces inscribed with a checker arrangement of profile lines by which the design of the patterns may be accurately traced upon a tool blank, said body having one margin formed with a flange adapted to overlie a slotted edge of the tool blank and being formed below said flange with lugs adapted to engage said slots to inter-lock the body with the tool blank, said template being adapted to be mounted first on one side and then on the other of a tool blank to enable the pattern to be transferred in like manner to both ends of the blank.

3. A template for laying out designs upon shaping tool blanks comprising a plane angular body having a flange at one edge adapted to overlie the corresponding margin of the tool blank and having a plurality of stop lugs to interlock with the blank below said flange to hold the template and blank in true coincidence, one face of said body being inscribed with a criss-cross arrangement of profile lines, said lines extending from the middle towards one end of the body and adapted when inscribed with the outlines of a tool pattern to be cut away along said lines to enable a tool-maker to inscribe the pattern upon the opposite faces of the tool blank by the reversing of the template, substantially as described.

4. A template comprising a plane rectangular body having the same length and breadth as a tool blank, a portion of one face of said body being ruled to provide a checker field to aid in accurately designing the patterns for shaping tools, said body being adapted to be cut away along the lines of a pattern and to be mounted upon a tool blank to enable the tool-maker to trace and inscribe the pattern upon said blank, one margin of said body being bent to form a flange adapted to overlie the corresponding edge of the tool blank and said body also having a plurality of stop lugs to inter-lock and hold said body and blank in coincidence while the pattern lying within the limits of the checker field is being inscribed upon the opposite faces of the tool blank.

5. A template for tracing shaping patterns upon tool blanks having sockets in one edge, comprising a substantially plane body having the same length and breadth as said blank, one margin of said body being formed with a flange adapted to overlie the socket-edge of the blank, said body below said flange being punched to provide stop lugs that face in the same direction as said flange, said lugs being adapted to engage said sockets and to cooperate with said flange for interlocking the template with the tool blank to effect the registering of said parts when they are brought together, one end portion of said body being adapted to be cut away to conform to the outline of a shaping pattern to enable a tool-maker to inscribe said outline upon the opposite faces of the tool blank by the reversing of the template.

In testimony whereof I affix my signature.

RAY L. CARTER.