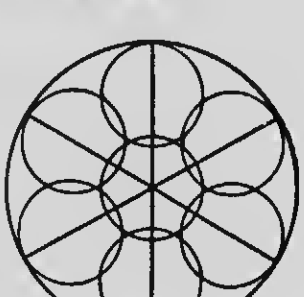
The radius of a circle being $1\frac{3}{4}$ in., inscribe in it a regular hexagon. Test the accuracy of your construction by testing the equality of all the angles.

Describe a regular hexagon about the circle in the preceding question, testing the equality of sides and angles of the figure.

Construct a regular hexagon with sides $1\frac{1}{2}$ in.

Construct a figure similar to that annexed, in which the outer circle touches six smaller ones.



Construct the figure also so that the six small circles touch one another, aud are all touched by the outer (large) and inner (small) circles. (Radius of small circles should be one-third radius of large circle.)

Describe a regular octagon in a circle whose radius is 43 millimetres. Test the accuracy of your construction by testing the equality of the sides (using dividers), and by examining whether each of the angles of the octagon is 135°.

Construct a regular octagon whose side is 2 inches. Examine the accuracy of your construction by testing, with the dividers, the equality of the sides, and, with the bevel, the equality of the augles.

Describe eight circles of the same radius, each touching two others of the set, and the entire eight lying within and being touched by a ninth circle of given radius.

The general way of solving such a problem as the