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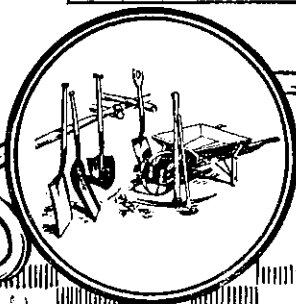
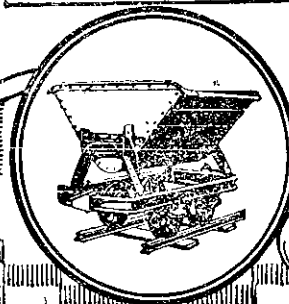
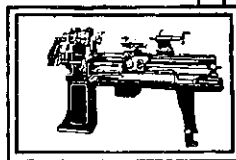
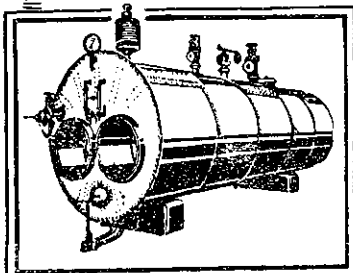
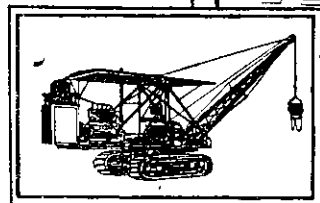
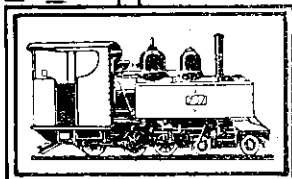
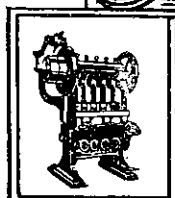
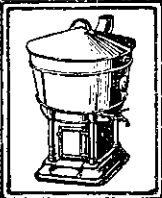
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The Editor will at all times be glad to receive Illustrated Articles on subjects of interest for consideration, provided the articles are short and to the point, and the facts authentic.

Should subscribers continue to receive copies of this journal after expiry of current year, it will be accepted as an intimation that they are desirous of subscribing for a further period of twelve months.

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Our 66th Competition.

We offer a prize of £1 is. for the design adjudged to be the best for a

Workman's Cottage,

with the following accommodation:—Living room, kitchen, three bedrooms, bathroom, scullery, pantry, woodhouse and other ordinary conveniences.

The site has a frontage of 100 ft., and is an exposed one on the side of a hill facing N.E. The house is to be substantially constructed of brick or concrete, for a workman who cannot afford extravagance, and is to be designed on economical lines.

Mr. Leslie D. Coombs, A.R.I.B.A., of Dunedin, has kindly set this subject, and will adjudicate.

Designs must be sent in, finished as above, under a *nom-de-plume*, addressed to the Editor "N. Z. Building Progress," 22, Wingfield Street Wellington, and clearly marked "Sixty-sixth Competition," on outside, with a covering letter giving competitor's name, and address of Employer. Designs must be sent in by Sept. 27th.

Our 67th Competition.

We offer a prize of £1 is. for the design adjudged the best for a

Small House,

in the suburbs of a town.

The object of this competition is to attempt to produce a plan of a house, which will be as labour-saving as possible, consistent with comfort and appearance.

In these days of high costs, when most families have to economise to a great extent, and also where the household duties have to be carried out by the householders themselves (domestic assistance being practically unobtainable), it is essential that an unnecessary work and running up and down stairs, and along passages be eliminated. Consequently a one-storey house, with two rooms in the roof, will be more easily worked than the usual two-storey house. For the same reason the orthodox drawing room will be dispensed with, also the kitchen, which being usually some little way from the dining room, entails a great deal of carrying dishes, etc., backwards and forwards. In short, anything which can be done to save unnecessary work, and yet preserve the self respect and aesthetic feelings of the family, should be embodied in the plans. The elevations should be simple in detail yet interesting in their massing. Careful proportioning of windows and other features costs nothing, but makes all the difference to the general effect.

Schedule of Rooms required:—Living room about 20 x 16, with open brick fireplace. North aspect. Bay window. Opening direct off this, and separated therefrom by sliding doors, a kitchenette about 8 x 6, with gas cooker and gas hot water system, sink and bench. Opening off this a small bedroom about 100 super feet. Pantry about 50 super feet, with safe ventilated to open air. South aspect. Small back porch with glass door. Wash house, (gas boiler), coal house, and small combined workshop and tool house off the porch. One bedroom about 18 x 14, with East and North aspect—fireplace. One bedroom about 14 x 12—fireplace. Bath room about 9 x 7, with extra door to outside. W.C. close to bath room. Linen cupboard about 30 super feet. Verandah about 12 x 7 with access from living room, and not at front door. N. and W. aspect. To be planned so as not to interfere with direct sunshine to any room. Small front vestibule and small hall. Stairs to attic to start adjacent to living room door. To be kept as simple as possible, about 2 ft. 6 in. wide, close to balustrade, etc., to save dusting. Attic plan—Two bedrooms about 16 x 14 each. A fireplace in one balcony on sunny side. Small sink in recess. Box room. Cupboard on landing. Materials of brick or concrete, slate or tiled roof. The site faces N., and is a chain wide. Drawings required.—Plans of both floors. Four elevations. One section. Roof plan in conjunction with Attic plan. Drains to be indicated. Scale one eighth of an inch to one foot, all to be finished in ink, coloured and shaded. Sheets to be rolled drawing-side out.

Mr. Basil Hooper, A.R.I.B.A., of Dunedin, has kindly set this subject and will adjudicate.

Designs must be sent in finished as above under a *nom-de-plume*, addressed to the Editor "N.Z. Building Progress," 22, Wingfield Street, Wellington, and clearly marked "Sixty-seventh" Competition on outside, with a covering letter giving competitor's name, and address of employer. Designs must be sent in by October 27th.

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Editorial Comment

**Loans—
and More
Loans.**

If money is the measure of industrial development, New Zealand is booming, for there has seldom been so great a call for increased capital for large businesses, and loans for public bodies. Wellington City Council is asking its rate-payers to sanction a loan of £1,700,000, and the Prime Minister declared in Parliament recently that nearly every local body in the country seemed to be going in for heavy borrowing. He is concerned about the rising rate of interest. Local bodies hitherto have not been permitted to borrow at a higher rate than 5 per cent, but under present conditions, the State-imposed limitation has been raised to 5½ per cent., while private companies are raising capital on 6 per cent. debentures. The ease with which the latter seem to be securing their requirements shows that investors are taking a fair view of the position, and that the millions of private accumulations disclosed by the bank returns are likely to go into useful circulation at a reasonable rate, so long as the Government and local authorities do not display too much anxiety in the rush for loans. An excess of competition will have its effect upon the lender's ideas regarding interest, unless the Government strictly controls the position in accordance with the legal power in its hands.

**The Curb
on
Spending.**

If borrowing provides the sure sign of prosperity, we are going to be very prosperous, especially as the money will be loaned by New Zealand to New Zealanders, and the interest spent in the country. Important public works of a developmental nature must be carried out almost regardless of cost, unless the country is going to stand still. Hydro-electric head-works, for instance, will ultimately prove so remunerative that they should take the first place on the public works programme. But we believe that the restricted labour supply and the high cost of materials will effectively curb the orgy of spending for which the public authorities are pre-

paring, according to the evidence of their loan schedules. The Hon. C. J. Parr, Minister of Education, has put the difficulties of the position into a nut-shell when he informed a deputation of educationists that he feared that he must call a halt on school building programmes unless he can get better value for the money, "because," he said, "the threequarters of a million allocated for the purpose is effectively worth to-day only £400,000." This is one of the causes of the comparative failure of the public effort in connection with housing. —

Labour and Nationals.

Though all the resources of the State are behind the Housing Department, it has been so hampered by the difficulties of shortage of materials and labour that these two subjects occupy the bulk of its annual report to Parliament. Some very illuminating facts appear. It is shown that when the Government displayed the greatest activity and optimism over its housing programme—when houses were being scheduled by the hundred—no builders could be got to tender. Two hundred dwellings were wanted in one instance, and the most elastic conditions were specified. The tenderer could make his choice of materials, and submit his own designs. "yet only two small tenders were received for complete dwellings at a reasonable price." The chief obstacle to building operations has been in obtaining supplies of materials, states the Housing report. In view of the fact that practically all the dwellings now under construction are of concrete, the recent shortage of cement has greatly intensified the difficulties to be met: but the decision of the Board of Trade to allocate cement in accordance with the urgency of requirements, placing workers' dwellings second on the list, should have the effect of largely removing this difficulty in future. The shortage of timber also has been marked, but the Department has recently overcome this to some extent by arranging for the purchase of large quantities directly from the mills. In November last the Department arranged for the importation of considerable quantities of other materials, such as roofing-iron and other hardware, and these are now almost all to hand. In this connection it may be noted in justification of the Department's action that while the current price of roofing-iron in New Zealand is £75 a ton, a shipment of 200 tons arranged for by the Department was recently landed at a cost of £43 a ton. The Housing Superintendent has investigated the causes of shortage of labour in the building trade. His report goes straight to the heart of the trouble, showing that unless we have an influx of artisan immigrants, the difficulty is too deep-rooted for local solution:—"In order to disclose one cause of this shortage I have obtained information showing that in the various building trades there has been a great falling-off in the number of apprentices since five years ago. In the carpentering trade, for instance, the employers in the principal towns in the Dominion employed in April, 1914, 391 apprentices. To keep pace with the increase in population this number should have increased by April, 1919, to 405, yet the number employed by the same employers was only 245—not much more than half. The shortage of apprentices and skilled workers not

only in the building trade but in most occupations calls for serious and urgent attention."

Co-operative Building.

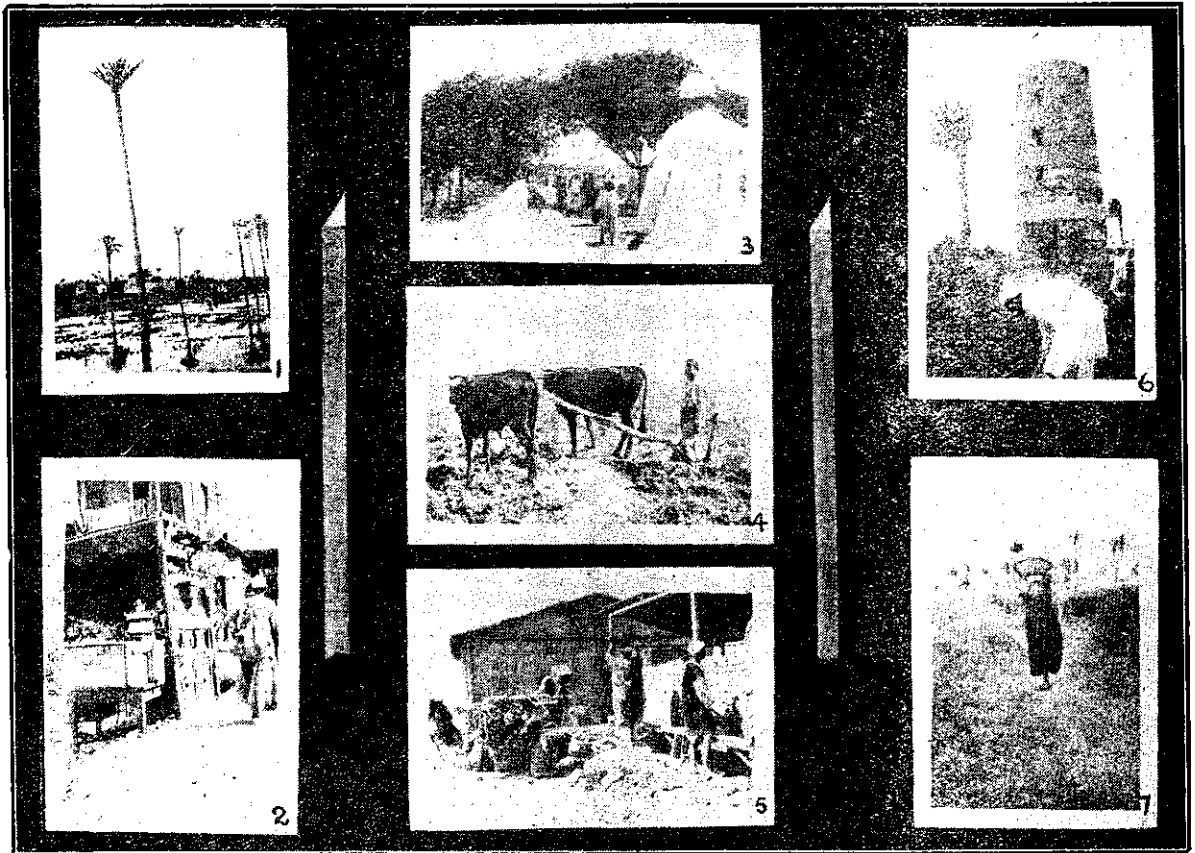
An offer by four of the largest building firms in Wellington to concentrate their resources for one year upon the building of small dwellings, and thus get rid of the shortage, has attracted a great deal of public attention. The scheme, on the face of it, is just the thing to grip the imagination, and raise high hopes, especially as it involves the most complete kind of co-operation between capital and labour, the building trades unions being joint partners with the employers in the scheme. Our enthusiasm is not at fever-heat over the project, because we have the evidence of the Housing Report to show that the biggest organisation in this country, the State, has not achieved much in a twelve-month of effort, and half a million sterling to back it. We suggested quite a year ago that the State might be able to do useful things if its organisation was centred on the housing problem, but the State does not seem able to rise superior to labour shortage or restricted supplies of material, and we fear that the big co-operative building scheme will fall down for similar reasons. There is more building of houses going on to-day than most people realise. There are the workers dwellings contracts, and innumerable private contracts. The latter are usually undertaken by small firms of working builders who have a team of men thoroughly accustomed to this special work of building dwellings. If they can get supplies, they are extremely efficient in their methods. What will happen to these useful working teams of house builders if a giant co-operative building organisation offers such high wages that the majority of the building trade employees are attracted thereto? And what will happen to the architects during the twelve months occupied by the experiment? Already the building trade is controlled at all points—official authorisation of the job, and official control over distribution of all important materials. If to this is added a concentration of labour under the control of four big builders, thus drawing away employees from the smaller working firms, we are afraid that the consequent dislocation of the whole industry will have worse permanent results than the evil the scheme is intended to remove. Our legislators are beginning to suspect that the small builder has already been too badly treated. The Prime Minister was questioned in the House about the operation of the rent restriction legislation, Dr. Newman, of Wellington East, suggesting that it had forced out of business the speculative builder, who—whatever his other faults—actually did build houses with celerity. Mr. Massey, in reply, hinted that the Government might have to go back a little on its restrictive legislation owing to the fact that it seemed to have frightened out private enterprise in house building, though he added that this legislation imposing an 8 per cent. limit on rent in relation to capital value does not apply to new dwellings. It is quite a novelty to find people speaking up in friendly terms for the speculative builder. It is another instance of a benefit not being appreciated until it has disappeared!

Some Impressions of Architecture in Egypt.

By F. E. Greenish, A.R.I.B.A., Wellington.

It is not without some misgiving that one takes up a pen to write an article on the impressions received of Architecture in Egypt, now 3600 years old; nor will a diversion into the life of the Egyptian

of palm timber and palm leaves covered with rammed mud. His fuel consists of camel dung. He ploughs by oxen with a wooden plough. Water which requires to be raised to a higher level is bailed up by



1. An Inundation near Tel-el-Kebir. 2. Native Drink Stall in a Bazaar. 3. The Road to Tel-el-Kebir. 4. Ploughing. 5. Bricklayers at Work. 6. An Observation Tower near Tel-el-Kebir, built by Napoleon. 7. An Egyptian Child at Work.

native of to-day in any way convince one by comparison of the great strides that have been made during the ages past. But such retrospection and comparison shews unmistakably of what conservative character the Egyptian native is composed, the primitive state of the existing masses and the high development to which the rulers of ancient times attained.

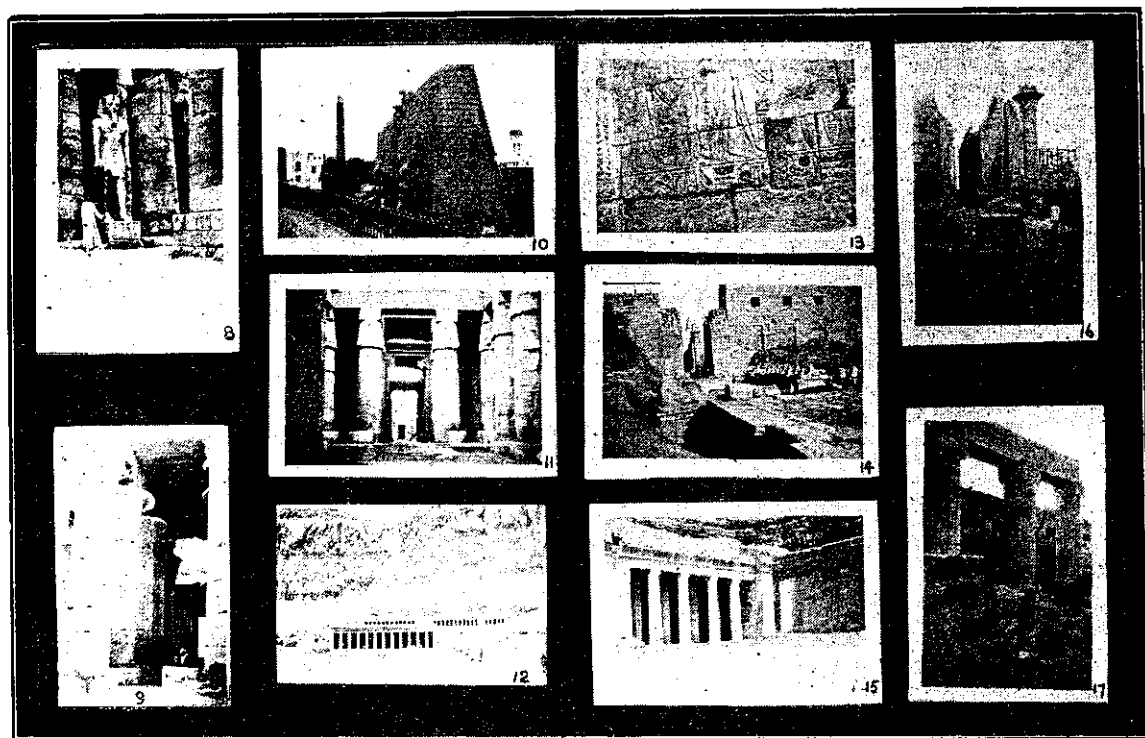
The Egyptian peasant of the present day lives in a most rudimentary manner. His house is built of mud bricks, sun-dried as of old, and its roof of pieces

rudimentary machines called "chadoufs." The marvellous network of small canals which irrigate what would otherwise be but parched desert, and provide in some cases five crops per year, and contained in mud banks, provided with wooden locks and gates. Figs. 1 to 7 shew some aspects of the life of the modern Egyptian.

During a stay in camp near Tel el Kebir on the banks of the sweet water canal between Cairo and Ismailieh, came the word early one morning in May 1916, that leave could be obtained to visit Luxor and

its wonders, and within an hour three fly-worried, sunbaked persons after a dash to be ready, found themselves in a train en route for Luxor via Cairo. Midday brought us to Cairo with the solace of good meals free from bully-beef, rancid butter and sand washed down with really cold liquid. Early in the evening we started on our next journey of over 400 miles by train up the green and fertile strip of Nile valley, sleeping as well as we could on the well upholstered leather seats either in a state of hot suffocation with closed windows or subjected to a deluge of sand. However, early morning saw us nearing our destination and with it appeared on the train numerous would-be "dragomen" (guides). In some doubt as to the wisdom of our choice, we engaged the handsome looking gentleman in flowing tussore silk

to the Temple of Luxor (Figs. 8, 10, 18 and 19), much of which is still buried in the sand and litter of ages, as the tomb of a Sheikh (shewn in Fig. 10), which is on the site, cannot be removed owing to Mohammedan objection. Entering between the two pylons with their seated colossi of Rhameses II. flanking the door, we came upon the forecourt of Rhameses II., (the Great), (Fig. 8), in which will be noticed the enormous statues of this truly vain monarch, all of them severely damaged by Cambyses the Persian King during his invasion of Egypt. The illustration shews the most perfect of the statues, but even this has lost the peculiar mitre-like Egyptian Crown. A small statue by his side shews his Queen—Nefertari. Passing between the enormous central columns of the Hypostyle Hall—attributed to



8. Statue of Rhameses the Great in Temple at Luxor. 9. The Hypostyle Hall of the Rhamesionn Thebes. 10. The Entrance to Temple at Luxor. 11. Forecourt of Temple of Khonsu. 12. The Temple of Queen Hatshepsu. 13. Hieroglyphs in the Temple of Khonsu. 14. The entrance to Great Temple at Karnak. 15. Colonnade in Temple of Queen Hatshepsu. 16. Altar and Unfinished Hall of Rhameses Great Temple of Karnak. 17. Banqueting Hall of Thothmes in Great Temple at Karnak.

garh with a clean tarbouche whose portrait may occasionally be recognised in the photographs—and without doubt Ibrahim Ayan, for that was his name, fully justified our confidence. His knowledge, energy and courtesy were all that could be desired, and withal he shewed that rare quality in the Egyptian—fair dealing. He took us round for two days, paying all entrance fees, carriages, boats and doukeys for a fee of 200 piastres each (a little over £2 each). Our hotel accommodation was also both comfortable and moderate in cost.

After baths to rinse off our coating of sand, and a rest in the cool, we sauntered forth from the gate of the Luxor Hotel a short distance along the river

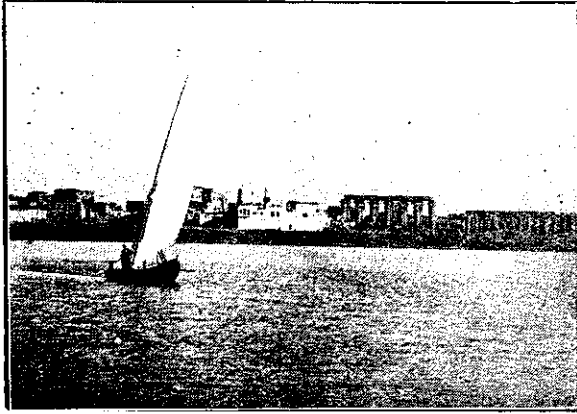
Horemheb, the court of Emenhotep with its profusion of columns of the lotus bud form, is opened before our eyes (Fig. 19). The grace and dignity of this court and its great extent give a much higher opinion of the work in this temple than is gathered from most writers. In the Sanctuary of this temple was once a Roman altar, and it was evidently used as a Roman Cella; later on the Christians made the same compartment into a chapel, plastering the hieroglyphs over and painting thereon a fresco of a Christian saint said to be St. John, which is still visible.

A carriage drive in the afternoon took us to the Arab village of Karnak, which is the Great Temple

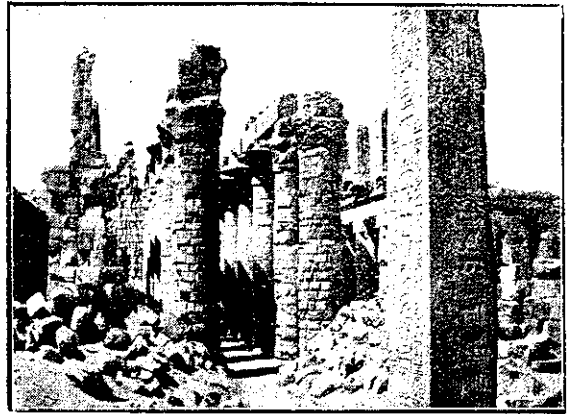
of Amen-ra, (generally known as Ammon), King of Kings and God of the Sun, to give him his full title. (Figs. 14, 16, 17, 20, 21). This temple as many others was approached by an avenue of ram-headed sphinxes which at one time extended to connect with the Temple at Luxor. In previous times there were also, as at Luxor, two obelisks at the entrance. On entering the first objects that strike the eye are the large isolated columns of a great hall which Rhameses II. left incomplete. (Fig. 16). Beyond this is the famous Hypostyle hall of Maceplitha (Fig. 20), the father of the great Rhameses. This is probably the

be noted the 16-sided columns with square abacus, so reminiscent of the Greek Doric Order, but erected by a Pharaoh twelve hundred years before and such example as we know of was erected in Greece. At the side of the Temple is the sacred lake (Fig. 21) on which periodically were held some mystical rites in connection with the sacred boat of the God Horus, God of the Western Sun, to whom the spirits of the departed were conveyed after death.

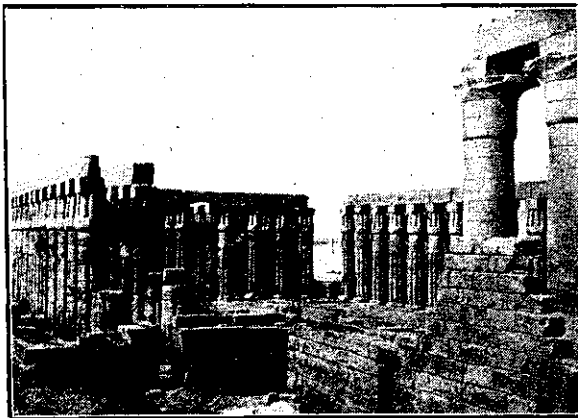
From this place we made our way to the Temple of Horus or Khonsu, sometimes known as the small south Temple at Karnak. This is likewise approach-



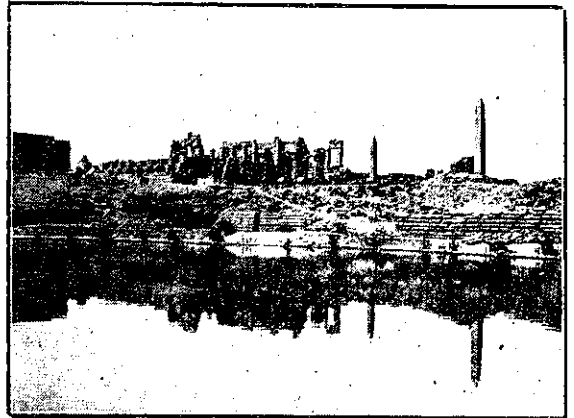
18. General View of Luxor, showing Temple.



20. The Hypostyle Hall, Great Temple at Karnak



19. Court of Amenhotep in Temple at Luxor.



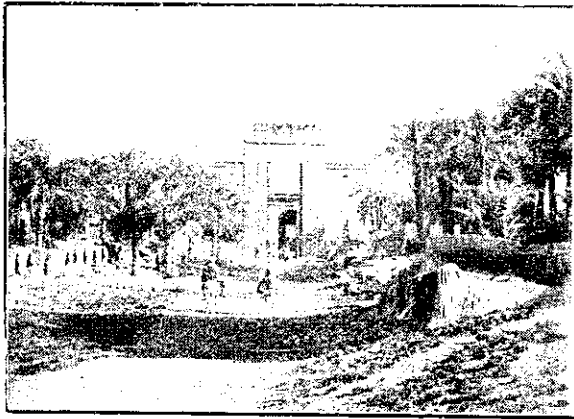
21. General View of Great Temple and Sacred Taka Karnak.

most glorious monument of ancient Egypt, measuring 340 feet by 170 feet, with 122 columns of the lotus bud type and twelve larger columns 69 feet high and nearly 12 feet in diameter, supporting the roof in the centre. Whilst in here we were treated to a sand storm and a shower of rain, the latter said to have been the first for five years, a statement which we did not know if we ought to believe. Beyond the Hypostyle hall are two obelisks—the record of the life and work of Thothmes I. and his daughter, Queen Hatshepsu. In rear of the Temple proper though portion of it is the great Palace or Banquet-hall of Thothmes III., (Fig. 17). Here should

ed through an avenue of sphinxes or rams to the propylon or gateway of Ptolemy Euergetes I., built at a much later date, (Fig. 22). The pylons of the temple are seen beyond, entering between which the very beautiful forecourt is disclosed (Fig. 11). The pylons are unsculptured and in very excellent preservation, as is the whole Temple, and consequently one obtains a far more realistic impression of the appearance of an Egyptian temple than from the more ruined examples, furthermore the plan is simple and easily understood. The appearance of this court in the last rays of the setting sun looking into the mystery of the hall in rear is not easily forgotten.

The dusk swiftly following on the setting of the sun compelled our retirement to our quarters.

The next morning, rising early, we took boat across the Nile at 7 a.m., and landed on the western bank, the background of rugged, barren hills being baked in the fierce glare of the brilliant morning sun. Donkeys awaited us on the bank and we rode off with as much comfort as we could in the blazing heat, bound for the Tombs of the Kings in the valley of Biban el Melouk, followed it appeared by half the countryside, who appeared to rise from any odd nook, trying to sell *genuine* antiques, which shewed no sign of their recent manufacture, Ibrahim assured us, and put the gentlemen to flight with a few words which may not have been polite but were evidently forcible. However, some of the fugitives appeared to be able to keep up with our donkeys and produced at every halt unlimited bottles of lemonade from nowhere, so we quite forgave their fraudulent intentions in our great desire for moisture—we were still thirsty after drinking 7 bottles in 5 hours. On arrival at these tombs cut deep into the ragged rock we had to await



22. Entrance to Temple of Khonsu.

the starting of the electric light with which they are most incongruously lighted and then we entered.

All the tombs were very similar in having steeply sloping galleries, some now fitted with wooden steps, others with very roughly hewn stone steps and rather difficult of descent, at the bottom of which are large rooms, and then a further succession of galleries and chambers until the actual chamber of the dead is reached. The sepulchral chambers were very cunningly concealed, and in some cases false chambers were provided, and the actual chambers sealed, with difficult approaches. In most of these both sarcophagus and mummy have been removed, but we saw one which had been left in a glass case illuminated by electric light, the face still remarkably well preserved, and having nothing but a placid and happy expression. There were also in the same tomb the mummied remains of one of the Queens remarkably beautiful, the natural hair still preserved and with a lustre still remaining. Most of the chambers are covered with hieroglyphics beautifully painted on the smooth plastering of the walls, recording the life history of

the departed and his expectations of the life to come, and even in some cases giving the name of every slave employed in the work. In parts some of the work is quite unfinished, being only drawn out in charcoal and shewing the corrections of the chief artist; the death of the proposed occupant having stopped the power of the directing impulse.

From here we proceeded to the tombs of the princes, these being similar to those of the Kings, but owing to the rock being of denser quality the hieroglyphics are most beautifully sculptured on a very small scale, instead of being painted.

Our next journey was to the great Palace-temple of Rameses II., known as the Rhamession. The exact purpose of this building is in doubt, but it is considered as the Memnonium of Amenophis, and the smaller building of Rameses III. at Medinet Hanoû, to have been a place where the monarch sat pondering on his own greatness during his life, and perfecting his knowledge, and as a temple to his memory after his death. In any case the plan adopts the general principle of other temples—a forecourt open to the air, a Hypostyle hall lighted by clerestory, and smaller sanctuary without the light of day, thus gradually increasing in mystery as in sacredness. The forecourt of this building is adorned with great statues of the founder, surrounding an enormous monolithic statue of the same monarch which has been overthrown and badly broken by Cambyses the Persian, who appears to have had a particular hatred of Rameses' greatness. The Hypostyle hall is illustrated in Fig. 9, and is remarkable for the very fine central columns with their beautiful and tasteful details. From the Rhamession we visited the tomb of Queen Hatshepsu, daughter of Thothmes I., who succeeded to the throne after the death of her husband and ruled Egypt, continuing the expeditions and conquests with great capability. Her brother, Thothmes III., who was the greatest of Egyptian conquerors and added more to its territory than any other of the Pharaohs, so detested the memory of her greatness that he destroyed her image wherever found. Her originality and character are finely expressed in this sepulchral temple. It is constructed on the side of the hill in three enormous terraces, with sloping causeways in place of steps, giving access from one level to another (Fig. 12), and each terrace is finished with beautiful colonnades of more delicate proportion than seems to have been considered right in the temples previously described. In Fig. 15 is shewn the detail of these columns which are so very close an approach to the Greek Doric as to leave hardly any doubt as to its origin. The stone work is of a fine grained limestone, the columns being built up and not rock cut, and 16-sided, and the sides slightly hollowed to give greater prominence to the sharp angles. Inside this beautiful colonnade are bas-reliefs of great delicacy and truth of expression, depicting the expedition of Queen Hatshepsu to the Island of Punt, considered by some to have been Mauritius. The extreme fineness of drawing and workmanship of these sculptures, which are far more advanced than the usual hieroglyph, give a very advanced conception of the Egyptian as an artist. This

work dates from about 1700 B.C. There are similar prototypes of the Greek Doric, some dating about 800 years prior to this example, at the rock cut Tombs at Beni Hassan and another, (previously illustrated in Fig. 17) by the succeeding ruler.

After a further indulgence in lemonade and a donkey race to the river bank we were rowed back to Luxor, dried our wet clothes in the sun, rested and took the train in the evening to return to Cairo, much regretting that so many more of these glories of the past ages remained unvisited; for although we saw many of the principal monuments, there are numerous others and many could be studied for weeks with more appreciation.

Our Competitions.

In response to numerous enquiries we have decided to re-commence our competitions for Architectural Students beginning with this issue. Mr. Leslie D. Coombs, A.R.I.B.A., of Dunedin, has set a subject for September—a Workman's Cottage. Any bona fide student of architecture can enter for these competitions, which are run solely with the object of

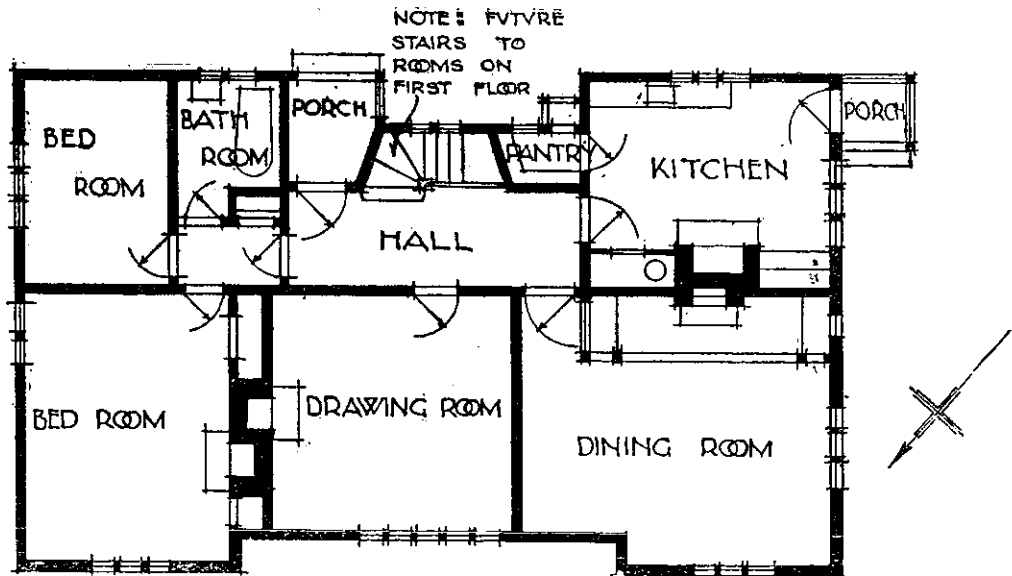
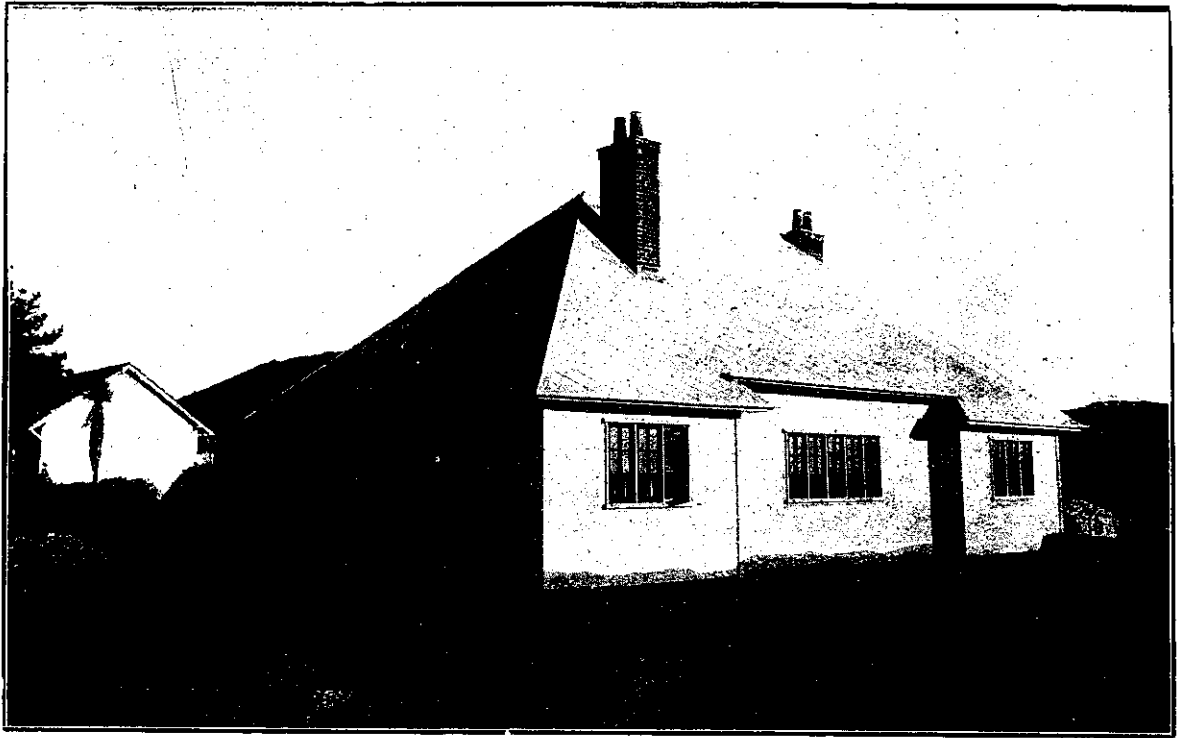
giving the architect of the future the benefit of the wider experience of the professional architect, and we appeal both to the students and architects—the former to show their appreciation of the trouble the judges take for their benefit, and latter to send us carefully considered subjects which their experience shows will be of value to the younger members of their profession.

The Labour Department is experiencing some difficulty in erecting twelve workers' cottages in Christchurch (says the "Lyttelton Times"). It has called for tenders, but all those sent in are higher than the maximum price fixed for these buildings, and the Department cannot accept them. Messrs. H. E. Moston and P. H. Graham, who are in charge of this branch of the Department's work, are in Christchurch trying to find a way out of the difficulty. They expect to be able to make arrangements in a few days. These proposals will be submitted to the Government, and if approved the work of erecting the cottages may be put in hand soon. Messrs. Moston and Graham inspected the concrete blocks for building purposes made at the Templeton Prison. It is possible that these will be used in future building operations by the Department.



The Stafford Hospital, Dunedin, showing recent additions.

Basil B. Hooper, A.R.I.B.A., Architect.



Residence built at Karori, Wellington. Wm. M. Page, Architect, Wellington.

Reproduced from "Commonsense Homes."

John Bull Wakes up.

For generations past it has been the consistent policy of British Governments to neglect the question of home forestry, and to rely on other countries to supply the Empire's timber needs, and this seems all the more strange when across the channel, at no distance from their doors, they had the object lesson provided by France and Germany, two important nations upholding probably the most advanced forest policies in the world, and in a self-contained way supplying from the productions of their forests almost the whole of the domestic and industrial needs of their enormous populations.

Then came the great war and Britain found herself so unprepared in many directions, to provide the resources necessary for its successful conduct, that had it not been for the forests of France, and the fortunate circumstance that she was allied with that country, it would have been quite impossible to prevent the Hun armies from over-running Northern Europe, or perhaps from shelling the southern shores of Great Britain.

A recent article on "Wood and War" states amongst other things:—

As has been said for food so might it also be said, that wood will win a war. It can at least be said that without wood we could not have won the recent war. Sixty thousand feet (board measure) of lumber were required per mile of trench, or fifteen billion feet for the French front alone, not including the millions of feet required for shelters, artillery screens, etc. Because of the ease with which it is shaped and built into positions, wood cannot be substituted by any other material. Speed is a prime factor in war; wood makes speed possible. Problems in mining, transportation and housing behind the lines are absolutely dependent upon it. England stands to-day as a living example of the dependence of warring nations upon ample local wood supplies. Her past supine attitude towards reforestation and forest management has cost her dearly.

And here are the evidences of a lesson well learnt, for the Britisher though slow to profit by example is not altogether foolish. Before the war had concluded Committees on reconstruction had been appointed throughout Great Britain, and one such on Forestry presented so strong a report on the needs of a home policy, that legislation has already been passed for the creation of a National Forestry Commission with powers to manage the existing home forests, and in order to render the United Kingdom free of imported timber in future, with authority to acquire land and to either plant or encourage the planting of somewhere about two million acres of coniferous forest during the next 40 years.

Then in addition a conference of representatives from several Dominions has been summoned to meet in London next month, with the view of presenting statements dealing with the forest resources of each country, and of taking stock, and conferring upon the steps necessary to protect and develop these resources in the interests of the Empire as a whole. This Conference is the direct outcome of the experi-

ences of the war, and Australia has prepared its evidence and will be worthily represented by two delegates sent to take part in it. That its results will be of lasting advantage to the British Empire there can be little reason to doubt, and seeing that it represents the awakening of a People's conscience upon a very important but much neglected National question, all advocates of forestry will in keeping rejoice. Yes, John Bull has undoubtedly waked up, and it does not seem that he is likely to go to sleep again.

Brick-Making in Wellington.

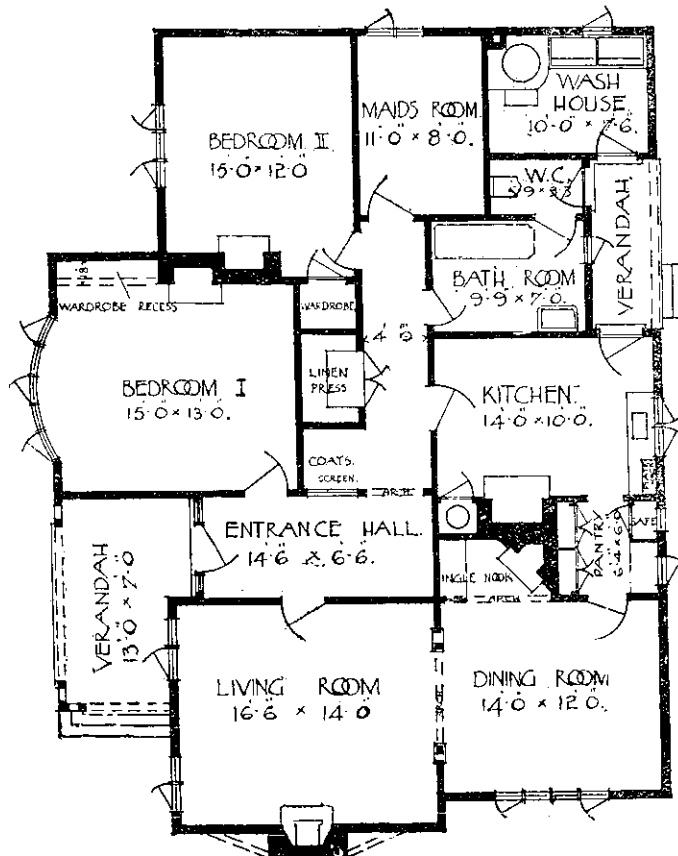
The Wellington Gas Company is extending its field of industrial endeavour by setting up what promises to be an extensive brick manufactory. For some years past the company has had to find locations for the depositing of the large quantities of clinker, which is the residue of its furnaces, and as this has had to be carted considerable distances from the works the charge for cartage has been a gradually increasing one. Some time ago experiments were conducted to determine whether it would not be practicable to use this waste product in the manufacture of bricks, using the local clay as the binder. The bricks turned out in the rough were pronounced to be of good quality, which fact induced the company to set up a kiln, with the result that a moderate supply of bricks is being turned out, some of which are being used in the construction of the new wing to Victoria College. Later the company intends to establish four kilns, and so enter seriously into the brick business in Wellington.

The Bricklayer on Top.

A story is told by a Wellington architect the truth of which he vouches for. A professor, thinking that his salary was not adequate for the present times, decided to become a bricklayer. Bricklayers, he read, can earn 3/6 per hour, plenty of work guaranteed. The work seemed so stupidly simple to him that he thought he would like the change. He applied to a local builder for a job in Wellington. The builder asked him what he could do. He said he was a professor, but wanted to learn some branch of building. He said he thought he would like to be a bricklayer. "Go and see the foreman bricklayer," said he. The professor found the foreman and asked him for a job. "Do you know anything about laying bricks," said he. "No," said the professor, "but I can soon learn." "No you don't," said the foreman, "you're not going to begin at the top of the tree. Go and learn to be a bally architect first and gradually work your way up."

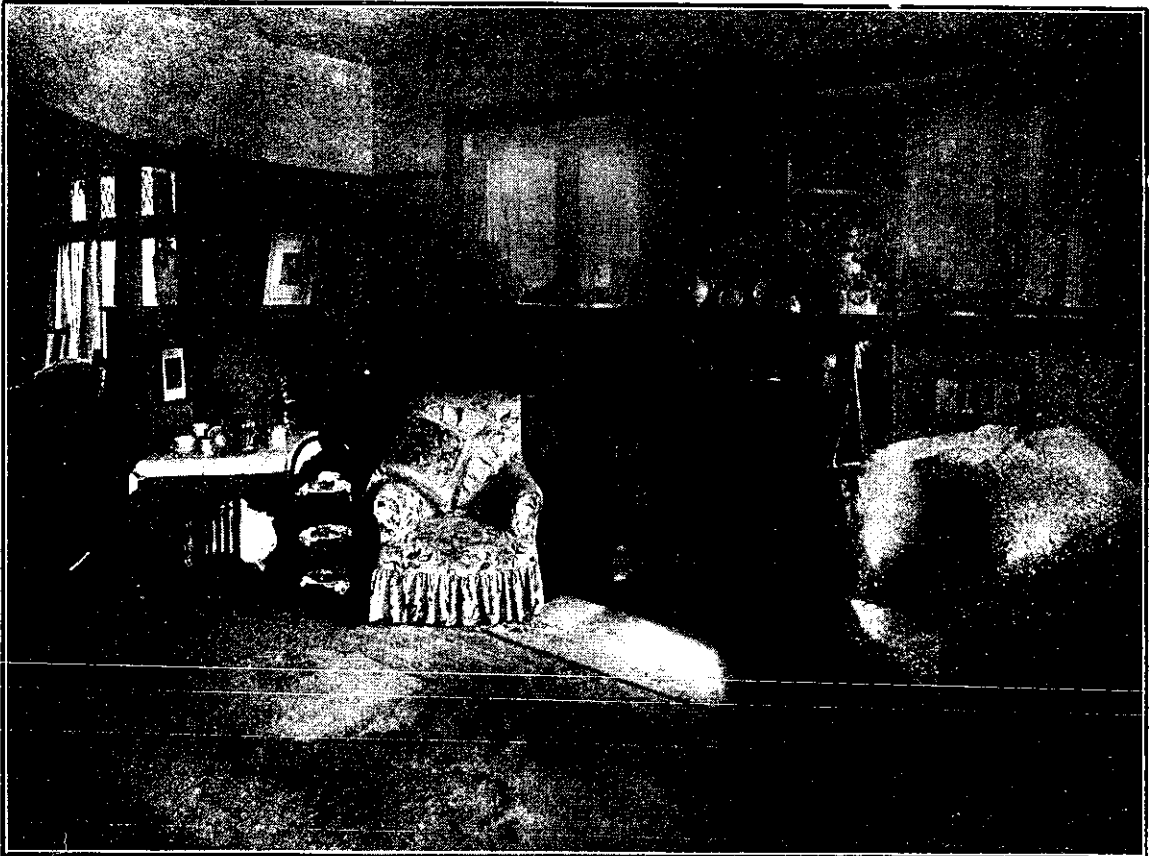
Auckland University Competition.

The three Assessors for the Auckland University Competition are Professor Leslie Wilkinson, A.R.I.B.A., Chair of Architecture, Sydney University, Mr. W. A. Cumming, F.N.Z.I.A., Auckland, and Mr. Basil Hooper, A.R.I.B.A., of Dunedin.



Residence erected at Hawera, in 1917, at a cost of £1150, to the designs of Messrs. Duffill & Gibson, Architects, of that city. The outer walls are of reinforced concrete, inner walls stud and lined. The ceilings are of fibrous plaster with wood beams, and the roof of Marseilles tiles. The plan is so arranged that all rooms except the kitchen get sunlight at some part of the day.

Reproduce d from "Commonsense Homes,"



Two Interiors of a House Built in Hawera.

Messrs. Duffill & Gibson, Architects, Hawera.

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.

The Annual General Meeting of the Federation was held at the Accountants' Chambers, Wellington, on the 14th July, when a fairly representative attendance of members was present from districts as wide apart as Totara North, Whangaroa, and Invercargill. In moving the adoption of the Report and Balance Sheet, the President (Mr. W. J. Butler) reviewed the work of the Federation from its inception when it was first assailed by the Dairy Industry in connection with the export of white pine, further inquiry being afterwards handed over to the Efficiency Board. Then came the assistance given the Board of Trade in framing regulations for the conduct of the industry, which although not approved by the Minister-in-charge, in their entirety, subsequently formed the basis and ground-work of the Regulations as they exist to-day. The agitation and denunciation of the sawmiller by the dairy industry has proved to be groundless, but had it not been for the fight put up by the Federation at the time, it is more than probable the export of white pine would have been unnecessarily restricted, if not ruled out entirely. The adoption of the Report and Balance Sheet was carried unanimously and the following officers were appointed for the ensuing year, viz.:—Mr W. J. Butler, Hokitika (President, re-elected); Mr H. Valder, Hamilton (Vice-President, re-elected); Mr L. M. Lane (North Auckland), Mr Jos. Butler (Auckland), Mr G. A. Gamman (Ohakune and Taumarunui), Mr S. M. Stone (Rangitikei), Mr J. D. Smith (Gisborne and East Coast), Mr D. Tennent (West Coast), and Mr J. K. Campbell (Southland and Otago).

A further agitation for the removal of the duty on the importation of oregon has arisen, and a question has been asked in the House of Representatives by Mr Harris (Waitemata) having this for its object. Inquiry was then set on foot by the Minister for Customs, through the usual channels, and a deputation from the Federation waited upon the Comptroller of Customs to explain the position from our point of view. It was held that owing to the high price of oregon as compared with our building timbers, and to the fact that the timber was not used in the erection of dwellings, but principally for larger buildings such as warehouses, picture theatres, and motor garages in the long lengths these require, the remission of duty would be of no assistance in relieving the housing problem, and the remission if granted would probably mean an additional profit to the importer. The present price of oregon say 60/- per 100ft makes it prohibitive for ordinary building when compared with rimu at 30/- to 40/- according to grade and quality.

We regret to chronicle the death of Mr E. A. Wickes which took place at Greymouth on the 29th July. A prominent figure in Sawmilling circles and one who took a lively part in the building up of the export trade to Australia, when local markets were glutted, his genial presence will be greatly missed by a large circle of friends on the Coast, and we extend to these and his relatives our heartfelt sympathy in their loss.

* * * *

The new award for the Wellington Country Sawmills situated within the Industrial Districts, and approved by the Conciliation Council come up for ratification by the Arbitration Court at a sitting held on the 2nd August, when Mr Grayndler, representing the King Country Union of Sawmill Workers, appeared to oppose the application on the grounds that he represented about 1000 workers along the Main Trunk line who had not been consulted, nor had an opportunity to discuss its provisions. Mr. Reed, the Secretary of the Wellington Timber Workers' Union took exception to the Court granting a hearing to a Union which was not registered under the Arbitration and Conciliation Act, and quoted an earlier judgment of the Court in support of his contention that the present case was exactly on all fours. After hearing argument on both sides the Court decided it could only take cognisance of Unions registered under the Arbitration Act and that an Award would be granted in terms of the agreement entered into between the Wellington Timber Workers' Union and the employers.

* * * *

In the light of the restrictions and regulations to which the Timber Industry is subjected, the following remarks made by Mr Nosworthy in the debate on the Financial Statement are of interest. "A part of the expenditure of the Government recently, had taken the form of subsidies on wheat and butter and he disapproved of this arrangement, believing the time had come to say that the people must pay the value of the articles they bought. Production was essential to the prosperity of New Zealand, and the proper basis of local prices, as well as of export prices was the market value."

* * * *

By the Test of war and reconstruction, forestry stands supremely justified. Without it the timber trade and wood-working industries would cease to exist. Its practice is necessary, and now more than ever profitable.

Timber Control.

Protecting the Local Market.

How the Regulations Operate.

The Hon. Sir Francis Bell (Commissioner of State Forests and Minister in charge of regulations governing the export of certain building timber) states that there is evidently much misunderstanding concerning the regulations and the price of timber. He says that the export is controlled in such a manner that the limited permits do not reduce by one board or plank the maximum supply available for the New Zealand market. The latest increase (as from July 1) in the price of timber was wholly due to an increase of wages at the mills.

The Board of Trade, says the Minister, has positive evidence that on the average the factor of wages is responsible for seventy per cent. of cost of timber at the mill. Despite the increases which millers have been allowed to make by reason of increased cost of production, the price of building timber on the New Zealand market to-day is very much less than the figures offered for export, so that a large saving is effected for the people of New Zealand by the agreement under which the millers are not able to take advantage of the world market. The prices fixed for New Zealand have no relation whatever to the prices which could be obtained for export. The local prices are based strictly on cost of production, with only a reasonable profit for the millers.

The control of export of building timber and the fixation of prices for supplies distributed in New Zealand were first undertaken in August, 1918. Regulations provided that no timber could be exported from New Zealand except under permit issued by the Minister (Sir Francis Bell). At the same time an arrangement was made by the Board of Trade with sawmillers and merchants by which they agreed that the price of timber for use in New Zealand could not exceed rates fixed by the board with due regard to the conditions and circumstances. The board agreed that the prices should be subject to review from time to time in accordance with new factors in the cost of production. In consideration of an increase in milling costs, particularly wages, the board has agreed to proportionate increases of prices. Before any increase is sanctioned, millers have to submit a complete statement of facts and figures in support of their application, and such statements are thoroughly sifted by the board. No specific evidence has yet been received by the board in support of complaints of breach of agreement by millers or merchants in the matter of prices, but if there is reason to believe that the letter and spirit of the agreement are not being strictly observed by any miller or merchant, deterrent action will be quickly taken.

In order to place the various sawmillers in a relatively equitable position, the prices are fixed on a basis of "price points"; this means that the millers receive a fixed price at a certain place of distribution.

For example, the price point for millers whose supplies go south of Ohakune is the fixed price on trucks at Ohakune. The millers' connection with the timber ends on the trucks at Ohakune. Similarly the price point for the West Coast of the South Island is f.o.b. Greymouth, and the price point for Southland is on trucks at Riverton or Tahakopa. Thus, by this system of uniformity of price, millers are placed on the same basis for the disposal of their timber; definiteness of price is assured for all users at various distances from the price point centre; equitable distribution is facilitated for various districts, because the millers are not affected by the factor of distribution or other influences outside the price point.

When the regulations restricting export of building timber were gazetted, there was a fairly large export trade with Australia by certain mills. Action was immediately taken to reduce these mills' exportations and to prevent exportation by new mills. In the case of rimu the maximum quantity that could be exported during a year was definitely fixed by Order-in-Council, and provision was also made for a yearly reduction of that quantity, so that mills which had formerly been doing a large export trade could gradually readjust their business. As new mills cannot complain of hardship by a sudden prohibition of all export trade, they are not allowed to begin exporting. The export of totara and heart matai has been absolutely prohibited. At no time since the quantities of certain timbers for export were fixed have the quantities so allotted amounted to the maximum stated in the Order-in-Council.

Since April 1 no export of building timber whatever has been permitted except from the West Coast of the South Island and the north of Auckland district. The export permits issued to these two districts are subject to the condition that full advantage must be taken of all shipping available for New Zealand ports. At present it is impossible to lift from these outlying mills the whole of their output for the New Zealand market, and if export was absolutely prohibited, such a bar would not put another stick of building timber on the local markets. The only effect would be to block the mill skids, and then the mills would have to cease operations, with a loss to employers and workers alike.

The Board of Trade, with the personal help of the Prime Minister, has been constantly endeavouring during the past year to obtain adequate shipping for supplies of building timber for the Dominion's many needs. The output of the mills was larger for the past year than it has ever been, and this big production could have been further increased if sufficient bush labour had been available. Even with the increasing supplies, a timber shortage continues, because the demand continues to the abnormal (far in excess of the production). However, by the operation of the new building regulations it is hoped that the position, in regard to essential building, will be gradually improved, for the use of all timber is now subject to permit, and the Board of Trade is checking the diversion of timber to non-essential works at this stage.

Naturally, the large, insistent demand does not give millers or merchants an opportunity to dry the timber. The timber for joinery requires two years' seasoning in the ordinary course, but seasoned stocks have been depleted by the heavy orders. It is hoped to overtake the shortage of timber for joinery and furniture by the use of artificial drying chambers, which are being installed in several quarters.

Building Control.

The Position Explained.

Statement by the Minister.

From "Dominion" 11/8/20.

An explanation of the regulations just issued as to control of works involving the use of cement, bricks and timber was made yesterday by the Minister of Industries and Commerce (the Hon. E. P. Lee), who stated the reasons for the issue of these regulations, their objects, and the process to be followed in order to obtain permits.

The Minister stated that as a result of the increase in the erection of buildings it had been found that the supplies of cement, bricks and timber produced in the Dominion were insufficient to meet demands. The Government had therefore decided that action must be taken to ensure that the available supplies were applied for use in essential works and the regulations just issued are designed to give effect to this decision. Under the regulations no new work of a completed cost in excess of £20, and involving the use of any of the materials mentioned, may be commenced without a permit issued under the regulations. As the whole object of the regulations is to direct supplies to essential works, arrangements have been made to facilitate the process of obtaining permits for dwellings. The local authorities throughout New Zealand have been supplied with the necessary forms and have been authorised to issue permits for dwelling-houses and essential farm buildings within their districts. All applications for permits must be lodged with the local authority within whose district the work is situated and upon receipt of these applications the local authority will deal with all of those having relation to dwellings or essential farm buildings, and will forward other applications through the local Inspector of Factories to the Secretary of the Board of Trade.

Applications other than those for works which the local authority it authorised to deal with will be considered by the Board of Trade, with whom an advisory committee will be associated for the purpose. Works at present in course of construction will be allowed to proceed for a space of two months, but the right is conferred upon the Board of Trade to order any such works to be discontinued at any time. Before the expiry of two months it is necessary that application for a permit to continue such works shall be lodged as in the case of a new work, and unless a

permit is obtained all works at present in course of construction must cease immediately upon the expiry of two months.

Before supplying cement, bricks or timber, distributors must satisfy themselves that the work for which the materials are required is being carried on in accordance with a permit or authority to continue issued under the regulations. Any distributor supplying any of these materials to works not so authorised is liable to penalties, as is also the person to whom such materials are supplied. The production of a statement in writing signed by the person for whom the work is being done, asserting that a permit has been obtained, is sufficient authority to relieve the distributor of liability. The use of the materials covered by the regulations for works other than those for which they were supplied is also an offence. The breach of these regulations is an offence under the Board of Trade Act and renders the person committing such breach liable to a fine not exceeding £200 or to imprisonment for a term not exceeding three months.

The effect of these regulations, being to reduce the construction of non-essential buildings, will release labour at present engaged or proposed to be engaged on such non-essential buildings for the purpose of the erection of dwellings and other essential buildings. The Minister stated that he wished specially to urge those having in contemplation the erection of non-essential buildings to delay their proposals and thus reduce the work of administration of these regulations, as it is not possible at the present time to authorise the issue of permits for such buildings.

The control of the distribution of cement, which has been in the hands of the Board of Trade for some time, must be continued for the present, as even with the restriction of buildings it will still not be possible for the full demands with respect to cement to be met.

Scrap the Arbitration Act.

A Drastic Proposal.

The Hon. J. MacGregor gave notice in the Legislative Council of the following motion:—

“That in the opinion of this Council (1) the system of State regulation of industry under the provisions of the Industrial Conciliation and Arbitration Act, 1908, and its amendments neither fosters genuine trade unionism nor promotes true conciliation nor prevents strikes, nor tends in any way to improve the relations between Capital and Labour. (2) The time has come when the whole subject of the relations between Capital and Labour must be looked at from an entirely different point of view and dealt with in quite a different manner; and in order to enable the Government, members of Parliament, and industrial unions, trade unions and associations of employers to reconsider the whole subject and avail themselves of the knowledge derived from the study, investigation and experience of other countries, a short Act

should be passed this session repealing the Act and making provision for the following objects:—

“(a) For continuing in force until December 31, 1921, all awards of the Court of Arbitration and all industrial agreements in force on the date of the passing of such Act; (b) for empowering the Board of Trade, upon the Government Statistician reporting to it that there has been a serious rise in the cost of living, to make an order, to be published in the Gazette, increasing the rate of wages fixed by all or any of such awards or industrial agreements on the principles laid down by the Court of Arbitration; (c) for vesting in the Supreme Court all the judicial powers and jurisdiction now exercisable by the Court of Arbitration, either under the provisions of the Industrial Conciliation and Arbitration Act or under the Workers' Compensation Act; (d) for empowering the Minister of Labour to summon mandatory conferences to deliberate upon the subject of the relations between Capital and Labour, such conferences to comprise representatives of the consumers, of industrial unions and trade unions and associations of employers, and for empowering the Governor-in-Council to make regulations for the election of such representatives, for the appointment of a chairman of any such conference, and generally for the conduct of the proceedings.”

Current Topics.

It is understood (states a Greymouth Press Association telegram) that the Great Western Timber Company, which was formed to exploit a large bush area in the Okarito district, has applied for protection of the area it is intended to operate on. It is also understood that the Crown opposes the application, on the ground that the company has not complied with certain sections of the Mining Act.

Australia needs a large amount of soft-wood, and now is the time to plant, and so shorten the period of importation of these timbers on a large scale. There are many arguments to advance in favour of softwood growing, and when the vast depleting effect the war has had on the softwood-producing countries of the world is considered, it must be realized that the prices will still increase, and the source of supply become less and less, and finally a serious outlook will have to be faced, unless some steps are taken to replace the areas already cut over.

The Board of Trade has reason to believe that some persons engaged in the distribution of cement, bricks, and timber are infringing the regulations recently gazetted for the purposes of preventing the use of such materials for non-essential building operations. The board will press for the prosecution of such offenders, who are liable to a fine up to £200 or to imprisonment up to three months. The persons particularly affected by these regulations are those who supply direct to building contractors, and other users. The responsibility is on the ultimate supplier to ascertain whether the materials ordered are to be

used for work which authority has been obtained under the regulations, which apply to all works of which the completed cost exceeds £20. Local authorities throughout the Dominion have been authorised to issue permits for dwelling-houses and essential farm buildings within their districts. Applications for other kinds of buildings must be also lodged with the local authority, which will forward them on through the local inspectors of factories to the Board of Trade for its consideration and decision.

The Commonwealth Government is considering a new scheme for payment of bounties on paper pulp produced in Australia. It is expected that the scheme will be adopted. It is designed to encourage manufacture on an extensive scale.

A few of the uses made of sawdust and forest waste in America: “Silk” socks, which look like and feel like silk but are cheaper than the real thing; sawdust sausage casings, in which wood, converted by chemical processes into viscose is used instead of the old type of sausage casings, produced from the by-product of the slaughter-house; wood-flour phonograph records compressed under enormous power, to help make music from sawdust; tanbark shingles, made from the waste hemlock bark after it has been through the tannery; and paper cork bottles to help fight the high cost of living.

“Steps are being taken to increase the rolling stock with the least possible delay,” said the Minister of Railways in the House of Representatives, in reply to a question by Mr McNeol. “Tenders have already been invited from abroad for two thousand five hundred trucks and twenty-five locomotives. Offers are also being invited from local manufacturers, and these will be supplementary to the rolling stock programme to be undertaken in other countries. The necessity for making improvements at the stock-yards is being investigated, and improvements will be made if found necessary.”

The shares of the Kauri Timber Company have had a sharp rise recently, and the reason for it appears to be a circular sent out to shareholders by the directors in respect to the redistribution of capital. The directors propose (1) that a dividend of 5 per cent. be declared, making with the dividend just paid a total distribution in respect of the financial year ending August 31, 1920, of 10 per cent. on the capital of the company as at present constituted; (2) to return to the holders of the paid-up shares in the existing company the sum of 18/- per share, being the amount paid-up on those shares in excess of the contributing shares, so as to have one class of shares, all of which will be fully paid-up; (3) that the new company shall have a capital of £750,000 shares, consisting of 600,000 shares at 25/- each fully paid-up; (4) that one fully paid-up share be allotted to every member of the existing company for every share, whether paid-up or contributing, held by such member in the existing company on August 31, 1920.

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"Progress" will be pleased to have its friends contribute from time to time, their experiences. If you have any new ideas, or old ones for that matter, they will be welcomed. Let us hear from you.

—EDITOR.

Building Notes.

AUCKLAND.

The competition date for designs in connection with the Arts building for the Auckland University has been extended from August 16th. to August 25th.

Tenders have been invited for new schools for the Education Board as follows:—Manurewa, in brick; Arapohue (Northern Wairoa), in wood; Kohimarama, in wood; Marohemo, in wood; Kiokio, in wood; Curran St. Ponsoby, in brick.

The District Engineer P.W.D. Dept., invited tenders this month for the erection of a new courthouse in wood at Pukechoe.

Operations in connection with the erection of the branch freezing works of the Auckland Farmer's Freezing Company at Waipuna, Bay of Islands, are steadily progressing. The difficulty of obtaining full supplies of building material has somewhat retarded the work, but fairly good progress is being made. The railway siding is almost completed, and the Company has its own engine engaged in shunting work at the site. It was anticipated the works would be ready to start operations in January, but it is stated that owing to unavoidable delays in obtaining material it is impossible to forecast the exact date of completion.

CHRISTCHURCH.

Messrs J. S. and M. J. Guthrie called for tenders last month for a new factory and office building in brick, on Ferry Road for T. J. Edmonds Ltd. The same architects invited tenders for new stores at Kaiapoi, in brick, for Mr. J. H. Blackwell.

Messrs Greenstreet and Anderson invited tenders for a butter factory at Methven for the Mount Hutt Co-operative Dairy Company.

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CANTERBURY AGENTS

FEATHERSTON.

The ratepayers of the Featherston County Council some time back sanctioned a loan of £6,000 for the purpose of providing homes for the workmen. The council was unable to secure the money from the Government under the Housing Act as a proportion of the money was to be utilised in the purchase of land. The Council, however, obtained the money elsewhere, for which it is paying 6 1/2 per cent. At the Council meeting last month mention was made that the interest was somewhat high. The Chairman replied that they would recognise in a very short while the money had been secured cheaply, as everything pointed to the fact that the rate of interest had not nearly reached its limit.

HAMILTON.

Tenders were invited early this month for additions and alterations to the High School.

MASTERTON.

Nine building permits, aggregating £6612 19s., have been issued by the Masterton Borough Council during the month of July.

WELLINGTON.

A new Catholic school has been opened at Kilbirnie last month. The building, which is in Upper Bourke St. is to be known as St. Catherine's High school. It is a substantial building of reinforced concrete, roofed with Winstone tiles. The timber used was all heart Oregon. It contains four fine class rooms, with all the latest improvements in lighting, heating and ventilation. The building has also a fine external appearance, the vestibule with its leadlight doors and windows making a neat and pleasing finish. The building and grounds cost £2500.

The Golden Bay Cement Works Limited, came to an official end last month. The company has been purchased by the Golden Bay Cement Co., Ltd. The shareholders of the old company have become debenture holders in the new. Capt. C. McArthur and Dr. C. P. Knight were elected directors as representing debenture holders on the board of the new company. Mr. W. M. Hannay, managing director of the old company and debenture holder's director, declined re-election. He was warmly thanked for his long and strenuous services in the interests of the shareholders of the old company, and for his part in representing them as debenture holders in the new concern.

The Labour Department called for tenders closing on the 16th. inst. for 266 houses to be erected in various towns throughout the Dominion. Christchurch is to have 18 houses, Wellington and Petone 54, New Plymouth 28, Masterton 40, Palmerston North 15, Tinaru, Nelson and Invercargill 11 each. Plans and specifications for five designs can be obtained from the Inspector of Factories at the various centres.

The N. Z. Society of Civil Engineers have a project for a new building in hand. It is proposed to buy a piece of land at the corner of Aitken and Molesworth streets, Wellington, and erect a new building as headquarters for the Society, letting the remaining space.

Engineering Notes.

The ratepayers of Te Awamutu by a large majority recently sanctioned a loan of £40,000 for sewage. The money is available, and the plans have been approved by the health authorities. The Te Awamutu Electric

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Power Board invite tenders up to Aug. 31st. for covered copper cables, transformers, meters and insulators.

The Aroha called for tenders for the following material:— 1760 ironbark poles; 9000 cross arms; 9000 U bolts and 2000 mixed wooden poles.

The Southland Electric Power Board invites tenders for 16,200 poles and 31,170 cross arms. Plans and specifications can be seen at the Board's offices, Invercargill, or Messrs Hay and Vickerman's offices, Dominion Farmer's Institute Buildings, Wellington.

The Invercargill Borough invite tenders up to October for wires, cables, and overhead equipment. Rails, fish plates etc. Sleepers

The Christchurch City Council invite tenders for series street lamps, closing date Oct. 30.

The Southland Electric Power Board invites tenders for (a) 36,000 eleven-thousand volt insulators; (b) 135 tons of iron work for poles.

The Napier Harbour Board invites tenders for Australian hardwood poles up to Sept. 13th.

The Public Works Dept. invites tenders for a water wheel and generator for Hamner Springs up to Nov. 3rd.

The New Plymouth Borough Council invite tenders for three electric capstans up to Nov. 15th.

The proposal to dam and lock the Wanganui river for the purpose of improving its navigation facilities, and also for obtaining power for the generation of hydro-electricity, was placed before the Harbour Board at the last meeting. The Board decided to give the scheme favourable consideration, provided it was within the bounds of engineering and financial possibilities.

The Whangarei Harbour Board has a proposal to raise £120,000 for various harbour works.

A loan of £60,000 has been sanctioned by the Matamata township for improvements in the water and sewage schemes.

A loan of £30,000 has been sanctioned by the ratepayers for extension of and improvements in the tramway system and road making machinery.

The Rangitaiki Waterfall at Galatea, 35 miles inland from Whakatane, is receiving prominent attention as a source of electric power for the Bay of Plenty. At a conference of the Chamber of Commerce with local bodies the statement was made on the authority of a Canterbury engineer, that the power would be equal to that at Lake Coleridge. It was resolved to ask the Government for a report with a view to forming an Electric Board.

The Miramar Borough Council proposes a loan of £33,000 for water supply, street improvements and reserves etc.

A deputation representing the Wairoa County Council and Wairoa Borough met the Minister of Public Works (Hon. J. G. Coates) recently. Mr. H. M. Campbell, M.P., suggested that if the Government were prepared to push on with the Waikaremoana scheme, and earmarked a loan for this purpose, the local bodies affected would no doubt subscribe. The Minister said that if the petition for the establishment of the scheme were in order, the scheme would be sanctioned. As to whether the Department or the local bodies should do the work, he would consider all points in the proposal and let them know.

The Waimate County Council want the services of a qualified engineer at a salary of £500 per annum, car provided.

The Auckland University College desires the services of a professor in electrical engineering at a salary of £400 per annum. Duties to commence in 1921. A professor of Civil engineering is also wanted at the same salary.

The Marlborough Borough Council requires the services of a competent engineer. Salary £500 to start, with an allowance of £75 per annum for a motor car.

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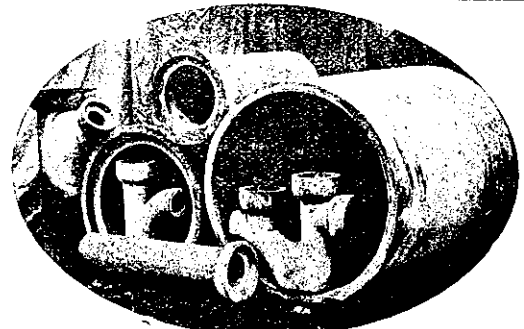
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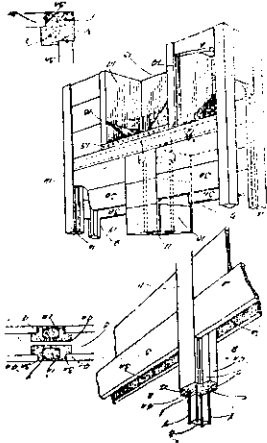
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dards are checked as at 4, preferably about 2 inches back from their face 4a. Into these checks the blocks 3 are set in building up; by this design a continuous cavity 5 is provided. The standards 1 are held at selected distances by a metal strip of about 1 in. wide by a quarter inch thick, or any other suitable stay may be provided. Another form is a solid standard with a series of cavities 5a in the wall, which are properly ventilated, preferably by

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a 9 in. by 3 in. cast iron grating, one disposed at the top and one at the bottom of the wall. To prevent dampness penetrating the wall at the standards, the only solid part of the wall, the faces of the said standards 1 are water-proofed with a special preparation. The standards are checked, preferably about 2 in., the ends of the blocks 3 fit into the 2 in. check as illustrated in both figures, but in the first figure the surface of the standard 1 and the surface of the twin blocks 3 would be flush, both inside and outside the wall, while in the double standard system the surface of the standards would project beyond the flush of the blocks within the cavity. The standards are reinforced with quarter inch steel rods 7, bound together with wire stirrups 8, or other suitable reinforcement may be used such as boiler tubing. A bolt is set in the top of each standard for fixing the top plate. Similar provision is made for the lower end of the standards, or the reinforcement may be let into the foundation. In the chimney round-flue construction there are concrete standards 1 set at each corner of the breastwork; the spaces 9 between the said standards are built in with blocks 3b by a similar method as described in connection with the wall construction. Within the space thus formed the flue proper is built, which comprises concrete blocks 10, preferably about 15 in. square, with a 9 in. round hole 11 through each block in the centre thereof, so that when the blocks are built one on top of the other a round smoke-shaft is formed, the shaft is carried on a reinforced slab 12 or bearing supported in a position just above the grate-opening 13 by reinforced concrete work comprising two slabs 14 and a cross piece 15. There is a sheet-iron-concrete projector and smoke-director 16 fitted in the grate-opening 13, which directs the smoke to the round flue. The flue may be permanently lined with fireclay or fireclay pipes as indicated by broken lines at 17. The flue, instead of being built up in blocks, may be boarded in and the concrete poured round a mould or core, which may be of wood or other material, so constructed as to be easily moved when the concrete has set.

Conditions of "Progress" Competitions

The Editor reserves the right of publishing any or all the designs submitted, and while every care will be taken of drawings, no responsibility is accepted should any loss or damage be sustained. Those desiring their designs returned must send postage to cover cost of same. No award will be made unless at least three designs are sent in for any one competition. Unless otherwise stated drawings are to be in black and white only.

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