

portions already laid are on the unstable portion C, the movement of which, owing to the shape of the under-surface, will be towards the north-east." Does that give you any enlightenment as to the movement, then, of the north wing?—It gives you the movement forward of this altogether.

1155. If it came to your knowledge, as an architect, before commencing a building that such a thing was possible, would not you consider it your duty to advise those who employed you that certain particular things required to be done to guard against that?—Yes: in fact, I would stop the work until it was done.

1156. Looking at that report further down, it says, "Unless the foundations are carried through to the solid, or otherwise completely isolated from the general mass of formation C on the hill-side, there is danger that, however strongly they may be laid, the northern end of the building will be insecure." Would cutting a trench and leaving it open, isolating the ground on which the building was to be erected, be of assistance?—It would have a tendency to help it.

1157. Would cutting an open trench, and isolating the portion on which the building was placed from the remainder of the moving mass, be a thing that you would suggest to do?—Yes.

1158. To isolate the site?—Yes.

1159. What would be the effect of that?—That would cut off the water from the site of the building, and give the building a better chance of standing.

1160. In what way would it have a better chance?—Because you take the water away from it.

1161. What would be the result on the isolated portion?—It would give it more solidity.

1162. Would it harden it?—Yes, it would harden it.

1163. If you recommended the proprietor to do that, and no attention was paid to your recommendation, what would you think of the proprietor?—I think he would require to stand the consequences.

1164. *Mr. Blair.*] If there was boxing put in the foundation, would there be evidence of it now?—Not unless it was left in.

1165. Would it not be smoother with boxing than if it was just thrown in the rough drain?—More even.

1166. Could you, on examining the foundation, know whether boxes had been put in or not?—Yes, you could tell that.

1167. You were asked, if you were architect of a building, and that you advised the proprietor to drain the ground, and he did not drain the ground—[*Mr. Lawson:* I did not ask that.]—would the responsibility rest upon the proprietor?—I would consider so.

1168. But, supposing the proprietor drained the ground according to the architect's own plans, then upon whom would the responsibility be?—Then I should consider myself responsible.

1169. Supposing the whole hill-side was moving as suggested, would an open drain remain open?—No, unless precautions were taken for it to remain open.

1170. You will find in the same report, if you will read the last clause of *Mr. Cox's* report—would you mind reading the first clause of the last paragraph, beginning, "If proper precautions are taken"?—"If proper precautions are taken to thoroughly drain the new site, which is also situated in such a manner that a very slight rise takes place immediately beyond the front of the building, and substantial foundations put in, I do not think much danger exists of another slip taking place."

1171. After that warning would you see, if you were the architect, that substantial foundations were put in—would you pay particular attention to the foundations?—I would see that the foundations were strong enough; but this would require, not a foundation, but a retaining-wall.

1172. I merely referred to this clause to ask, if your attention was directed to the necessity for substantial foundations, would you see that substantial foundations were put in?—I should see that the foundations were put in strong enough to carry the building.

1173. *Mr. Lawson.*] I would ask another question or two: Supposing you have a building erected on confessedly soft ground—say it is a building 40ft. high in the wall—would you recommend as a good thing to be done that a tunnel 3½ft. by 2ft. or so should be sunk within 12ft. of its foundations—remembering always that it is soft ground—and carried right along two sides of the building only, and then above that another tunnel or gallery about the same size, still within 8ft. or 10ft. of the building, or 12ft., or 14ft., or 15ft. of it? Do you think that would be conducive to the stability of the building?—No, I should say not.

1174. Do you think you would recommend it to be done in any case?—Not in moving ground.

1175. Or on ground that there is even a supposition of moving?—No.

1176. And if you knew a certain hill-side was famed for moving, would you still say it would be a most ridiculous thing to do?—No; I should prefer to put a tunnel behind to cut off the water.

1177. Put at a sufficient distance back from the building?—Yes.

1178. How far back do you think, to give the building a fair chance?—You would require to go back from the building so that it would not have a tendency for the weight of the building to carry the stuff to it.

1179. How far back?—That depends on the nature of the material.

1180. In the case of the Seacliff building here—look at its size—how far back do you think on the hill above it would it be fair to the building to put in a trench to intercept the waterflow? I speak of the whole building, not of the wing?—I could not say the distance back, but should like it pretty well clear of it.

1181. Supposing the building was 40ft. high, as in this instance, and a drain has been put within 16ft. and 12ft., and carried down 17ft. below the foundation, and another 12ft. above that—that is, 3ft. below the foundation—carried along the west and the north ends of the building, do you consider that a safe thing to do?—No; I would not like to go within 12ft. of the building.