

Skyscrapers of the Future

Engineering

COL. W. A. STARRETT, in *Skyscrapers and the Men Who Build Them* (Scribner's):

What man has done in his building has been to travel in a great circle of evolutionary detail from the communal cave or hut out to the separated family abode, then to the further refinement of the multi-chambered domicile. Then, with the advent of our mechanical age, the tendency has been a return toward communal living, not as a measure of self-preservation such as prompted the earliest communal life, but now as a matter of mutual self-benefit in the attainment of the comforts, conveniences and, indeed, the luxuries of life that modern urban existence offers in such abundance. Hence, our cities; hence our congestion, for convenience of proximity to the sources and origins of these comforts becomes as important as the existence of the comforts themselves. We have seen the swiftness of acceptance of multi-storied structures as soon as the means of producing them were invented. We have seen the enormous wealth their invention and the consequent requirements created. But the basic requirement has remained the same: safe, comfortable, adequate, sanitary and hygienic habitation of about the same dimensions as originally conceived, and certainly about the same objective of conveniences to which primitive man first aspired.

Such retrospection, while it can do little in supplying a clue to our final destiny, can at least be used in considering our ultimate form of structure. We can conceive of no situation that will remove our desire for rooms, well heated, lighted and with sanitary and hygienic conveniences. It is certain that in the cities at least, the grouping of rooms into a single structure has a fixity from which all conjecture must proceed. The demonstrated advantages of common sources of heat, light and water, the common use of thoroughfares, and the universal access to common media of communication indicate that these will ever be extended, but only to serve the basic requirement of human convenience as it remains entrenched in its sheltered and conveniently equipped rooms.

All of these things point in the same direction so far as construction is concerned—ever larger and more

efficient structures, with conveniences that will always continue to develop and refine. Good thoroughfare arrangement, with due regard to ease of swift movement from place to place, goes hand in hand with increasing construction. Like our rooms, our city blocks have not greatly changed from time immemorial. True, avenues have widened and straightened, easier circulation has been forced upon us, sometimes reluctantly, but nothing has arisen greatly to change the average requirements, and the city block may be regarded as about fixed. Certain it is that the metropolitan tendency is toward the construction of buildings occupying whole city blocks; already we have many of this kind throughout the land, and the movement is well established as the next great economic phase of construction. The demonstrated economies and conveniences of this latest development herald the advent of the city of single city-block structures.

This leaves only the moot question of height and height limitation to be considered. Limitation of height of metropolitan structures has never been a more acute question than it is today. When the first skyscrapers were built their critics denounced them as structurally unsafe, and dismissed them as capricious, temporary freaks that would soon fall down and thus seal their own doom. When this prophecy was unfulfilled, and one skyscraper commenced to shoulder another along our busy thoroughfares, the hue and cry against them as destroyers of air and light was raised, and to some purpose. Before anything could be done about it, however, some of our most cherished avenues of travel almost overnight became yawning chasms into which the sunlight never penetrated. The law, with leaden steps, slowly focussed its attention upon this condition, and we commenced to get our height limitation and zoning laws. Hardly had this been accomplished when the problem of traffic congestion became the most acute aspect of metropolitan existence, and today that staggering perplexity of city life overshadows every other problem in importance. It almost threatens the very existence of the convenient, if complex, living that our city so ideally serves in all other respects.

It is futile to point the finger of accusation toward any one phase of city life and condemn that phase in particular as responsible. The responsibility is itself a great complexity to which many activities of metropolitan existence contribute. All that may be said is that over-tall buildings contribute some indefinite and undefinable share to the problem, and to some extent height limitation is not only justifiable but necessary. It is a fair guess that the great metropolitan problem of the future will center around height limitation considered in the light of street arrangement and the solution of the traffic problem. Dreamers have vexed the question by injecting the possibilities of aviation into it, and already the fantasy of the skyscraper landing roof is portrayed in our Sunday supplements. The imagined fulfilment of these dreams contributes nothing to the solution of the question, for these fantasies simply add another aspect to it.

As an escape, some theorists are actually visioning an abandonment of the great cities that the skyscraper has made, and the construction of new centers, with Utopian arrangements that seem perfectly to meet the requirements of our many methods of swift communication. Perhaps even these wild conjectures may be realized in some now unthinkable way; but if they are, if new and wholly different cities are built, if new and wholly undreamed-of means of transportation and communication are devised, if wholly different building materials are invented, and refinements of conveniences developed beyond our wildest conjectures, yet the basic human requirement will be the same. Until human nature, and even human existence itself, is changed, that basic requirement will be shelter, light, heat, sanitation, and swift transportation and communication; and architects, engineers and builders will be in demand to study and solve these problems. Truly, building construction is the most fundamental requirement of human progress.

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New apparatus, by which oxygen may be piped from room to room in a hospital, makes it possible to administer oxygen more promptly and frequently in emergencies.