hyper-pressure process comprising a plant for separating hydrogen by a solution method from the gaseous products of distillation of the coal, part of said hydrogen being utilised for the manufacture of ammonia and part of the hydrogen being used as fuel in a gas engine so removing oxygen from the air, the remaining nitrogen being employed for the manufacture of ammonia using hyper-pressures.

Personal.

We are always glad to be able to record the success of New Zealand's young architects, and it gives us pleasure to learn that for the Victory Scholarship, 1921, of the Society of Architects, London, the jury have selected two designs in the final competition as being of equal merit, and they have recommended that the prize of £100 shall be divided equally and the gold medal duplicated. One of the successful candidates is Mr. J. H. White, A.R.I.B.A., of Dunedin. The other is Mr. B. Fraser, M.S.A. Both are students at the First Atelier of Architecture. The jury's report of recommendations is subject to confirmation by the Council of the Society of Architects. During his course of study at the Architectural Association, Mr. White has been a very successful student, and it will be remembered that he was one of seven in the final for the Rome Scholarship last spring; while in association with Mr. S. Natusch, also of New Zealand, his design was selected for the Ideal Inn.

The Victory Scholarship competition is held yearly by the Society of Architects and carries with it the gold medal of the Society and £100 prize, and is open to all students of the Empire under thirty-five. It consists of two competitions. First one of twelve hours, open to everyone, and then ten are selected to sit for the final. This consists of a twelve-hour "en loge," in which the candidate has to set down roughly the solution of the problem. After that he is given a month to develop it, but any serious change from the first idea disqualifies the competitor. This year the first subject was "The Facade of a Theatre," and there were fifty-one entrants. The second subject was "The Arts Group of a University, including Museum, Administration, Lecture, Ampitheatre, and four Lecture Halls with necessary adjoining rooms; 16 Ateliers arranged round a formal garden and a loge building with 100 cubicles on each floor."

According to all the building papers, Mr. White was unlucky in having to share honours and the prize. At present he is designing one of the largest stores in London, and he finds it really most interesting work, but, unfortunately, he will not even see it started, as he left for New Zealand in October. He has completed his course at the Architectural Association, and he had the good fortune to gain the Association Diploma—one of the first three awarded. This is equal to the A.R.I.B.A. Degree.

"Esitol" Wood Preservative.

An interesting booklet published by the manufacturers of "Esitol" wood preservative gives some details that prospective users should know. The manufacturers claim that "Esitol" will do all that creosote will do. It is odourless, making the immediate habitation of a house possible, and it is harmless to plant life. In greenhouse and conservatory work there is a big future before "Esitol" because it is so much cheaper than paint. It preserves the wood better than paint, and is considered for this purpose quite as decorative.

Creosote does not always preserve wood, being a combination of an oil and an acid, the acid portion tends to destroy the fibres of the wood. The only preserving action that creosote has is due to the oily constituents, these being volatile; in time wood treated with creosote will be left entirely unprotected. The hotter the climate the more rapid will be this volatilisation.

The chemicals of which "Esitol" is made are not volatile; therefore they cannot be driven out of the wood by increased temperature. As temperature does not effect the wood preserving qualities of "Esitol" it is a much more permanent preservative than creosote.

With regard to the degree of penetration, very often in the case of piles, pit-props, railway sleepers, etc., the creosote has to be forced into the wood under pressure, which is a very expensive process. Now plain water penetrates wood more easily than an oil will. It is a well-known chemical fact that certain inorganic salts in solution in water have a peculiar affinity for wood. Therefore they will penetrate, attack, or bite into the wood more easily and more rapidly than anything else. This is the case with "Esitol" wood preservative, altnough water is the medium used for impregnating the fibres of the wood with preserving chemicals; once these chemicals come into contact with the tannin and cellulose of the wood they form an insoluble compound that cannot be re-dissolved by water. For this reason "Esitol" can be used for under-water piles with perfectly satisfactory results; the insoluble chemicals will resist the *Teredo* and other sea vermin much longer than piles treated with an oily preservative like creosote.

The colouring matter penetrates into the wood just as deeply as a similar application of creosote. The chemical explanation of this fact is that the wood preserving elements in "Esitol" are practically colourless; the surface of the wood acts as a kind of filter, the colours purposely being retained on the surface and being "fixed" there by means of a chemical fixative which enables the colours to resist the action of the weather—wet or dry.

"Esitol" is non-inflammable, and is a very quick dryer. It can be painted over or varnished over immediately it is dry, and is claimed to be an excellent preservative for railway sleepers and much cheaper than creosote or tar.