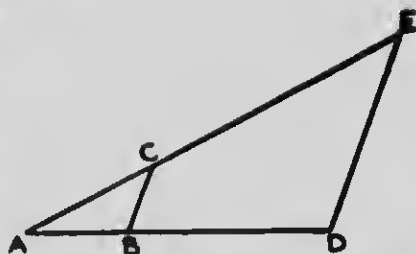


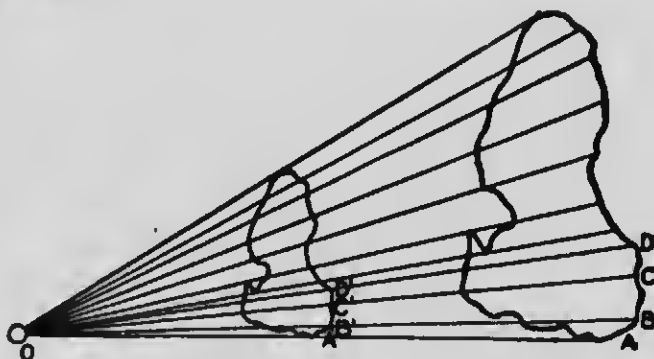
4. Diagrams such as the following should be constructed with accuracy, where DE is parallel to BC , and therefore the triangles ABC and ADE similar. AB , BC and AD should then be measured, and DE calculated from the proportion



$$\frac{DE}{AD} = \frac{BC}{AB}, \text{ or } DE = \frac{BC}{AB} \times AD,$$

and the accuracy of the construction, measurements and calculation tested by measuring DE with the dividers and scale.

5. The proportionality of the sides of similar triangles may be employed to reduce or enlarge a figure to any scale.



Suppose we wish to obtain a figure the same shape as $ABC \dots$, but with linear dimensions half those of $ABC \dots$. Take a line $OA'A$, with $OA' = A'A$. From O draw a number of lines $OA, OB, \dots$. With the parallel rulers obtain B' , through $A'B'$ being parallel to AB ; also C' , through $A'C'$ being parallel to AC ;