

parts removed. The trusses are then supported by the bolts passing through the walls, which now take the load first put on the posts."

The first experimental concrete house, we are told, was built at South Orange, N.J., and numerous changes were made in forms and methods as the work progressed. Then the operation on forty detached houses on land owned by Mr Ingersoll at Union, near Elizabeth, was started. His historian goes on:—

"The problem has been to train a crew of men in handling the work in every detail with such efficiency, as is applied in automobile-factories or watch-factories—a series of unit operations. It is proposed to train the first crew so that each man will be competent as a foreman to train a new crew. The schedule of hours here published, however, is made up at the time when the period of training is only well started. The standardisation of operations is constantly improving. It is hoped to attain a degree of standardisation of operations so that in normal times, as to labour and material costs, these four-room-and-bath houses, with full basement, open plumbing, and electricity can be built in most localities in quantity at £400 each. This price is not for a mere shell of concrete. The exterior walls are to have a thin stucco finish, inside surfaces of exterior walls a coat of waterproof paint, and furring with lath and plaster, while interior surfaces will have a thin white plaster coat only. The ground floors are pine on sleepers nailed to blocks set in the concrete when it was first screeded. Wood trim is simple, with finish in natural colour.

"If an industrial housing enterprise is to utilise the Ingersoll system, a different house may be chosen and a complete set of forms must be developed for it. Fifty to one hundred houses would, it is felt, justify a full new set. So that a housing enterprise of several hundred dwellings might have several different sets of forms, each in continuous operation with its own crew."

### Local Building Materials.

Some interesting evidence has been brought forward by the Parliamentary Industries Committee, which has been visiting the various centres collecting information. The war has been responsible for the establishing of quite a number of industries in connection with the building trade, but according to Mr John Hutcheson, who represented the Dominion Ferrolith Company before the committee, the Government Departments have not been very encouraging to our local products. Mr Hutcheson accused the Government of 'sitting on the Company's back.' He said that his company did not want spoon-feeding of any sort, but it was handicapped at present to a tremendous extent by Government changes, such as railway freights. The witness alleged, incidentally that the company had been exploited by gentlemen who came from the prisons to see the process used. Before the company heard anything of the matter, and without any "by-your-leave," they were making some of the same articles

as the company in the prison institutions of Canterbury and Southland.

With regard to the existence of asbestos in New Zealand the witness observed:—"I am thoroughly convinced that there are deposits of asbestos in sufficiency in New Zealand, and that the Government of the country could very well bring the material to the market much lower in price and much better in quality than the material at present being obtained from Canada."

Mr Hutcheson suggested that his products ought to be in the same freight class as New Zealand-made earthenware tiles. He thought he had grounds for saying that the New Zealand-made tiles and New Zealand-made asbestos slates should be in the same class, and that the latter should not have to pay much larger freights than the former paid.

At the same meeting of the Industries Committee Mr E. J. Guinness, chief clerk of stores, Railway Department, was invited to answer questions in regard to the extent of the support given by his Department to local manufacturers of paints. He said that in general his Department went to a good deal of trouble in order to ascertain what local industries could supply it with its requirements. In 1913 a special schedule was drawn up favouring local industry, and the Department had been using locally-made articles as far as they could be supplied. Locally-made paint was not in 1913 included in the schedule, because at the time the Department was not satisfied that the paint was sufficiently high-grade to satisfy the Department's requirements. The Department was continually testing paints, and was at the moment testing locally-produced paints.

The chairman: But how long will it take you to test them out?—"We are going into the matter of rebuilding our schedule next June, and the matter of all locally-manufactured paints will then be considered."

In reply to a question from Mr Craigie, witness said that if there were works established in Nelson that could turn out a hematite equal to the old hematite that they used to produce there, the Department would put it on the schedule.

The chairman: In the event of a local manufacturer of paint coming to you and saying: "We've a good paint, and we are prepared to back it, and in the event of its not standing the test we will under a bond repay the loss," would you consider the proposition?—"We certainly would consider that aspect of it. It has never been suggested to us before, but we would not say 'no' right away to that."

Mr Sidey: Can I take it that we have an assurance that in the matter of all local productions the Department will give reasonable preference to purchasing locally-made goods in future?—"That is the settled policy of the Department."

The chairman: We recognise just as well as anybody that the Railway Department cannot buy unsuitable goods or bad goods; but we do strongly urge that where a local product can be purchased that will give satisfaction, and the price is reasonable, the Department should be a little more active and a little more energetic, so that they can establish the industries that the country so badly needs.