

sage through the solid terrestrial crust from the focus of origin, the earth-wave must be liable to continual deflections and delays, from the varying geological structure of the rocks. To this cause, no doubt, must be in large measure ascribed the marked differences in the rate of propagation of the same earthquake in different directions. The wave of disturbance, as it passes from one kind of rock to another, and encounters materials of very different elasticity, or as it meets with joints, dislocations, and curva-

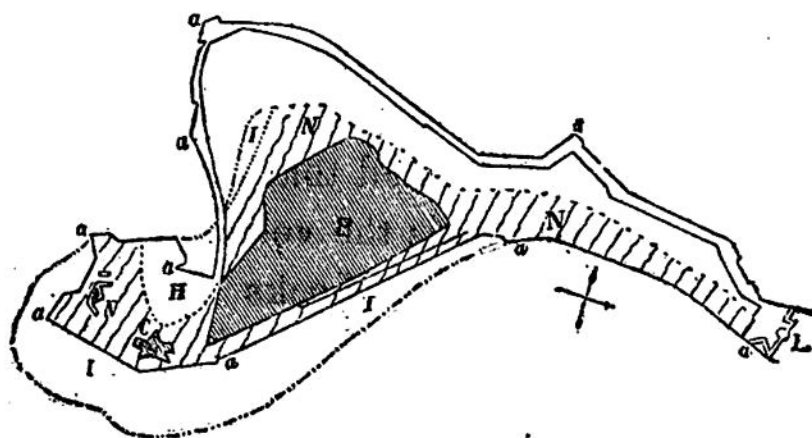


Fig 71.—Plan of Port Royal, Jamaica, showing the effects of the Earthquake of 1692 (B.).

P C, Portions of the town built on limestone and left standing after the earthquake; a a, L, the boundary of the town prior to the earthquake; N N, Ground gained by the drifting of sand up to the end of last century; I L H, Additions from the same cause during the first quarter of the present century.

tures in the same rock, must be liable to manifold changes alike in rate and in direction of movement. Even at the surface, one effect of differences of material may be seen in the apparently capricious demolition of certain quarters of a city, while others are left comparatively scathless. In such cases, it has often been found that buildings erected on loose inelastic foundations, such as sand and clay, are more liable to destruction than those placed upon solid rock. In illustration of this statement the accompanying plan (Fig. 71) of Port Royal, Jamaica, was given