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Editorial Comment

Building Trade Prospects.

Heavy drops in the freight rates from England and the United States seem to give some promise of improved conditions for the building trade, but hopeful as we are inclined to be of a revival, there are unfortunately other factors which off-set to an important degree the reduction in cost of transport. The labour upheaval in England will increase the cost of production, and probably result in maintaining the price of manufactures almost at the war level. It is anticipated that the landed cost of heavy ironwork will drop owing to the improved freight conditions, but other lines used in the building trade do not seem to be making the prompt decline which was hoped for when peace came. Wall plaster has actually advanced 5/- per ton since the armistice, and there is nothing very consoling, so far, about the prices of hardware. In reviewing the position of the New Zealand building trade at the opening of the past two years we ventured to advise owners not to wait for an uncertain drop in prices after the war, and we must repeat that advice to-day. It is unwise to postpone the erection of useful buildings in the hope of any substantial reduction in cost in the near future. New Zealand's labour situation is none too promising, but the rapid demobilisation of the Expeditionary Force will ease the severity of the shortage, and enable the most important building operations to proceed this year. Though it will be under difficulties, the building trade should enjoy a mild revival of activity this year.

War Memorials.

The adjudicators in the "Progress" competitions for war memorial designs report that nineteen competitors submitted designs, but they are disappointed at the lack of interest on the part of the more mature section of the architectural profession. Possibly our leading designers are awaiting the big national opportunities now in sight, for the question has become very prominent and the public is getting a good deal of advice of various kinds. The problem before New Zealand is the one which has concerned peoples from the beginning of history—how to fittingly commemorate an historical

event, and provide as a constant reminder to the community, and posterity, something which will vividly picture the valour, the self-sacrifice, and endurance of the men who fought for four-and-a-half years until complete victory came. The struggle brought out great qualities, not only in the fighting men, but the whole community, and this broad view of the great commemoration must be kept in mind. It has been suggested by Mr. Hurst Seager that a magnificent arterial road from Auckland to the Bluff would fittingly mark the achievements of our young nation. He will find support from those who believe in the utilitarian monument, but there will be a larger body of public opinion, we hope, to favour symbols more directly and appropriately suggestive of the great human qualities which enabled the race to win this war for freedom. The subject will stimulate the best creative and artistic genius. What we wish for is a monument capable of suggesting to the men and women of the future the qualities which the test proved the British race to possess. Fine groups of statuary in the four centres would provide this reminder so that "he who runs may read." New Zealand cities have in the past paid very little attention to these objects of beauty, but this is the opportunity to fill the void, and give visible evidence of higher ideals than the mere pursuit of a record production of meat, butter and cheese.

The Gardeners' Campaign.

Town Planners will find in the New Zealand Nurserymen's Association a valuable ally in their objective of the city beautiful. The Association has decided, in the interests of its own members, to enter upon a publicity campaign to induce more planting of flowers and shrubs by New Zealanders. It is a business venture, of course, but must not be discounted for that reason, as the nurserymen generally do not overcharge for their product, and they have in the past shown commendable public spirit in assisting municipalities to beautify public spaces. We hope their publicity will follow the admirable lines of that adopted by the American Association of Nurserymen, which in booklets and pamphlets has greatly encouraged useful and ornamental gardening. One of the Association's pamphlets, dealing with "Home Grounds, their Planning and Planting," is a splendid guide to home builders, for it shows how even the small city plot may be made a very beautiful setting for the home if certain clearly-defined principles are followed. There is a good public spirit about the advice which this booklet gives on the subject of the prospect from the street, advice which we repeat for New Zealand absorption, for our readers will agree that there is a sad lack of appreciation of the importance of this viewpoint. "In North America," says the author, Mr. L. H. Bailey, "it is considered that the public has a legitimate interest in the appearance of the home landscape garden. Pedestrians on the sidewalk, travellers on the street, have the right to pleasant prospects. There is an air of hospitality and a suggestion of interest in the common weal when the residence areas of any town or countryside are well open to view from the street. They express welcome, and each one contributes to the civic solidarity. Yet the resident is entitled to his own tastes (if they do not violate the common conscience), and specially to his privacy. To some persons the way to secure these results is to wall themselves in with masonry enclosures. For-

unately this treatment is not common in a democracy. It seems to express exclusiveness or even selfishness. It is associated mostly with the places of the very rich. The privacy that one desires may be secured without walls. The residence may be well back from the street, for example, if the area is large enough: low planting may be placed along the thoroughfare, in the nature of a broken border-line, but not high or dense enough to close either the inward or the outward view: the approaches to the house may not be direct: the architect may so plan the house as to provide the necessary seclusion without offending the public: a private lawn may be developed at the side or the rear. A man doth not live to himself alone, particularly when his wealth comes from the people. Indeed, he may properly consider the people, and so plant the home grounds as purposely to give pleasure to the passer-by."

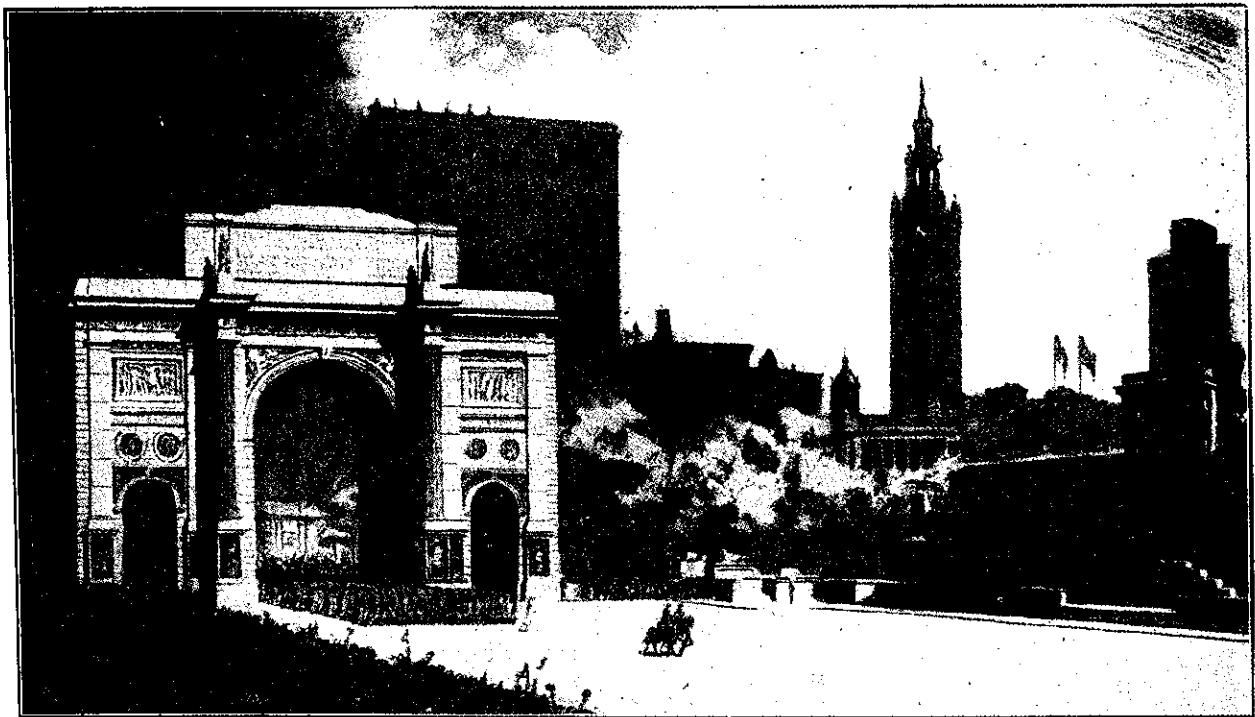
The Town- Planning Conference.

On Tuesday, May 19th, at the Wellington Town Hall, the Minister of Internal Affairs will open a Town Planning Conference and Exhibition. The honorary organiser is Mr. Hurst Seager, of Christchurch, who has temporarily established himself in an office in Parliament Building, and making every effort to secure a thoroughly representative gathering of all who have interested themselves in the question. The foremost topic for discussion will be the Town-Planning Bill, and the Hon. G. W. Russell must be prepared to hear some destructive criticism of that measure. He had the courage to introduce it into a House of Representatives containing a number of members who ridiculed it, but the logic of subsequent events has been too strong for the thoughtless or conservative minds, and there is now a good opportunity of getting a workable measure through Parliament. The Minister will require to be convinced of the necessity of including in the personnel of the Town Planning Board at least one expert who has studied the Town-Planning movement from more than the point of view naturally taken by, say, the municipal engineer, who is inclined to imagine that perfection is to be reached through good roads. This is only one of the essentials. Town-Planning seeks to bring to bear on the lay-out and maintenance of towns a combination of artistic ideal and technical skill which will make, not only for beauty but utility. It is a money-saving movement, not a "pull-down" fad. The work of the conference will be to discuss a series of illustrated papers on the principles of Town-Planning and housing, and their application to Dominion conditions, compiled by delegates possessing expert knowledge of some portion of Town-Planning work: to consider the legislation necessary to carry into effect the principles for Town-Planning and advancement: to collect and arrange for exhibition plans, models, photos, and diagrams of Town-Planning activities in other parts of the world: to show the existing conditions and growth of cities in New Zealand, their merits and defects, and to contrast them before and after improvements have been made: and, among other matters of interest to inaugurate competitions for housing for workers, industrial villages, garden suburbs and civic improvements. For the first time in the history of the movement in this country, the subject will be discussed by a truly representative gathering. Its educative influence will be enormous if it shows adequate initiative and secures wide publicity for the papers and discussions.

New York's Memorial to Fallen Soldiers.

New York's memorial to its fallen soldiers is to take the form of a triumphal arch in spite of the suggestion that arches symbolise effete tyrannies, according to many critics. A design by Mr Thomas Hastings, the architect, has been accepted by the Committee on Art, of which Mr Rodman Wana-

Avenue at that point, which is a little over fifty feet. The temporary arch will be designed in stucco, and, according to Mr Hastings, will be very classic, almost Roman in character, with a considerable amount of sculpture, illustrating the events of the war. A great quadriga will crown the entire



A Suggestion for a Memorial for New York.

This sketch for the arch under which the returning boys will march is tentative, and may undergo modification before being realised.

maker is chairman and Paul W. Bartlett is president, with the proposal that it be erected on Fifth Avenue at the northwest corner of Madison Square. In the New York "Times" Mr Hastings' project is presented, partly in his own words—"Mr Hastings said that the Madison Square site, which will be the entrance-way to Fifth Avenue, seemed to be the only place where it would be practical to build an arch on so large a scale and where there would be room for two abutments, one slightly encroaching upon the park itself to the east and the other standing on the small island caused by the intersection of Broadway and Fifth Avenue, now occupied by the Worth monument. The arch is to be fifty feet high and will bridge the entire width of Fifth

scheme, representing the Triumph of Justice or Democracy.

"In a general way, said Mr Hastings, it was proposed that the arch should be simple and so large in scale as to give great dignity to its design. Such triumphal arches, he pointed out, had been built in many cities: London, for instance, had three or four, and Paris had four, the principal one being the Arc de Triomphe on the Place de l'Etoile.

"It is interesting to note," he said, "that this arch will be about the same width as the Arc de Triomphe, but much lower, because the Arc de Triomphe is surrounded with so much open space that it would of necessity need to be larger than this one."

Chairman Wanamaker said that the construction of the temporary arch would be hastened as much as possible, so that in some form it would be ready to welcome the returning troops within the next few months.

"This arch," he said, "is to be a free-will offering of the people, and, beginning Thanksgiving week, the 20,000 of the police and the police reserves will receive offerings of the people through pennies, dimes, and dollars, so that every one may have a part in its erection.

Mr Hastings, in giving out his sketch, took pains to point out that "it was only a sketch to be studied, and that he counted upon the collaboration of the architects and sculptors, not only on the committee, but others, with the idea of producing the very best arch for the city." What is dependent upon the success of New York's effort is indicated by the New York "Evening Post." "Artists are particularly concerned over the New York monument, feeling that whatever is done here will be the example for the whole country. If made the greatest artistic achievement the occasion warrants, it may arrest the frightful piles of stones now in our town squares as a result of misdirected enthusiasm to commemorate the Civil War, as they say. As a result they urge time for consideration of the matter.

"A public exhibition of drawings of all known arches is proposed by some artists. Such an exhibit, it is said, should include the designs submitted for the present monument and be held in the Public Library or at the Metropolitan Museum, where every citizen could view it. The idea that the masses are not art-critics is scoffed at by some artists who cite the general appreciation of the Metropolitan Museum as backing for their statements."

Lady Architects as Church Builders

(From an English Building Journal)

Sir, -I am writing a paper on "Architecture, as a Profession for Women," and would like to know if any church has been built from the designs of a woman architect.

If you do not happen to know yourself, may I ask if you would be kind enough to publish the query in your journal?

Yours faithfully,

Miss B. A. CHARLES, A.R.I.A.

September 17, 1918.

Pinus Insignis for Fruit Cases

In our December number we republished from the "Agricultural Journal" an interesting article on the use of pinus insignis for fruit cases. The illustrations were credited to the "Agricultural Journal," but not the letterpress, which was also taken from that source. We make this acknowledgement of the origin of a very useful article to which we were glad to give wide publicity.

Soldiers' Memorial Competition

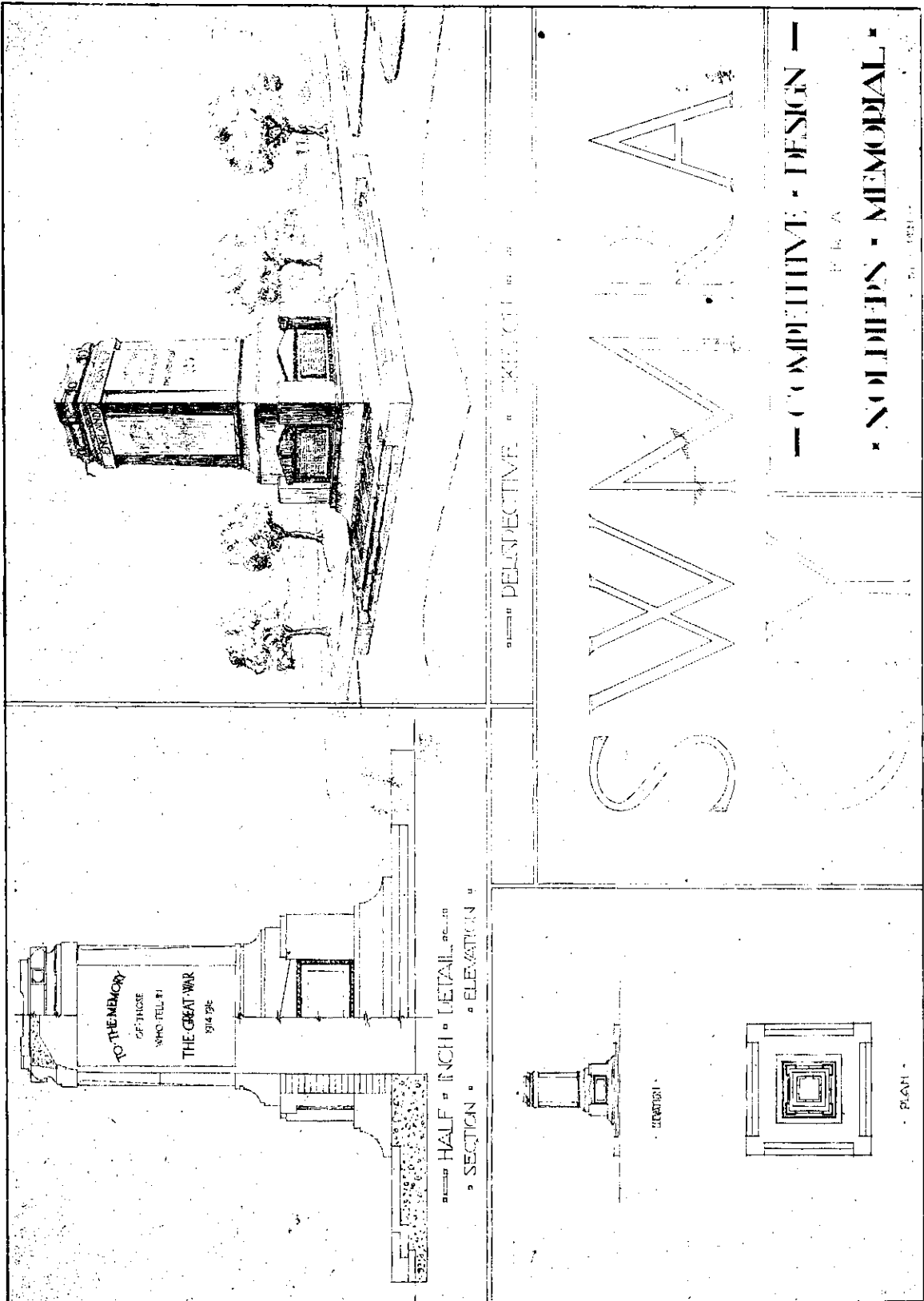
This competition brought nineteen designs, viz:—
 "Thomas Atkins," by Edward G. Le Petit, Hamilton; "Jonquil," by William Jaques, Motueka; "100," by M. Honore, Napier; "Cyma," by J. I. King, Wellington; "Stronghold," by James E. Hay, Wellington; "Omega," by W. F. C. Vine, Wellington; "Pen" and "Inkey," by Geo. Penlington, Wellington; "Astylar," by G. Glenton Hunt, Auckland; "Stone," by N. A. Paterson, Wellington; "Kismet," by J. I. King, Wellington; "Pax," by H. L. Hickson, Wellington; "Bar," by R. N. Wakelin, Wellington; "Effort" and "Junior," by G. F. Wilson, Wellington; "O," by J. O. Owen, Auckland; "Pro Partie," by N. Walnutt, Auckland; "Pigeon," by A. V. Campbell, Wellington; "Sphere," by A. E. Shank, Dunedin. Messrs W. S. La Trobe, Joseph Ellis, and W. M. Page, who kindly adjudicated in this competition, report as follows:—

"The response to this open competition has been, in some ways, very disappointing. It was the hope of the promoters that the practising architects and sculptors would submit designs, but, we should say that most of the drawings sent in are the work of students. As such, it is exceedingly successful and does the students infinite credit. The influence of the Architectural Students' Associations is clearly evident, and we are confident that such a set of designs would not have been forthcoming a few years ago.

Many of the designs are very good and with a little further study and alteration would be very suitable and appropriate. The competition has made it clear that there are a number of designers here to whom, under guidance, the carrying out of war memorials may safely be entrusted, and there can be no excuse for the erection of memorials such as were severely criticised in this magazine some time ago. In one respect, nearly all the competitors have shown a decided weakness. Great stress was laid in the conditions on the lettering, and the designs show a great want of study of good models. Competitors have failed to appreciate the importance of the arrangement of the inscription and the design of the letters. Even a very ordinary design will gain immensely if the inscription be good. The methods of the signwriter must be abandoned, and we suggest to the editor of "Progress" that a short illustrated article on the subject be published at an early date."

In another direction the competition has failed, inasmuch as all the designs of a suitable nature would exceed the cost stated in the conditions. Certain of the designs, indeed, would cost as much as four times the amount laid down. We admit that the problem was a difficult one, but the whole object of the competition was to ascertain what could be done for a certain modest stipulated sum. Mr W. J. Helyer, of Wellington, to whom we submitted what we considered the best of the designs, assures us that none of them could be carried out in the material specified by the competitors for two hundred and fifty pounds as laid down in the conditions.

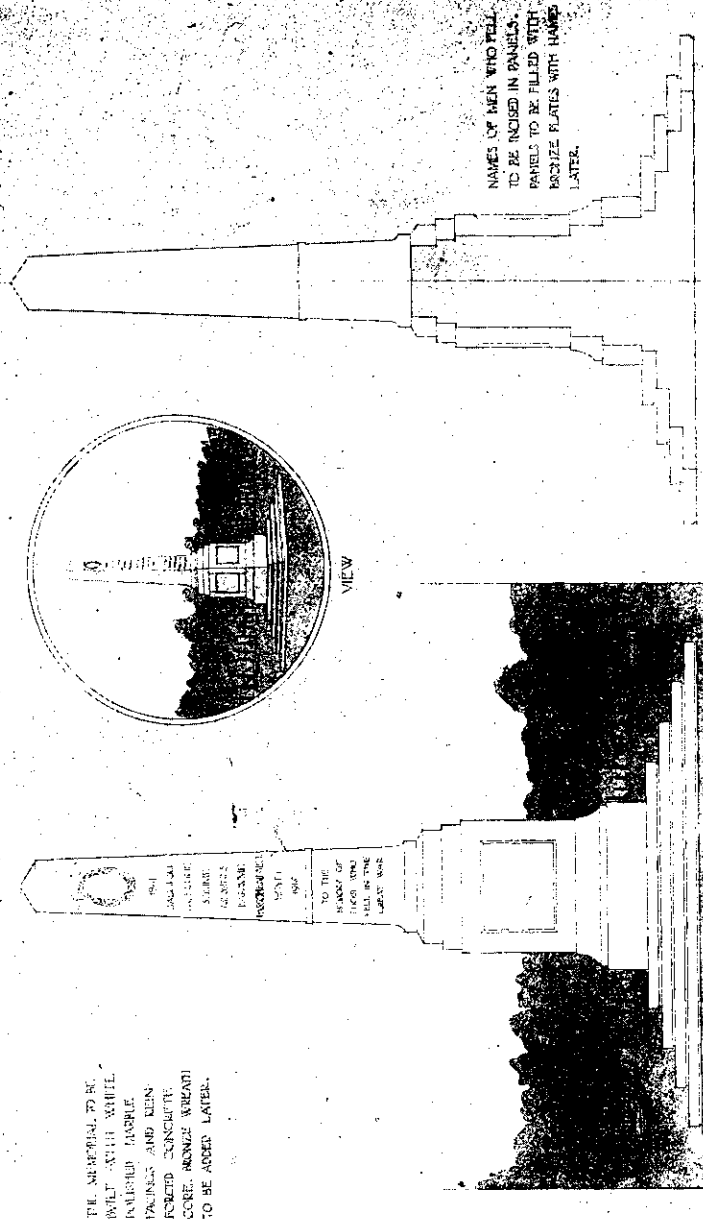
(* This has been arranged for—Editor.)



Our Soldiers' Memorial Competition
Design, "Pen," by G. Penlington, Wellington, placed equal First with "Effort."

DESIGN FOR A WAR MEMORIAL

STANDARD
BY EFFORT



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Our Soldiers' Memorial Competition

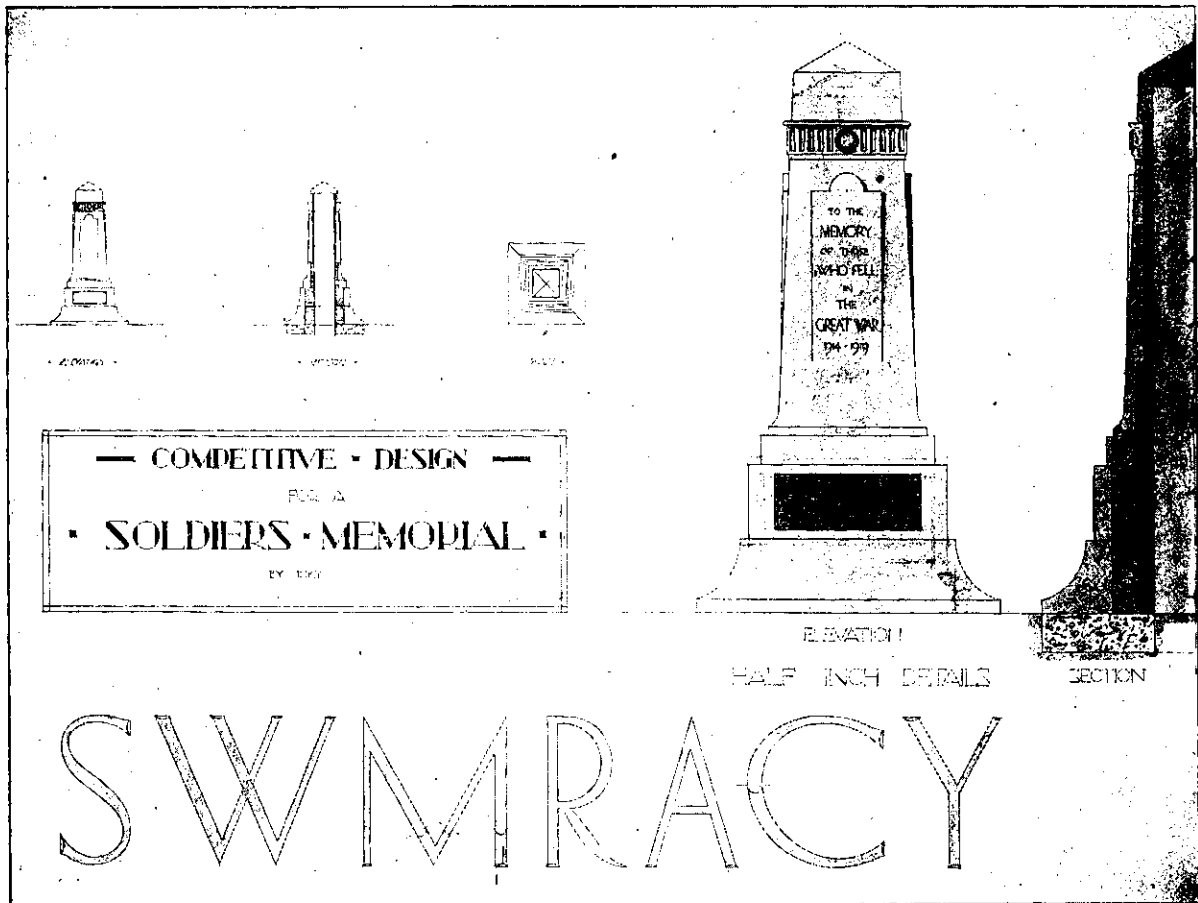
Design, "Effort," by G. F. Wilson, placed equal first with "Pen."

ditions. We cannot, therefore, recommend that the full prizes be awarded to any design. We have, however, selected two designs, namely "Pen," and "Effort," and placed them equal first, and we suggest that a prize of two guineas be awarded to each. One is, we consider, the best from an architectural point of view, although greatly exceeding the cost, and the other, also very satisfactory in design, more nearly approaches the stipulated sum than any of the others. We append for the benefit of students a few remarks on the various designs.

for and the dwarf trees give the memorial a very wrong sense of scale.

"Effort."—It is difficult to say how this design could be improved. Perhaps the base might be slightly remodelled with advantage. In this case also the dwarf trees give a wrong effect.

"Pigeon."—This design, like "Effort," is an obelisk, but its stability is taken away by the hollow at the base of the shaft. The inscription panels are too low and the accessory vases are too small to be effective.



Design, "Inky," by George Penlington, Wellington, in our Soldiers' Memorial Competition.

"Inky."—Generally satisfactory, but the base is too much cut up and the top too heavy and detail coarse. The bronze panels do not seem to fit position, and the half brick thick wall is not sufficient for setting heavy slabs against.

"Stone."—The detail at top is too heavy and the lettering is execrable.

"Clyma."—A nice quite design, but of very usual type. The memorial tablet is placed too low and the dome would scarcely be seen.

"Pen."—The general design is very good, but here again the name panels are placed too low. The half inch drawing is not fully rendered as asked

"Kismet."—This design is also an obelisk. The supporting wings and accessories are not happy and should certainly not be placed in the centre of the pedestal, but at the angles if employed at all.

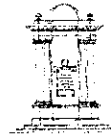
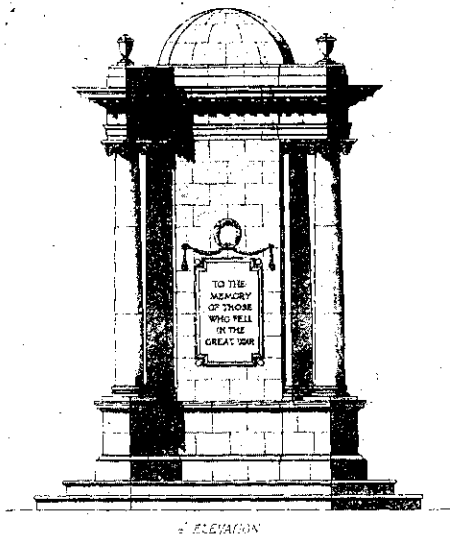
"100," "Stronghold," "Jonquil," and "Sphere."—The authors of these designs will realise, after seeing the published designs, that they are not yet ready to take part in such a competition.

"Astylar."—This design suggests that it is intended to be executed in cast iron. The memorial tablets are much too near the ground and the lettering is very bad.

"Omega's" design is simple, but not pleasing; the

COMPETITIVE DESIGN FOR A SOLDIERS' MEMORIAL

DESIGN BY "CYMA"



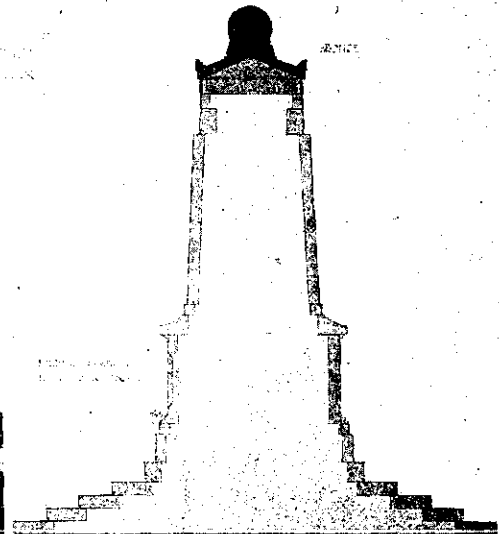
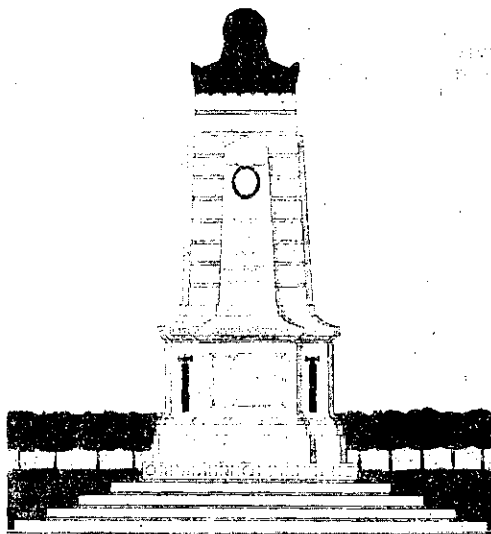
MEMORIAL TO BE
ERECTED IN STONE
WITH BRASS OR
CONCRETE BASING.
LETTERING TO BE
ELEGANTLY WORKED

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Design, "Cyma," by J. I. King, Wellington, in our Soldiers' Memorial Competition.

DESIGN FOR A WAR MEMORIAL

TO BE OF MARBLE
FACINGS WITH CON-
CRETE CORE.
LETTERING TO BE
ELEGANTLY WORKED



S·W·M·R·A·C·Y

Design, "Junior," by G. F. Wilson, Wellington, in our Soldiers' Memorial Competition.

base is wrongly treated and the jointing of masonry is not right.

"Thomas Atkins."—This design is very well drawn, but has the appearance of a monolithic structure with a suggestion of a mausoleum about it. The lettering shows great lack of study. The W. and M., being glaringly bad.

"Pax" has a great deal to commend it and could easily be made a very satisfactory memorial. It

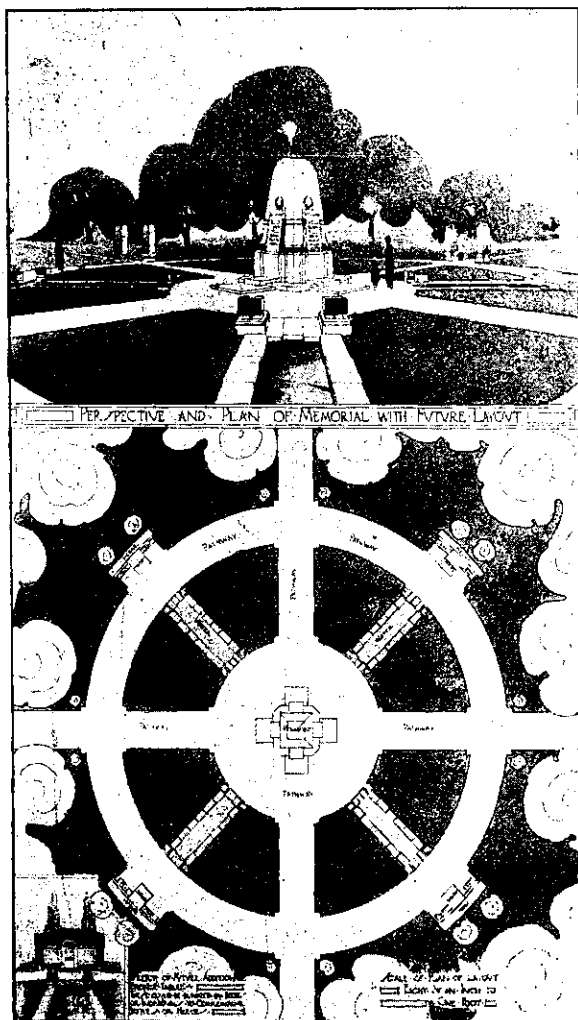
"Junior."—The trees in the background give the memorial a wrong scale.

"Pro Patria."—This design is one of the best and is interesting by reason of the study which has been given to the surrounding lay-out. The inscription tablets ought to be vertical and the two lower divisions of the memorial are too equal. This design somewhat resemble "Pax's," and, like it, would be improved by omitting the string course at top of inscription panels.

In most cases the lettering is not suitable for cutting in stone and leaves much to be desired.

Common faults are showing a half round section to the incised letters instead of a V section. The Ss are frequently weak and several As have the thick stroke on the wrong side.—Signed,

W. S. LA TROBE,
JOSEPH ELLIS,
WILLIAM M. PAGE.



Design, "Pro Patria," in our Soldiers' Memorial Competition.
by N. Walnutt, Auckland.

would be improved by omitting the string course and remodelling the detail at top.

"O,"—This is quite good architecturally. The top would be improved by keeping the uppermost course back on all four sides. No good mason would cut the top part of a niche out of a single stone and then put false joints on it. This is artifice, not masonry.

"Bar" is simple, very simple, and suggests certain City Council erections one sees on the streets. No provision is made for panels for names.

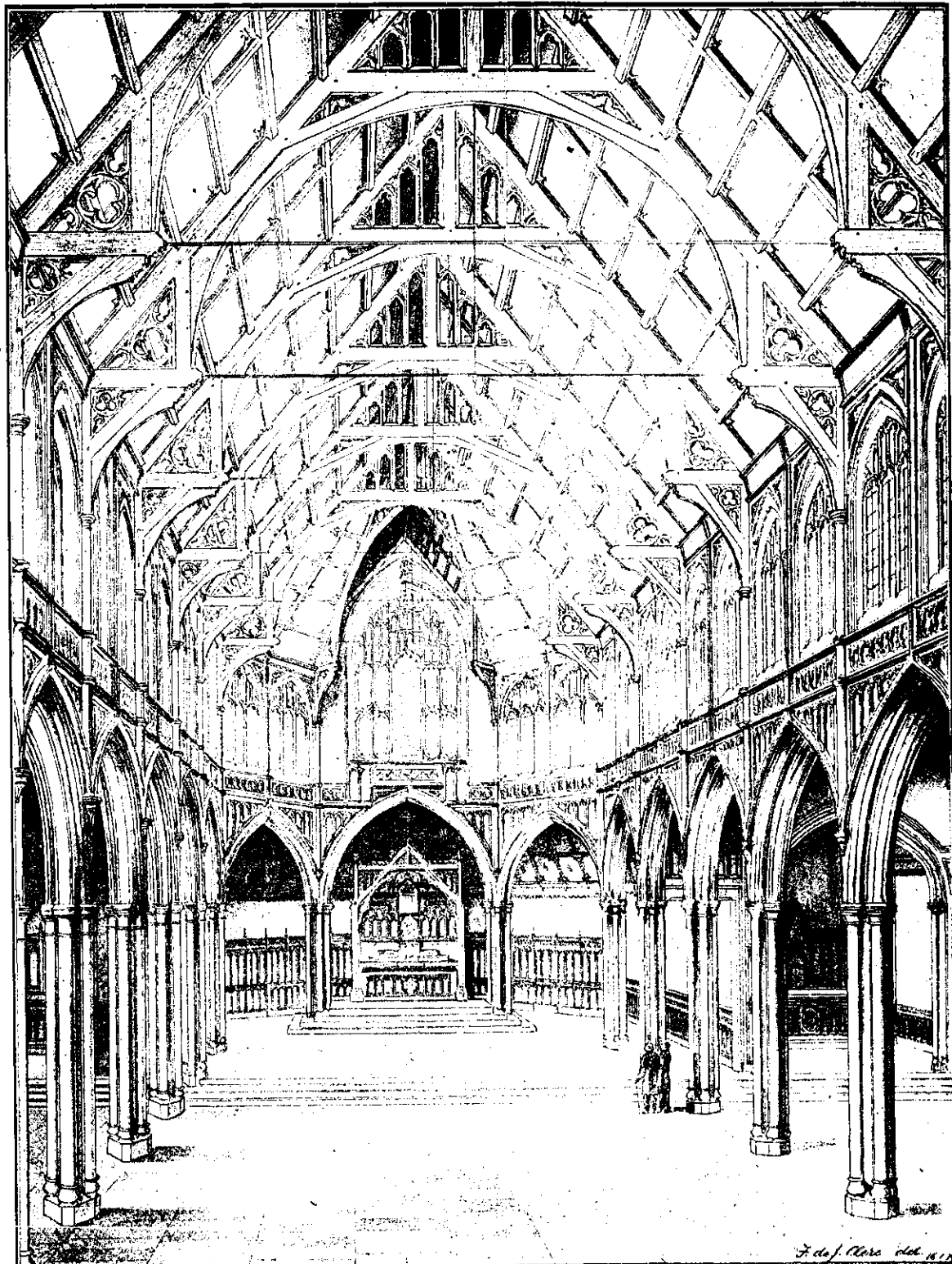
Building Restriction in Concrete

The Concrete Institute of America had something to say regarding building restrictions recently, which is of interest to New Zealand, which is suffering in a similar way. Under the heading "Restrictive Laws," the committee reported as follows:—

"Building ordinances framed to control the brick, tile and stone constructions before the extensive use of concrete in wall construction are in most cases unduly burdensome and restrictive when applied to concrete. Six-inch walls are the maximum needed in monolithic construction and 2in. is common in precast construction where other structural members carry the load. Most codes call for 8in. and some as much as 12in. thickness. Similar difficulties are found with floors. A reform of our building laws is urgently needed in many of our big cities, and the committee has in mind the preparation of a building code for concrete small house construction which will serve as a model for cities, and suggests that after receiving the endorsement of the Institute it be circulated and urged upon municipal authorities.

There is a widespread interest in the concrete house to-day. There is not, however, much active demand for it, owing to the dearth of contractors experienced in concrete work who are entering this new field to create a supply. The majority of the small houses built to-day are built for quick sale by the vendor and not for investment. House building standards have been low. Competition in prices has been keen, but quality has been a secondary consideration. The demand at the present time seems to be for a better type of construction. Concrete meets this demand.

He who never makes a mistake never makes anything.



• CHURCH OF ST MARY OF THE ANGELS • WELLINGTON • CLERE AND WILLIAMS 1919
FRIBA ARCHITECTS WELLINGTON, N.Z.

SAWMILLING SECTION.

[This Section is published by arrangement with the Dominion Federated Sawmillers' Association (Incorp.) in the interests of the Sawmilling Industry of N.Z.]

Editor: W. T. IRVINE.

During the holidays we had the opportunity of visiting Nelson, and in a wood-working establishment there, saw something of the process of shredding short lengths of timber and connecting them into "wood wool" for fruit packing. A kind of guillotine with many knives shreds the wood, and it passes automatically into a press similar to an ordinary wool press, in which it is baled up ready for shipment by rail or steamer. We were given to understand this is the only machine of the kind in the Dominion, and that the "wool" is forwarded to all the fruit growing districts in New Zealand for packing apples in particular. Formerly large quantities were imported from Tasmania and Victoria, but owing to various causes little has found its way to New Zealand of late.

* * * *

Referring to the paragraph which appeared in last issue of this journal on the increased price of timber we reproduce copy of a letter by "Fair Values," addressed to the editor of the "New Zealand Times." This amplifies the remarks contained in our last issue, wherein it was stated that the cost of timber when it reaches the house or actual consumer, is the true point at which it affects the public or users. To say that the price to the public shall depend on the cost of production to the saw-miller, is simply to create a fallacy and draw a red herring across the scent, as so many intermediate services must be rendered and added to the saw-miller's price before the timber reaches the user, and these are all capable of exploitation. Then, again, if timber is to be sold at a percentage of profit on cost, why not wool, cheese, butter, wheat, oats and all other products, and whose cost is to be considered the basis of calculation? Is it to be the man most favourably or least favourably situated? When the character of the country to be worked, distance from railway or shipping port, royalty or rent payable on the standing timber are all taken into consideration, the variation of cost in individual cases must be very great, and a reasonable profit to one may mean a loss to another.

* * * *

The whole world appears to be in a dreadful state of unrest, and the war after the war between capital and labour, or rather between the "have nots" and those who have, grows darker almost daily. We have never seen a clear definition of Bolshevik or the Bolsheviks, but as we understand it, the term stands for anarchy and the under-mining of everything that makes for good government and order. In addition to the physical realm all moral order is

submerged, and we are to be brought down lower than the beasts of the field should Bolshevik principles prevail.

* * * *

The suitability of pinus insignis for butter boxes is being tested by experiments carried out by Mr H. G. Kingsland, of Nelson. He has forwarded to the Agricultural Department three boxes of butter, which have been stored at the freezing works, Stoke. The butter will be kept for three months, and the condition then reported on by the Dairy Division.

* * * *

It is a certainty that a better understanding between capital and labour, the employer and the employee, will be brought about, and in this connection the British Whitley Committee has recently brought down a most valuable report and we reproduce in another column an article from the "Sydney Morning Herald" bearing upon the subject under the heading of "Industrial Unrest." The crux of the whole trouble is well put in a few words. "That labour does not favour increased production is due to the fact that labour does not believe that any of the increase would accrue to itself. Therein lies the problem. How if there is increased production, shall labour be given its share and the other factors of production their share? Until a reasonable solution of these questions is found, industrial unrest will always be more or less in evidence."

* * * *

That a considerable quantity of timber is being imported from America, notwithstanding the scarcity of tonnage, is evidenced by the returns of the Bruce Railway and Coal Company, which is the South Island agent for Messrs J. J. Moore and Co., Oregon and redwood exporters, of San Francisco (states a Dunedin paper). Since the beginning of March, 705,000ft. of Oregon, 174,000ft. of redwood, 39,000ft. of yellow pine, 1500 bundles of redwood shingles, and 362,000 Oregon laths have arrived at Lyttelton and Dunedin—a total of about 1,008,000 super. feet of timber. Orders booked to arrive early this year total between 400,000 and 500,000 super. feet. For the same period a total of 45,300 super. feet of hardwood has been imported from Australia in execution of contract for supplies of telegraph cross-arms for the New Zealand Government.

* * * *

State forestry business occupied the attention of the Commissioner of State Forests, Sir Francis Bell, during his visit to Auckland. Prior to his

departure for Rotorua Sir Francis Bell said he had arranged for the railway sawmills to be taken over by the State Forestry Department. During his visit to Rotorua he will discuss with the natives the question of the ownership of the bush at the edges of the lakes in the district, and he will also visit the prison plantations. Towards the end of the week he will leave with the Hon. W. D. S. Macdonald for the East Coast, travelling via Whakatane and Opotiki to Gisborne, and visiting the State forests en route.

* * *

Hitherto the humble *pinus insignis* has been regarded as having but little value as a timber tree, owing to the knotty formation of its wood throughout. A novel experiment recently made by the manager of Ellis and Burnand Veneer Co., at Manunui, has disproved this belief, with remarkable results. The *pinus* is treated similarly to other timbers used in ply-work, and the finished article is a highly pleasing and beautifully grained veneer, much handsomer than any usually in favour, and having equal value as an accessory to cabinet-making.

* * *

If the war has taught the lumber industry one single lesson it has been the necessity for proper cost ascertainment. The benefits which will accrue in the future will be of inestimable value. Men are not nearly so apt to cut a price deliberately when they have in front of them the real cost of production.

Industrial Self-Government

In the course of an important speech delivered in the Federal Parliament on September 26th, the Hon. W. O. Archibald made a strong plea for action in the Commonwealth on the lines proposed in Great Britain by the Whitley Committee.

Mr Archibald said:—"No award by any industrial tribunal can prove as satisfactory as an agreement which is arrived at between the parties to any industrial dispute at a round-table conference. When the war is over, the workers will no longer be content to be merely employees in industries—they will insist upon becoming partners in them. Otherwise there will be a cut-throat revolution and the red flag will be hoisted. It is of no use mining matters. The sooner we face the situation as it is being faced in the Old Country the better it will be for us; but the Labour leaders there are acting very differently from the Labour leaders here. There, Mr Will Thorne, Mr Ben Tillet, and others recognise the responsibility which will rest upon their shoulders when this fearful struggle is over. They realise that the workers will never return to the drab conditions of life which obtained prior to the war. That, I repeat, is the keynote to the report of the Whitley Commission. Let us constitute an authority to cover practically the same ground as has been covered by that body. I know

of nothing more important to the industries of this country than that we should establish some such machinery.

"I have not the slightest doubt that Mr Beeby, the Minister of Industry in New South Wales, is in thorough accord with the suggestion that I have made under the heading. Let us call together the Ministers of Industry in the States, and let them form a council. Let a council be formed in every large city, consisting of workers and employers, and, as this scheme will be useless unless it is far-reaching, let there be a committee in every shop. Of course, the task will be a difficult one, as it has been found to be in England, but as it is not a characteristic of Australians to run away when they are in a tight corner, that fact should not deter us from seeking to achieve the desired end. No doubt there will be grievous disappointments, but if the workers can have the opportunity of criticising the methods by which work is carried on, there will be greater harmony. Let them be put in the position of partners. A partner in a concern does not necessarily have an overwhelming monetary interest in it. We must work on those lines in order to get the absolute confidence of the men. One of the causes of discontent in Great Britain has been the absence of constancy of employment, and it is no doubt a great cause for discontent to a worker when he finds that for a large portion of each year he is out of employment. Some capitalists will question our right to interfere with the conduct of their businesses, but the sooner such men are pushed out of business by taxation, or in any other way, the better it will be. Without question the old days have gone. We no longer look upon employment as a means of creating colossal wealth for a few to put into their pockets or squander, while the great majority have difficulty in securing the necessities of life. All that sort of thing has to go.

"If we approached the Trades Halls in Australia with a proposition such as I have outlined they would turn it down in five minutes. It is a curious fact that many great questions which have cropped up in these organisations during the war have been determined by very narrow majorities. The red-rag element win merely by the skin of their teeth. It is characteristic of this red-rag brigade, the industrialists, that they are the greatest tyrants we have in Australia to-day. They throw out the taunt that a man is a 'scab' if he does not roll up to a meeting of the union where a question is to be decided by a show of hands which should be submitted to a ballot, and where no man dare open his mouth, and in this way they intimidate him. The best type of unionist does not go near his union. He sends along his contributions by someone else. I have asked several unionists why they do not attend the meetings, and they have said: 'We have no time for that sort of thing.' But, notwithstanding the absence of so many of the best type of unionists from the meetings, the red-raggers in Sydney, Melbourne, and Brisbane only win by the skin of their teeth.

"In the inevitable reform before us, we have a right to claim the support of the Government. It is useless for them to say that the Trades Halls are opposed to it. Let them be opposed. Every time they withstand an effort which is made with the object of bringing the two contracting parties together in the interest of the peace and security of this community, they are putting a nail in their coffin, and now we shall be putting a nail in our own coffin if we are prepared to allow these men to longer pretend that they represent the workers. They no more represent them than does the Kaiser. The time is eminently ripe for dealing with this problem, and I hope that the Government will do something upon the lines that I have suggested."

Industrial Unrest

In an excellent article upon the above subject the Sydney "Morning Herald," in a recent issue again points out some of the fallacies underlying the doctrines preached by the extremists among the Labour leaders of the Commonwealth.

Here again is found an advocacy in favour of the practical adoption of the ideas embodied in the report of the British Whitley Committee.

In the course of the article, the "Herald" says:—

"The aim of all Labour agitation is better conditions of living. It is a truism that better conditions can be achieved only by greater production. If production is limited the worker suffers. He may believe that if he receives a higher wage in the money count, he will be able to buy more of that production than before, but he finds it is a vain hope, because the production being the same and the cost higher, a higher price must be charged for the product, in order that the other factors of production, organisation and capital, may obtain their wages. There has been some advocacy of all sharing in the product alike, but that may be dismissed as chimerical. The engineers would be the first to dismiss such a proposition. While men are constituted unequal in talents and in energy there will be inequality in remuneration. It will be looked for even in the most pronounced Labour coteries. The Labour leaders have outstanding talents in one direction, and they aspire to positions and remuneration above those of their fellows not so fortunately gifted. Their aspiration lies in the direction of Parliament and its emoluments. Others gifted not with speech but with foresight and powers of organisation become managers and employers themselves.

"That Labour does not favour increased production is due to the fact that Labour does not believe that any of the increase would accrue to itself. Therein lies the problem. How, if there is increased production, shall Labour be given its share and the other factors of production their share? It can only be done by greater mutual confidence, not by fights in the law court, which is really what the arbitration scheme at present amounts to, nor

by one party determining what the division shall be, but by both meeting in council, studying the facts, and seeking on those facts an agreement. The scheme would be on the lines of the Whitley Report, presented to the British Parliament. We have arrived at a stage when the worker as well as the employer should have a voice in the management of industry. The worker is as much concerned with industry as the employer. It is the livelihood of the worker; he lives in the workshop for practically one-third of his working life. He knows what steps could be taken to improve the amenities of his life there, and he should have some means, some mouthpiece by which he may give utterance to his suggestions for that improvement. At present antagonism is the most marked feature in the relations between employer and workman. Each believes his interests to be diametrically opposed to the other. Yet in reality it is not so. If one suffers the other is bound to suffer too. A badly-constructed workshop, cheap though its construction may have been, entails loss of energy, and no matter how hard a foreman may drive the men, production will not be up to the average. For that cheapness of construction both employer and worker suffer, since the profits are low and employment is probably not constant. If it were found that by mutual discussion an improvement in workshop conditions could be brought about, the way would be open to discuss an increase in production, with a consequent increase in wages when the increased production had accrued. Who will be the first to make this experiment? That a Government Department should be the first to move in that direction would be particularly appropriate, since the suggestions of the Whitley Report have had the strong approval of Government authorities. Though Government Departments are more conservative in these matters than private employers, there are no strong reasons why the leaders of the tramway workers, not the men who do the talking, but the men who know, should not be consulted to ascertain what are the difficulties of the working conditions, and whether there could not be amelioration without extravagance. Of this fact we may be sure that if the community is divided by bitterness between employers and workers, Australia will no longer be a paradise of the workers, as it has been termed. Other countries will produce cheaper than we can, and real wages and real profits, which are the commodities which money, wages, and money profits purchase, will fall."

The Housing Problem.

(From the New Zealand "Times," 20/12/18).

Sir,—There seems to be an erroneous impression that the increased price of sawn timber is responsible for the present high cost of houses. As a matter of fact sawn timber is quite a minor cost of a building.

The Government has appreciated the fact that the cost of houses is comparatively high and an

erratic attempt is being made to remedy this by fixing the maximum price of sawn timber. Why sawn timber? The point at which the price of timber should be fixed is when its use reaches the community, for it is obvious if fixed at, say, on railway trucks that the Railway Department (and in some cases shipping companies), the carters, timber-merchants, builders, architects, and land-owners are free to exploit the public, and the public, in supplying the sawmillers, with commodities and services, the prices of which are not fixed, are free to exploit the miller.

There is no reason why houses should not be provided to the community on a fixed maximum scale, for they all consist of practically the same materials and work. This is especially so in the case of workmen's homes, where good, clean, wholesome conditions are the features aimed at.

If the rich want houses of an ornamental character by all means provide them, but make them pay for the ornaments. A fixed maximum price for, say, bricks, timber, plaster, roofing, iron, standard door and sashes, etc., in position, would be just as easily arrived at as a fixed maximum price for sawn timber, and the advantage would be that a worker could know exactly what his home would cost and that he had received a fair value. Land submitted for building sites should be subject to a fixed maximum valuation at which the owner must sell to the public. Why close our eyes to this aspect of house cost?

The Board of Trade is arranging for standard boots to be provided to the public at a fixed maximum price. If standard boots, why not standard homes? It should be recognised that the Board of Trade has power to fix the maximum price of any commodity, and that being so the machinery for obtaining fair values is already operative.

20/12/18

FAIR VALUES.

Uniform Cost Systems

The members of the White and Sugar Pine Manufacturers' Association, of California, have decided to adopt a uniform system of accounting. The step is a progressive one. By standardising accounting it is possible to make comparisons of costs that are comparable. There is no single factor in association work that is so helpful to the membership as a standardised form of accounting. It allows each member to have a check on his costs. If he finds his neighbour is performing any single service at less than himself he can immediately commence an investigation. The Federal Trade Commission has rendered very excellent service in constantly bringing before the lumber industry the necessity not only for standardising accounting, but for making sure that every item of cost has entered into final presentation. In many individual cases reports show that essential elements of cost have been overlooked.

With the Loggers

John Stafford, logging foreman for A. F. Coats Lumber Co., Tillamook, Ore., who followed timber falling for five years in discussing the difficulty of getting fallers and buckers made the following interesting observations as to the difference in the length of time which it takes to fall timber as compared with a few years ago:

FORMER YEARS.	PRESENT.
4 to 5-ft. tree, 1½ hours	4 to 5-ft. tree, 2 hours
5 to 6-ft. tree, 1½ hours	5 to 6-ft. tree, 3½ hours
7 to 8-ft. tree, 2½ hours	7 to 8-ft. tree, 6 hours
8 to 9-ft. tree, 4 hours	8 to 9-ft. tree, 9 hours

Mr Stafford says not only does it take a considerably longer time to fall the timber, but it is almost impossible to get men to undertake the work. If any practical mechanical device can be invented to replace man labour it will be the greatest thing that ever happened to the logging industry.

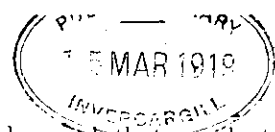
A. W. Callow, of Hoquiam, Wash., supervisor of logging for the Coos Bay, Ore., district and associated with the Wynooche Timber Co., says:

"It is now costing about one dollar ninety cents per thousand feet to fall and buck timber and I am not sure that the maximum cost has been reached. The logging business is just up against it unless some mechanical means can be found that will replace hand labour in falling and bucking. When you stop to think what has been accomplished in other lines of industry, it would seem that there must be brains enough in the lumber business to invent a portable and practical machine to fall and buck timber. Mr Callow is supervisor of spruce logging in the Coos Bay district.

Falling Timber with Air

The interest which has been aroused in the timberman's efforts to utilize compressed air as a means of falling and bucking logs is attracting much attention all over the Pacific Coast. A recent interview with the Ingersoll-Rand Company, the leading manufacturers of air tools in the United States, brings out the fact that a portable compressor, capable of supplying four 600-foot lines of air, discharging at 100 pounds pressure, can be installed at a cost of about 1500 dollars. The plan in mind is to build a steel sled, say 30 feet long and five feet wide, torpedo shaped, and mount a drum carrying say 1000 feet of one-half-inch line, the drum to be operated by a gasoline engine with a chain drive. The air compressor would also be driven by the gasoline engine. An outfit of this kind would be easily portable. It is suggested that the air lines be half-inch or three-quarters-inch.

The only problem to be solved is the type of cutting tool, which would be of the rotary type. A tool weighing not to exceed 20 pounds, with an aluminum shell, could be utilized. The logging industry is pretty well up against it for fallers and buckers, but out of the scarcity will come a mechanical substitute, as has been the case in every other industry. It is a wonder that the pneumatic



tool manufacturers of the United States have not given the subject of free falling their attention up to this time due largely to the fact that labour has been plentiful for this work. It would be a good idea if a purse were subscribed by the industry to stimulate an incentive for development along this line. A fortune awaits the man who invents a pneumatic tool which will replace the saw and axe. The subject will be very thoroughly discussed at the tenth session of the Pacific Logging Congress, which will be held in Portland on December 5, 6, 7.

Loss in Converting Logs into Sawn Timber.

By Joseph Butler, Managing Director Kauri Timber Company, Ltd.

(Continued from January issue.)

With the quantity of data available and by allocating certain proportion of sawing to the various saws a fairly accurate average of kerf was ascertained. This was determined at one-sixth of an inch, therefore, for the purposes of ascertaining sawdust-measure, each sawn face should be credited with one-twelfth of timber plus the sawdust-measure in producing sawdust, which would equal one-sixth of an inch by one-sixth of an inch by the number of lineal feet. This loss by sawdust under our present system of conversion can be termed an unavoidable waste.

In order to arrive at an easily workable system it is proposed to ignore this sixth by sixth because the inclusion of this small factor would involve taking out the lineal measure and to treat only with the sawn faces produced.

To ascertain the sawn face of any specification the following formula is submitted:—

- A - Width.
- B - Thickness.
- C - Superficial feet.
- D - Sawn face.

$$\text{then } \frac{(a - b) \cdot c}{\frac{1}{2} a b} = D$$

Example: 6 x 1 100 feet.

$$\frac{6 + 1}{\frac{1}{2} \text{ of } 6 \times 1} = \frac{7 \times 100}{3} = 233.3$$

which is the area of the sawn face.

These calculations look difficult, but when it is considered that in treating with specifications all superficial quantities are already run out, it reduces it to a simple calculation for each size.

Having obtained the total sawn surface, the actual timber lost in conversion by way of sawdust would be determined by dividing the surface by 12—this is assuming a sixth is the width of the kerf.

When one considers that in producing a 6 x 1 with a kerf averaging a sixth, the loss in producing the sawn face is 19.8 per cent. on the net measure, it is surely a factor of sufficient importance to have consideration when arriving at an ascertainable loss in conversion.

It must be remembered, in considering waste by sawdust, that it is mainly produced by sawing the

valuable part of the log and that sawdust before it came to be sawdust was in the form of timber. Timber saved from sawdust is timber gained plus the cost of getting rid of it if it were in the form of sawdust, therefore, the timber so saved is not only a gift but a bonus for taking it.

To sum up, it is suggested, in determining the loss in conversion, that:—

(1) Hoppus' measure be the standard.

(2) Allowances for the size of the logs operated on be made according to scale submitted.

(3) The sawn surface produced be considered a factor of loss in conversion to the extent of one-twelfth of an inch on each sawn face.

It is only by perfecting some such system that the miller can ascertain whether his logs are fairly and intelligently dealt with by those responsible for their conversion.

Beyond these considerations is the question of value of timber produced, but in this calculations cease and the intelligence and vigilance of the sawyers come in, and in this connection it might be mentioned that big tallies are not everything. The diagram illustrated in last issue and notes may prove interesting.

This diagram was obtained by first cutting a short section, about 4in. long, from the butt of the log, which section was used as a record of the size and shape of the log. The end of the log was then marked by a compass with a number of concentric rings of varying differences of diameter, and was also marked off into four equal sections, three of which were coloured differently and the fourth left plain. After the log was cut up, each piece showing the end of the log was carefully docked and then by the aid of the concentric rings and the colours the exact position from which the slab or timber came was accurately ascertained. These pieces were laid on top of the short section previously cut off the log and were blocked out until the shape of the section and the pieces of timber and slabs with the addition of the blocks coincided. It will be seen that the wide cuts were produced at a much less loss in sawing than the narrow or flat cuts. This is accounted for by the fact that the wide cuts were produced by hand-saw or gang frame, while the flat cuts were produced by circular bench or gang-edger, the latter carrying much heavier gauged saws.

It should be borne in mind that the diagram was from the butt, and that in some cases the slabs which apparently contain a timber size ran out to a point before a marketable length could be obtained. A diagram from the small end of a log should give a better timber result.

It is also worthy of note, the following results, based on Hoppus' measure plus suggested sawdust measure would have been obtained:—Actual as per diagram:—Timber 85.2 per cent., sawdust 16.50 per cent.

If the same specification were cut, and reckoning one-sixth of an inch kerf:—Timber 85.2 per cent., sawdust 15.35 per cent.

If cut into the largest sizes obtainable from the log and reckoning one-sixth of an inch kerf:—Timber 94.81 per cent., sawdust 5.74 per cent.

Building Notes.

AUCKLAND.

Messrs. Holman and Moses called for tenders last month for a new storey to a brick building in Customs Street.

Mr. W. A. Cumming called for tenders for additions and alterations to premises for Messrs. Sanford Ltd.

Mr. Routley also invited tenders for a house in wood at Waikunete.

The Public Works Department invites tenders for a post office at Wharepoa.

CHRISTCHURCH.

A contract has been let by the Christchurch Tramway Board for the erection of new officers in Cathedral Square. The successful tenderers are Messrs. P. Graham and Son, and the contract price is £18,722. Eight tenders were received. The contract period for the erection of the building is 12 months, and the work will be commenced immediately.

The plans for the new building were drawn in the Tramway Board's offices. They provide for three storeys, of which the ground and first floors will be occupied by the Tramway Board, and the second floor will be leased by the Lyttleton Harbour Board. Provision will be made in the foundations and walls for the addition of a fourth storey, if necessary.

The front facade is Italian renaissance in conception. The ground floor will be constructed of Timaru bluestone, with substantial arches over the doors and right-of-way that will pass through the building. A large arched centre window, embracing both the first and second floors, is a feature of the front of the building. On either side of this arch are piers, ornamented with Roman columns, the first floor being Doric, and the second Ionic in design, with a segmental pediment.

The building in Madras Street South near High Street, in which the District Nursing Association is to be housed, is making good progress towards completion. It is expected that the work of erection will be finished in February, or March.

Mr. Roy Lovell Smith called for tenders for a residence on Cashmere Hills, and Mr. J. S. Guthrie invited tenders for a house at Avonside.

The Scheme for a Soldiers' Memorial and Memorial Hall which was illustrated in these pages a little while ago, is to be modified to a Soldiers' Club only, making the Memorial a separate scheme to partake of a more national character. At a recent meeting of the building committee of the Returned Soldiers' Club the following motion was carried:—

"This meeting realises that the people of Canterbury desire to erect a Peace Memorial on a larger and more ambitious scale than the Hall of Memories asked for by the Returned Soldiers' Association; that there is considerable diversity of opinion as to the form a peace memorial should take. In the hope of securing unanimity as to the form of the Peace Memorial, this meeting therefore resolves to proceed with the appeal for a Soldiers' Club only, and to ask the public for a sum of £8000 for this purpose alone."

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DUNEDIN.

The opening of the new Anglican Cathedral took place on the 12th of this month.

The building trade at Dunedin has been particularly brisk during the year, despite the increased cost of material and the scarcity of labour, due to the war. Two hundred and eighty-one permits were granted for the last twelve months, of the gross value of £121,510.

HAMILTON.

The installation of the new automatic telephone exchange at Hamilton is to be resumed shortly. Building operations will last about three months, by which time it is expected that the equipment will have arrived.

A deputation from the Hamilton Returned Soldiers' Association waited upon the Mayor, Mr. J. R. Pow, and asked that the scheme for the erection of a soldiers' club should be proceeded with as soon as possible. Plans of a suitable building were submitted. The Mayor assured the deputation of his sympathy, and promised to call a meeting of the Citizens' Committee to discuss the matter.

HAWERA.

The Council of Education recommends the establishment of a Technical High school in Hawera. The Minister from time to time had been approached regarding the matter, but had given no definite reply, and the Mayor of Hawera, therefore, called a public indignation meeting to protest against the delay. Just before the meeting, which was largely attended, the following message was received from the Hon. J. A. Hanan:—

"I am advised by the Department that adequate building accommodation does not exist at Hawera for all pupils taking technical high school and secondary courses, and for that reason it is undesirable at present to disestablish the District High School. In the meantime, I am prepared to give favourable consideration to an application for a grant for a technical high school building, provided the plans meet with approval, and I will endeavour to expedite matters so that the erection of the new buildings may be put in hand and completed, if possible, by the end of the year."

The meeting considered the telegram a step in the right direction, and passed the following resolution:—"That the Minister's telegram be acknowledged, that he be thanked for his offer to build a technical high school within twelve months, and that the offer be accepted."

A second resolution was:—"That this meeting request the Minister to disestablish at once the present District High School, when Hawera people will undertake to find the necessary building accommodation for the pupils for the next twelve months."

HORNBY.

The Paparua County Council has granted a permit to Messrs. Kempthorne, Prosser and Company, to erect sulphuric acid works at Hornby. The proposed works are estimated to cost £90,000.

NEW PLYMOUTH.

Messrs. Messenger and Griffiths invited tenders for the erection in concrete for a nurses' home at the Hospital, details of which were given in our last month's issue.

OHAKUNE.

A well attended public meeting was held recently to consider a proposal for the establishment of a maternity hospital with accident and observation wards. The Mayor (Mr. Goldfinch) presided, and the proposal was heartily supported. An officer from the Health Department is expected to visit the district shortly to inquire into the hospital claims of Ohakune and Raetihi, and a subsequent visit by the Minister of Public Health is promised.

ROTORUA.

The Public Works Department invites tenders for an Infectious Diseases Hospital.

ROXBURGH.

The laying of the foundation stone for the new Catholic Church at Roxburgh took place recently. The architect is Mr. H. Mandeno, and the contractor Mr. D. Boyd. The building will cost £1,800.

TIMARU.

Mr. H. Hall invited tenders for the erection of a two-storey brick and ferro-concrete building for a nurses' hostel at Timaru Public Hospital.

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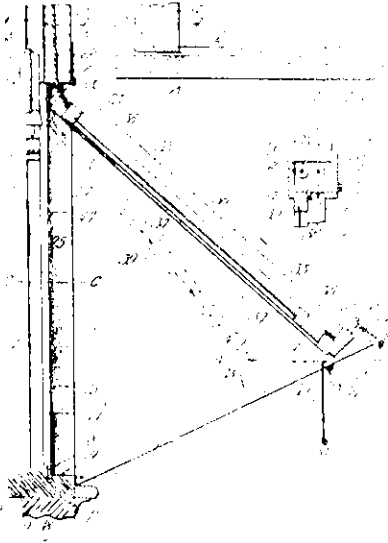
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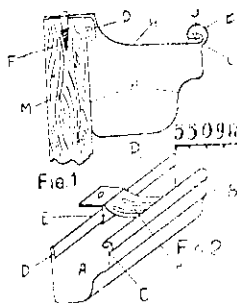
Patents of Interest to Builders.

Sliding Sash Window.—A patent, No. 40483, has been taken out by Thomas Burden and Ernest Abbott Martin, both of Warrnambool, Vic. According to the invention, the lower part of the window-frame accommodates a swinging cradle or frame which is hinged at its top and is adapted to slidably accommodate the inner or lower window-sash, so that by hinging the cradle inwardly into the apartment said inner sash



is carried with it and the exterior of the glass thereof may be easily cleaned from within the building. The lower portion of the parting-head which separates the inner and outer window-sashes, and also the lower portion of the inner head, form part of the swinging cradle, so that when the cradle is opened into the room the outer or upper sash may also be swung into the apartment for the cleaning of its outer glazed surface.

Roof Spouting Bracket.—A patent, No. 5509, has been taken out by R. C. Smith, S.A., to allow free expansion and



2 figures, 5 claims

contraction and to obviate perforation, the fastener H, R is hooked at J and F to interlock with the head B and the downturned edge D.

Portable Building.—A patent, No. 39929, has been taken out by Charles Stafford Wakefield, of London. According to the invention, building elements or sections are constructed of laths of wood, metal, or other material, so relatively arranged and secured together by a flexible backing of canvas or other material that covers the whole of one face of the element or section that if curved or arched to form roof or roof portion—for example, with the flexible backing on the outer side—the said backing will be under tension in that its normal length corresponds to the length of the section or element when flat as that it is lengthened or stretched when

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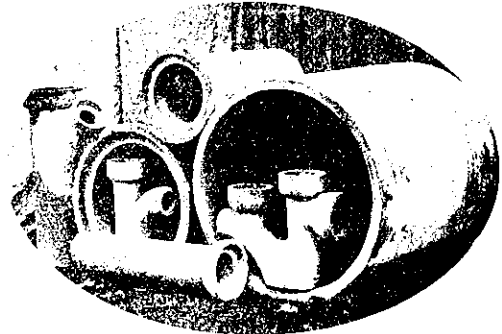
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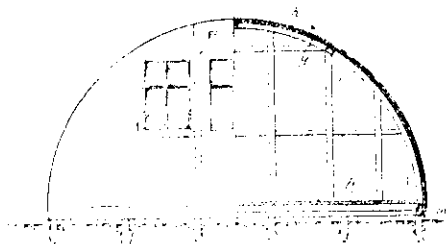
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curved and placed under such tension as to force the longitudinal sides of the several laths one against the other, whereby they mutually support each other and render the



element self-supporting, whilst for convenience of transport the element can be rolled or folded into a body of relatively small compass.

Cement Production and Recovering Potassium Compounds. — A patent, No. 30498, has been taken out by Frederick William Huber and Frank Fredland Reath, both of California, U.S.A. In this process the original raw material is calcined in rotary kilns in the ordinary manner, thereby producing cement-clinker, and the flue-dust so produced is recovered, which dust contains most of the alkali metals and most of the oxide of sulphur contained in the original raw mix, and those derived from fuel. To this material is added a substance capable of readily liberating the alkali metals in a somewhat volatile state, such a material as finely divided calcium fluoride being, so far as has been found, the most effective material for this purpose. To the flue-dust then is added an amount of calcium fluoride substantially equivalent to the amount of alkali metals present in the flue-dust, together with sufficient argillaceous or calcareous material (or both) to bring the composition up to that of a normal cement raw mix. This mixture is then calcined and clinkered, for example, in the ordinary type of rotary kiln, and from this

burning there results a clinker and a second flue-dust. This clinker is in all respects a perfectly good cement clinker, although produced from materials extremely high in alkalis and oxides of sulphur. The flue-gasses are cooled, and the flue-dust produced (second flue-dust) is found to contain considerable quantities of sodium and potassium fluorides, some sulphites, sulphates, lime, and other materials. To recover the fluorine from this material it is preferred to add to the flue-dust (if it does not already contain a sufficient amount thereof) salts or other compounds of calcium, such as the oxide or sulphate of calcium or the like, and digest the whole mixture with water, preferably in a heated condition, until substantially all of the fluorine present has been converted into calcium fluoride, while substantially all of the potassium and sodium salts become dissolved, for example, as sodium and potassium sulphates. The solid is then separated from the liquid, for example, by filtration or sedimentation, the liquid evaporated for the recovery of the alkali metal salts, and

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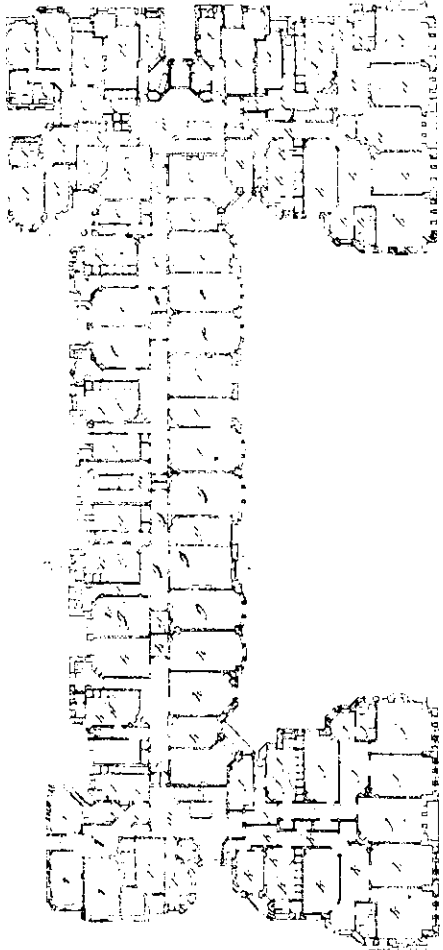
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the solid material containing calcium fluoride is employed for treating a further batch of the first flue-dust as above described.

Flats and the Like Residential Structures.—A patent, No. 40778, has been taken out by Abraham Davis, of London. According to the invention, a building can be constructed with a single central kitchen, centrally or otherwise suitably situated—say, on the top story of the building or other convenient position—and with a private lift-shaft containing a suitable service-lift connecting each flat, suite, or the like either directly with the private kitchen of such flat or with a passage, room, or servery near or adjacent thereto, the lifts being grouped together in blocks for convenience of service. One or more auxiliary serveries may be provided and arranged to adjoin or communicate with the central kitchen. A telephone, speaking-tube or like communicating-means is also arranged to connect each flat or the like with the kitchen.



or with a room, passage, or the like adjacent to same. The residents of each flat or the like are by the above arrangement able to send an order for a meal either directly to the central kitchen or to an operator or attendant in a room or servery near or adjacent thereto, and upon the order being completed it can be delivered direct by the particular lift to the flat or the like of the resident who has given the order. In a large block of buildings there may be two or more of such central kitchens, with or without connecting auxiliary serveries, conveniently located near the service-lifts, which would be grouped in blocks, appropriately lettered and numbered, and connected each with its particular private kitchen or with a private service-room. Each central kitchen or auxiliary servery is thus arranged to serve one or more blocks or lifts.

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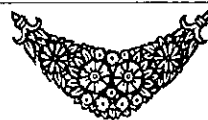
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