CORNICE WORK.

To describe a pattern for a miter joint at right angles for a semicircular gutter. Let the semicircle **ACB,** Fig. 170, be the width and depth of the gutter. Draw the line **AB,** and draw the lines **AF** and **BE** at right angles to **AB.** Join **AF** and **BE** by the line **FE**

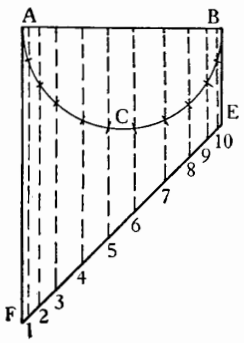

Fig. 170.

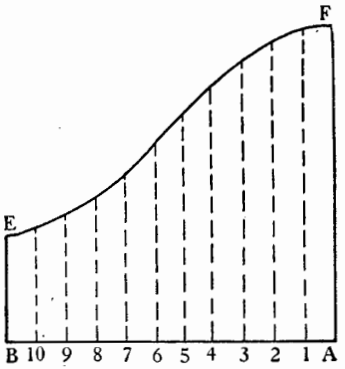

Fig. 171.

at an angle of 45 degrees. Divide the circumference of the semicircle **ACB** into any number of equal parts, and from these points draw lines parallel to **AF,** as **1, 2, 3, 4, 5, 6, 7, 8, 9,** and **10**; then lay off the line **AB** in Fig. 171, equal in length to the circumference of the semicircle **ACB.** Erect the lines **AF** and **BE** at right angles to **AB,** and lay off on the line **AB** the same number of equal spaces as on the circumference of the semi-

circle **ACB**, and from these points draw lines parallel to **AF**, as **1, 2, 3, 4, 5, 6, 7, 8, 9,** and **10.** Make **AF** equal in length to **AF** in Fig. 170 and **BE** equal to **BE** in the same figure; also each of the parallel lines bearing the numbers **1, 2, 3, 4, 5, 6, 7, 8, 9,** and **10.** A curve drawn through these points will give the shape of the pattern required.

To describe a pattern for a joint at any angle for a semicircular gutter. Let **ABC**, Fig. 172, be the width and depth of the gutter. Draw the line **AC** and the lines **EG** and **DH**, then draw the line **ED**, cutting the

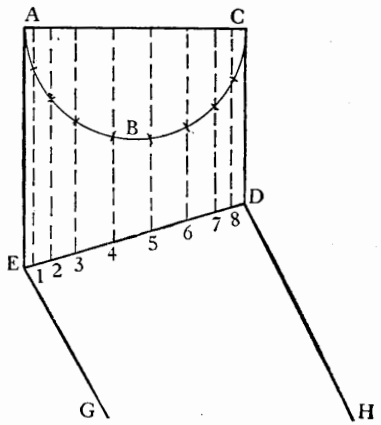

Fig. 172.

lines at the points **E** and **D.** Divide the circumference of the semicircle **ABC** into any number of equal parts, and from these points draw lines parallel to **AF**, as **1, 2, 3, 4, 5, 6, 7,** and **8.** Then lay off the line **AC**, Fig.

173, equal in length to the circumference of the semicircle **ABC**. Erect the lines **AE** and **CD** at right angles to **AC**, and then lay off on the line **AC** the same number of spaces as on the circumference of the semicircle **ABC**, and from these points draw lines parallel to **AE**, as **1, 2, 3, 4, 5, 6, 7,** and **8.** Make **AE** equal to **AE** in Fig. 172 and **CD** to **CD** in the same figure; also each of the parallel lines bearing the numbers **1, 2, 3, 4, 5, 6, 7,** and **8.** A curve drawn through these points will give the shape of the pattern.

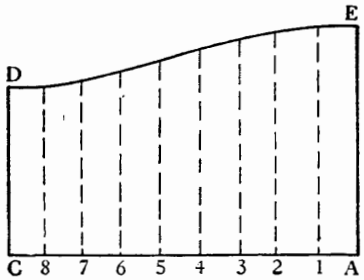

Fig. 173.

To describe a pattern for an O.G. gutter joint at right angles. Let **ABCD**, Fig. 174, be the given gutter. Divide the curved line **BC** into any number of equal parts and from these points draw lines parallel to **AD**, as **1, 2, 3, 4, 5, 6, 7, 8,** and **9**; then lay off the right angle **ABE** in Fig. 175 and make **BF** and **BA** equal to **AB** and **AD** in Fig. 174, and draw the line **CF** parallel to **AB.** Make **CF** equal in length to **AB,** and then draw the line **AC.** Make **FD** equal in length

to the curved line **BC**, Fig. 174, and lay off on **FD** the same number of equal spaces as on the curved line **BC**, and from these points draw lines parallel to **CF**, as

Fig. 175.

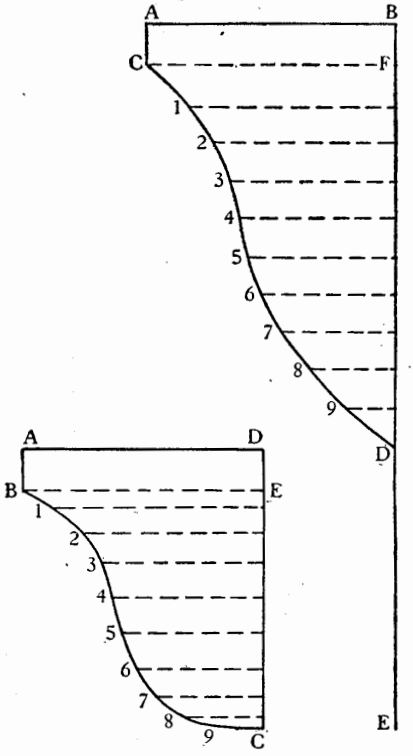

Fig. 174.

1, 2, 3, 4, 5, 6, 7, 8, and **9**. Make each of the parallel lines bearing the same figures as **1, 2, 3, 4, 5, 6, 7, 8,** and **9** equal. A curve drawn through these points will form the shape of the pattern.

To describe a pattern for a joint for an OG cornice at right angles. Draw the right angle **AFE** Fig. 176 and let **ABCDE** be the given cornice. Divide the curved line **BCH** into any number of equal parts as **1, 2, 3, 4, 5, 6, 7, 8 and 9,** and from these points draw lines parallel to **AF.** Lay out the right angle **ABCF** Fig. 177 and make **C1** equal to **AB** Fig. 176, then make **1G** equal in length to the curved line **BCH** and make **GE**

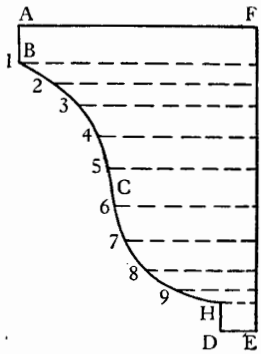

Fig. 176.

equal to **HD** and **EF** to **DE.** Lay off from **1** to **G** the same number of equal spaces as there are in the curved line **BCH.** Make **BC** and **11** equal to **AF,** and also each parallel line bearing the same number as **1, 2, 3, 4, 5, 6, 7, 8** and **9.** Make **KG** and **HE** equal to **DE** and a curve drawn through these points will give the shape of the pattern. When there is an offset or projection at right angles as **AB** in Fig. 177, make each of the dotted lines the same length as **AB,** and a curve traced through the points will give the pattern.

In place of using cornices and string-courses of stone in the fronts of brick houses, many prefer those of galvanized iron made in long lengths, and fixed to wooden blocks let into the brickwork, or to suitable rod-iron supports similarly fixed. Some of these cornices, when

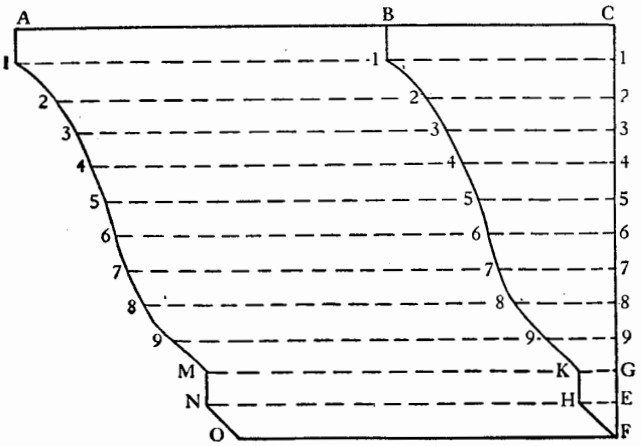

Fig. 177.

containing many members of mouldings, especially if they are circular in plan, need much skill. In general principle the metal is bent over the hatchet-stake with a mallet or a hammer, much as in making zinc guttering, assisting with swages where necessary.

"In making up circular mouldings, it is necessary to have the material sufficiently heavy to bear shrinking and stretching without breaking or becoming brittle. The best plan for bringing mouldings to the required shape is the following manner: Take a piece of hard wood 4 inches by 4 inches and 12 inches long, make

a profile of the work intended, and on one end of this piece make a die of the desired shape, to this must be fitted a plunger, which allows the thickness of iron to intervene. The die is shown in the following figures: Fig. 178 is the top, Fig 179 is the sectional view

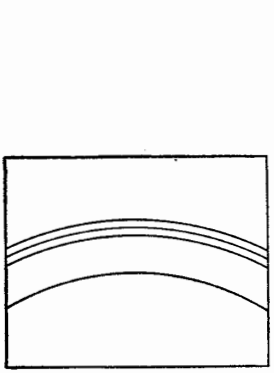

Fig. 178.

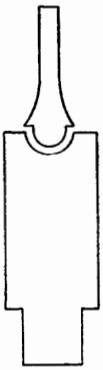

Fig. 179.

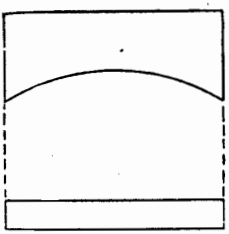

Fig. 180.

of the plunger and die for a half-round mould. Fig. 178 is to be made in the same circle as the work. Figs. 180 and 181 are the same, of a different moulding. Figs. 179 or 181 is to be placed in an oak block, as shown in Fig. 182. The right-hand portion should be of sufficient length to answer for a seat to the operator. Fig. 183 is a mallet about 12 inches long. To make these dies, imagine the cap to be stamped from one piece, and get out the die and plunger accordingly. The tools required will be a saw, brace, and ½-inch bit, a straight chisel, two or three sizes of gouges, a straight rasp, and a rasp curved at one end. When the iron is cut to the required pattern, it is raised in these dies, shifting the mould to and fro each time it is forced

into the die with a blow on the plunger from the mallet, until it is brought to the required shape. A little practice will soon demonstrate the utility of this method, and also its superiority over the hammering process.

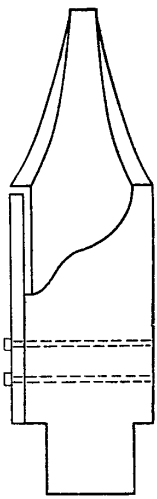

Fig. 181.

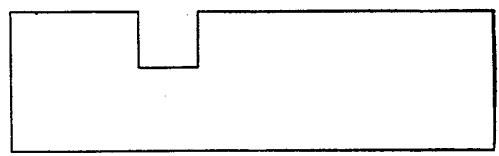

Fig. 182.

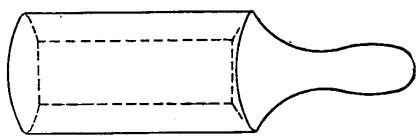

Fig. 183.

"When work is to be put together, never place two raw edges together. On one of the members turn ⅛ of an inch edge, and lap the member on this and soak the solder in well, so as to firmly unite the pieces, and on the top strip that is to be built in the wall turn a ½-inch edge to stiffen and answer the purpose of straps to hold the cap in position. An edge of the same kind should also be turned on the bottom strip, to extend over the frame, and if the cap is to have a

drop or corbel, let the inside of the drop or corbel extend back past the frame at least one inch, to secure the corbel to the frame, and the other side of the corbel to have a ½-inch edge to fit against the wall."

Should the work be for a building already up, the strip should have an edge sufficient to nail through into mortar joints. Good judgment is required in putting up work of this character, to make it a success.