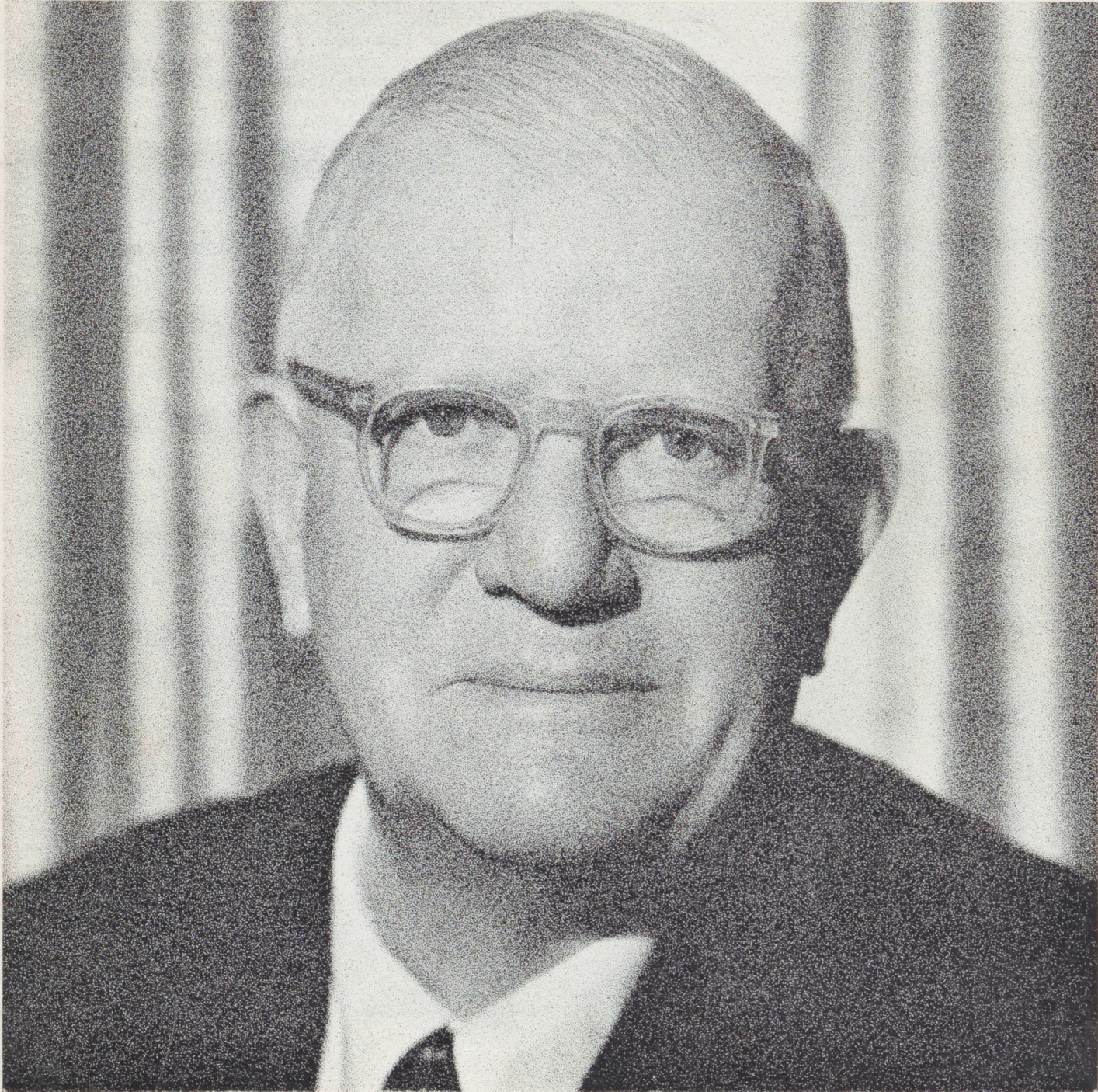


Autumn, 1966

# arrowhead



# arrowhead

THIS is the 44th issue of Arrowhead. Writing nearly 12 years ago in the first edition in October, 1954, our Chairman and founder, Sir James Fletcher, said:

*As I see it Arrowhead should be telling the staff where we are going as a Company — telling the boys in Southland what the boys in Whangarei are doing; it should tell our clients, suppliers and associates something about what we make and build and how we do it. Above all it should be interesting, factual and informative to every reader.*

Arrowhead was K. G. Fraser's "baby" and J. H. Churton was its nursemaid — to him goes the credit for the name. Fletcher in Anglo-Saxon meant a maker of arrows. Looking through the early editions of the magazine brings a certain nostalgia and even sadness . . . big projects long since completed and faces no longer with us. A lot has happened in 12 years.

In its early years Arrowhead was produced with the help of our good friends, Dormer-Beck Advertising, whose role was later taken over by Carlton-Carruthers.

As the Company continued to grow we established our own advertising and public relations section under P. A. Matthews and recent issues have been planned and edited by him, with his assistant, D. M. Barr, responsible for layout. It was originally printed by Abel Dykes and subsequently by E. S. & A. Robinson who took them over in 1958. Robinsons continued to print Arrowhead until last year, when, because of other commitments, they asked to be relieved of the assignment. Our Christmas issue and this issue have been printed by Whitcombe and Tombs.

In growing bigger we have realised that Arrowhead's original two-fold function, to inform our own staff as well as our friends outside of our activities, could no longer be done satisfactorily in one publication. Consequently this and future issues will not include personal, social and sporting news of staff. These items will be handled in a separate supplement which will come out twice yearly.

We have given Arrowhead a new look and we hope you will like it. We launch it on the eve of our Chairman's 80th birthday and his photograph takes pride of place on our front cover just as I believe his warmth and leadership would take a leading place in the hearts of all who know him.

I have great pleasure in declaring this new-look Arrowhead well and truly launched. May it bring pleasure and interest to all who read it.

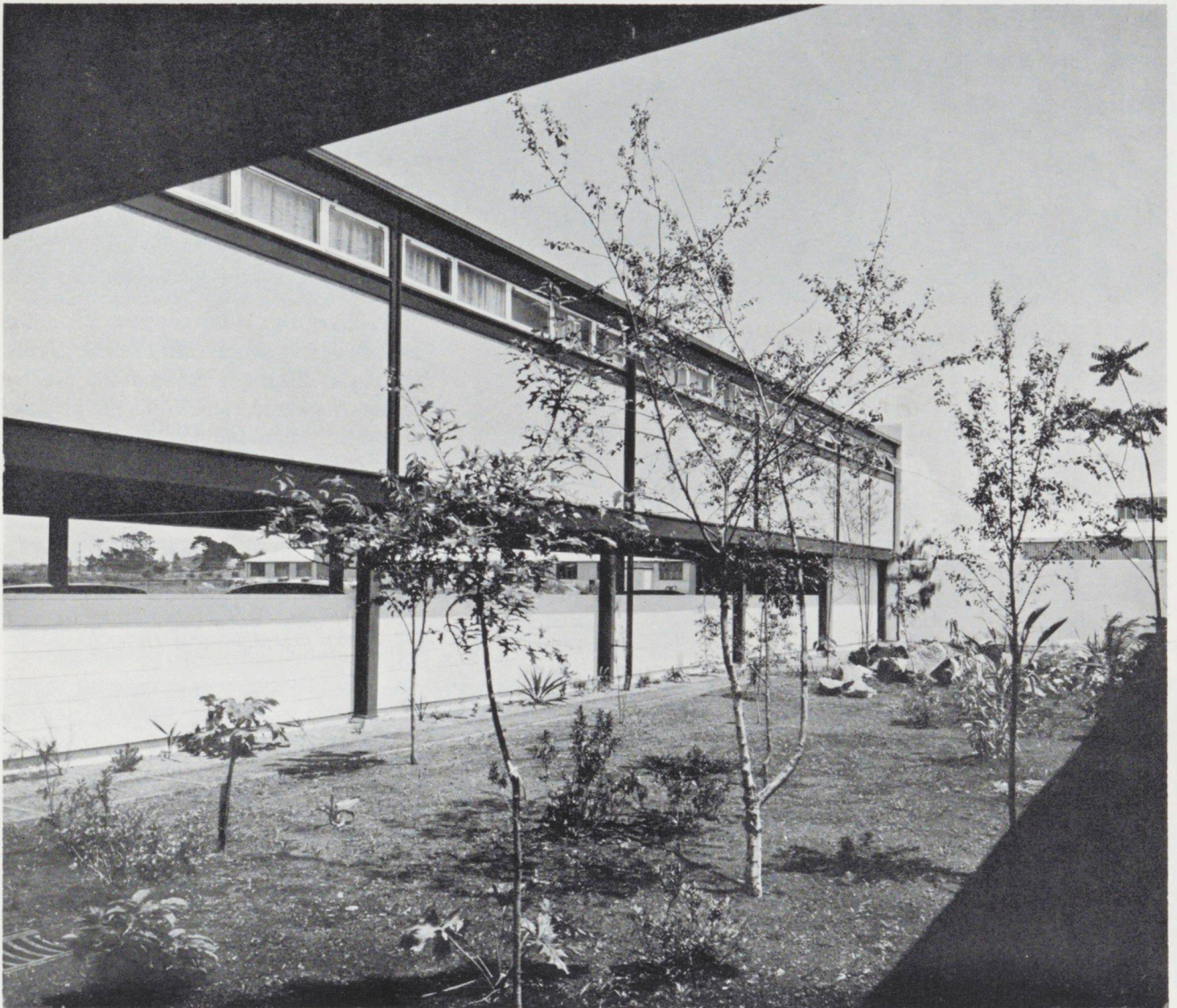


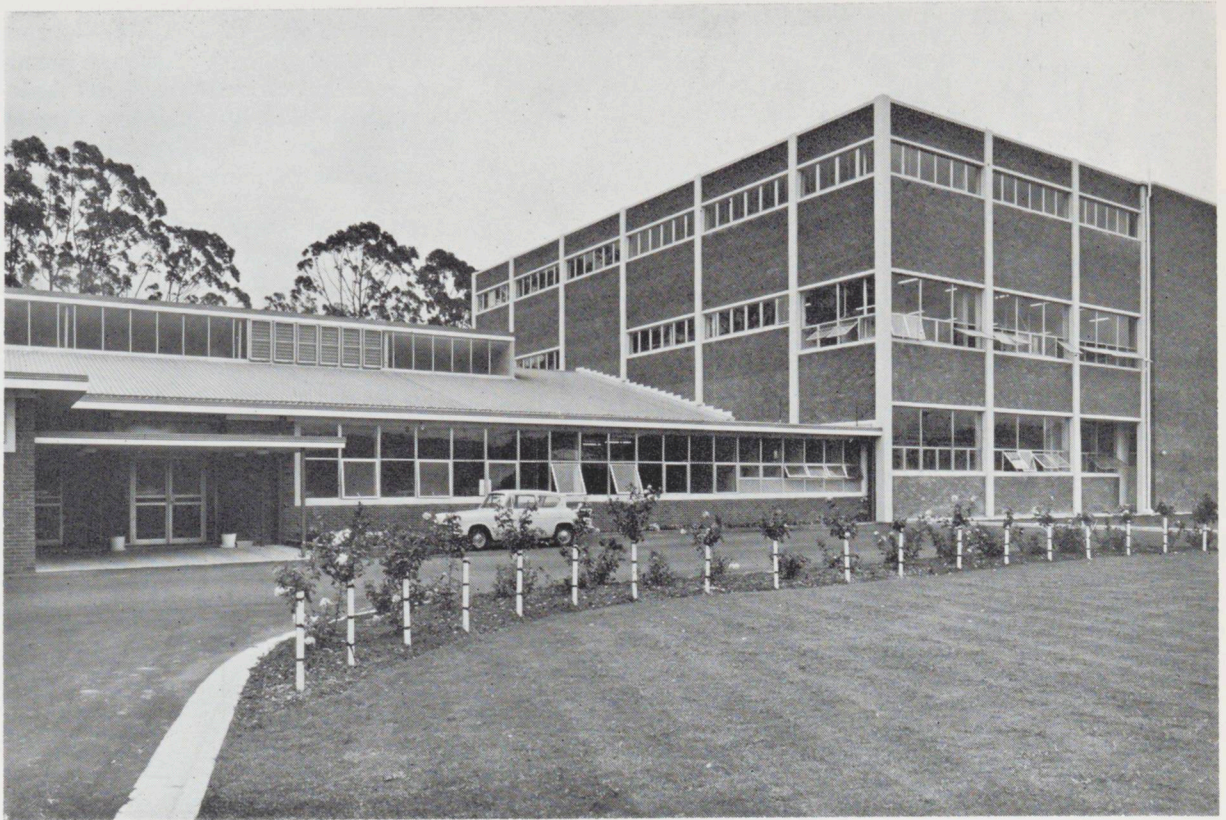
A handwritten signature in black ink, which appears to be "J. Fletcher". The signature is written in a cursive, flowing style.

# INDUSTRY WITHOUT UGLINESS

BY necessity, many New Zealand industries — some of them now thriving — started off in backyard sheds and graduated to premises which were certainly larger but were still sheds — boxes of ugliness. Many yet exist, but happily the time is passing when the only considerations in factory construction are minimum requirements and cost.

Today good design and attractive surroundings make working conditions more attractive for staff and give pleasure to visiting clients and passers by. On this and the two following pages, are illustrated two industrial undertakings with which Fletchers have been associated and which vividly demonstrate that New Zealand can have industry without ugliness.



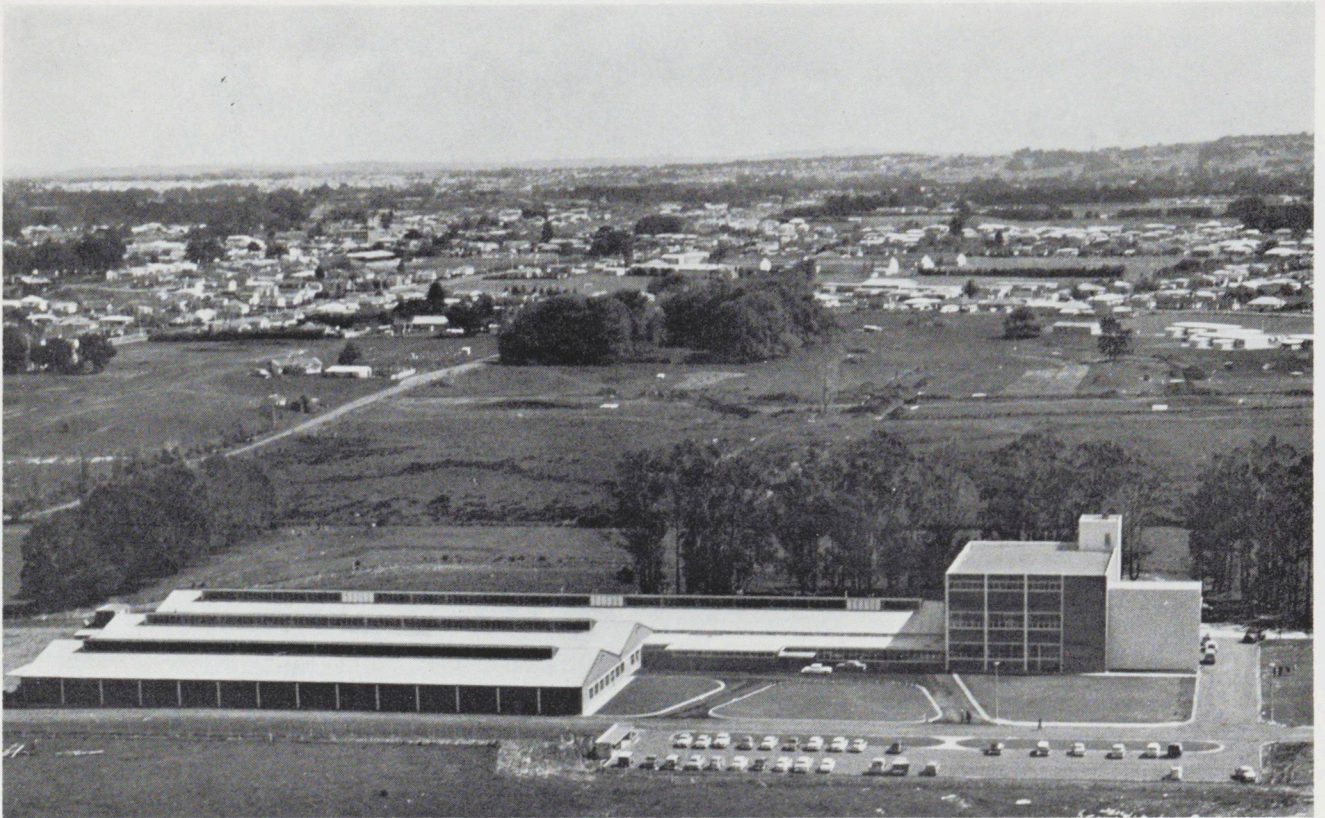


# INDUSTRY WITHOUT UGLINESS

Cadbury Fry Hudson's new £1 million factory at Papakura, and Fletcher Trust's Industrial Estate at Southdown are two recent Auckland establishments in which attractive surroundings were planned, from the start, as an integral part of the overall designing.

The illustrations show (on the previous page) the shrub-planted courtyard of Floor Tiles and Parquet Limited at Southdown; at the top of this page and page 5 a close-up and a general view of Cadbury





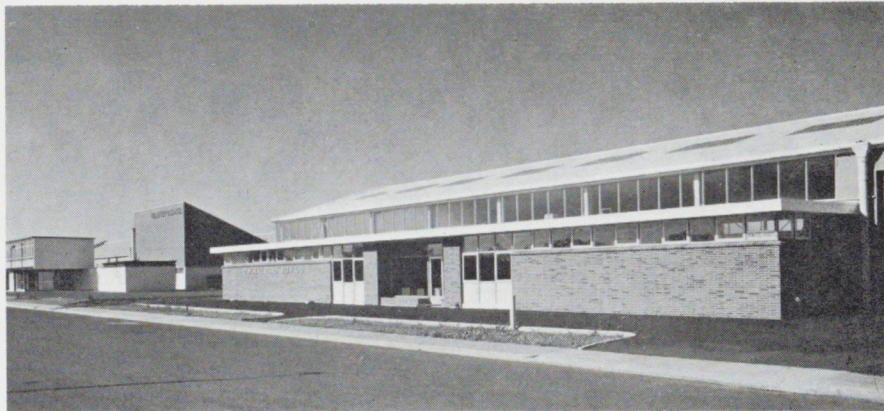
Fry Hudson; and at the foot of these two pages, two general views of Industry Road, Southdown.

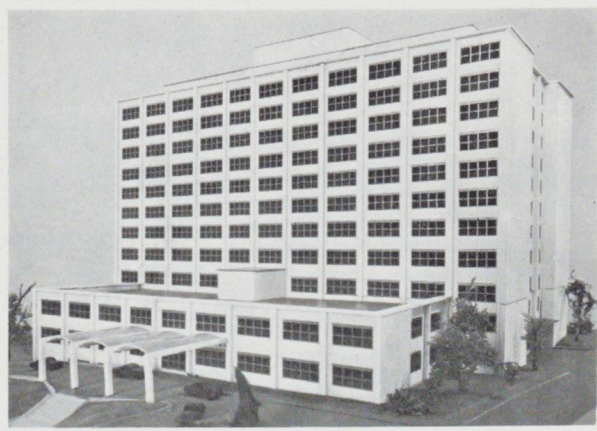
It is Cadbury Fry Hudson's worldwide policy to set its factories in attractive surroundings and on its 63-acre site at Papakura this objective was helped by the existence of mature gum trees close to the factory buildings. Extensive lawns and gardens were established as soon as building operations allowed.

Southdown Industrial Estate, which a very few years ago was an ugly rocky waste, has been planned by Fletcher Trust as a co-ordinated industrial estate. While clients, who may either purchase land outright or make lease arrangements, have considerable latitude in design, all buildings have to conform to certain standards so that they fit within an integrated scheme. The result is the development of Industry Road as an attractive street.

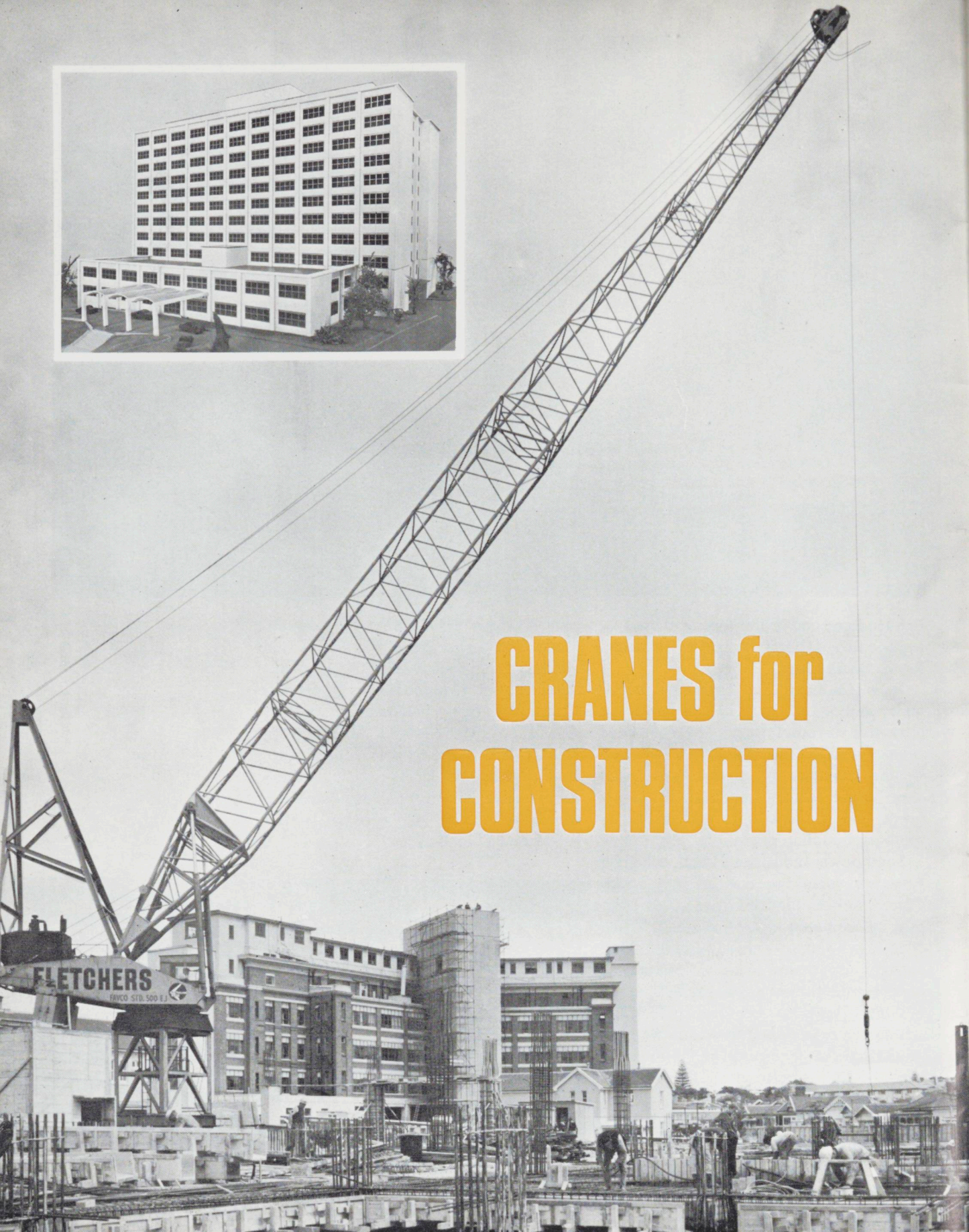
Another point of interest in the two projects referred to on these pages is that

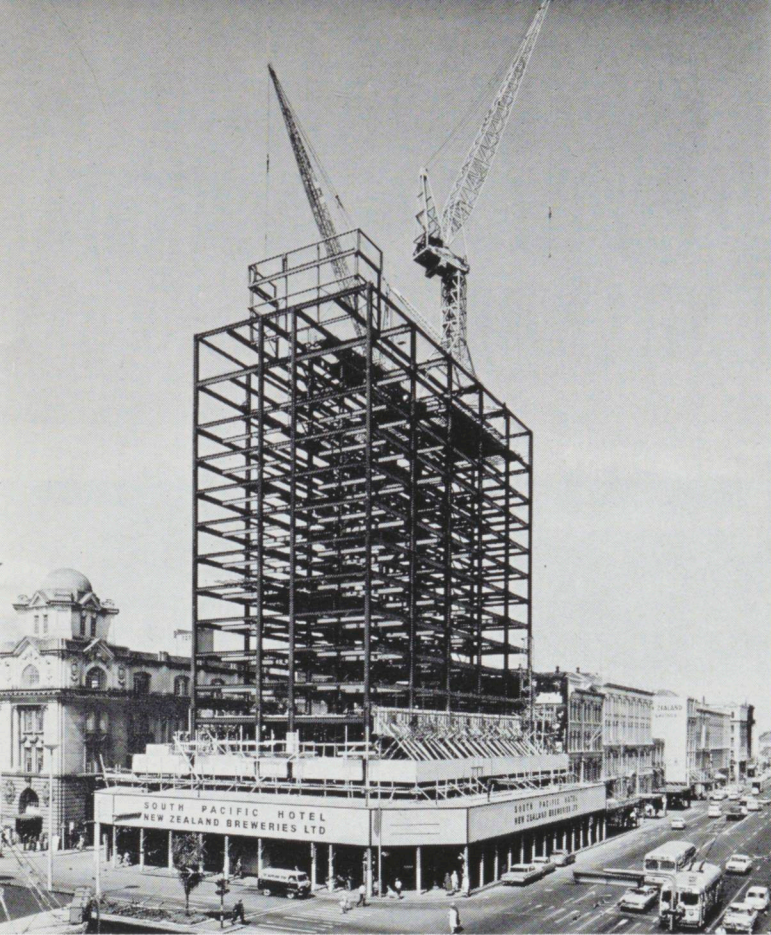
both Cadbury Fry Hudson's factory and Floor Tiles and Parquet's buildings were Fletcher design-and-build assignments, with Fletcher Group Services responsible for the designing and Fletcher Construction for the building. Architects in charge were W. H. Gray (Cadbury's) and H. R. Phillips (Floor Tiles and Parquet). Both buildings were officially opened by the Deputy Prime Minister (the Hon. J. R. Marshall) in November.





# CRANES for CONSTRUCTION





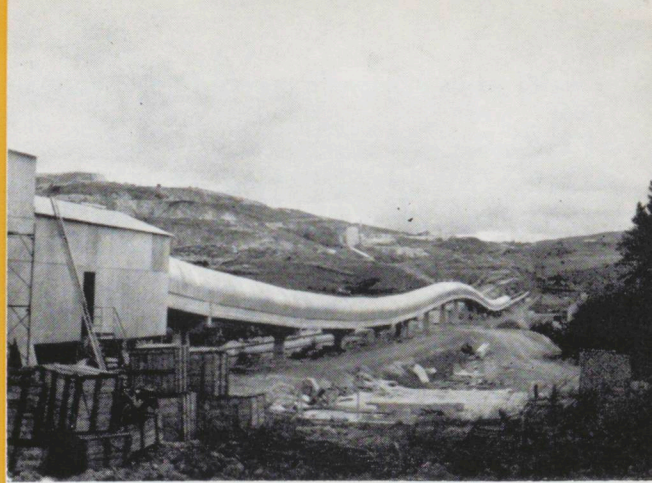
“SPEED is the essence of the contract” — an old cliché but a very apt one in many cases of big building contracts where delays can cost thousands of pounds and equipment which can save time becomes virtually essential.

Time, as well as labour, is saved by the Favco Universal tower cranes shown on these pages. They are designed and manufactured by Favelle Industries Pty. Limited, of Sydney, and are marketed in New Zealand by Fletcher Steel.

The Favco STD500-EJ has a capacity of two tons at 145ft. radius and a hoisting speed of 330ft. per minute, or of 2½ tons at 130ft. radius with a hoisting speed of 240 FPM. The Favco STD250-E10 has a capacity of two tons at 110ft. radius and a hoisting speed of 330 FPM. Hydraulic finger-tip controls ensure easy, smooth operation. Their diesel engines operate on a fuel consumption of one gallon per hour. A patented feature is the automatic self-adjusting counterweight which ensures that the centre of gravity remains at all times within the tower section.

A Favco STD500-EJ is shown opposite in use by Fletcher Construction on the £3 million Auckland Hospital Acute Block contract. Inset is a model of the project.

Above is shown another Favco (STD250-E10) purchased by Williamson Construction, the main contractors for the South Pacific Hotel, Auckland, and erected on the 14th floor of the building. The stiff leg derrick on the left was used for the erection of the steelwork and was later lowered to the ground by the Favco.

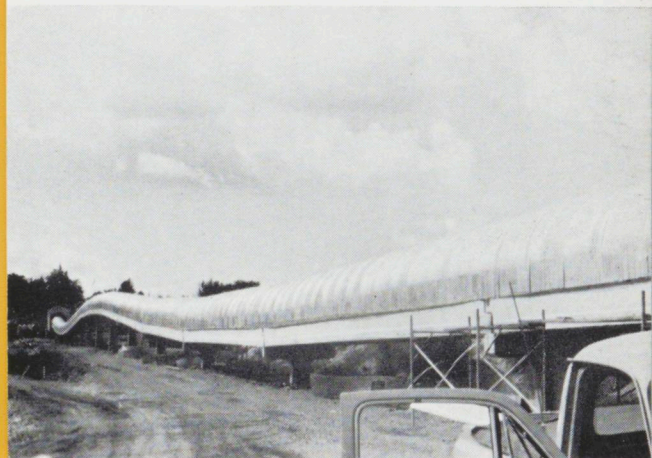


## PORTLAND'S IRON SNAKE

AN unusual contract for Fletcher Mechanical Services recently was a cement conveyor for the Wilsons Cement Works at Portland, near Whangarei.

Some 2,600 sheets of 16ft. long corrugated iron were used, total weight being 51 tons. The coiled galvanised iron was specially imported, cut to lengths and subsequently curved as required by Fletcher Mechanical Services. Special transport had to be arranged to move the material to Portland.

The roof structure was completely self-supporting and had no internal framework other than at the fixings on the lower edges, yet its strength was such that workmen used the roof as a walkway prior to the permanent walkway being finished inside the conveyer. The total finished length of the conveyer was one mile — making this the largest covered system in New Zealand. Site foreman was Graham Freeth and supervisor Steve O'Brien.



# AUCKLAND INTERNATIONAL AIRPORT IS OFFICIALLY OPENED





ON 29 January, some 100,000 people converged on Mangere, to bring an audience equal to one-fifth of the population of Auckland to witness the official opening of the city's new international airport.

In the building of the airport and its facilities, Fletchers had played a considerable part.

Fletcher Construction was responsible for the building of the hangar, the maintenance workshops, and the engine test cell for Air New Zealand, and eight power-control centres, the meteorological radar building, the surveillance radar building, the overseas holding lounge, the overseas airline arrival and departure fingers and the domestic airline covered ways for the Ministry of Works.

Fletcher Mechanical Services were responsible for supplying and fixing the Brownbuilt roofing on the hangar, fingers, covered ways and the power control centres; the plumbing and external sheet metal sheathing of the hangar, workshops and maintenance workshops; the compressed air installation for the workshops; installation of equipment in the engine test cell; plumbing for the instrument landing buildings, the operations and control tower, the overseas holding lounge and both radar buildings; plumbing, heating and ventilating for the services building and the extensive heating, ventilating and air-conditioning of the workshops and administration building. The Carrier air-condition-

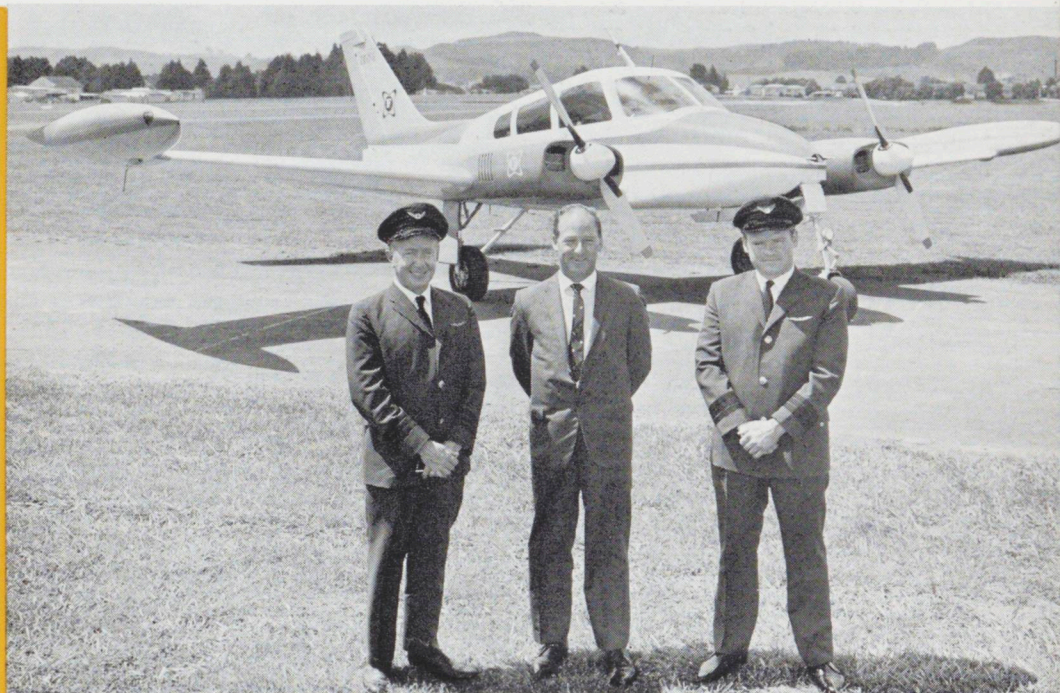
ing equipment used here was manufactured by this division.

Fletcher Insulation and Acoustic Services were responsible for the suspended ceilings in the offices of the maintenance workshops, and for the lagging and sheathing of pipe and duct work.

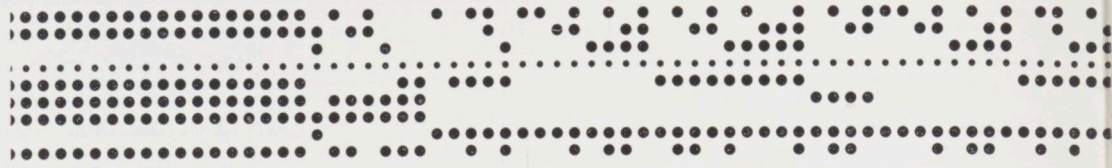
On the day of the opening, Fletchers' company plane, a Cessna 310G with the call sign ZK-CFG ("Charlie Foxtrot Golf"), flew from Ardmore to Mangere with Auckland Aero Club planes to join the display of light aircraft from all parts of New Zealand. During the morning, a solo handling display, designed to show the capabilities of the Cessna, was given. This display included a low-altitude run with one engine feathered.

The photograph below shows "Charlie Foxtrot Golf" painted in its new colours of white, deep orange chrome and monastal blue. Standing with the plane, in uniform, are the pilots, P. Duggan-Smith (left) and E. J. Ferrier. In the centre is L. R. Everingham, formerly Fletcher Trust, who recently succeeded the late Alex Marks as Special Duties Officer with Fletcher Group Services, and as such is responsible for the scheduling of the aircraft. The chief pilot, Peter Duggan-Smith, is now just short of logging 2½ million miles of flying. Jock Ferrier recently joined the company after completing a commission with the R.A.F. where he was flying, among other planes, Vulcan bombers.

**CHARLIE  
FOXTROT  
GOLF  
TAKES  
PART  
IN  
OPENING  
PAGEANT**

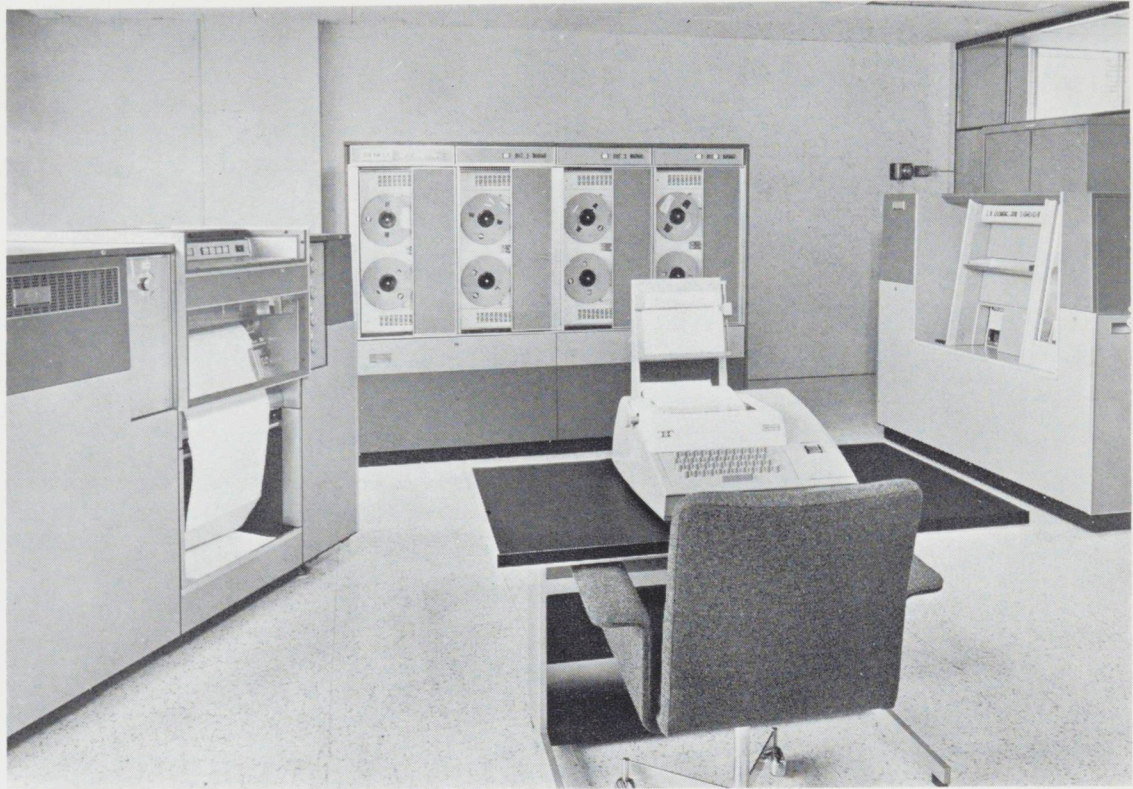


# CATCHING UP WIT



Photographs show the various components of the computer which Fletchers are installing. From the left, on this page, are the line printer, which prints up the processed information from the computer; four magnetic tape units, used for storing information; and the card reader which reads the input information in card form; with the console typewriter, which controls the whole system, in the foreground.

In the centre of the left-hand illustration on page 11 is the central processor and in the centre of the right-hand photograph is the paper tape reader, which reads the input information in paper tape form.



**F**LETCHER HOLDINGS has ordered an I.C.T. Series 1902 computer which will be installed in a special computer office in Nelson Street, Auckland, and will be run on a bureau basis for the benefit of member companies. It will be moved to Penrose when the new head office building is erected.

It is due for delivery in April, 1967, prior to the changeover to decimal coinage in July of that year.

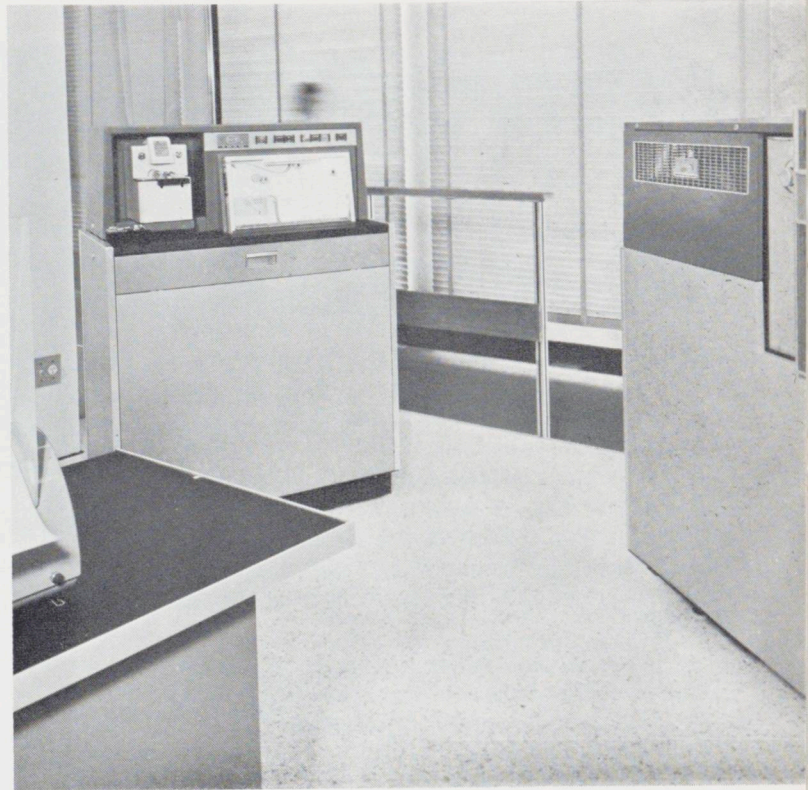
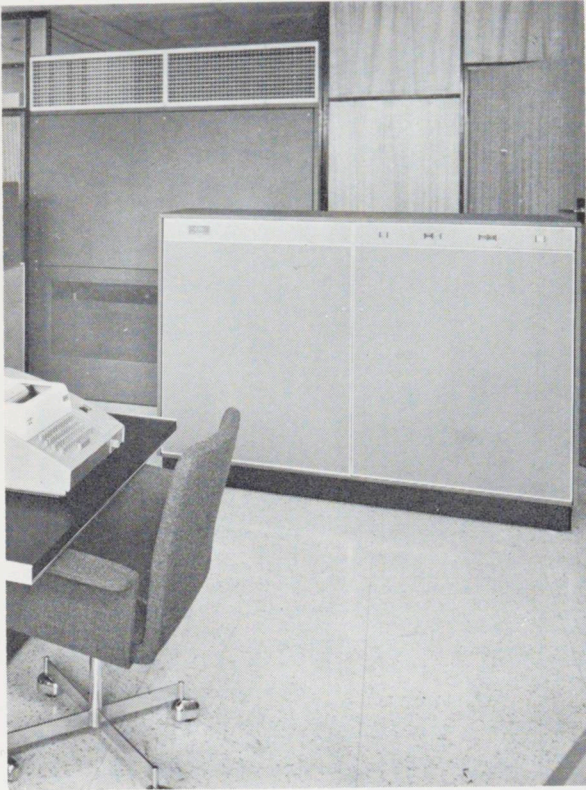
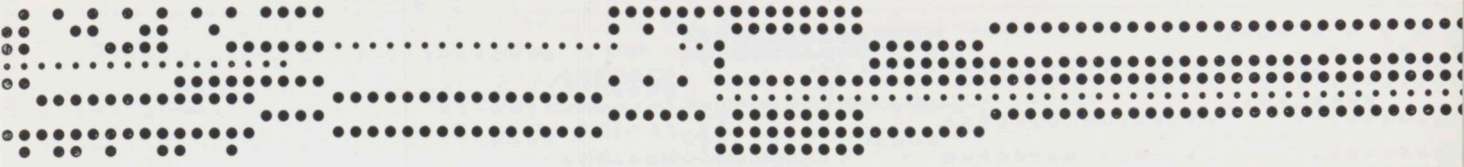
Among the tasks which the computer will undertake will be the control of stock in the larger companies of the Group, market research, technical work on behalf of Fletcher Construction and other subsidiaries and accounting work of a wide and varied nature.

This article describes in general terms what a computer is and what it will do for this organisation.

In one way or another, the computer will assist everyone in the Group. The whole basis of this computer — indeed, any computer — is that it is there to work **for** people. The concept behind the computer is briefly that, as a group of electronic machines, it will work very much faster than conventional accounting machines and undertake technical tasks which it is not possible to do either manually or with slower equipment, or, could it be done, it would take time measured in man-years.

Many people have for long likened — if not openly then in their own minds — a computer to

# H THE COMPUTER AGE



an “electronic brain.” In some instances it has been linked with robots, often giving the impression that a computer, with a flick of a switch, can take over a multitude of jobs which can be undertaken normally by people.

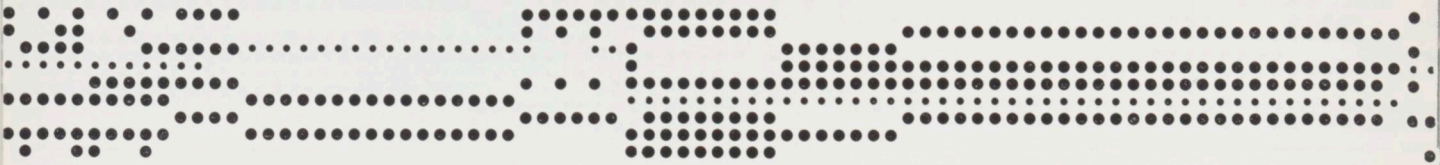
Nothing can be further from the truth. First and foremost, a computer cannot exist without people. Not just one person pushing the buttons or turning on the switches; but people preparing the data which it will process; people interpreting or handling the data which it has processed.

Computers vary in size and in complexity. One such as the Series 1902 is essentially a

device which is capable of taking in information . . . of holding or filing this information . . . then of performing calculations of some sort or another on the information which it is holding . . . and finally of printing out the answers which it has achieved.

A computer is not very different from a simple desk calculator where an operator pushes keys to pass information into the calculator. This information then stays there until more keys are pressed causing numbers to be added together or multiplied and so on. Finally, further keys are pressed to produce the printed answer, or the answer is shown on some form of register.

# THE COMPUTER AGE



But the desk calculator is no good without its operator. It is the operator who follows the sequence of instructions which has been laid down by the person designing the system.

For example, in calculating employees' weekly pay, a series of instructions tells the operator which numbers to find on which pieces of paper, where to find the hours worked on the time sheet, how to multiply this number by the basic rate of pay to come to the gross wage, how to calculate the tax and other deductions and so on.

In the computer, this "operator intervention" is taken over by the machine itself. The sequence of instructions which were given to the operator of the desk calculator is held inside the computer in a coded form — known as the program.

Essentially, these coded instructions tell the computer to do precisely the same thing as the written instructions told the operator of the desk calculator.

The instructions tell the computer which numbers to read, which numbers to multiply, add or subtract, how to print the answers, where to print them and so on.

In this way you can see that the computer can only do precisely what it is told to do. Someone might say, "Well it's not much better than the desk calculator!"

But its great advantage lies in its speed. It will take the average person several seconds to add a small column of figures. The computer on the other hand can add together 40,000 figures in one second — in other words, it could add up (probably with discount calculated) 4,000 accounts each with ten items in this one second.

But it is not just calculations for which a computer can be used. There are many other aspects of office work which it can undertake — not by replacing people, but by replacing **other equipment.**



The Chairman of Directors of International Computers and Tabulators (New Zealand) Limited (B. R. Law) and the Managing Director of Fletcher Holdings Limited (J. C. Fletcher), sign the agreement for the supplying of Fletcher's computer. Looking on (right) is I.C.T.'s Auckland Manager (G. A. Hiam).

Its filing system in a compact form not much larger than a briefcase will be able to store a vast amount of information. For example, there is sufficient space on a 2,400ft. reel of tape to list the names and addresses of 140,000 customers or suppliers. This is done by magnetic spots on the tape — each spot representing a letter of the alphabet or a number.

Another important feature of this computer is the printer attached to it. A good typist may be able to type 40 - 50 words a minute. But because the computer has to keep up with the high speed at which it is doing its arithmetic, its printer can print up to 20,000 words a minute. This, as far as computers are concerned, is normally translated into so many lines a minute. This computer will be able to print up to 300 lines a minute or 100 addresses each of three lines in a minute.

This gives some idea of what the Series 1902 computer will be able to do when it arrives next year. As indicated its chief advantage lies in its speed.



Publication of this issue of Arrowhead coincides with the 80th birthday, on March 29, of Sir James Fletcher, founder of the Fletcher Organisation and chairman of Directors of Fletcher Holdings Limited. In the pages which follow something of his life is told by Neil Robinson, author of "Lion of Scotland," who is at present writing a biography of Sir James.\*

# 80th birthday portrait

It is a measure of Sir James Fletcher's vitality and character that he spends more time looking forward than looking back, but when he does so it is with pride, cheerfulness and few regrets.

What are the things that he likes to remember in a long and full life?

First of all, a childhood that might have been harsh and dour, but instead was enriched by family affection and a sense of belonging to a community. When his father, John Fletcher, died, he left a widow and a large family, none of them over 21. The widow, Janet Fletcher, was a remarkable woman. She borrowed money, invested in houses and ensured that her children would have a proper start in life. There was no luxury, but there was order, discipline and love in the family that she brought up in the little town of Kirkintilloch, not far from Glasgow.

Then there was his decision to migrate to New Zealand, following an address by the Rev. Leonard Isitt. The Rev. Mr Isitt was a notable champion of temperance but in his lectures he also painted in glowing colours "The Sunnier Britain of the South."

On arrival in Dunedin, the young James Fletcher immediately looked for work. After three days he had not found it. Then, after another vain search, he saw a heap of bricks up a

right of way. It was the back entrance to the first place he had called at.

"Well, Scotty," said a voice. "you're back again. You must be hard up."

"No," he answered sturdily, "I just want a job." He got it.

Then in 1909 there was the building of his first cottage with his partner Bert Morris. The nett profit was 3s 6d.

There were changes, advances and some setbacks; and the growth of a feeling that there might be more to New Zealand than Dunedin and Invercargill, the only cities that he had time to see in those first few years. He remembers vividly a holiday visit to Auckland with his brother Bill in 1916. It was a tiring journey. Relaxing that morning in sunny Parnell Park, Bill went to sleep but James read the building tenders. Before his brother awakened, James had decided to tender for the Auckland City Markets.

His banker, D. W. Duthie, when seen in Wellington, refused to support him: "You can't run a builder's business in Auckland as well as in Dunedin

and Invercargill."

James Fletcher said: "You would think it an impertinence if I said you couldn't run a bank down there, too, but that's no worse than what you've said to me. I don't know how, but I'm going to build the markets. I'm a third generation builder and we've never welshed on anything we signed for."

Duthie replied: "I am going to back you."

The tender was accepted and Fletchers had taken the first significant step towards becoming a nation-wide organisation.

There were the boom years after the First World War when the company erected many fine buildings in all the main cities; buildings that he can still look at with pride during his travels. There was also the development of an organisation that included brickworks, timber mills, engineering shops, joinery factories and marble quarries — all of them necessary if contracts were to be carried out efficiently and smoothly.

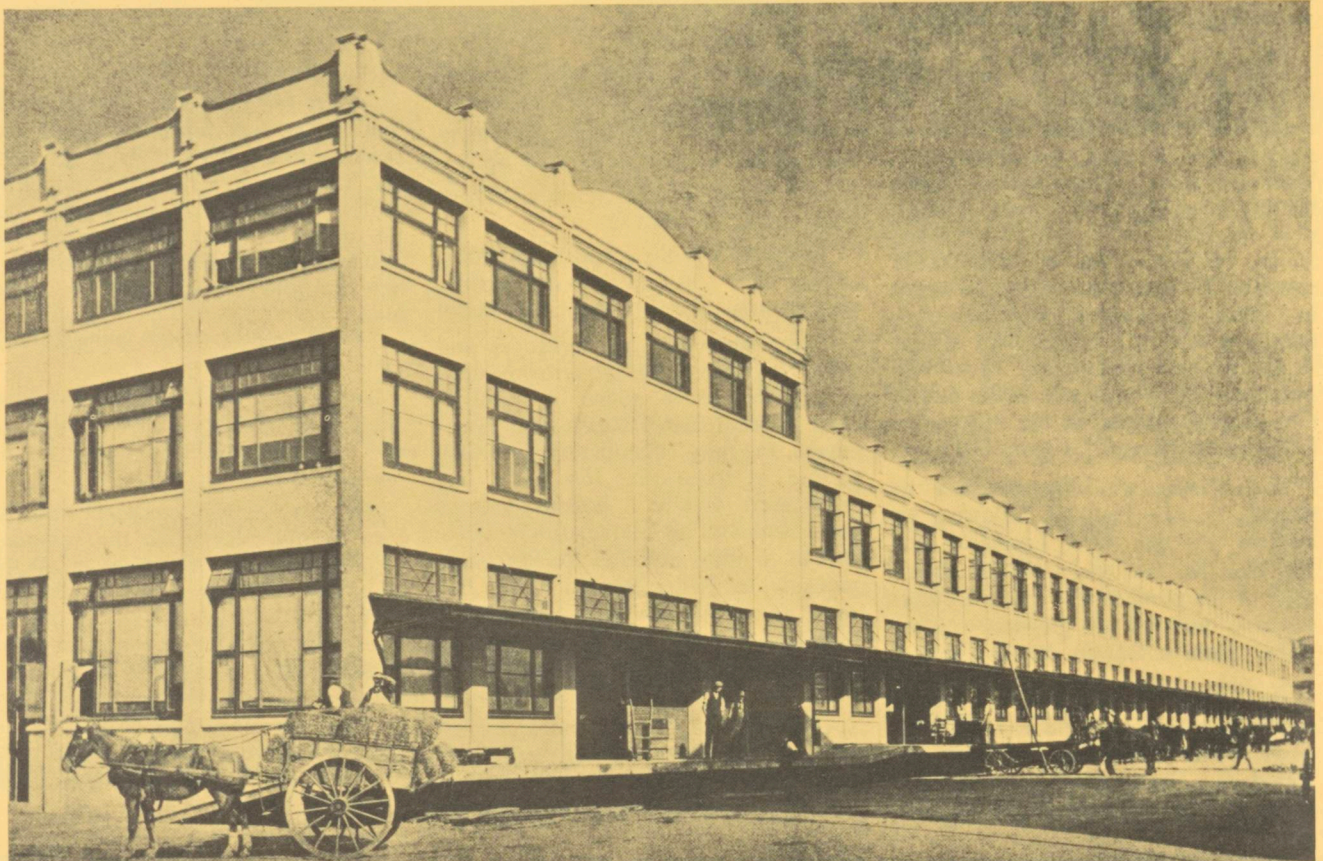
\*Neil Robinson would like to hear from people who have known Sir James and feel they could contribute to the biography. He may be contacted care of Arrowhead.

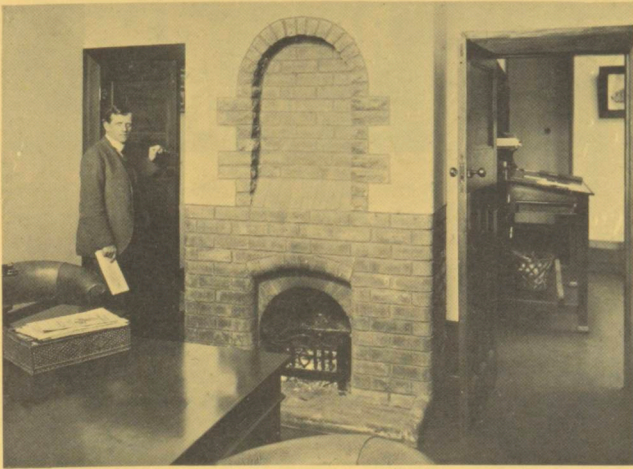


He remembers, too, the frustrations of the depression years, when the country's energy seemed to be sapped by a deadly inertia. But most of all from that period he recalls the friends he made when, at the request of the Prime Minister, Mr Forbes, he went to earthquake-ravaged Hawkes Bay and helped to reconstruct the commercial life of Napier and Hastings.

Then, a few years later, came the day when the new Labour Government invited him to prepare a scheme for State housing. This was the sort of thing he had been waiting for. The efficient building force which Fletchers had struggled to hold together could now expand. Fletchers themselves gained, in open competition, contracts to build 1,000 State houses initially. It was a contract that, in the first year, brought a big loss, but Sir James

**Left:** The first house built by Fletcher and Morris in 1909. **Below:** This photograph from an old album of Fletcher-built buildings, shows the 1916 contract which started Fletchers on the road to becoming a national organisation.





James Fletcher in his Dunedin office in 1918 and the joinery factory two years earlier. **Below:** The war period. **Left:** The little boats which were produced in the yards of Stevenson and Cook. **Right:** Sir James Fletcher, Commissioner of Works, 1945.

is still proud of the houses that young architects designed and his men built. So impressive was their work that Fletchers were invited to build State houses in New South Wales.

Then came the kind of challenge that he always enjoyed. The Labour Government was ready to launch its Social Security programme when the new building was destroyed by fire. James Fletcher told a gloomy Prime Minister (Mr Savage), that he could have another building ready by the end of March. The foundations began on February 7; six weeks later, on March 23, brilliant organisation and long hours of work had brought it to com-

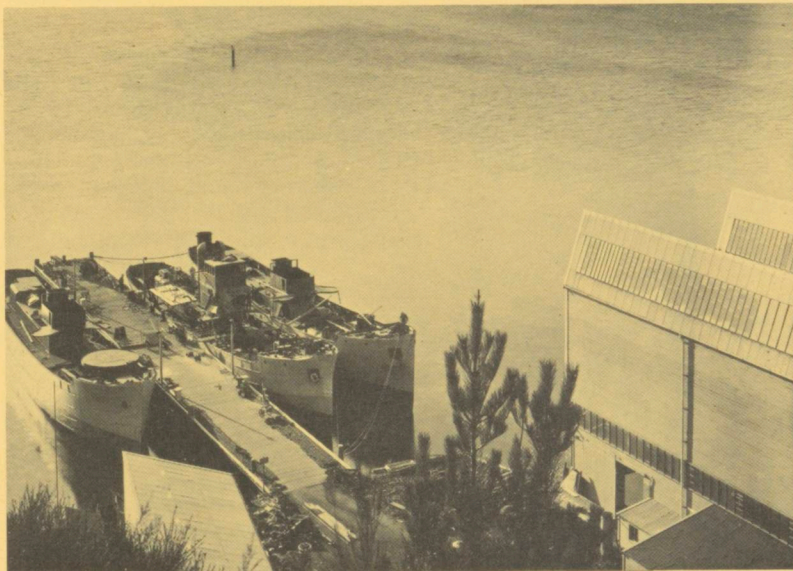
pletion, with office desks in place and the garden laid out.

He remembers the years of expansion, the formation of Fletcher Holdings Limited, to make possible the provision of capital that would see the work through. By now his two sons, young men in their twenties, had joined the family business. The companies were functioning efficiently; and when, early in 1942, the Prime Minister, Mr Fraser, invited him to become Commissioner of Defence Construction, responsible only to the Prime Minister himself, he was able to accept.

Those busy years are still sharp in his memory. Thousands of Americans

## 80th birthday portrait

were expected to reach New Zealand within a few months. Camps as big as towns, hospitals and stores had to be built quickly; and the building industry already seemed to be over-taxed or incorrectly aligned. It became his task to organise the supply of materials, plant and labour where it was most needed and to ensure that the work was done in time. It was a job that might have daunted many able men, but he enjoyed the challenge that it offered. These were some of the busiest years of a busy life, but he



## 80th birthday portrait



found them most rewarding — in results achieved, in contacts with men from many lands and from many walks of life. Those were years of great power, when, second only to the Prime Minister, he was responsible for all the construction necessary to allow the armed forces to defend New Zealand. His reward was a knighthood.

He remembers, too, chiefly because of the novelty of the assignment and the refreshing personality of the Americans he met, his term as Shipbuilding Controller, when little ships moved down new slipways and went up the Pacific with the advancing Allied forces. And then, before he returned to his private pursuits, there was a year as first Commissioner of Works, organising the Ministry of Works into a department that would be ready to tackle the huge tasks of peace.

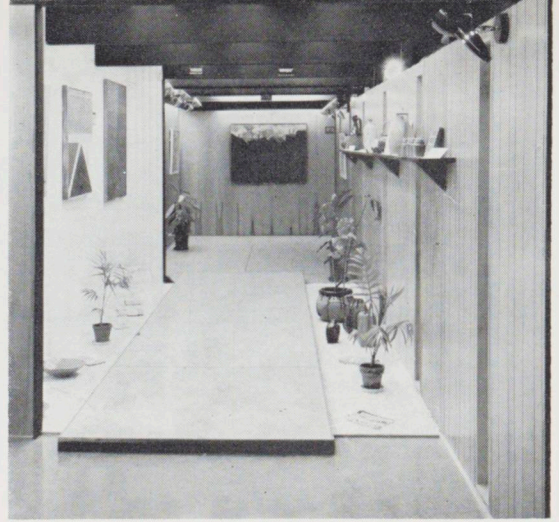
Since the war there has been much to think about and to do. Expansion into Australia and the Pacific; links with overseas companies; planning, with his associates, the development of new companies designed to diversify and strengthen the whole organisation. One of his most vivid, and exciting, memories is of the birth of the giant Tasman Pulp and Paper enterprise, in which Fletcher ideas and initiative, and Sir James personally, played a leading part.

And yet a man who has directed great enterprises still, at 80, finds his great pleasure in simple things: In the companionship of his wife and family; in his farm at Te Kauwhata, Alton Lodge, where he and his son, Mr J. C. Fletcher, once had a noted thoroughbred stud and where he and Lady Fletcher spend most of their week-ends; in the Presbyterian Church at Te Kauwhata where they worship on Sundays; and in his work for the British Sailors' Society, of which he is still the very energetic treasurer.



**Above:** Sir James with Silver Gold at Alton Lodge, 1947. **Below:** At the staff Christmas party at Auckland, Sir James chats with Malcolm McGregor, of Fletcher Timber, after presenting him with his 40-year pin. Malcolm's father was Sir James' first employee.



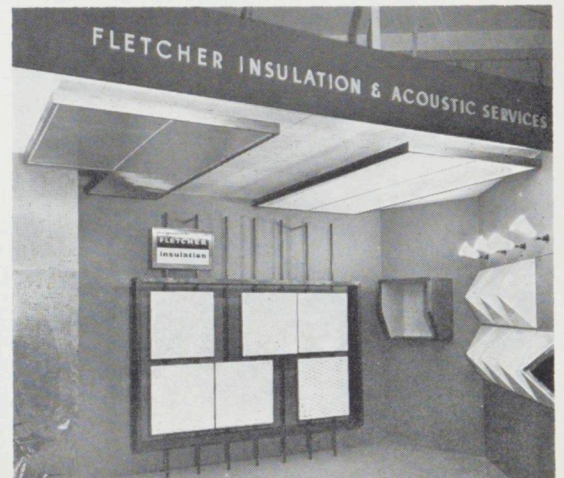


## FLETCHER PRODUCTS ON DISPLAY.....

**B**OTH Fletcher Industries and Fletcher Insulation have taken space in the Wellington Building Centre which opened late last year. Fletcher Insulation are showing a sample of their comprehensive range of acoustic ceiling tiles and systems, acoustic wall board and acoustic telephone cabinet.

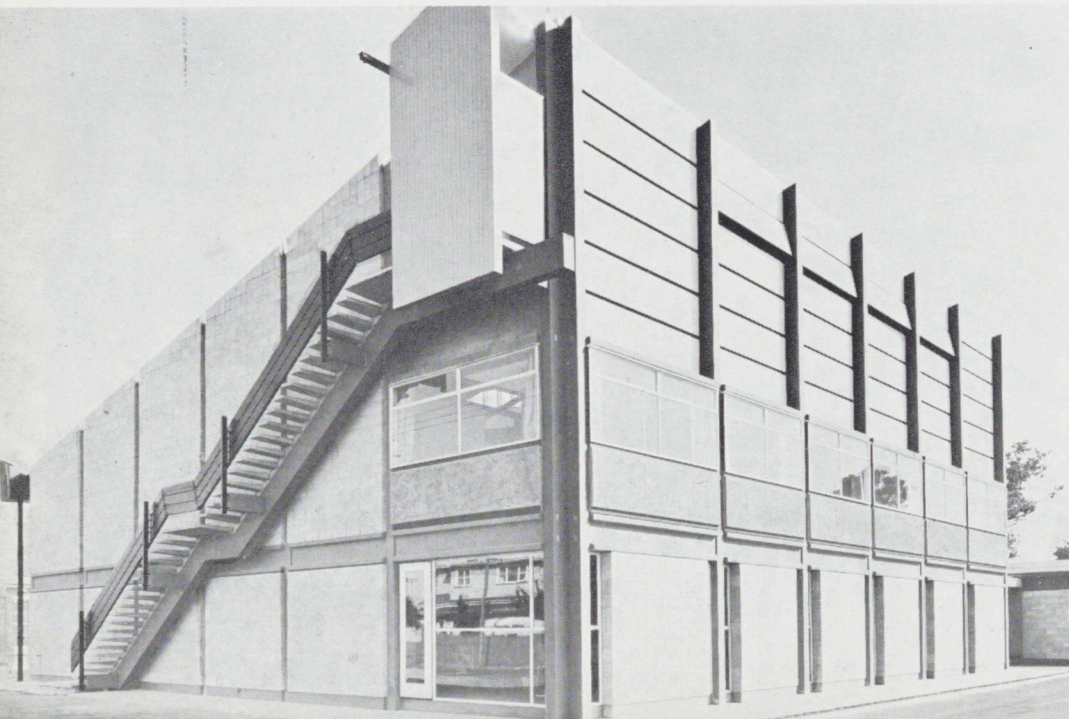
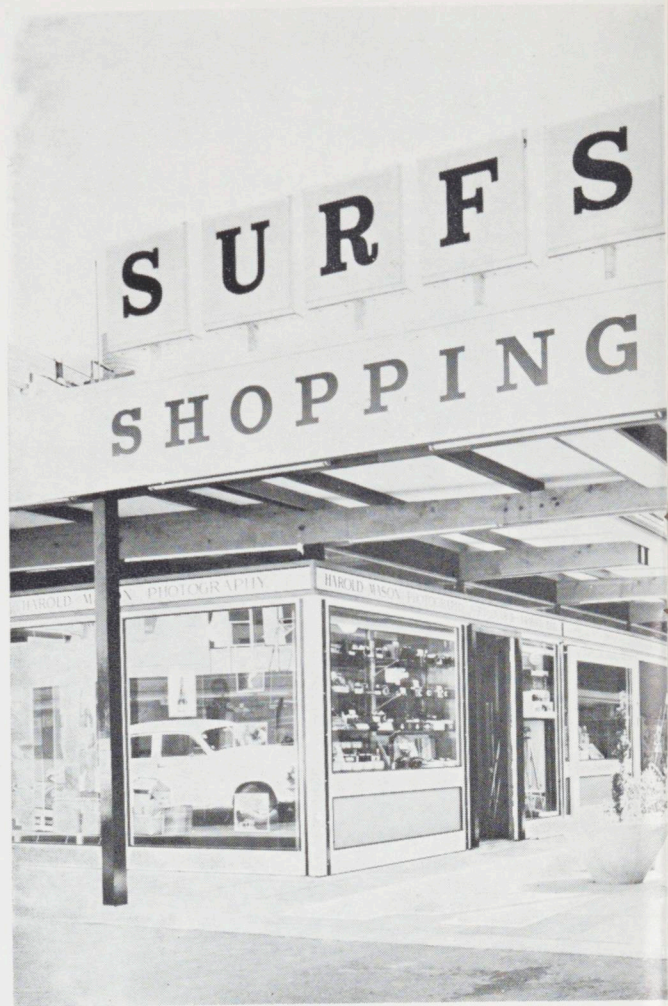
In Fletcher Industries' stand plywoods are prominent. Ranch Pattern—the grooved exterior/interior five-ply, first marketed last Spring, faces the front of the stand. In the interior of the stand the walls and the curved ceiling are of slice-cut plys. A texture contrast is obtained by having one wall of Durock asbestos cement cladding in the recently-introduced Log Cabin profile. Floors are of Plycopyne particle board tiles and Durock asbestos cement deck tiles.

Fletcher Industries also had an impressive stand at the Christchurch Industries Fair. Again slice-cut plywood was an important feature of walls and ceilings. Panel-Line interior panelling lined another wall and Plycopyne and Durock products were also on show.

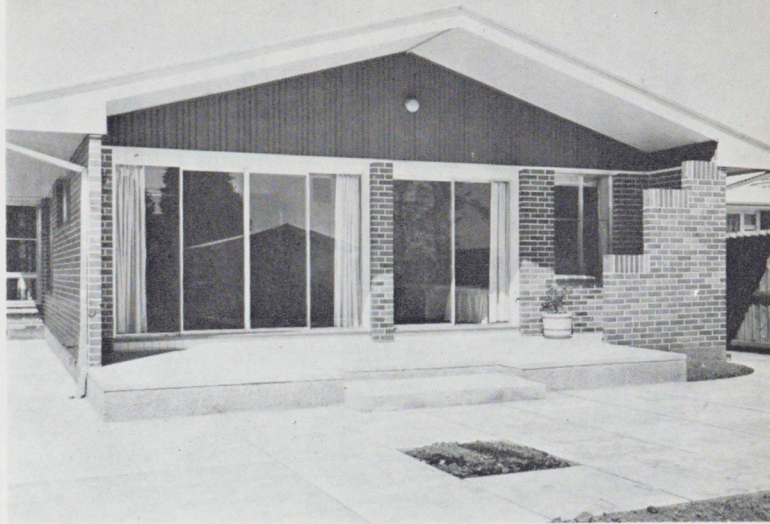


## .....AND IN USE

For the Surfside Shopping Mall at New Brighton, Christchurch (illustrated at right) several Fletcher products were used. Brownbuilt continuous length steel roofing was chosen with a combined sarking and ceiling lining of Stramit building slabs. Durock flat sheet was used for the fascias and in the shop interiors. Pycopyne was extensively used for paneling and shop fittings. Architects were Griffiths Moffat and Partners.

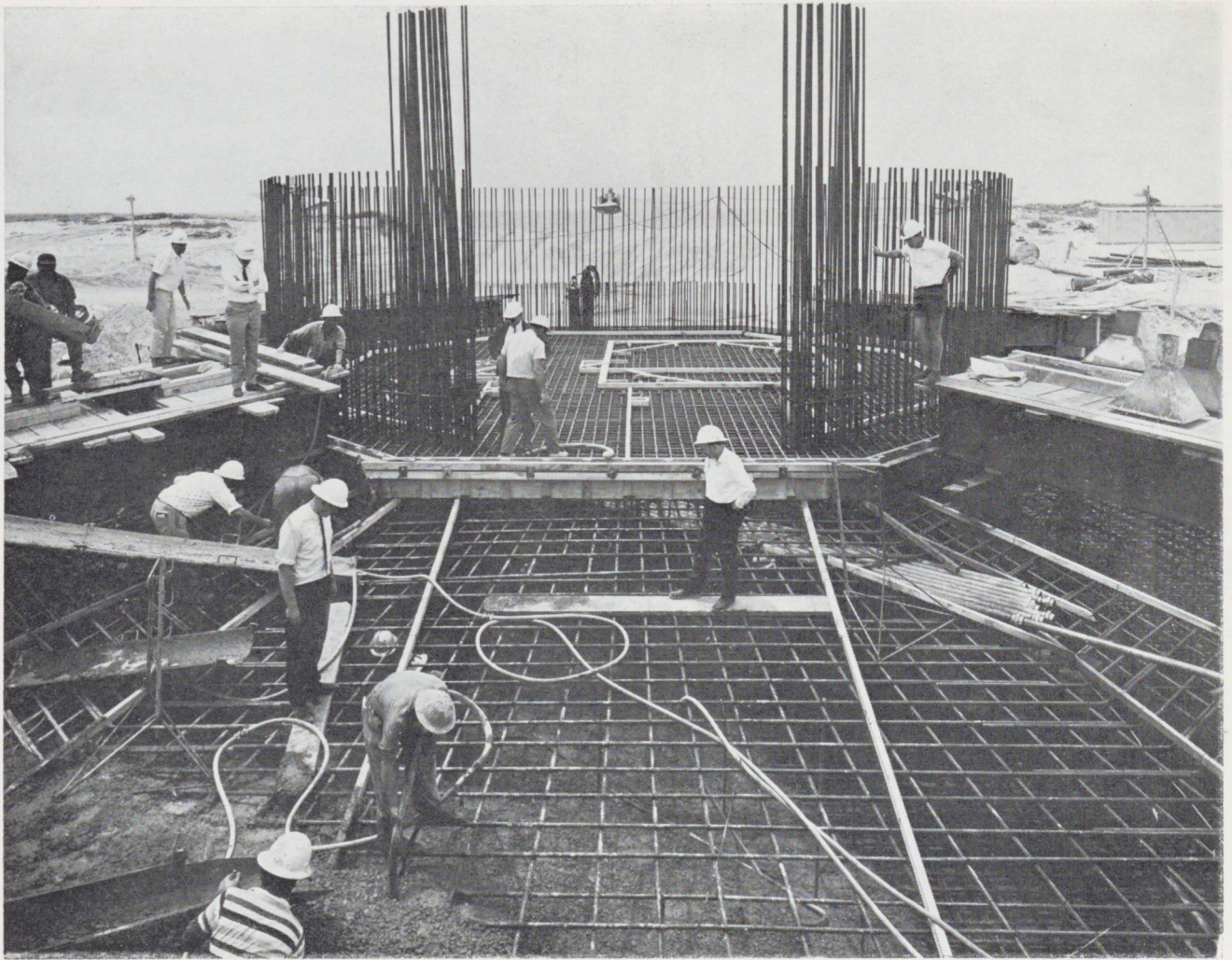


Durock moulded panels, three-eighths of an inch thick were used for the upper wall of the Christchurch Wool Exchange. As is seen in the photograph, some of the panels are hinged to provide ventilation. Architects were Warren & Mahoney, of Christchurch.



Two homes in Christchurch which have made effective use of Hacienda, one of the range of Durock asbestos cement sheetings. In the single-storey house (above) which has Hacienda on all gables, sheet Plycopyne was used for flooring throughout. The home illustrated below shows the striking effect which can be achieved by a combination of vertical and horizontal applications of Hacienda.





# THE BIG POUR

**A**FTER four weeks of hard work and planning the base for the concrete chimney stack at Marsden Power Station was ready to pour. During this time some 2,700 cwt. of reinforcing steel had been placed and much advance planning put into the location of ramps and access roads in order that the concrete could be delivered and discharged into this massive foundation.

The pour started at 7 a.m. on Thursday, 9 December, and finished at approximately 2 p.m. the following afternoon.

In those 31 hours 2,041 cubic yards of concrete had been placed. From this base will rise

a 400 foot high concrete chimney with a steel liner (the highest to date in New Zealand).

Bechtel Pacific Corporation Limited are the managers of the project and the concrete is being supplied by Hardie Brothers of Whangarei from a central mixing plant located on site.

Personalities in the photograph above include M. La Krapes and L. Patterson of Bechtel Pacific Corporation and J. G. Smith, R. A. Bootle, A. C. Campbell and B. Reid (General Foreman for this particular piece of the work) of Fletcher - Downer - Wilkins & Davies, the joint venture contractors.



## FIRST IN NEW ZEALAND

### CERTIZINC LICENCE FOR ENSTONE INDUSTRIES

ENSTONE Industries has been granted the first licence issued to a New Zealand firm to participate in the Certification Scheme of the Zinc Alloy Die Casters Association of Australia (ZADCAA). This authorises the company to apply the "Certizinc" symbol to its die castings — the widely recognised symbol gives an assurance to a purchaser that he is getting reliable castings of the highest quality.



The president of the Zinc Alloy Die Casters Association of Australia, H. C. Hussey (left), presents the International Licence Certificate to R. A. Pearce (right), Manager of Enstone Industries, of Penrose, Auckland. With them is L. C. Ryan, Managing Director of Fletcher Steel, which controls Enstone Industries' plant.

To qualify for the Certizinc Licence and to maintain it, Enstone Industries has to commit itself to the scientific control of the quality of its products. Certain aspects of the policing of the licence have been undertaken by the Department of Scientific and Industrial Research. The D.S.I.R. has continuous access to Enstone's plant and its officers can walk in at any time to inspect, take samples and analyse to ensure the standard of the zinc is maintained. In addition, Enstone Industries has to submit samples regularly and often to the Australian Association for analysis by spectrophotograph. This instrument makes an electronic visual examination which shows up the metallic components of the sample. If the examination reveals any variation from the standards prescribed, the association will impound all castings related to the sample.

These stringent controls mean that clients of Enstone Industries can now obtain products with an assurance of a standard up to that of imported articles.

Enstone Industries is an old established firm with long experience in die casting. Over the past 12 months it

has concentrated on up-dating factory methods and set-up to put it in a position where it could meet the requirements of ZADCAA.

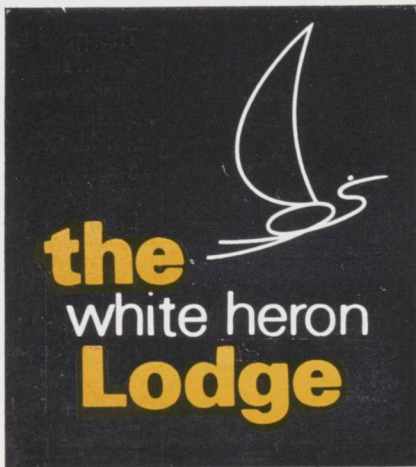
The Penrose company has the equipment for die-making and is currently producing, by pressure die casting, pumps for washing machines, decorative nameplates for household appliances such as stoves, radiators and refrigerators, and components for industrial equipment. It can also produce motor-car parts — there are about 50 die cast parts in a car — which up till now have been imported.

Pressure die-casting results in a product with a fine granular structure and maximum strength. Production is fast and economical.

The company's only restriction is in limits of size to a maximum zinc shot of 5lbs.

As a result of the factory re-organisation, in addition to its production of zinc alloy castings which can be electroplated in their works, Enstone Industries also has capacity available for casting and finishing of aluminium products as well as compression plastic moulding.

## ATTRACTIVE MOTEL FOR CHRISTCHURCH



THE £335,000 116-bedroom White Heron Lodge, adjoining Christchurch Airport, is an attractive addition to New Zealand's "visitor accommodations," as the photographs on these pages show.

The motel was built for Holiday Lodge (Christchurch) Limited by a joint venture sponsored by Fletcher Construction whose partner was Tecon Corporation of Dallas, Texas, with whom Fletcher Construction are also associated in harbour development works in Western Samoa.

Project Manager was Barry Hegarty and Foreman Fred Kingsford. Architect was Joseph F. Gordon, of Dallas, in association with Hall and McKenzie, of Christchurch. Engineer was W. Lovell-Smith.

The concrete blocks used extensively in the construction were supplied by R. C. Horsley, one of the Christchurch divisions of Butler Bros.

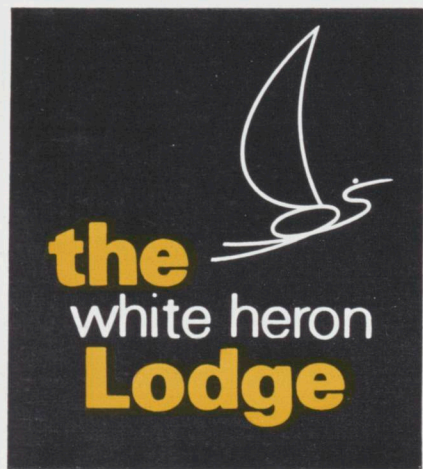


The foyer (above) and the Windjammer Bar (below). On facing page the swimming pool and one of the lounges.

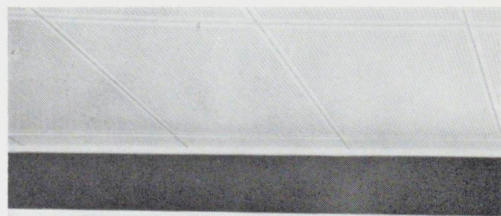




## GUEST ROOMS AND DINING FACILITIES



The formal dining room (above), the dining gallery (below) overlooking the swimming pool, and one of the units (left).





# FINANCE HOUSE

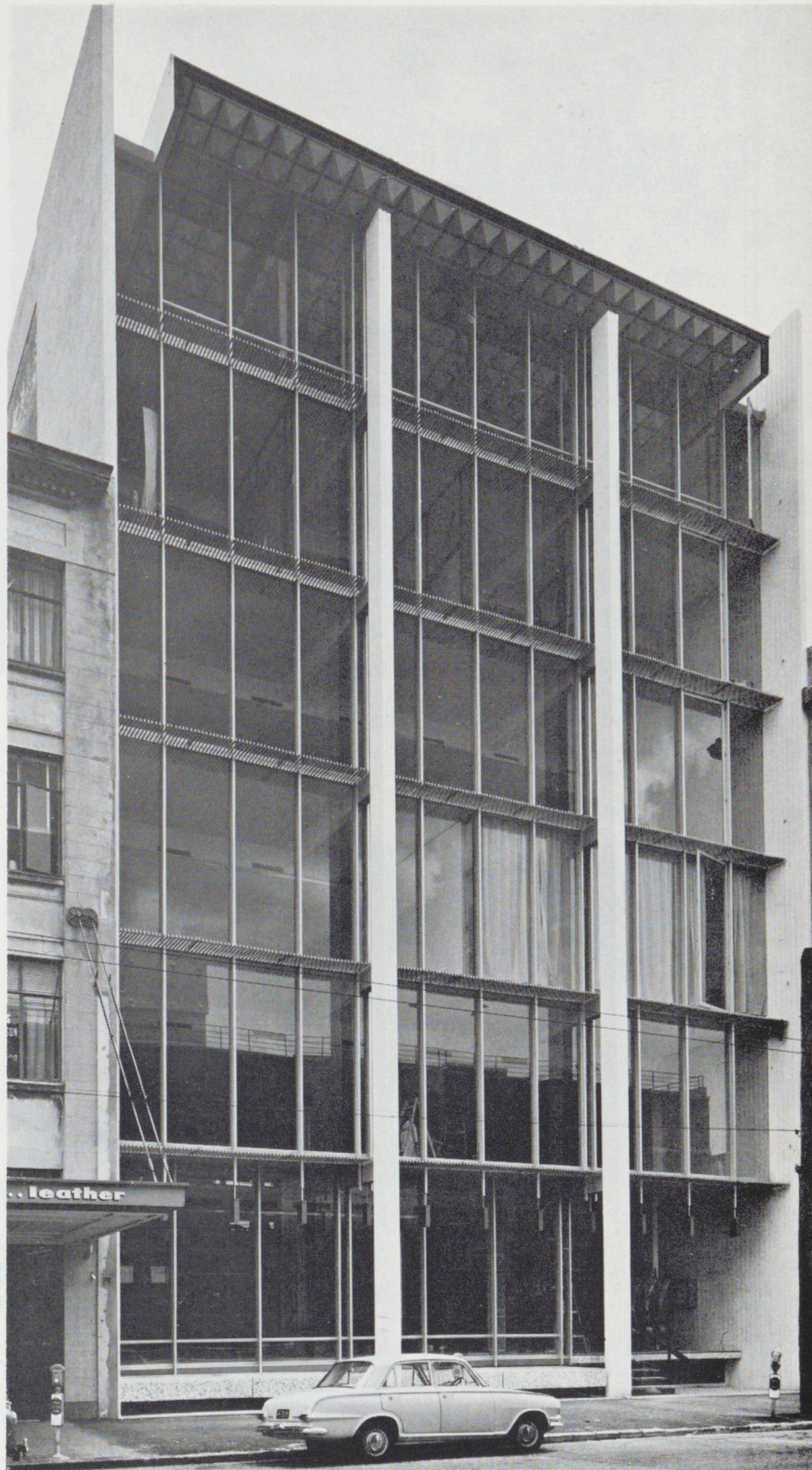
**L**ATEST of Fletcher Trust's property development projects to be completed is Finance House, a striking six-storey office block opposite the Auckland City Council car park in Albert Street. Each storey has a floor space of 5,000 sq. ft.

The walls facing Albert Street and Federal Street are glassed from ground to roof with 10ft. high panels, filtered to eliminate glare. On each of the five upper floors one panel opens as a door leading to a stainless steel walkway. These walkways add a decorative touch as well as having the practical function of facilitating window cleaning.

Two-thirds of the ground floor frontage below the windows is occupied by stone planting-troughs holding a variety of shrubs. Entrance on the right is by five brass-bound exposed aggregate steps to a lobby with walls of polished exposed aggregate. At the entrance is a decorative screen of copper, mahogany and stainless steel. A free-standing stairway, supported by a steel centre string, leads off to the right. The high speed lifts are just beyond. The building is fully air-conditioned and all mechanical services are housed in the basement to eliminate the more common rooftop structure.

Architect was H. A. Gillam, of Auckland. Fletcher Construction was the principal contractor. Contracts manager was W. T. Anderson and Foremen were Les Cook and Jock Herries. The development came under the wing of J. R. Humphreys, Fletcher Trust's Project Controller.

Fletcher Mechanical Services designed, supplied and installed the Carrier air conditioning system and were fixers of the Brownbuilt roofing. Fletcher Insulation and Acoustic Services supplied and installed the acoustic suspended ceilings. Redpaths were responsible for the carpeting of offices and the laying of special flooring in the service areas.



# FAST BUILDING JOB IN SYDNEY



SIX months after deciding upon a site, Gallaher International (Australia) Limited, were in production at their £1¼ million cigarette factory at Rydalmere, an industrial suburb 10 miles from the centre of Sydney.

This feat called for a great effort by Gallaher's own staff and from the co-ordinating contractors, The Fletcher Organisation Pty. Limited, who were responsible for the whole building works programme. Architects were Towell Rippon and Associates.

The Rydalmere site was previously occupied by a hosiery manufacturer. It contained a large factory building with an adjoining administrative block, together with a few other small buildings. All had been disused for some time and the surrounding area was largely undeveloped.

However, the site was a key one on a main traffic artery, and had access to both front and rear. It lent

itself to conversion to a tobacco factory, and it had ample room for future expansion.

Early in April the first echelon of contractors moved on to the Rydalmere site and began the big job of demolition and reconstruction. Additional facilities included a huge air-conditioning plant, new roadways, and many thousands of square feet of reinforced concrete flooring. More than 40 tons of steel was used to reinforce the main factory floor, covering 43,500 square feet.

As soon as this phase neared completion installation began of modern processing, production and packaging machinery and equipment.

Seven months after deciding to buy the 10-acre site, Gallaher were marketing two new brands of cigarettes, Gallaher Superfine and Ski, produced in their first Australian factory.





The entrance lobby (above) of the administrative offices of Gallaher's new factory at Rydalmere. The floor is of multi-coloured clay tiles.

Below is the service kitchen and self-service area of "Club G," the staff canteen, which is fully air-conditioned and equipped with the latest catering and service equipment. It provides hot meals and snacks for all staff. Initial seating capacity was 200 with provision for expansion as staff increases.

Left is an exterior view of the factory. The surrounding area is planted with lawns, flower gardens and shrubs.



# arrowhead

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