and of spiral plan in most cases, being not readily accessible, and of a capacity absolutely unequal to cope with the rush of hundreds of men, women and children, whose efforts to find a way of escape would be further impeded by the overturning of the unfixed chairs and tables crowded into these rooms.

"Another instance of similar lack of provision against the ever-increasing fire risk is found in the construction of many of the large residential flat buildings, in which instances may be seen where, in addition to softwood floor and stairway construction, projecting Oriel windows of the flimsiest construction of softwood and stamped metal seem almost to have been specially designed to facilitate the spread of fire from storey to storey, forming, in some cases, practically uninterrupted flues from the first floor to the topmost storey.

"A further instance, but in another category, is the avoidable, and in these times discreditable waste in building material, due to the lack of regulations governing the thickness of walls, built of different qualities of materials. At present the highest grade of brickwork in cement must be built of the same thickness as the lowest grade of brickwork in lime mortar, the thickness, not the strength, of the wall being the chief consideration.

"Before these and many similar matters can be dealt with effectively, an extension of the powers conferred on the City Council by the recent Act, giving similar authority to regulate all building operations, must be obtained, and at the request of the late Lord Mayor such regulations are being considered; but Parliamentary authority for their enactment has yet to be obtained, and, in view of the above instances and their admitted urgency, should be granted during the coming session."

High Tension Insulators

Mr. L. Birks, Electrical Engineer to the Public Works Department, gave some interesting information to a meeting of the Philosophical Society in Christchurch early this month on the testing of high tension insulators. The lecturer stated that the importance of the Lake Coleridge hydro-electric system to Christchurch now could be gauged by the fact that the trams were run by it, the water and sewage pumping, three-fourths of the freezing works, the flour mills, the butter factories, and hundreds of industrial plants. If the Lake supply failed for long the city would have to be abandoned. The chief difficulty in maintaining continuity of service was the long distance transmission line, and a breakdown in the line was distinctly serious if of long duration. The weakest links on this line were the insulators, and a good many breakdowns had occurred since the inauguration of the line, though the public only knew of a percentage of them. In 1915 there were 15; in 1916, 19; in 1917, 27; and during the current year, 7. These were the total interruptions, some of which, however, were not due to the insulators. The main trouble in dealing with an insulator in which the insulation had broken down was in locating the faulty insulator, not in replacing it when found, which was a comparatively simple job. Insulators behaved in an irritating and tricky fashion, often working well enough when the weather was dry and failing when there was rain or moisture about. A fruitful cause of the breakdown of insulators was tree bark, especially the bark of blue-gums. In the autumn this blew about in long strips, which hung on the line and caused "shorts," and often serious breaks in the insulators. Lightning was also troublesome sometimes, and one severe discharge caused four or five breaks on one occasion; one at the time of the flash and the rest later as the weakened insulators gave way. The problem of insulation was rather an obscure one, and from investigations that had been carried out here and in other countries it seemed that the degree of excellence of the vitrification of the porcelain of the insulators was directly responsible for the degree of their excellence as insulators. Porosity in the porcelain was a bad fault, and usually porous insulators broke down in service, though this could not yet be stated as a rule. Very slight porosity seemed sufficient to weaken the effectiveness of an insulator, and for this reason it was difficult to detect porosity accurately. The speaker then described the mechanical and electrical tests to which insulators were subjected, and a very interesting demonstration of the tests was given by Messrs. Ferguson and Philpot, Mr. Birks's assistants.

Correspondence

The Editor, "Progress," Wellington.

Dear Sir,—

The article in the April number of "Progress" by Mr. George Fowlds on Town Planning is most interesting and to the point, and one cannot but agree with most of what he has written. Mr. Fowlds, however, makes a great point about the necessity of adopting the system of voting upon "unimproved values." This system, may or may not be the best, but it certainly should not be adopted unless stringent regulations as to the number of houses per acre, width of frontage, etc., are parts of the system.

This form of rating tends to make owners fill up their land to the greatest possible extent, and results in congestion, which cannot be regarded as ideal. Even if regulations are passed such as mentioned, it usually means an end of large gardens, or even moderate sized ones, which help so much to make the suburbs of our towns healthy and beautiful.

Rating on "unimproved values" also comes very hard on privately-owned golf links, tennis courts, etc., which although not available for the public at large, yet fulfil a most important function in creating and maintaining open spaces, which act as "lungs" to the cities, add greatly to the amenities of the district, and (in the case of golf links) provide most pleasant opportunities for the public to ramble about in open fields.

No doubt Mr. Fowlds has considered all these points and can answer any objections satisfactorily,