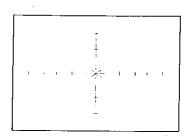
-Center of working space

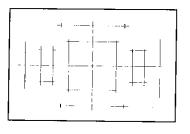


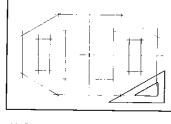


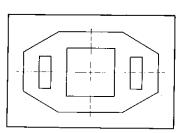
I. Locate center by drawing light diagonals.

II. Draw center lines.

III. Set off vertical and horizontal distances.







IV. Draw horizontal and vertical construction lines.

V. Draw angles (note lines crossing at corners).

VI. Heavy in final lines.

Fig. 4-53. Steps in drawing base place. Use Layout A in Appendix.

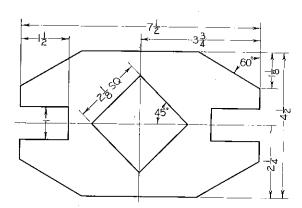


Fig. 4-54. Shim (Layout A).

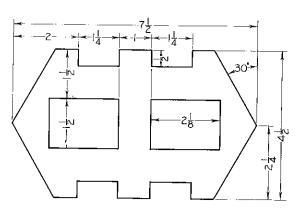


Fig. 4-55. Sheet metal stamping (Layout A).

A problem involving circular arcs and circles is given in Figs. 4-56 and 4-57. Further assignments can be made from Figs. 4-58 to 4-65.

The steps in drawing the Inlaid Linoleum Design, Fig. 4-44, are shown in Fig. 4-45. First, lay out the sheet, as shown in Fig. 4-43 (Layout A, Appendix). The working space inside the border is  $10\frac{1}{2}$ " wide and  $7\frac{3}{8}$ " high. The drawing is to be centered in this space. Make spacing calculations on a scrap of paper or on your sheet outside the trim line. Follow the steps below. Apply them to all of the problems that follow.

The steps in drawing the Base Plate, Fig 4-52, are shown in Fig. 4-53. First, lay out the sheet as shown in Fig. 4-43 (Layout A, Appendix). The working space inside the border is  $10\frac{1}{2}$ " wide  $\times 7\frac{3}{8}$ " high. The drawing is to be centered in this space. One method of spacing is

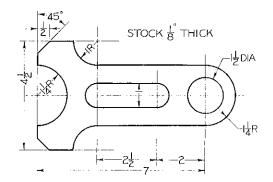
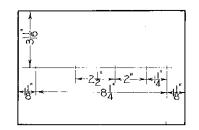
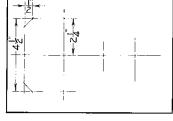


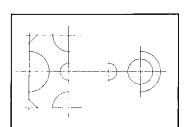
Fig. 4-56. Adjusting arm.



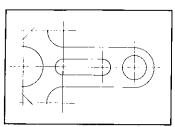
I. Draw horizontal center line and set off horizontal distances with scale.



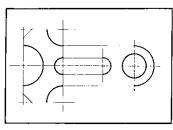
II. Draw vertical lines and construction as shown.



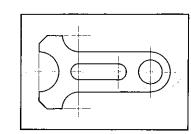
III. Draw construction arcs.



IV. Draw connecting straight lines.



V. Heavy-in arcs and circles.



VI. Heavy in straight lines to complete drawing.

Fig. 4-57. Steps in drawing adjusting arm. Use Layout A in Appendix.

shown in Fig. 4-45. Another is shown in Fig. 4-53, in which you locate the center of the working space by drawing diagonals and then making all measurements from this point.

The steps in drawing the Adjusting Arm, Fig. 4-56, are shown in Fig. 4-57. First, lay out the sheet, using Layout A in the Appendix. The working space inside the border is  $10\frac{1}{2}$ " wide  $\times 7\frac{3}{8}$ " high. The drawing is to be centered in this space. As shown in step I, draw the horizontal center line at mid-height on the sheet  $(7\frac{3}{8}" \div 2 = 3\frac{11}{16}")$ . Since the object is  $8\frac{1}{4}$ " long overall, and the space is  $10\frac{1}{2}$ " wide, the space on each side is  $1\frac{1}{8}$ ", as shown.

If assigned by the instructor, construct drawings using decimal-inch or metric scales by converting given fractional dimensions to decimal-inch or metric equivalents. Refer to Table 20 in the Appendix.

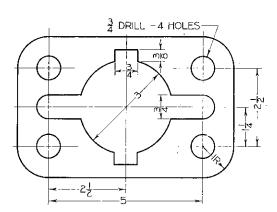


Fig. 4-58. Key plate (Layout A).

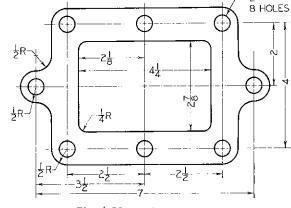


Fig. 4-59. Gasket (Layout A).

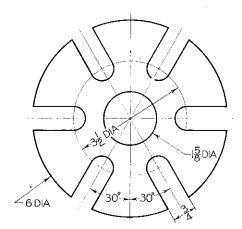


Fig. 4-60. Slotted cam. Use Layout A in Appendix.

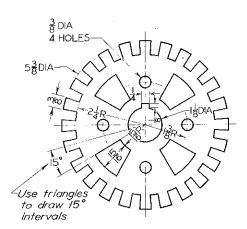


Fig. 4-61. Armature lamination. Use Layout A in Appendix. Use triangles to draw 15° sectors, Fig. 4-18.

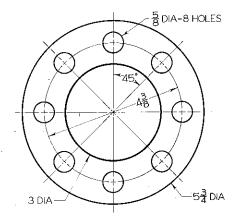


Fig. 4-62. Gasket. Use Layout A in Appendix. Use 45° triangle to draw 45° intervals, Fig. 4-14(b).

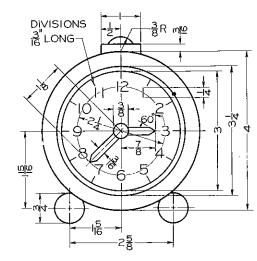


Fig. 4-63. Clock, Use Layout A in Appendix. Use  $30^{\circ}$   $\times$   $60^{\circ}$  triangle to draw  $30^{\circ}$  intervals, Fig. 4-14(d).

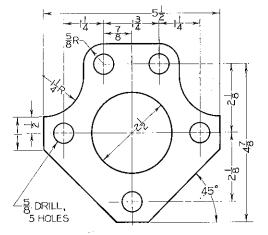


Fig. 4-64. Template. Use Layout A in Appendix.

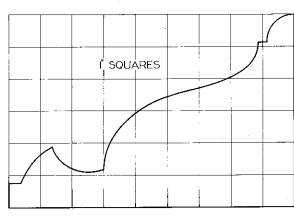


Fig. 4-65. Table leaf support wing. Draw full size. Use Layout A in Appendix. Use French curve.