suspension of the plumb-bob above the centre of the disc being known, and the distance of the lower end of the plumb-bob from the centre of the disc having been obtained by accurately measuring the distance between the centre of the photograph of the plumb-bob and the centre of the disc, the angle of dip can be calculated. The direction is also easily obtained by placing the two discs in the same relative positions which they occupied while in the instrument, which can at once be done by means of the two pin-pricks on each. The direction of the line joining the centre with the image of the plumb-bob on the one disc will then (unless it happens to fall in the magnetic meridian) make an angle with the photograph of the magnetic needle on the other disc, and from this angle the magnetic direction of the path of the borehole at that particular point is determined. In surveying a borehole, say 4,000 feet in length, two sets of readings should first be obtained at regular intervals, which should not exceed 250 feet in length. When these have been obtained, the dip and deviation must be calculated for each point, and then sufficient data are available to plot, in plan and section, the true path taken by the borehole. (Proc. Institute of Mine Surveyors, Transvaal, May 27, 1905.)