PROBLEM 1.—Represent properly in perspective the position of a point on the ground plune 2' to the right of the line of direction and 4' away from the picture plane. The eye of spectator is 6' above the ground and his distance from the picture plane is 14'. Scale  $y_{6'}^{*}$  (Fig. 7.)

The first step is to draw a horizontal line across the paper and mark a point somewhere near its centre to represent the C V. From C V draw a vertical line equal in length to the distance of the spectator from the P P, 14', and mark it L D, and its lower extremity SP. The scale in this problem is  $\frac{1}{2}$  of the natural size, that is, the unit of measurement in the drawing is to be  $\frac{1}{2}$ long. With C V as a centre and C V SP as radius draw a semicircle to find the measure from C V the height of the eye of the spectator above the ground, 6', which will be  $\frac{1}{4}$ '', and through this point draw the G L parallel to HL.



The point required in this problem is 2' to the right. On GL measure 2, or  $\frac{1}{4}$ , to the right of LD to find a point a which will be the PC of the point required, when it is moved forward in a direction parallel to LD to touch tho PP. A line from a to CV will be the representation of a line on the ground plane perpendicular to PP and 2' to the right throughout its entire length, and so we know that the point sought will be it. From a measure the distance of the point from the PP, 4', either to the right or left, as a b, and from b draw a line to ene of the measuring points to cut a CV in c. Then c will be the point required.

**PRONLEM 2.**—Show the position of a point in the ground plane 2' to the left and 6' beyond the picture plane. The eye of the spectator is 7' from the picture plane and 3' 6" above the ground plane. Scale  $\frac{1}{48}$ . (Fig. 8.)

Measure on GL, 2' to the left of LD to find a the position which the point required would occupy if brought forward to the *PP*. From a draw a line to CV. This will represent the track 8 of the point a on being moved back along the ground plane to the horizon, in a direction perpendicular to PP. From a measure 6' to the right, to b and draw b LMP to cut a CV in c. Then c will be the point required.



From the position of a point 1'3" to the right, 36 distant from the picture plane and 1' above the ground plane. Height of eye 1'3", distance from the picture plane 3'6", and scale  $\frac{1}{24}$ . (Fig. 9.)

Find the position which the point would occupy when in the ground plane 1'3' to the right and 3'6' back from P, by measuring 1'3' to the right of L D to a, and 3'6' from a to b, and drawing a CV and b R M P to intersect in e. At a erect a



perpendicular a d equal in height to the distance of the point required above the ground plane, 1', and from d draw a line to C V to cut a perpendicular from c in e. Then e will be the position of the point required.

It is evident that c is the proper distance to the right, and away from the P, and that d is the proper distance to the right and above the ground plane, so that if a line be drawn from dparallel to ac it will pass over c at the proper distance. In order to represent it in this direction, it must vanish in CV. (Rule iii.)

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