

Copy of a printed image of diffraction pattern referenced as "Straight edge diffr."

Contributors

Fuller, Watson, 1935-

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each example that the pattern consists of fringes in the plane of the figure. We shall consider first the straight edge.

1. **The Straight Edge.**—The pattern due to a straight edge consists of a single set of vertical fringes (see Fig. 51).

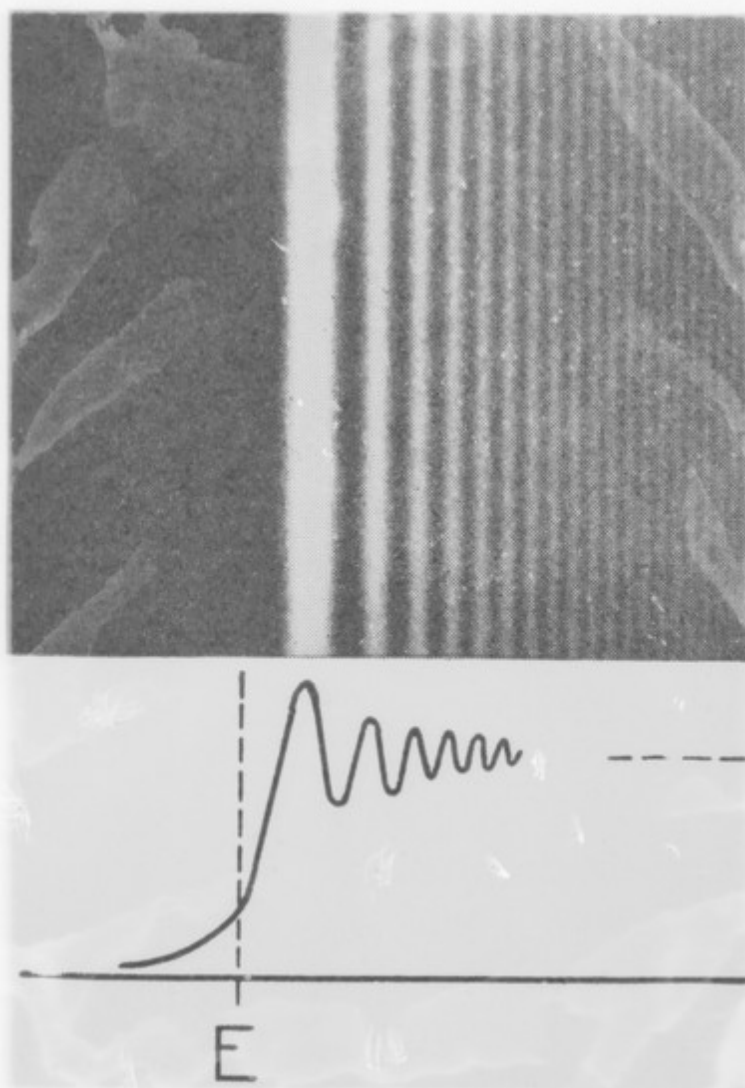


FIG. 51

inciding in position with the edge of the screen. The left half is obstructed and the entire right half is effective. The diffraction pattern is represented by the vector OJ (Figure 5) of the spiral to the upper asymptotic point. The

fracturing screen is on the left. The pattern to the right of the edge of the screen is indicated by the fringes. The intensity varies rapidly in space. The intensity is uniform, normal to the edge of the screen. The intensity in the plane of the screen is the same intensity as in the plane of the screen on a larger scale, of amplitude indicated by curve A .

Our problem is to find the diffraction pattern for the diffraction of light by the Cornu spiral. Referring to the point lying on the spiral, the diffraction pattern is the same as that of a straight edge with reference to the point.