

than twice the number of patients, who could be placed on a site of only one acre. A site of one acre, if rectangular and measuring 40 yards by 121 yards, would require 322 yards of fencing to enclose it, but a site of the same length, if 80 yards wide, would contain 2 acres instead of one, and yet would require only 80 yards additional fencing. Similarly with water supply, sewage disposal, and other matters, works which would be necessary for a hospital, however small, would serve with comparatively small additions for one considerably larger.

Local authorities sometimes contend that they can provide their district with sufficient means of isolation at less expense by separate action than by entering into a combination. This, however, generally means that they consider that a cheap temporary or existing building will suffice, or that some makeshift arrangement can be extemporized when infectious disease has broken out. Such expedients, however, are rarely satisfactory. The cost of procuring and adapting a site, providing water supply and drainage, and procuring furniture and other necessary equipment, greatly reduces the apparent advantage on the score of economy of a wooden or iron building over a permanent one; existing buildings erected for other purposes cannot readily be adapted to make satisfactory hospitals; and extemporized arrangements, such as tents and huts, which have to be erected when an outbreak occurs, are frequently not ready until too late to be of much use.

*Structural Details.*—Commenting on the suggestion that for the sake of cheapness the walls of hospital buildings might be constructed, in lieu of brick or stone, of the more recently introduced materials, such as concrete, concrete blocks, Frazzi, etc., Dr. Parsons says: "The Local Government Board have in one instance (at Acton) sanctioned a loan for the construction of a ward block built of blocks of clinker concrete, keyed together in cement mortar and rendered outside with a coat  $\frac{3}{4}$  in. thick of cement and sand, the structure being supported by steel stanchions 12 ft. apart, which carry the roof. The cost of the walls was 5s. 10d. per square yard complete, and the total cost of the block for thirty-six beds, including roads and drains, but not furnishings, was £4,000, or

£111 per bed. The cost per cubic foot was 4.66d., that of the original pavilions, which have hollow walls of brick, having been 6.9d. per cubic foot. But the comparison is not quite fair, as the new block is much longer, the main wards containing eighteen and sixteen beds respectively, whereas those in the older blocks contain only six and eight, and, the centre and ends of the block being nearly similar in each case, increased length of the wards does not add to the cost of the block proportionately to the increased number of beds."

*The Question of Site.*—The most frequent cause of excessive cost of isolation hospitals, and the hardest to avoid, is the difficulty of obtaining a suitable and convenient site. A local authority desiring to erect a hospital, in order to get a site at all, often has to buy a larger and more costly one than is necessary for the purpose, to give a higher price per acre than the land would be worth for any other purpose, and to incur heavy legal expenses in meeting opposition, and any site obtainable is often so situated as to involve much further expense in adapting it for hospital use.

The influence of the site upon the cost of an isolation hospital is by no means eliminated by reckoning the cost per bed as exclusive of site. If the site is remote from sewers and water mains, the cost of drainage and water supply may run into several hundreds of pounds, whether these wants are supplied by making connections of considerable length with the nearest public service or by constructing independent works on the site. Similarly, remoteness from gas or electric mains may involve expense in works for lighting. If the site is not on a good road expensive works of road-making may be needed in order to secure a proper access. Sometimes the only site obtainable has been an old quarry or other excavated ground, where much expense was involved in clearing and leveling the surface and in securing stable foundations; or, in other cases, the soft and treacherous nature of the ground or the risk of subsidence from undermining has added to the cost of foundations. If the site is far from a railway station, with bad or hilly roads, the cartage of building materials will add much to the cost of building, and may render it difficult to procure