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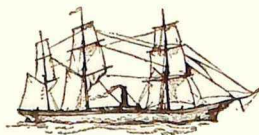
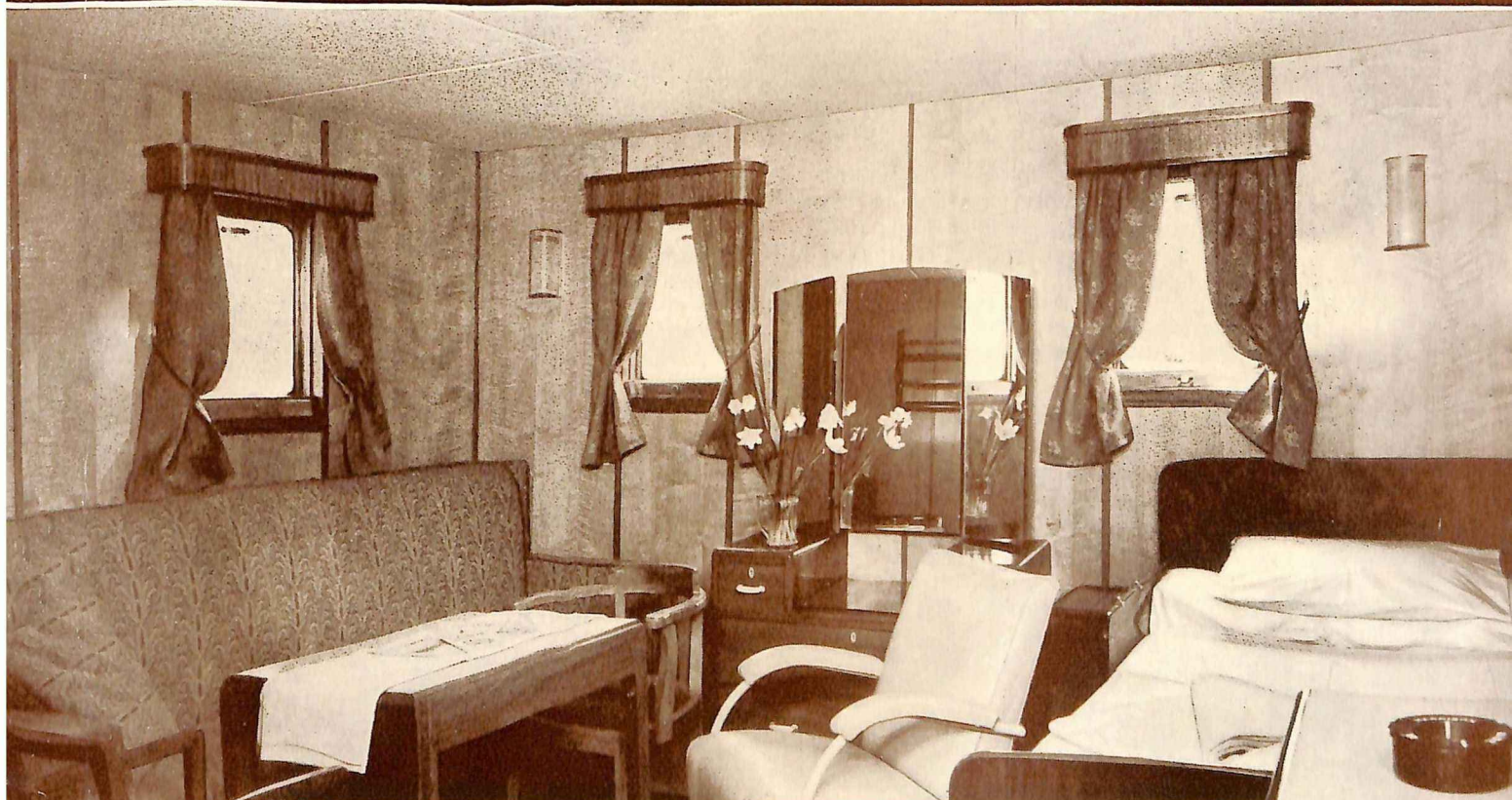
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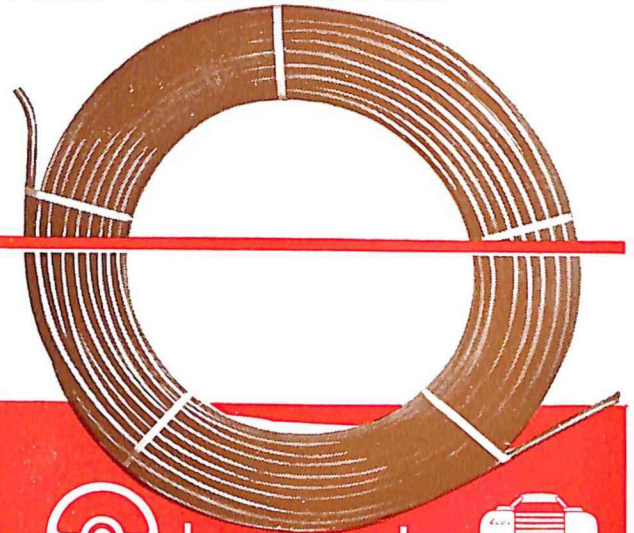
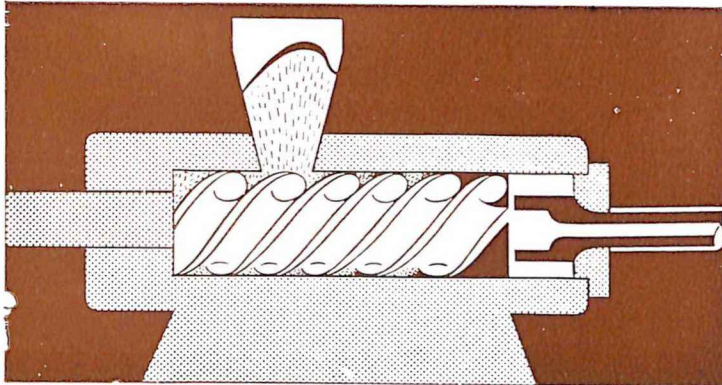
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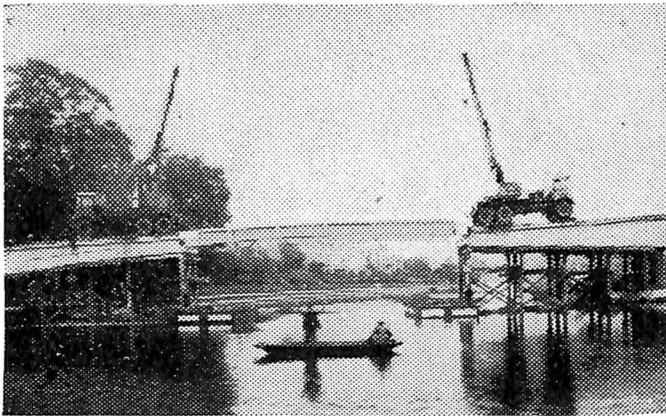
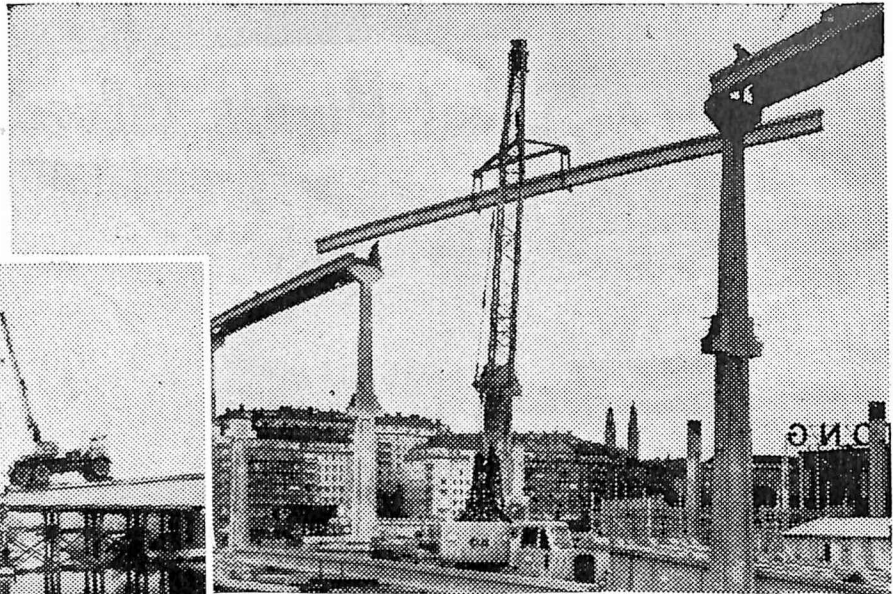
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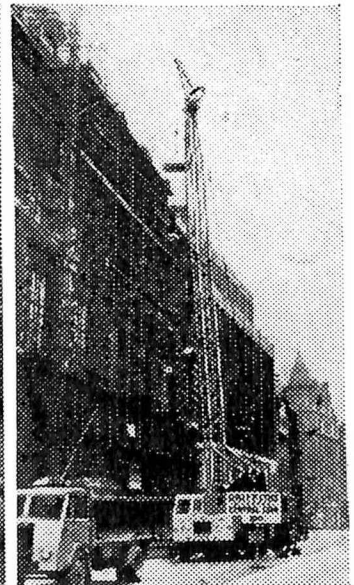
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# Modern Manufacturing

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**SERVING NEW ZEALAND INDUSTRY**

**Vol. 7, No. 1 - - - - SEPTEMBER, 1955**

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## Who Speaks for Manufacturers?

IN the December-January issue of this journal attention was drawn to the fantastic position that the manufacturer-importer occupies in the ranks of the Manufacturers' Federation. The obvious frequent conflict of interest between manufacturing and importing was noted, and the point was raised whether the best interests of New Zealand industry could be served by undue reliance on the counsel of those whose stake in the economy is divided between manufacturing and importing.

The question has now been brought to the fore again by Mr. H. Korman, a member of the Council of the Auckland Manufacturers' Association, who has quite rightly affirmed the absolute necessity for import controls "to protect the vital interests of true manufacturers in this country."

The irony of it all is though that Mr. Korman has taken up a challenge issued not by one of the sworn and proven opponents of New Zealand industry, but by no less a person than the president of the Otago and Southland Manufacturers' Association, Mr. T. E. Roff, who has appealed to manufacturers not to "hide behind the cloak of import controls."

Mr. Roff has importing interests, and is certainly entitled to have them, as Mr. Korman concedes. But is he, as Mr. Korman asks, fitted to speak on behalf of the Manufacturers' Federation, which has consistently campaigned for import control as the key to flourishing New Zealand industry?

It makes nonsense of Federation policy if those ostensibly committed to it are perfectly free to repudiate it at will. It cannot be repeated too often that there are sworn and proven enemies of New Zealand industry, and divisions within the manufacturers' own ranks are not likely to escape the attention of these people.

Internal division is the classic forerunner of external attack, and the leaders of the Federation should remember this. If they do, they will boldly and courageously face up to a problem that certainly has come no nearer to solution through being shelved or glossed over for so long.

## Manufacturing Leads

THOSE who seem congenitally destined to go on taking a jaundiced view of industry's growth in New Zealand have lost no time in trying to "play down" the significance of the fact that in 1953-54, for the first time, manufacturing contributed more than farming to the national income. The arguments used show the specious reasoning on which critics have to rely when they attempt to discredit trends that strengthen the national economy.

For instance, as part of the process of belittling the importance of the manufacturing industries, much is made of the fact that their growth has been greatly aided by the farming industries. Of course this is so, but is not the reverse equally true, and should not the new stature of manufacturing be made the reason for acknowledging its impressive contribution to the national well-being?

The point about the whole line of argument that sees manufacturing as a kind of parasitic and precarious growth is that fundamentally it denies the wisdom of a balanced economy and the interdependence that exists between town and country. Accordingly it should be opposed as often and as vigorously as possible.

## Lost Orders

A REPORT that New Zealand recently lost substantial English orders for milk powders because the company asked to supply could not secure export licenses is alarming in the extreme. And the story, as it has been reported, reflects credit on none of the parties concerned. It goes like this:

A representative of an Auckland manufacturing company who was visiting Britain was offered the orders—which were "entirely new business"—but because the Dairy Products Marketing Commission has a marketing monopoly for milk powders, was unable to obtain the necessary export licenses. It is assumed that as a result the business went to Continental suppliers.

Surely two points must occur to all those who have no special axe to grind in this matter. Firstly, it may be asked, what was there to prevent the company offered the orders from "tying up" the business for New Zealand—if not for itself, then for the commission? And secondly, why was it that the commission, with all the facilities it has for keeping in touch with the market, in the dark about this new business—and big business—that was offering?

## What's Happening in the East?

THE continuing round of military conferences arising out of the South-East Asia Treaty organisation underlines the apparent lack of attention being paid to implementing the economic side of the treaty. Neither are the limited number of S.E.A.T.O. economic talks that have taken place in any way very encouraging.

In June economic experts from the treaty countries met in Karachi, and New Zealand was represented by officials of the External Affairs Department and the Treasury. Whatever was achieved at this meeting it has been kept curiously secret, even though discussion was to have centred on "steps which might be taken to promote economic progress and social wellbeing in the Treaty area."

Perhaps the reason for the veil of secrecy is to be found in the pre-conference statement by the Minister of Defence and External Affairs, Mr. Macdonald, that "the Karachi decisions would probably have a defence slant, distinct from the Colombo Plan assistance measures." This being so, has not the time come for a reassessment to be made of the whole value of S.E.A.T.O. as a means of developing New Zealand's trading relations with the countries of South-East Asia?

This is a matter of vital concern to primary producers, manufacturers and commercial interests. Spokesmen for all these groups have acknowledged the potential that exists for expanded New Zealand-South-East Asian trade and have at various times called for direct New Zealand commercial representation in South-East Asia to open up new markets.

Given present trends, the question that must now be faced is whether the Dominion's interests in this direction can best be served by a commercial representative attached to Mr. Foss Shanahan's staff (which is concerned virtually exclusively with the country's obligations under S.E.A.T.O.), or by a representative completely freed from what can only be described as the disappointingly restricted terms of reference of the South-East Asia Treaty Organisation.

## Safer Heaters

IT is little to the credit of a section of New Zealand industry that members of the public are being forced to take the initiative in pressing for safer electric heaters. Latest body to bring the matter to the attention of the Government is the Wellington Plunket Society, which is seeking to have the sale of heaters without adequate guards made illegal.

As the Society points out, legislative action along these lines has already been taken in both Britain and Sweden.

There is no reason why the New Zealand Government should not follow suit.

The Standards Institute is at present working for the adoption of a standard specification for guards for all heaters, but far from obviating the need for legislation this actually makes the need all the greater. A law prohibiting the sale of heaters which are a hazard to children would ensure to the whole community the full benefit of the Institute's work.

## Scramble for Markets

AMONG the more interesting comments on the International Conference on Peaceful Uses of Atomic Energy held in Geneva in August was that of the influential American publication "U.S. News and World Report". The journal said that although the conference was described as scientific, non-political and non-competitive,

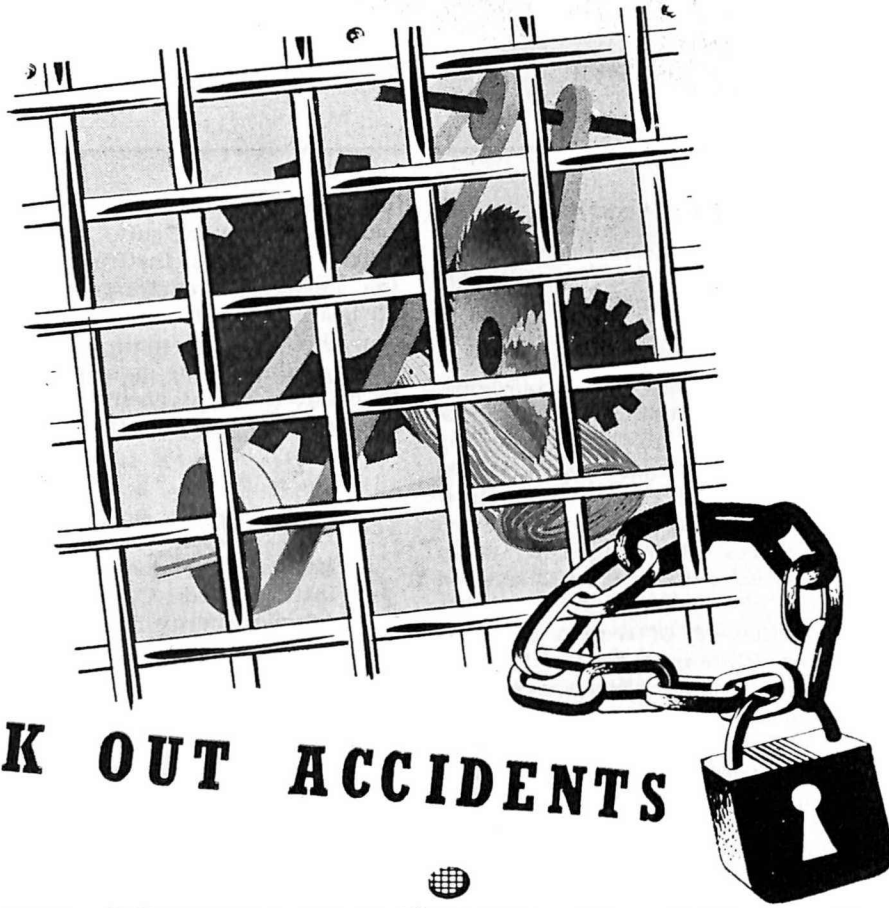
"The fact is that it is shaping up as the start of a race for world leadership in the application of the atom to industry . . . what it boils down to is a good old-fashioned scramble among nations for new atomic export markets."

Early this year it was reported that the British Government had decided to "go all out" to supply export demands for atomic power plants, and it was then estimated that over the next 20 years this new trade would be worth something like £2,000 million to Britain. And at the Geneva meeting the managing director of the British Atomic Energy Authority bluntly told delegates that Britain has commercial atomic secrets which she refuses to share with other countries because of their value in the future race for atomic markets.

Intriguing thing about the "good old-fashioned scramble" that is developing is that it promises to produce the most spirited rivalry not between East and West, but between Western countries themselves, and especially Britain and the U.S. Agreements that the Soviet Union has already concluded with her East European partners and China open up an enormous field for her exports of atomic equipment and when she looks beyond that vast market it is likely to be to the under-developed countries.

Meanwhile the situation should be exercising the close attention of those in New Zealand who are likely to be eventually responsible for advising on the placing of overseas orders for atomic equipment. The country must derive considerable satisfaction from the knowledge that when the time comes for the Dominion to purchase plant we are unlikely to be at the mercy of something akin to the shipping monopoly.





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# PRODUCTIVITY IS AN ATTITUDE— and Attitudes can be Changed



*This article reviews the findings of productivity groups from Britain and the Continent who compared their practices with those current in the U.S. The author, who is well known as an industrial consultant, was associated with the visits of many of the groups to the U.S.*

By **PETER DRUCKER**  
[Nation's Business]

**D**URING the past few years the American business system has been examined, probed and dissected as no other economic system has ever been. Several thousand hand-picked experts—businessmen, technicians, educators, workers and union officials—from every country of Western Europe and from almost every industry, have been touring the United States since 1949 to find out for themselves what influences American productivity. Organised in some 200 "productivity teams," under the Marshall Plan, and influenced by funds which the European governments provided, they have looked at foundries, textile mills, business schools, breweries, printing companies and labour unions. Most of them have stayed long enough to get more than a tourist's view.

Officially the programme goes by the name of "Technical Assistance"; and the purpose is to find American techniques for European use. The bias toward techniques is emphasised by the selection of teams who normally come either from one industry, locomotive building for instance, or from one technical specialty such as cost accounting or industrial engineering. The teams arrive in the United States expecting to find the cause of American productivity in techniques and processes. Yet, I know of no team which did not speedily discover for itself that techniques are not the really important thing, and certainly are not the real cause of productivity.

"Productivity is an attitude of mind," the report of the team from the British letterpress printing industry stated; and in one way or another every team has said the same. Attitude, social organisation and moral value—those, the visiting experts report, underlie and explain the industrial achievement of the United States.

Even in such a technical area as the use of machinery, visitors see attitudes rather than the abundance of capital, the lack of wartime destruction, or some other material factor as the main cause for such achievement. A British team investigating the making of brushes, for instance, remarks that machinery is being used successfully in the United States in operation normally re-

garded in British practice as unsuitable for mechanisation.

Five things in particular impress the visitors as being fundamental, and at the same time as presenting the greatest contrast to Europe:—

### 1.—The Discovery of Management

"The United States has made a major discovery—that it is management which makes the wheels go round," a successful French manufacturer said. "We are still largely organised on the belief that all a business needs is a supply of capital, after which it will run itself. In the United States basic decisions are made by men who know the business from the ground up, who consider it their main interest in life, and who got their jobs because of their competence. As a result business attracts the best minds in the country, and that, more than anything else, explains how Americans got where they are today."

Every report stresses the central importance of a management responsible for the success of the business, familiar with it and chosen for competence. The most glowing tribute to management and to its importance came from a group of British labour leaders:—

"We are convinced that it is efficient management who set the pace of productivity in American industry. American trades union officials can rely on management to be sufficiently progressive." Every trade unionist on the teams comments upon the confidence in management's competence, fairness and integrity that he finds among American workers and trade union leaders.

### 2.—Productivity as a Social Principle

Every team believes that its own country must raise productivity to survive. Yet most of the visitors, whether labour or management men, still tend to look upon increased productivity as primarily a way to increase individual business profits.

Visitors find that Americans look upon profits not as the rationale of increased productivity, but as the reward for the social benefits such productivity brings: higher wages, cheaper prices and more goods for the consumer. They report that managements of profitable companies hardly mention profits when they

discuss productivity, but stress the duty of business to increase productivity even if no immediate increase in profits results.

The visitors also find that American industry not only talks this way, but acts it too. They find it taken for granted in labour negotiations that an increase in productivity justifies a corresponding increase in wages. They find in companies, large and small, that management salaries and bonuses take into account performance, efficiency and productivity rather than profit figures alone. They find elaborate attempts, such as the suggestion system which they mention over and over again, to reward individual workers for contributions to productive efficiency.

It is to this concept of productivity that visitors attribute the basic American attitude toward technological progress. Precisely because in the United States increased productivity is a social, if not a moral responsibility, American industry and American labour—so visitors report—believe in, and accept, technological change rather than resist it.

### 3.—The Attitude Toward the Market

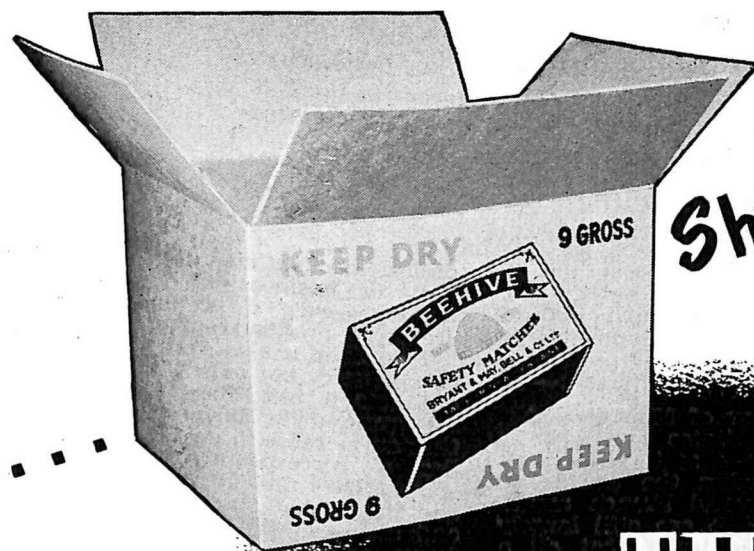
Visitors cannot be blamed for believing, when they reach the United States, what has been told them: that the major factor in the American distributive system is the continental span of the market. Few productivity teams have departed without having learned better.

Of course, the United States is a market larger in territory and in numbers than any country of Western Europe, but it is not the width of the market which constitutes the real difference; France, Italy, Germany and England each offers a larger market than that actually covered by the majority of American businesses with their concentration on one region or area. **It is in depth that the American market differs basically from other concepts and business practice — a qualitative rather than a quantitative difference.**

One example—and it is given again and again by visitors—is the structure of the American automobile market in which last year's car will compete direct with a new model. Another is the television market. What impressed one team the most was a comparison between a mail-

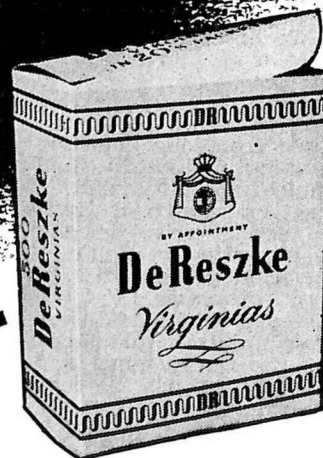
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order catalogue and that of an expensive sporting goods store definitely in the luxury class. They found that practically every kind of merchandise offered by the latter store also was to be found in the mail-order catalogue. "That 'wealth' is not just an economic term but a social one in the United States; that it means that there are the same things for the rich and for the poor, this none of us understood—and it is important."

Closely connected with the concept of the mass market is the American attitude toward the capacity of the market. "We put our stress on the actually existing market which we tend to take for granted. You look for the potential market," is one way some of the visiting teams put it. "We consider it our job to fill existing demands, you in the United States go out to create demands."

Basically the visitors' usual concept is that of a given, static market. Hence a new product is seen as cutting into the markets of all the existing products; competition as taking away sales. The American concept, so visitors report, is that the market is indefinitely expandable. New products create their own demand; competition broadens the market for all.

It is to this that visitors attribute, for instance, emphasis on research: technical, market, product; the pricing policy of progressive companies who often price a new product according to its expected eventual market rather than according to present cost or immediate sales, or the willingness to develop a new product first and to consider its market later. All of these visitors consider significant factors in America's high level of productivity.

#### 4.—Productivity Based on Diversity and Experimentation

Practically every team starts its tour by asking: "What is the standard American cost-accounting system?" "Does the typical labour contract give the union a voice in the setting of production standards?" "What is the typical American pricing policy?" "What is the foreman training programme?" When told that there is no such thing as "the American policy" they are incredulous.

It is not only that they are steeped in the prevailing myth of American uniformity. In their own country or their own industry such things are usually uniform, set by government, by an industry-wide labour contract, a nation-wide labour law, compulsory nation-wide arbitration, or by trade association or cartel. In fact, most of the teams cannot, at first, imagine that important practices and policies could be anything but uniform.

However, most of the teams eventually come to the conclusion that diversity is a major cause of American productivity. It means constant experimentation with new methods, ideas and approaches. "Almost every

company we have seen," wrote a Scandinavian team, "was working on something new, something it was experimenting with in foundry techniques or in personnel methods, in accounting or in merchandise. No two companies were alike. As a result, the entire industry is forever questioning its methods, working on improvements, trying to find a better way."

Even less expected and more baffling to visitors is the prevailing co-operation and the free interchange of ideas and experience. They know when they arrive that American business is highly competitive; they find even more competition than they usually expected. Intensive competition, they believe, must mean secretiveness. It must mean refusal to disclose anything which might help the competitor.

#### 5.—The Importance of the Human Being

Industrial training, management development programmes, the opportunity for workers to rise to the top, are important factors in America's productive capacity. Such factors as the informality in plants and offices, the attention paid to making work easy for the worker, the skill of the foreman in leading his people, are only a few of the things every visiting team noticed. American labour relations seem to them to be based on deep respect for human beings.

The close co-operation between stewards and management is remarked upon again and again; and several teams have underlined the friendly and relaxed atmosphere of American labour negotiations. That they are sincere in the compliments is shown by the fact that the United States always is asked to include a

(Continued overleaf)

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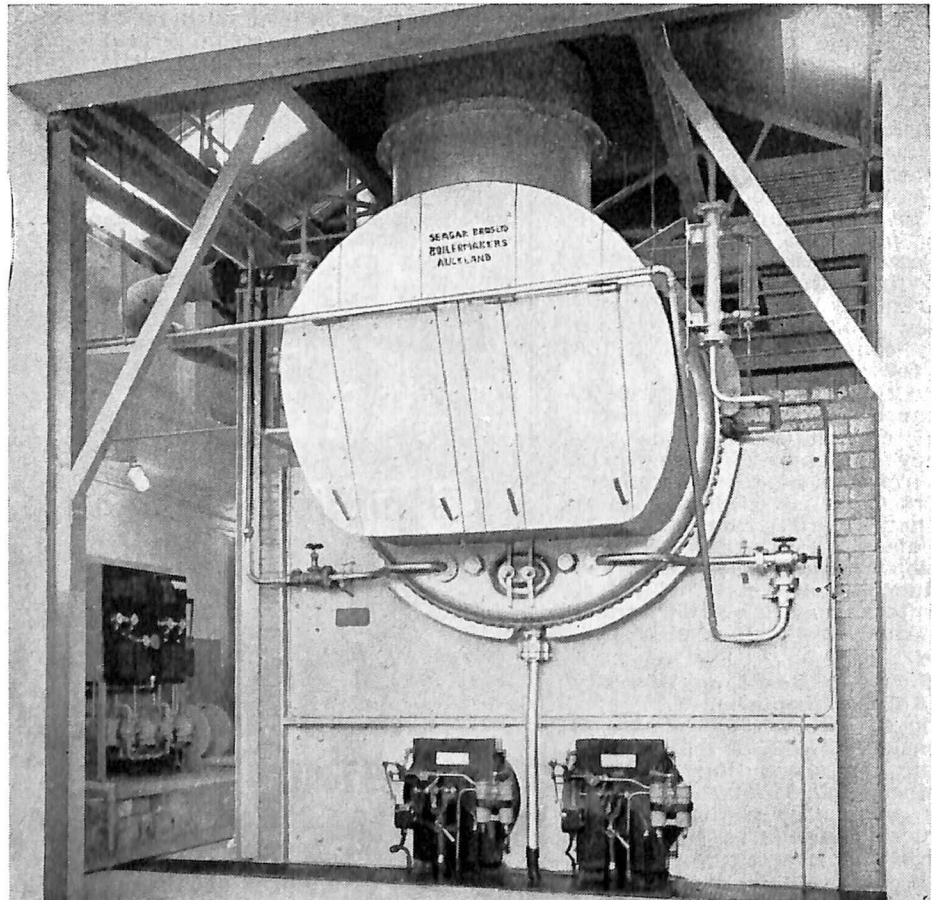
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WRIGHTING, BOILER & STOVE BRICKING, CARGO GEAR  
ANNEALING & TESTING.**

● **ENQUIRIES SOLICITED**



Synthetic plastics have found their way into an enormous range of products. Plastics, antibiotics and synthetic fibres are the top three developments in the past 35 years.

## INDUSTRIAL TELEVISION AIDS ATOMIC SCIENTISTS

HOW to obtain information on conditions in a reactor which had been in service for some years was a problem which recently faced atomic scientists of the United Kingdom Atomic Energy Authority at the Windscale plutonium factory at Sellafield, Cumberland. Direct observation was an impossibility owing to the intense radio-activity, even when the reactor is shut down for maintenance. An industrial television camera, suitably protected, provided the answer.

Its small size — 5¼ x 4 x 11½ in. — enabled it to be inserted through a narrow conduit to the interior of the reactor, whence it televised pictures over a closed circuit to monitoring equipment installed at a safe

distance. This installation enabled scientists to study the exact conditions obtaining in the reactor.

Another example of how industrial television is providing invaluable visual information on the conditions of plant and in a manner impossible to obtain satisfactorily by means of human agency is that of a recent installation by the British Electricity Authority at a new power station in Derbyshire. The fuel used for heating the boilers is pulverised coal, which is jet-injected into the furnace with the air stream and is ignited by pilot oil-burners, the latter being extinguished as soon as full combustion has taken place. In such an operation, it is vital to ascertain that the fuel has fully ignited, as a

labour relations expert in the American management teams which go to Europe.

Most visitors believe that the United States avails itself of a much larger percentage of its human resources than their own nations do.

How much of the American attitudes have the productivity teams taken home with them? Techniques and processes have been adopted wholesale and with good success in many cases. The productivity teams would be the first to stress, however, that techniques and processes without the underlying attitudes would not do much good. Yet precisely because attitudes are important, success has been slow. Attitudes do not transplant fast or well.

The greatest obstacle, however, has been that the American beliefs and principles require something of which most nations have a shortage: management. It becomes quite obvious in talking to visiting teams that the major reason for the stranglehold of the cartel system on an economy is not protectionism, but simply the absence of management. The cartel largely eliminates the need for management by eliminating problems of pricing, merchandising, competition, labour relations or technical efficiency. For this reason the emphasis on the training and development of management on all levels which recently has emerged in the Marshall Plan countries represents a major victory; but it also means that progress will be slow.

After all, though Americans today take for granted the basic attitudes to which productivity is credited, everyone of them was, 30 or 40 years ago, nothing but the pet obsession of a few visionaries. Certainly the productivity teams supply something which neither American dollars nor arms can supply: a constructive programme, a goal and a vision.

firing failure, if unobserved, could result in a serious explosion.

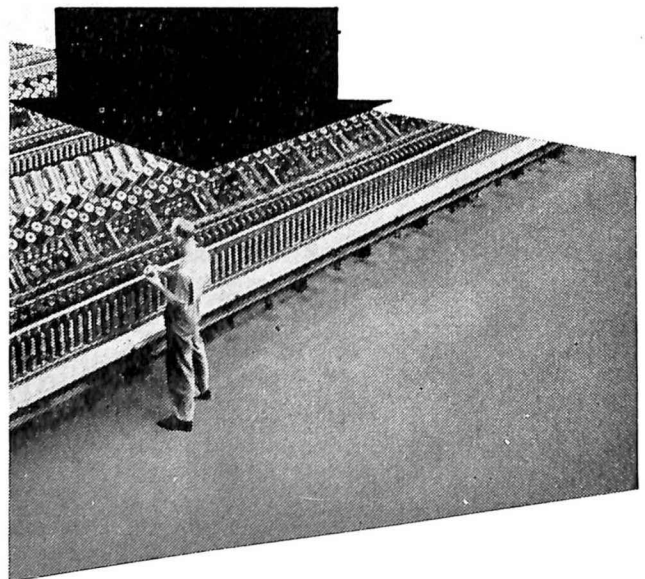
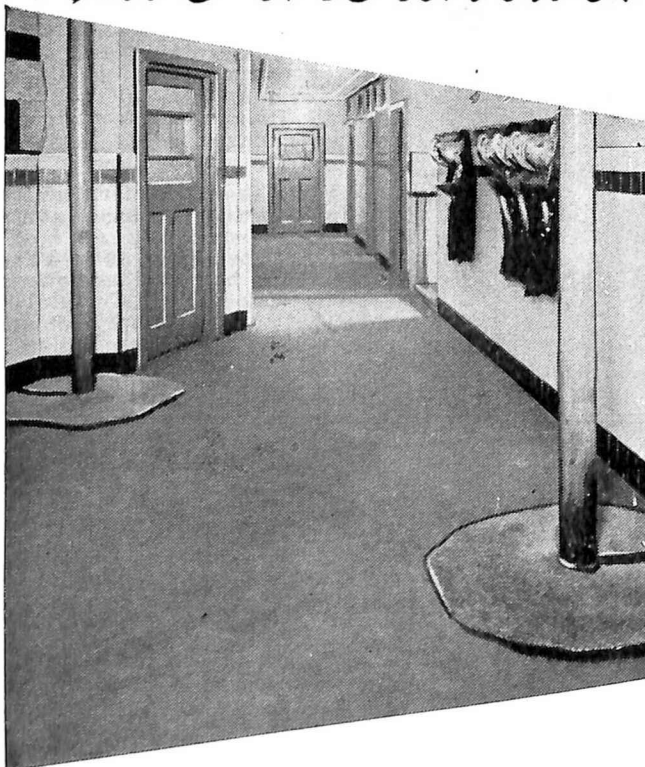
In the past, observation had had to be maintained through inspection ports in the wall of the furnace, a procedure which made supervision difficult in modern stations where control is exercised from a point which may not be immediately adjacent to the boiler. Experiments were carried out with an industrial television camera, fitted with a special air-and-water-cooled lens, and installed in the explosion door aperture at the base of the boiler.

The industrial television control unit and monitors were placed at a convenient point alongside the combined boiler and turbine control panel. The experiment was successful, the B.E.A. engineers being able to follow, at the control panel, all phases of the boiler ignition procedure and to detect conditions of imperfect combustion within the area under observation.

WHEN IT'S A QUESTION OF INDUSTRIAL FLOORING

DOES IT RESIST ACID OR FAT?  
 IS IT HYGIENIC?  
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 WILL IT WEAR?  
 IS IT JOINTLESS?  
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*have the answer*



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**LINOTOL** (illustrated)

Laid in situ on existing concrete or wooden floors.

- \* For Printing Works, Schools, Factories, Bakeries, etc.
- \* Withstands wear by wheeled traffic.
- \* Dustless, Fire-resistant, Jointless, Sanitary, Warm under-foot.

**RUBCRETE**

A fleximer type flooring — highly resistant to acids, alkalis, fats, sugar, greases, oils and most solvents.

- \* For Ablutions, Processing rooms, Kitchens, etc.



**I**N the space of less than half a century Hastings has grown from a straggling collection of wooden buildings to the Dominion's newest city. A thriving and prosperous centre, Hastings is ideally located in a district rich in the production of fruit, meat and wool. This fertile area's glorious climate is second to none in the country; the productive capacity of its land is world renowned.

Side by side with the development of the district's rural lands has been the steady growth of industry in the fast-growing centre of Hastings. Particularly in the past decade, many important industries have been established in the city, most of them closely allied with primary production.





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# “Our Blessings are Numerous”

HASTINGS has a history of only 80 years. The first sale of sections in Hastings (called “Hicksville” in early documents) occurred as late as 1873. The borough was constituted in 1886. I have heard some of our residents say that they can remember when Heretaunga Street was a swamp and the home of pukeko.

Today we have a thriving, prosperous and progressive community of 20,000 people in the borough area of 2,600 acres, as “urban” population—that is, within a radius of three miles from the Post Office. Nearby is the fast-growing “dormitory” borough of Havelock North.

Hastings will be formally proclaimed a city in September, 1956, during our annual Blossom Festival. What explains this progress, which is so remarkable when it is remembered that our sister centre—much older than ourselves—only 12 miles distant has shown great progress and now has a population exceeding 20,500?

The Heretaunga Plains by which we are surrounded is probably the most naturally fertile area in New Zealand. Our orchard industry is highly developed and produces upwards of 2,000,000 cases of apples, pears and stone fruit each season. Huge crops of peas and other vegetables are grown for canning at Hastings. In the district are two of the largest freezing works in the Dominion. The tremendous wool clip adds its income to Hastings’ financial wealth.

Our blessings are numerous. Our problems are only those associated with growing pains. From the foresight of our early administrators we have derived many advantages, including such civic amenities as a fine block of civic buildings and the Municipal Theatre. The borough is favoured by numerous splendid parks and reserves. Early administrators also established the Mangaroa forest reserve which is now coming into profit, also the Windsor Park motor camp, well known throughout New Zealand for the excellence of its amenities and appointments. Cornwall Park and Frimley Park are beautiful areas of trees, shrubs and flowers.

The spirit of civic enthusiasm finds expression in our Junior and Senior Chambers of Commerce and the Rotary Club and most particularly in our public relations organisation, Greater Hastings, Inc., which works in close liaison with the Hastings Borough Council. This happy and efficient set-up has been apparent on many occasions in the past three years.

We look forward with confidence to a continued and rapid development of the natural resources of the surrounding district of this northern City of the Plains.



W. E. BATE,

Mayor of Hastings.

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# GREATER HASTINGS, Inc.



**for a brighter town  
and a better spirit  
of citizenship**

**G**REATER HASTINGS INC., which was originally started by a band of enthusiasts just over five years ago with the intention of brightening our town and creating a better spirit of citizenship, has in the short space of time of its existence far outgrown these aims and objects and is now functioning very successfully indeed as a Public Relations Office for Hastings in conjunction with the Borough Authorities, as well as organising other activities for the town.

It has proved what a need a growing town like Hastings has for a Public Relations Office and our capable and genial Organising Secretary, Mr. Ken Sparks, is very fully occupied in his various duties. The office of Greater Hastings has now become the focal point for visitors to our town who seek any information pertaining to the different amenities and facilities we are able to offer them.

In this respect, we are very happy to extend to all interested industrialists who would like any information whatever regarding expansion or development a cordial invitation to contact our Secretary, and can assure

them of our whole-hearted co-operation in supplying them with all details they may require.

Two big attractions which have become nationally famous in recent years are the Hastings Highland Games, which are held annually at Windsor Park, Hastings, during Easter, and the Hastings Blossom Festival, another annual function held in the first week of September each year; these two big functions are Greater Hastings activities.

Our Camping Ground, which is ideally situated at Windsor Park, an area of 62 acres, with wonderful amenities for all outdoor amusement for campers, is another facility which Greater Hastings has sponsored in conjunction with the Borough Authorities, and here again we are proud to extend an invitation to all visitors to come and enjoy a holiday in these wonderful surroundings.

**H. B. POPPELWELL,**  
**President,**  
**Greater Hastings.**

# “A Glorious Climate, Rich Fertile Soils and High Productivity”

**The wealth of Hastings has multiplied many times since 1870, when land was offered for sale at £3 an acre.**

**H**ASTINGS is one of the largest provincial towns in New Zealand, with an urban population of 26,000, and is renowned for its glorious climate, rich fertile soils and high productivity. As the distributive centre and market town of the fertile Heretaunga Plains, Hastings has grown rapidly in keeping with the increasing prosperity of the Hawke's Bay Province.

Eighty years ago the centre of Hastings was little more than a swamp. About 1870, Mr. Thomas Tanner owned the land in the centre of which is now Hastings and he offered an acre of land at £3 an acre for every 3 acres ploughed—and to accept payment in labour. In 1871 he offered a block of 640 acres between Hastings and Havelock North at £4 an acre, without getting

a buyer. In 1910 the capital value of the borough was £1,370,000—today the capital value is over 19½ million.

**Within the 2,613 acres of the borough boundaries are:**

**The largest fruit cannery in New Zealand, with a 1954 production of over 10,000 tons of vegetables and fruits of 27 million units.**

**A quick freeze factory producing**



A recent aerial view showing part of the business area of Hastings. The town covers an area of 2,613 acres, of which 130 acres are occupied by well-planned parks and reserves.

## THE WEALTH OF HAWKE'S BAY AND THE DISTRICT OF WHICH HASTINGS IS THE CENTRE AND MARKET TOWN

**SHEEP** run totalled 4,800,000 at June 1954, of which 3,000,000 were breeding ewes, 80,000 rams, 320,000 wethers, and 1,400,000 lambs and hoggets, there being 2,935 sheepowners, occupying an area of 2½ million acres of farmland. More sheep are run to the acre in Hawke's Bay than elsewhere in New Zealand.

**WOOL** sold in 1953/54 totalled 160,000 bales — the greatest number in New Zealand — realising over £11,000,000 at an average of £70 a bale. Five of the six wool-broking firms operating in the district have their head office in Hastings. This wool, among the finest crossbred in the world, is bid for by buyers from all over the world.

**CATTLE:** There are over 800 dairy farms of over 90,000 acres carrying 500,000 cattle and 50,000 dairy cows.

**ORCHARDS:** Over 1½ million bushel cases of fruit are harvested annually from the 415 registered orchards (50 trees and over). In 1954, with 224,462 pip fruit trees, 138,951 stone fruit trees and 1,384 citrus fruit trees covering over 3,300 acres, the yield from these trees was easily the highest in New Zealand.

**GRASS-SEED** production exceeds 4 million pounds annually, the yield of perennial ryegrass being the highest in New Zealand at 497lbs. per acre.

**MARKET GARDENS AND SMALL FRUITS** cover an area of over 7,000 acres of which in 1954 over 4,500 acres were in peas, 500 acres in asparagus, 450 acres in tomatoes, and 450 acres in vineyards. Fruits and vegetables of all kinds are produced and dispatched to all parts of New Zealand as well as being canned, deep frozen, and bottled for export and local consumption.

packages of vegetables for export and local consumption.

A dairy factory with a 1954 production exceeding 1,787 tons of butter and 105 tons of cheese, half of which is exported. Some 2,000

farmers supply this co-operatively owned dairy company.

A milk treatment station, one of the most modern in New Zealand, pasteurising and bottling 2,000,000 gallons of milk and 25,000 gallons

of cream annually, washing and filling 13 million pint bottles and 2,000,000 half-pint bottles, and supplying 100,000 gallons of milk to schools.

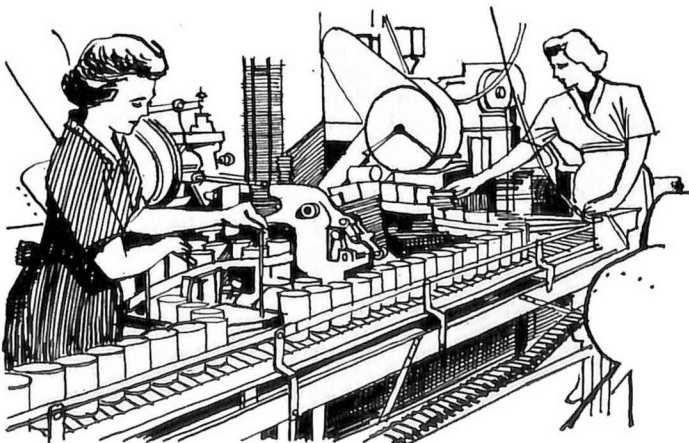
An egg-floor, receiving an average of 750,000 dozen eggs annually to be pulped for export and local consumption, chilled and sold in shell.

Stock saleyards where more livestock is sold annually than at any other centre in New Zealand (50,000 sheep at an annual ewe fair).

A racecourse of 84 acres, with seating accommodation in imposing stands, which, outside the main centres, are easily the best in New Zealand. Many of New Zealand's famous racehorses have been trained here.

A camping ground recognised among the best appointed and most popular in New Zealand in a park of 51 acres.

Five sawmilling and timber yards, handling the dressing, drying and





# AERIAL AGRICULTURE LIMITED

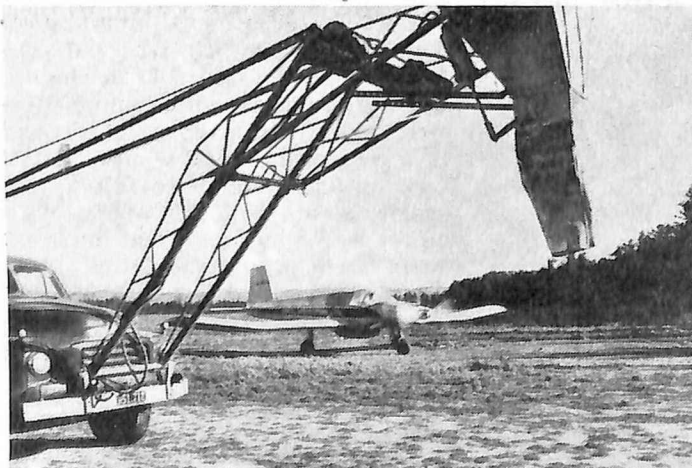
AERIAL WORK CONTRACTORS

P.O. BOX 250

PHONE 2840

QUEEN ST., HASTINGS

## CONSULT US FOR:



### ● AERIAL TOPDRESSING

Highest quality performance assured by the use of fully experienced pilots and ground staff operating the latest and best aerial top-dressing equipment—Fletcher FU24 and D.H.82 Tiger Aircraft, "Airtop" Bulk and Bag Hydraulic Aircraft Loaders.

### ● HORMONE SPRAYING

Last season we sprayed 48% of the total area covered in N.Z. We achieve a very high degree of accuracy in application. For Thistle and Weed Control, we have already sprayed thousands of acres with remarkable success.

### ● CROP DUSTING

We were the first to undertake this in N.Z. Aphis in rape and cut-worm in barley were treated with 100% results.

### ● SEED SOWING

We, uniformly and accurately, at whatever weight per acre required, sow new pastures or oversow with clovers. Costs are competitive.

**The Tomoana showgrounds of the Hawke's Bay Agricultural and Pastoral Association cover an area of 133 acres and are regarded as the most beautiful in New Zealand. Picture shows the Waikoko gardens, which form part of the grounds.**



treating of native timbers (rimu, matai, kahikatea and totara), New Zealand exotics (radiata pine and Douglas fir), Australian hardwoods and American softwoods.

**The largest fruit receiving depot in New Zealand, the Apple and Pear Board's building with an area of handling the dressing, drying and 60,000 sq. feet and cold storage space for 120,000 bushel cases of fruit.**

**A municipal theatre with a seating capacity of 1,350 and one of the largest stages in the Southern Hemisphere.**

**Just outside the present borough boundaries are:**

**Two of the largest freezing works in New Zealand, which kill for export over 100 million pounds annually of the finest lamb and mutton, daily killings during the season exceeding 26,000 lambs. Some 74,000 head of cattle are killed annually for the chiller beef trade.**

**The Hawke's Bay Agricultural and Pastoral Society's Showgrounds, regarded as the most beautiful in New Zealand, with an area of 133 acres. The 1954 Annual Spring Show was the**

**85th, with an attendance on "People's Day" of over 30,000.**

**The memorial hospital, with 174 beds and a total staff of 270, of which 142 are nurses.**

**The Hawke's Bay and East Coast Aero Club and Aerodrome at Bridge Pa. Founded in 1928 following the visit of Sir Charles Kingsford-Smith, the club now has six aircraft and the aerodrome is also the headquarters of nine aerial topdressing companies and their aircraft and also of the N.Z. Aerial Mapping Company.**

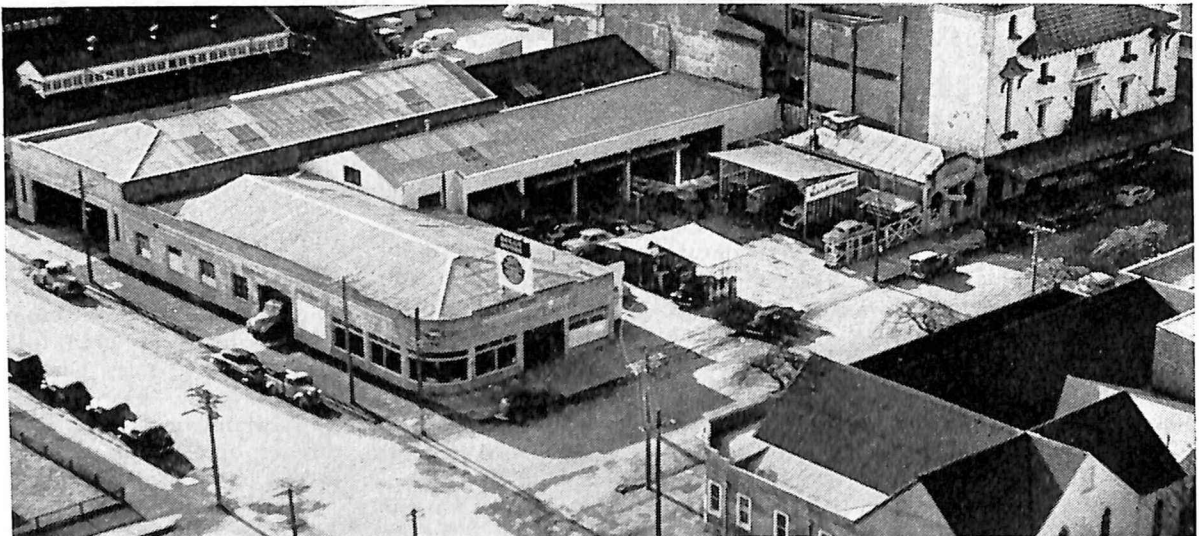


**View of part of the business area looking south.**

# BAILLIE MOTORS LIMITED

## *Hawkes Bay's Live Sales and Service Organisation*

**PROVIDING EFFICIENT TRANSPORT  
FOR NEW ZEALAND'S  
GREATEST EXPORTING PEOPLE**



Ever extending but never large enough. The present headquarters of Baillie Motors Ltd.

**T**HE Sheep Industry is the Dominion's greatest money-earner — over 56 per cent of our Export Income comes from the sheep (wool, £88 millions, frozen lamb, mutton, skins, etc., £48 millions). One eighth of this total (£17 millions) comes to Hawke's Bay. An additional estimated £4 millions for exports of beef, fruit, canned goods, grass and clover seed, etc., gives Hawke's Bay's 98,000 population an export income of £214 per head (compared with £112 per head for the rest of the Dominion). The great Sheep Industry and the other lesser but most important activities call for efficient transport — and plenty

of it — for which they can well afford to pay.

Recently we called on Baillie Motors Ltd., a powerful organisation which has built up a unique business with headquarters in Hastings and branches in Napier and Wairoa and representation in Waipukurau. We wanted to find out the reason for this large organisation in a town the size of Hastings. We were given the above revealing facts.

### **A FAR-SIGHTED FOUNDER**

When he set out to enter the business of selling and servicing cars and trucks, Mr. Guy Baillie first embarked on a tour of self-education.



Present Baillie Motors Bedford Trucks Division and Engineering Shop. This central three-quarter acre block, corner of Queen and Nelson Streets is the site on which it is proposed to build modern premises to become Baillie Motors Headquarters.

He travelled the U.S.A., giving special attention to the Assembly Plants, Research Divisions and Proving Grounds of General Motors. Returning to New Zealand at the end of the year (1936) he founded in Hastings the business of Baillie Motors Ltd. as the Hawke's Bay dealers for General Motors with agencies for Vauxhall-Bedford and Pontiac. No doubt his selection of Hastings followed some research into possibilities with perhaps a study of some figures related to those with which this article opens.

It was a modest beginning; Capital

£6,000 and a staff of 9 people. At the outbreak of War in 1939, this had grown to 30, but dwindled to 11 during the national emergency. Today the business is again reaping the benefit of careful planning, wise management and the sound base of research and investigation on which it was originally founded. The staff now numbers 74 and the Registered Capital is £60,000.

#### LIBERAL OUTLOOK TOWARDS STAFF

The founder attributes the success which has followed his enterprise to

the practical application of the golden rule in all dealings both with the public and with his staff. By providing incentives and encouraging key men to accept higher responsibilities, he has gathered around him a happy, efficient team each of whom gives the impression that he or she is personally interested in you — and in the business of Baillie Motors Ltd. You have only to speak to any member of the organisation to understand why the business has grown to take so large a part in the transport of the Dominion's greatest exporting people.



The Wairoa Branch.





Interior view of our well-stocked modern store.

**ESTABLISHED 62 YEARS**

**We are Agents for:**

**Unique Sash Balances  
Sandy Louvres  
Dexion Slotted Angle  
Whirlpool Washing  
Machines  
Motala Stainless Steel Sink  
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**Stockists of:**

**IMPORTED TIMBERS  
Oregon - Cedar  
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**N.Z. TIMBERS**

**Rimu - Matai - Tawa  
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Pine**

**HARDWARE:**

Lime, Cement, Steel, Galvanised Iron, Drainpipes, Galvanised Piping, Pinex, Gibraltar Board, Interior Fittings, Wonderheats, Champion Electric Stoves, Tayco Water Boilers, Paints, Netting, Nails, Doors, Plywood, Basins, Baths, Tap Fittings, Corrugated Fibreglass, Glenburn Bricks, etc.

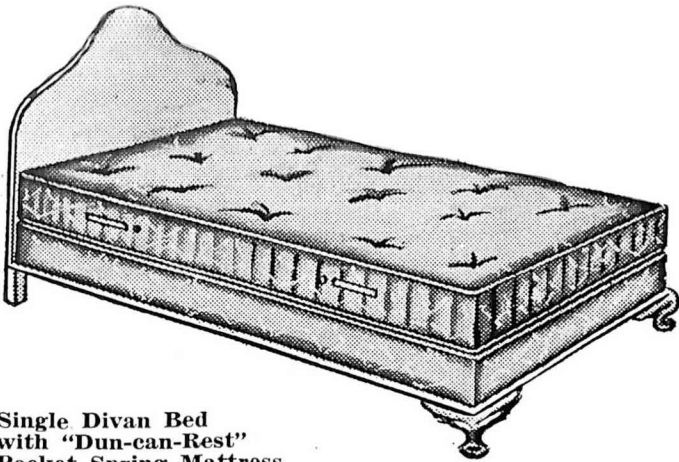
**H. H. Campbell & Sons Ltd.**

**Timber - Glass - Hardware - Oil and Colour Merchants**

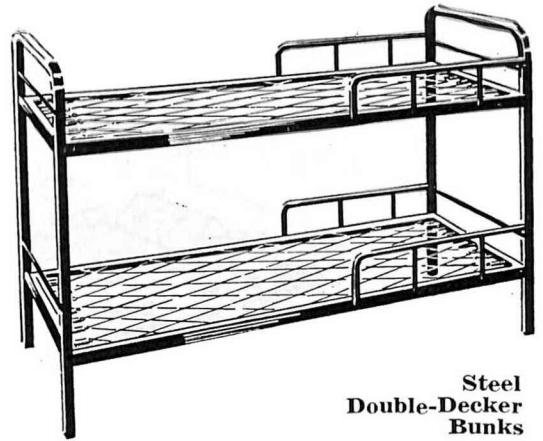
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603 KARAMU ROAD  
**HASTINGS**

P.O. BOX 389



Single Divan Bed  
with "Dun-can-Rest"  
Pocket Spring Mattress  
on Spring Bed Base.



Steel  
Double-Decker  
Bunks



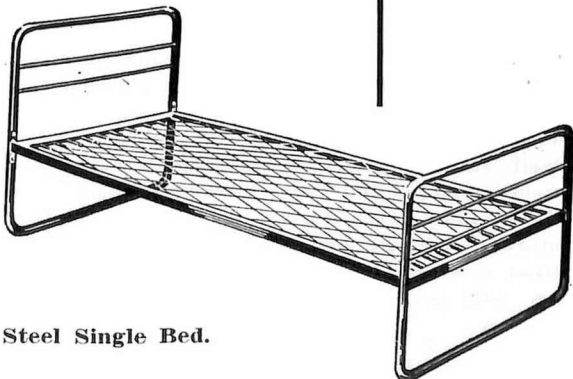
The Secret of the most  
Comfortable Rest  
in the world —  
Duncan-Rest Mattress  
with Spring Bed Base.

## Manufacturers of

DIVAN BEDS  
POCKET SPRING MATTRESSES  
INNER SPRING MATTRESSES  
LINK MESH MATTRESSES  
WIRE MATTRESSES  
UPHOLSTERERS SPRINGS  
SINGLE & DOUBLE CONE  
SPRING UNITS  
TENSION SPRINGS  
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STEEL BEDS & BUNKS  
POCKET SPRING PILLOWS  
REPETITION WOOD TURNINGS

# Duncan's

FURNITURE MANUFACTURING CO. LTD.  
"The Bed People"

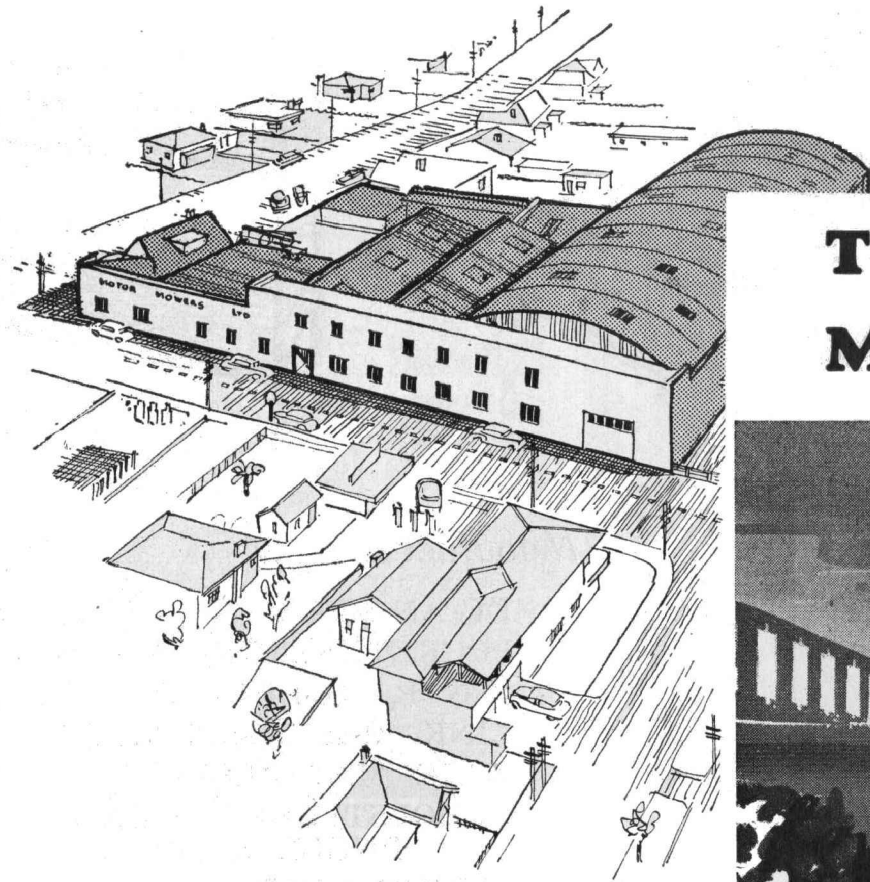


Steel Single Bed.

TELEPHONES 2849  
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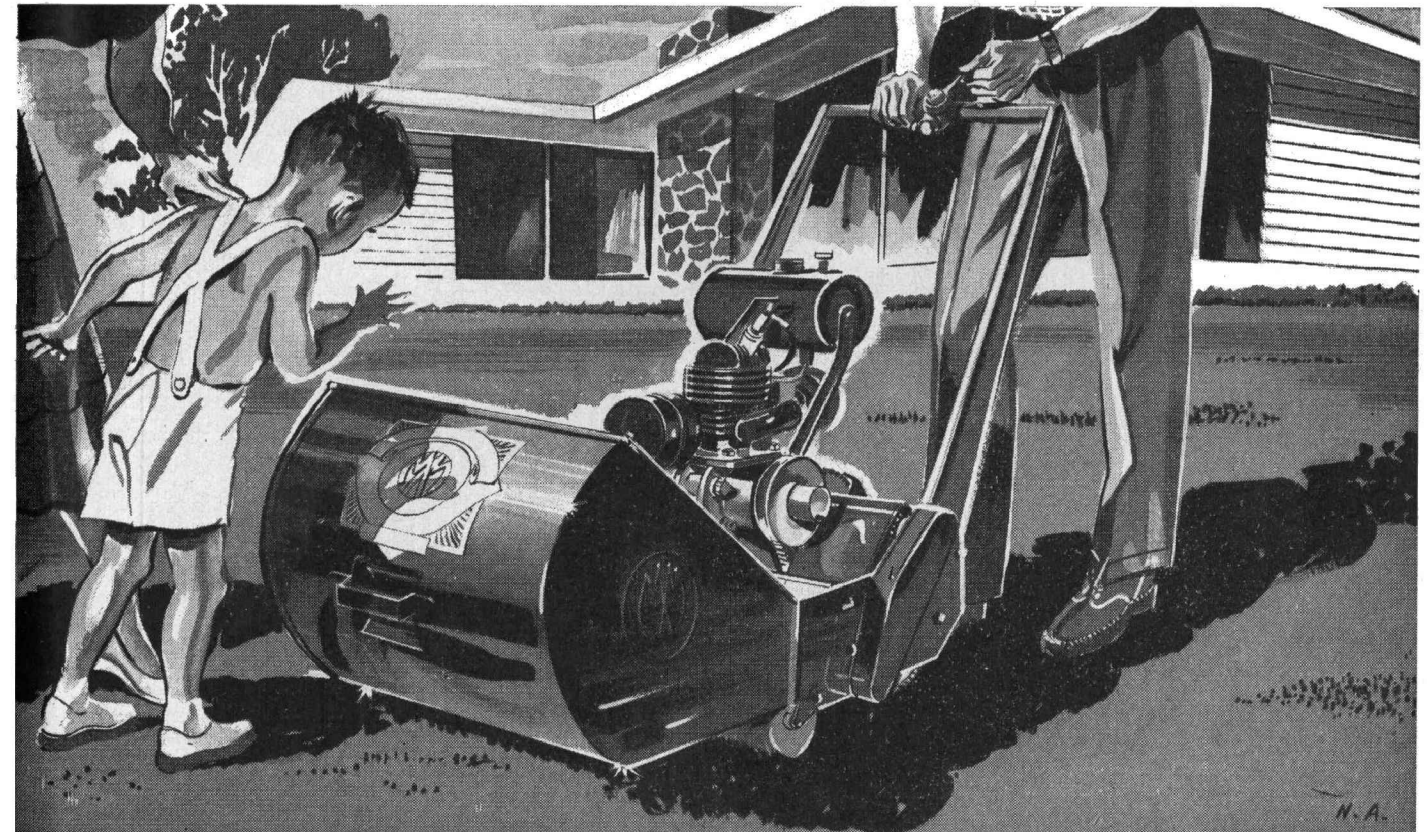
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405 AVENUE ROAD EAST HASTINGS N.Z.



Above: the Motor Mower's modern plant, 1000 Karamu Road, Hastings.

## The success story of MORRISON MOTOR MOWERS...



... started in

## HASTINGS seventeen

**S**INCE the early days of Motor Mowers Limited, tens of thousands of New Zealand and Australian lawns have been trimmed and cared for by Morrison Motor Mowers.

As with all successful products, changes have been made from time to time, gradually improving this tremendously popular Motor Mower. When customers reported difficulties, these were smoothed out or eliminated. For instance, long grass and tangled weeds no longer trouble a Morrison owner because an anti-clogging guard has been added. The Morrison now operates smoother and faster with rear rollers running on ball bearings. One hand controls the completely automatic clutch...

THOUSANDS OF MORRISON MOTOR MOWERS

## years ago...

... and so the staff of 75 at Motor Mowers Limited, Hastings, keeps progress rolling forward with after-sales-service matching the quality of the mower itself. Today, there are 450 re-sellers and service agents in New Zealand and a growing number in Australia where Morrison Motor Mowers are selling as fast as they can be made and shipped.

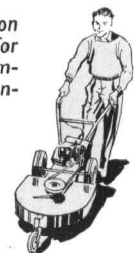
And the Morrison Motor Mower has two sturdy brothers—the new Morrison Motor Scythe and the all-purpose Morrison MK 2 Cultivator. Morrison is going ahead... an industry born in Hawke's Bay, thriving in Hawke's Bay and employing more and more Hawke's Bay men and women.

HAVE BEEN SOLD IN NEW ZEALAND & AUSTRALIA

Above: The latest model of the ever-popular Morrison Motor Mower—the lowest priced complete motor mower in New Zealand by pounds and pounds!



Right: The new Morrison Motor Scythe—ideal for cutting long grass—trimming road verges, controlling weeds.



Above: The Morrison Cultivator—a high grade machine powered by a 1 H.P. Villiers engine.

# **WE SERVE**

*the Community  
town and  
country*

*Authorised Dealers*  
**VOLKSWAGEN**  
**FERGUSON SYSTEM**  
**SERVICE STATION - LUBRITORIUM**

## **BARCLAY MOTORS Ltd.**

**HASTINGS - NAPIER - WAIPUKURAU**

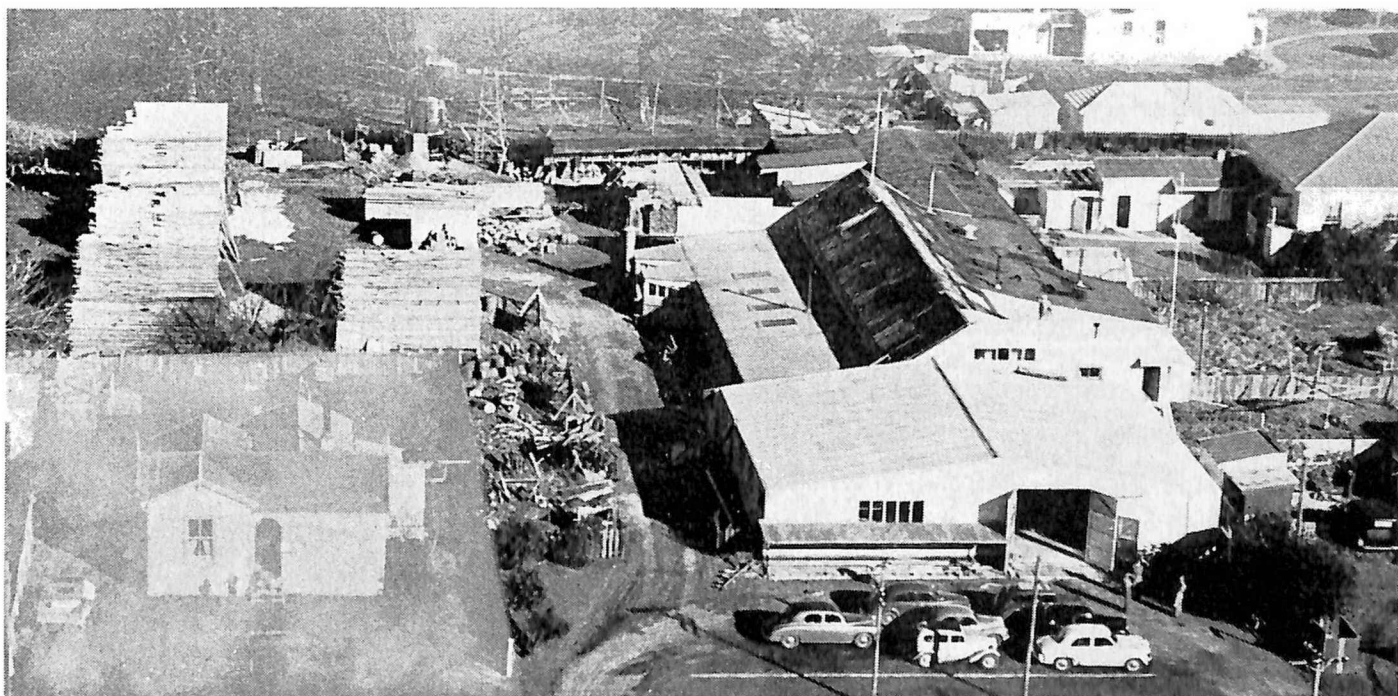
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*19 Years of Progress . . .*

**FOWLER, DRUMMOND & WADDELL LTD.**

HASTINGS

*Makers of Quality Furniture*



An aerial view of the factory and yards

***Wholesale Suppliers to Most Districts of the North Island***



Part of the Assembly Department

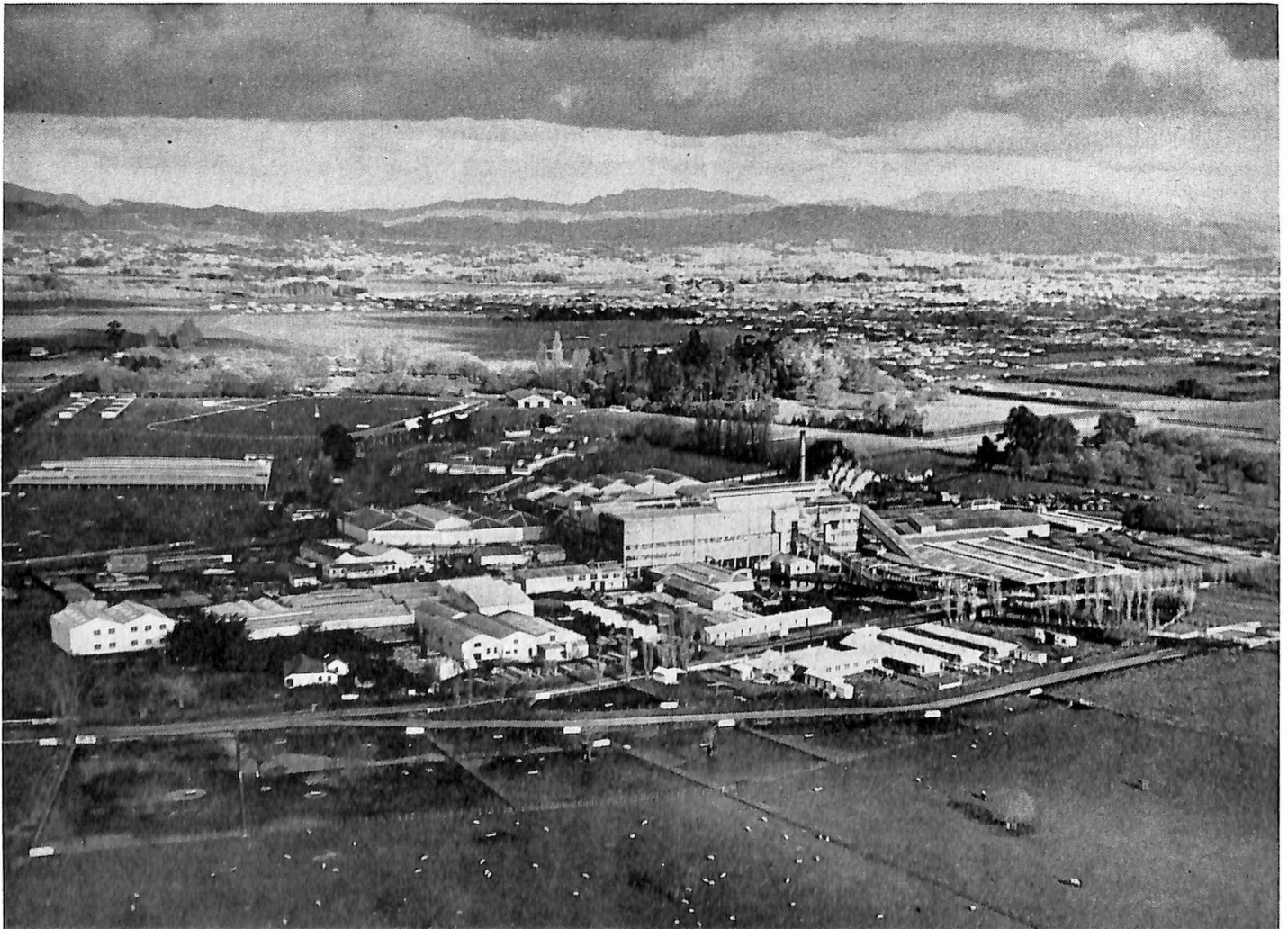
● OUR LARGE  
FACTORY IN  
HASTINGS  
HAS A STAFF  
OF OVER 50  
SKILLED TRADESMEN  
AT YOUR SERVICE

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# NELSONS (N.Z.) LTD.

*Tomoana Freezing Works have contributed  
to the wealth of Hawke's Bay since  
1883*



***The Tomoana Works is one of the most modern structures of its kind in the world. Daily capacity of the works is about 13-14,000 sheep and lambs and 500 cattle in addition to other stock.***

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## *from modest beginnings . . .*

**T**HE Tomoana Works were started in a very modest way by Messrs. W. Nelson and J. N. Williams in the year 1880 for the manufacture of the Extract of Meat in connection with the "boiling down" of sheep. In the following year, Meat Preserving was added to the industry.

### **FROZEN MEAT**

In 1882 the Colonial World was electrified by the arrival in London on the 14th May of the ship "Dunedin" with the first cargo of frozen meat from New Zealand (consisting of 4,460 carcasses of mutton and 449 carcasses of lamb) and the sale of it at (for those days), fabulous prices, a fact which resulted in freezing works being demanded all over the country. Thus, in the early part of 1883 the Company of Nelson Bros. Ltd., was formed in London with what in those days was a large capital and freezing buildings were commenced at Tomoana in the middle of 1883 to deal with 400 sheep a day—capable of being increased to 800 a day. As showing how little it was realised at that time the big things looming, the Manager (Mr. W. Nelson), was subjected to a good deal of quiet chaff for supposing that even a regular supply of 400 sheep a day would be forthcoming, much less 800. In 1884 the Works shipped during the whole season 41,000 sheep and 10 bullocks. The combined capacity of the Hawke's Bay Works is now about 13-14,000 sheep and lambs, plus cattle, calves and pigs per day.

In February 1884, freezing was commenced and the following 31st March the first shipment consisting of 9,000 sheep averaging 75½ lbs., was made by the sailing ship "Turakina". In a very short time the freezing capacity was doubled and in 1891 the machinery department was completely re-modelled and the

original machines scrapped. The freezing building was also re-modelled and the killing capacity increased to six times its original capacity, which was the position at the First World War period.

### **FOUR STOREYS**

In 1924 the Works were completely rebuilt in reinforced concrete and brick to four storeys and since then further major additions and improvements have been made (upwards of £300,000 since the Second World War), until now it is one of the largest and most modern structures of its kind in the world. This progressive policy has kept the Works capable of processing the increased production of the fertile lands of Hawke's Bay and continual expenditure is being made to ensure keeping abreast of the latest developments in processing and marketing New Zealand's primary products.

In the 1930's when the chilled beef trade commenced, Tomoana was one of the first works to provide facilities and ship chilled beef in quantity. These facilities are constantly being added to in order to cope with the expansion of this trade.

Tomoana was a pioneer in the development of the numerous by-products of the industry and the "Tomoana" brand of all stock foods and fertilisers is well-known throughout New Zealand.

From its very humble beginning in 1883, Tomoana has grown until in 1955 it provides work for upwards of 1,000 employees with an annual wage pay-out of over half a million pounds and uses in the course of a year, stores and materials such as coal, electricity, timber, lime, packages etc., plus transport by rail and road, amounting to a further £400,000. All this apart from the money distributed in the purchase of all classes of livestock. ●

*visit . . .*

# **The Leopard Brewery**

(D. H. NEWBIGIN)

Hastings Street North  
**HASTINGS**

TELEPHONES 4318, 2764

P.O. BOX 171

**For All Your Requirements**

**STOCKISTS OF**

Export Ale

Pale Ale

Hawk Ale

Lagered Ale

D. B. Lager

Pilsener Lager

Red Band

Crown

Guinness Stout

Tennent's Lager

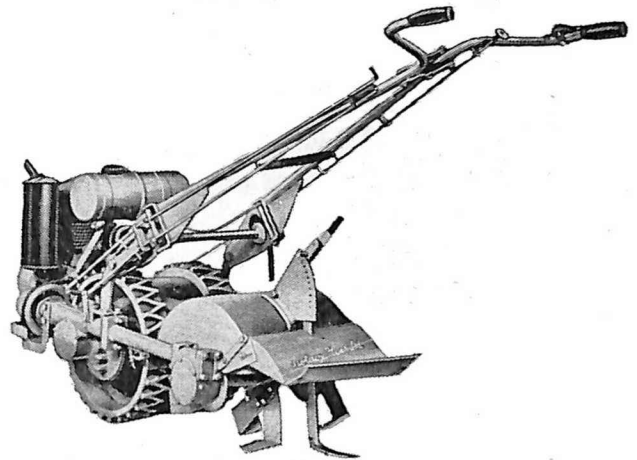
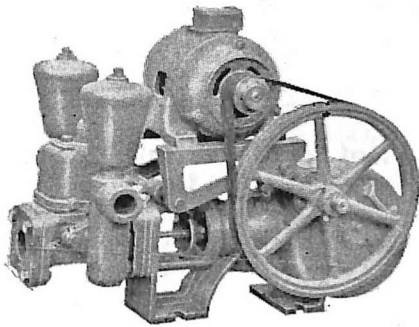
Newbigin's Stout

And the finest selection of Spirits, Liqueurs  
and Wines Available

**ALWAYS INSIST ON LEOPARD PURITY  
SOFT DRINKS**

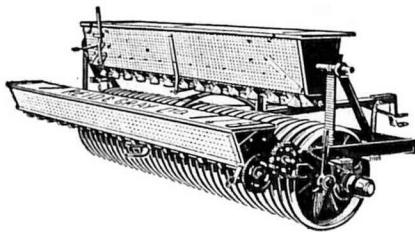
*Open Saturdays — 9 a.m. to 12 Noon, 2 p.m. to 5.30 p.m.*





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**Heretaunga Street West**

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**Agricultural Machinery Merchants  
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# SERVICE

**Where Efficient Plant and Careful Management Unite High Quality with Low Price**

Production-line methods applied to Woodware have built this flourishing Hastings enterprise, employing over a hundred people. For versatility of plant, large scale operation and value for money, Furnware fills a unique place in New Zealand industry.

## FOR THE MANUFACTURER

### COMPONENTS OF WOOD

If you use wooden components in the manufacture of your product, we should like to quote you. Following are just a few from our large-scale orders:—

### WOODBENDING

for Chair Backs - Wicker Perambulators - Invalid Chairs, etc.

### AUTOMATIC LATHE-TURNED ARTICLES

such as Tool or Utensil Handles, Textile Bobbins, Lawn Mower Rollers.

### VACUUM CLEANER BRUSH STOCKS, ETC.

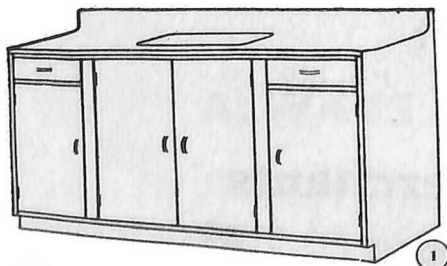
## FOR THE BUILDER

BOTH TRADE AND AMATEUR

### KITCHEN UNITS

**Fully Assembled  
Time Saving  
All Units Match Up  
for Size  
Competitive Prices  
Delivery within 4 weeks**

We have supplied Kitchen Joinery for a vast number of State Houses and Private Homes, including the largest private housing contract completed in New Zealand (600 homes). Of highest quality, built to rigid standards, of selected timbers and highly-skilled workmanship. We illustrate some of our 17 different units.



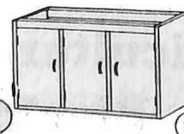
SINK BENCH



DRESSER UNIT



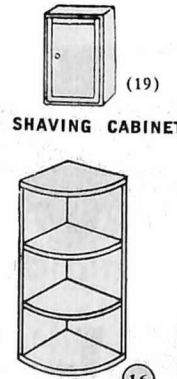
WALL CUPBOARDS  
DOUBLE DOOR



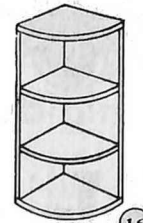
SINGLE DOOR



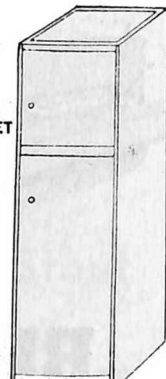
BIN UNIT



SHAVING CABINET



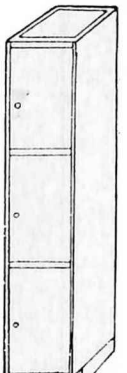
CORNER SHELF



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LETTER BOX



SAFE

**High-precision Woodware Components, Fully-assembled Kitchen Units,  
School and Household Furniture sent all over New Zealand**

**FOR SCHOOLS  
AND LARGE OFFICES**

We enjoy a large volume of work on behalf of Education Boards and Schools. Large quantities of School Furniture leave our plant regularly. School Desks and Chairs are a specialty. We also supply a limited quantity of school gymnasium equipment, such as vaulting boxes, spring boards, wall-bars, balancing benches, etc.

**TUBULAR STEEL SCHOOL FURNITURE:** We have recently installed plant for the manufacture of Tubular Steel School Furniture including "bonderising" metal treatment before painting.

**OFFICE DESKS** are being turned out in quantity for Government Departments, large enterprises, etc., in a wide range of sizes and prices. These are all to standard specifications.

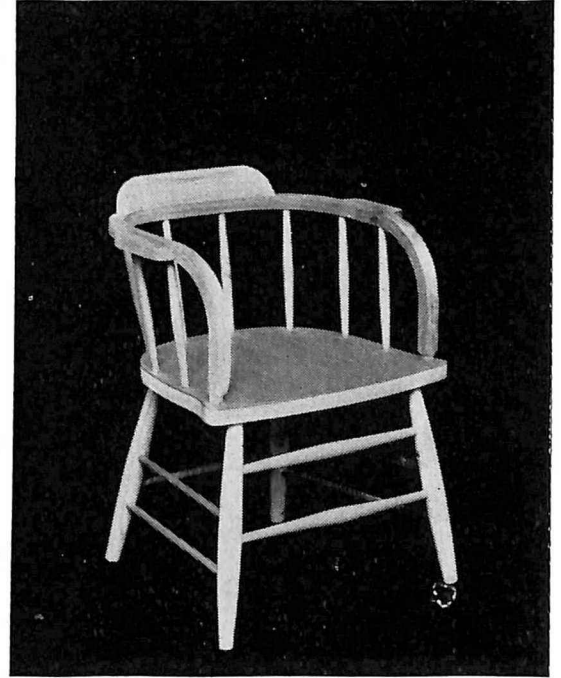
**FOR THE WHOLESALER  
AND LARGE RETAILER**

**WOODEN TOYS** such as seaside spades, skipping rope handles, junior cricket bats, etc.

**KITCHEN CHAIRS, STOOLS, TABLES,** etc.

**BABY CHAIRS** of all kinds, **OCCASIONAL TABLES.**

**FUNERAL CASKETS.**



Furnware Douglas Office Chair

**"Would we make it?"  
If it's wooden, we would.**

**AN INVITATION**

You are cordially invited to visit us when you are in Hastings. Our Modern Factory in Queen Street West houses a most up-to-date Woodware plant and we should be glad for you to inspect this. At the same time, you will be able to judge the quality of workmanship and materials in our productions.

**IF YOU USE MACHINED WOODWARE LET US  
QUOTE YOU.**

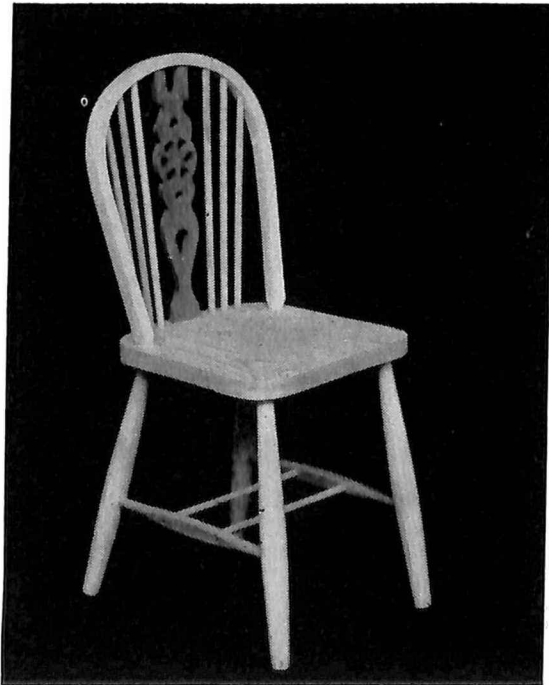


**FURNITURE & WOODWARE LTD.**

**416 QUEEN STREET WEST — HASTINGS**

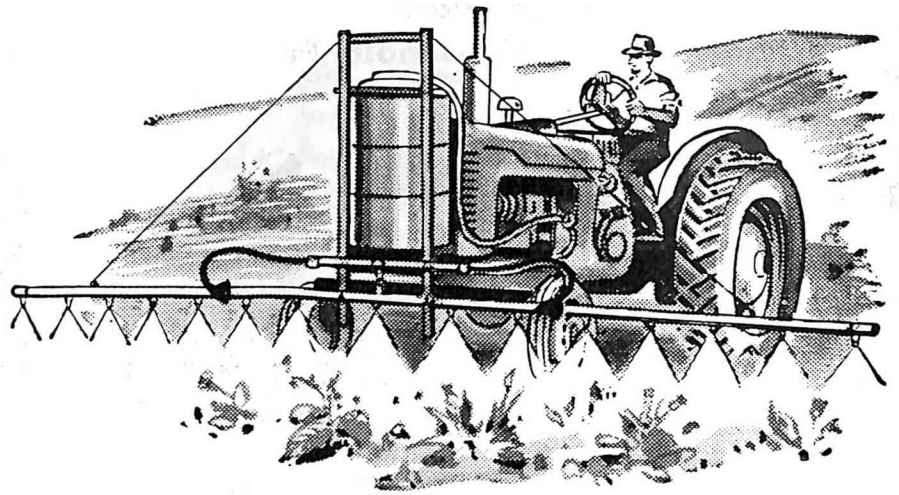
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**Telephone 3509**



Furnware Wheelback Chair

**Authorised  
Hawkes Bay  
Dealers**



for

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Sole Distributors of:

**INTERNATIONAL — Motor Trucks, Wheel and Crawler  
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UP-TO-DATE SERVICE AND SPARE PARTS FACILITIES,  
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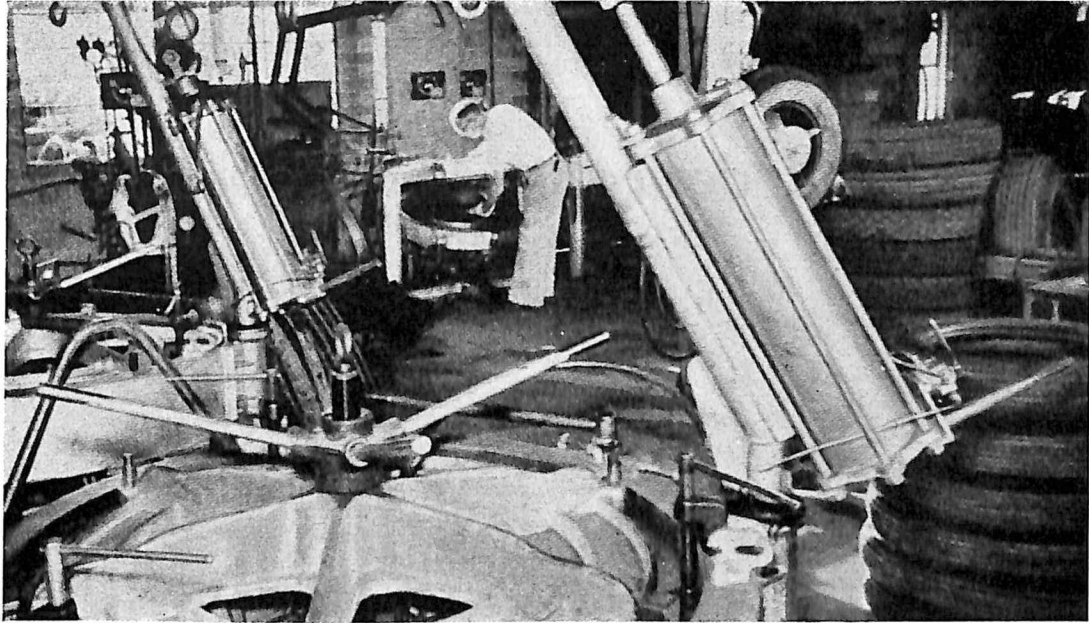
Agencies include:

WOLSELEY SHEEP SHEARING MACHINERY  
WOLSELEY ELECTRIC FENCES  
BUZACOTT ROTATING SPRAY DIPS  
CHAFFEY'S REVOLVING DOCKERS  
"WEEDONE" HORMONE SPRAYS AND MACHINERY  
QUIBELLS SHEEPDIPS

**GRAIN, SEED AND PRODUCE MERCHANTS  
WOOL AND STOCK AUCTIONEERS**

***Dalgety***

**AND COMPANY LIMITED HASTINGS**  
*(Incorporated in England)*



## **OUR MODERN FACTORY**

. . . An interior view of our Modern Tyre Retreading Factory in Hastings. Machinery used is the most modern available from the famous American LODI Retreaders.

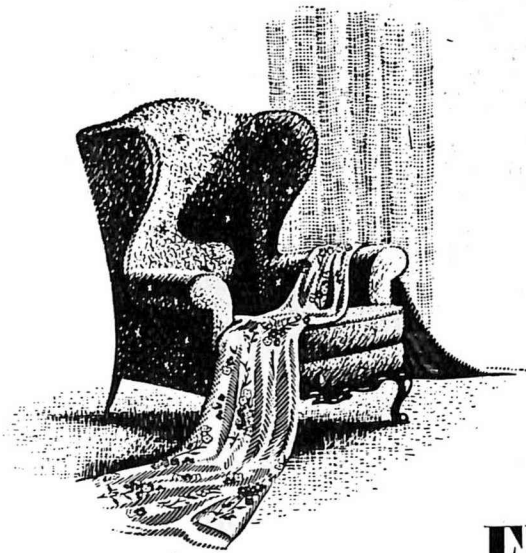
An enviable reputation for first class workmanship is enjoyed right throughout the district and tyres are sent in for attention from the furthest points of Hawke's Bay.

### **★ Service**

Country Clients receive the benefit of our 24-hour service and Tyres are loaned while Retreading is being done.

**THE HAWKES BAY  
TYRE & RUBBER CO.  
(Limited)**

*For most desirable and dependable*



**Furniture**

**Furnishings**

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**Gill & Fenton Ltd.**

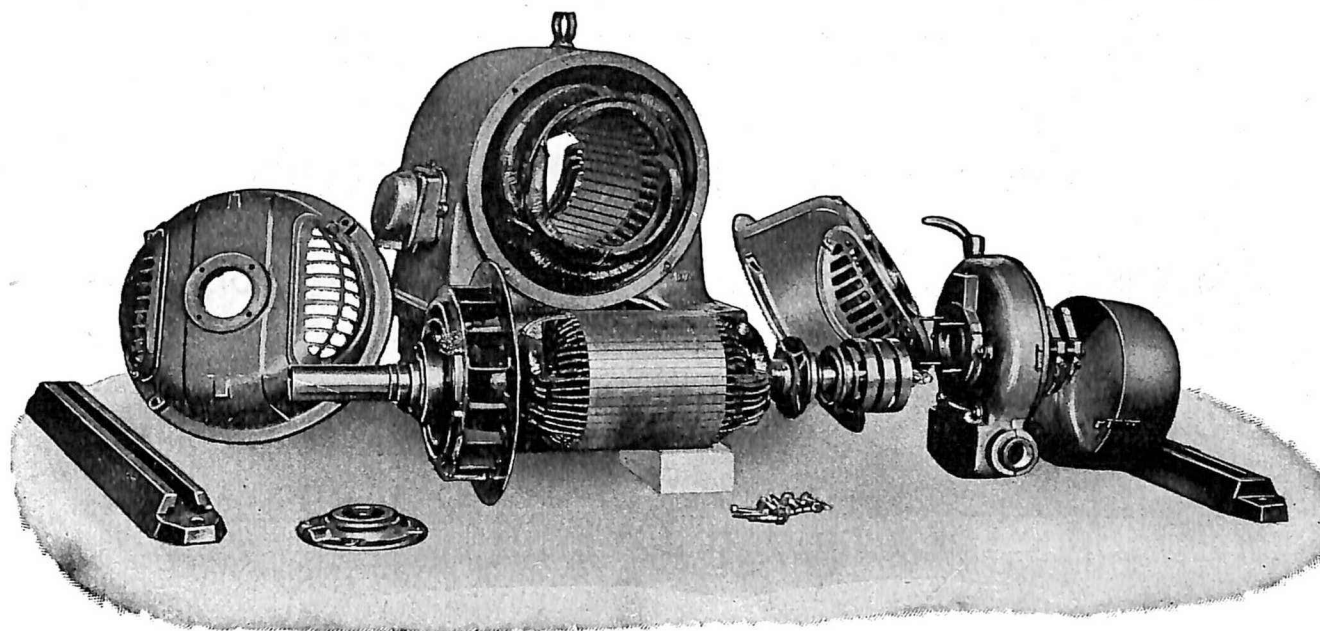
**HAWKE'S BAY'S FOREMOST FURNISHERS**

**MARKET STREET**

- - -

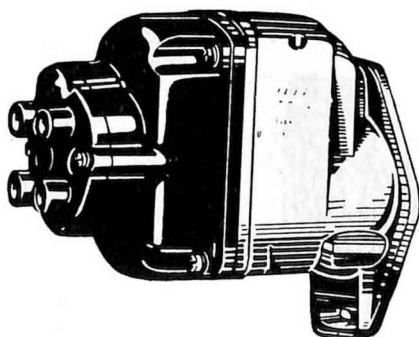
**HASTINGS**

# INDUSTRIAL AND AUTOMOTIVE ELECTRICAL SERVICE

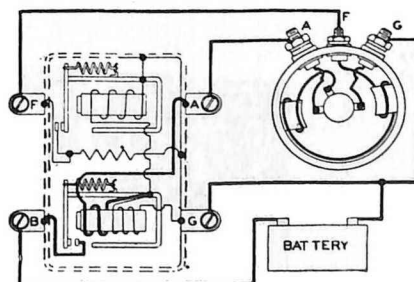


**WE REPAIR  
MOTORS**  
ALL SIZES

**WE REWIND  
ARMATURES**  
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**PROMPT MAGNETO  
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**AUTOMOTIVE  
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## JOHN HILL LTD.

(Established 1927)

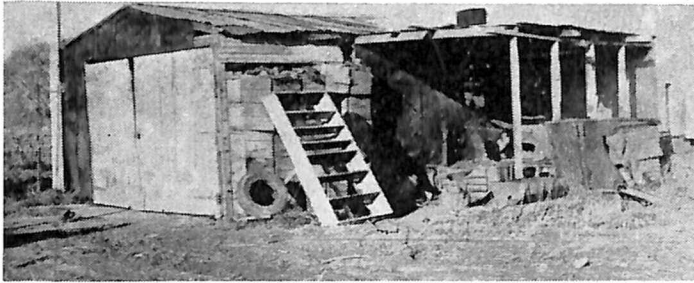
**ELECTRICAL ENGINEERS**

Phones: 2116, 2339 MARKET STREET — HASTINGS Phones: 2116, 2339

# HASTINGS

## Implement Sales & Service Ltd.

- FIRST-CLASS EQUIPMENT
- EXPERT WORKMANSHIP
- ROUND-THE-CLOCK SERVICE



In Five Years our business has shown remarkable growth.

This is where we started five years ago.



Implement Sales and Service Premises in Hastings.

**AGENTS FOR: Boothmac Farm Machinery and Pumping Equipment ● Perma-build Pre-fabrications ● Moffat Virtue Shearing Plants and Spraying Equipment ● Waldor Glass-houses ● Atom Tractors ● Mono Pumps**



# HUME INDUSTRIES (N.Z.) LTD.



A recent aerial photo of the Hastings factory.

*Nationally known for*

**CONCRETE**

**PIPES AND PRODUCTS**

**STEEL**

**PIPES AND FABRICATION**

**EARTHENWARE**

**PIPES AND FITTINGS**

SUPPLIERS TO MANY GOVERNMENT DEPARTMENTS  
AND LOCAL BODIES

# HUME INDUSTRIES (N.Z.) LTD.

CAROLINE ROAD - HASTINGS - PHONE 2670

# J. WATTIE CANNERIES LIMITED

*The Heretaunga Plains, of which Hastings is the natural centre, are New Zealand's most important horticultural district. That part of the plains associated with the growth of fruit and vegetables covers approximately 7,000 acres, with an undefined but immense area for further expansion. Best known name in the industry based on the growing and canning of the fruit and vegetables raised in this rich district is that of J. Wattie Canneries Limited.*

FOR many years fruit in the Hastings district, growing under ideal conditions, was produced in such abundance that it was far in excess of demand. The orchardist was gaining reward for his efforts, but grew dangerously complacent about the colossal waste which results from over-production and limitation of markets.

None was more conscious of the waste of excellent fruit than Mr. J. Wattie, who for some considerable time had realised the loss and prospective loss of surplus fruit. In his capacity as manager of Hawke's Bay Fruitgrowers' Ltd., a packing industry, Mr. Wattie had given considerable thought to the means of creating a market for processed fruits.

He discussed with friends the prospects of pulping fruit for jam making. Soon he was able to attract the practical assistance of a few small investors, and it was from this small beginning that the prospect of canning was seriously considered.

The original Company was registered in 1934 with a capital of £1,250, subscribed by 28 members. The premises were leased from the Hawke's Bay Fruitgrowers' Ltd. for a period of five years, and the purpose of the Company was the pulping of fruit for jam makers, the first order being 81 tons of fruit pulp. During this momentous year in the Company's history, some experimental canning operations were carried

out with improvised plant, which was replaced in the fruit season of 1935 by what was then standard canning equipment purchased in Australia by Mr. Wattie.

## QUALITY

Originally designed for the handling of peaches and pears, this machinery did not preclude the hand peeling and coring of fruit, as well as the hand halving and stoning of peaches, and not the least laborious method, the hand packing of each can.

In that first season there were 25 on the payroll, and the factory was a modest little establishment in a building which has been remodelled, part of which is now the First Aid centre. The variety of canned peaches was Golden Queen, which to this day has proved outstanding in quality.

As a result, subscribers were found with sufficient support to increase the capital to £10,000 by June, 1935. Coincident with this increase the leased premises were purchased, and a policy of expansion, with a basis of increased efficiency and high quality, was established.

## CRISIS

In 1936 there developed a crisis which strained the Company's resources to the limit. The gale in February and the frost in October of that year had the most devastating

effect on production. It was 26 years since the area had experienced such a frost. The peach crop was wiped out and only 10 per cent of the pear crop remained.

The Directors actually faced the question of closing down. By approaching the Company's distributors however, on the market for canned tomatoes, they in turn contacted the merchants and assured the Company it was well worth attempting. Contracts were let for 250 tons, and the whole pack was sold.

In his report to shareholders at the third annual meeting of the Company in September, 1937, Mr. Wattie said that the Company possessed as up-to-date a plant as any in Australasia, with a capacity of 26,000 cans per 8-hour day. He was undaunted by the previous season's catastrophe, as the whole pack of peaches, pears, tomatoes and peas for the coming season was tentatively sold. He was convinced that though production was in the hands of the elements, the supplies that would be available in a few years, given reasonable weather conditions, would make the factory the premier canning concern in the Dominion.

## ASPARAGUS

Still another prophetic development had its dramatic results. Work of a pioneering nature had produced small packs of peas and asparagus which had been enthusiastically received. Peas necessitated the installation of special machinery, and this plant was soon obtained.

As opposed to the imported bleached type of canned asparagus, the Company processed this commodity green, and though nervous about its reception at first, it was soon evident that the market for this variety would be one of the most successful on the Company's record. Extensive plantings were undertaken that year by Asparagus Ltd., and together with other contractors, production followed which established this commodity as a major line.

During the war new problems were faced by the Company and in every way met. New installations included the establishment of a Government dehydration plant later to be purchased by the Company—and together with other new machinery this

The Hastings laboratory, where all products are tested for the maintenance of quality and food values.





Harvesting a crop of tomatoes.

quickly enabled the factory to reach a productive capacity which exceeded that of any other cannery in the country.

In 1951 the Company decided to establish a factory in Gisborne, the centre of a district particularly well suited for the production of sweet

corn and peas, with additional prospects because of exceptionally good soil and climatic conditions for extensive production of fruits and vegetables. Indeed, some authorities predict a production value in Gisborne as great as or even greater than that of Hawke's Bay.

A valuable site was acquired from the Gisborne Sheepfarmers' Frozen Meat and Mercantile Co. Ltd., together with a leasehold property from the Gisborne Harbour Board. A short time later the property of Clare and Clare, adjacent to the main factory building, was purchased. The complete area covers approximately 6½ acres, and is situated by the waterfront, with its own rail siding adjoining the coastal harbour facilities.

In 1950, Messrs. Gordon Wattie and Ray Wattie, sons of the Managing Director, travelled extensively in the United Kingdom and U.S.A., in order to study production methods. Their experiences included several months of practical work under the normal conditions of employment in similar factories. Mr. Gordon is now Managing Director at Gisborne, and Mr. Ray is Manager of the Hastings factory. ●

## HOW PEAS ARE CANNED

An outline of the processes that take place between the cropping of peas and the canning.

WHEN the field supervisor decides that peas are in the correct stage of maturity for canning, the harvesting team with mobile harvesters moves on to the field. These machines gather the growing vines as they travel along, threshing the peas and delivering them into boxes for transport to the cannery, spreading the vines on the ground for ploughing in, thus enriching the soil by returning the nitrogen.

In the 1953-54 pea season, J. Wattie Canneries Ltd. owned and operated the largest fleet of these mobile pea harvesters in the world.

### CLEANING

The peas are fed through a winnow and then through a water flotation machine to remove extraneous material and over-ripe peas. Rod reel washers then apply high pressure water sprays while the reels rotate.

The peas are then automatically pumped to the factory canning lines, at the head of which are the first inspection belts where members of the staff are skilled in discarding peas not up to standard as they pass along.

### BLANCHING

Peas then pass through the blancher, where they are carried through in hot water at a controlled temperature. Among the reasons for blanching is shrinkage by expulsion of gases contained in the plant cells. This helps to obtain a high vacuum in the finished product, together with the proper fill of the cans. After blanching, the peas pass over another inspection belt and are then elevated to the hoppers on the filling machines. These machines fill a predetermined weight of peas and boiling brine to each can, thus ensuring the exclusion of air.

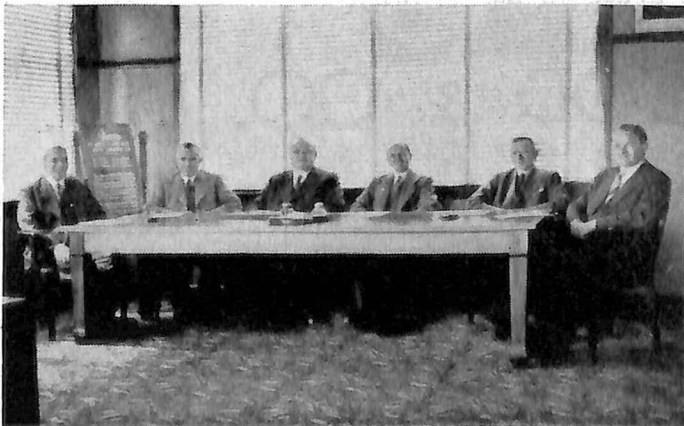
### HEAT PROCESSING

The cans are then mechanically conveyed to the closing machine, which double seams the tops. They are now ready for heat processing, which involves exposure of the sealed container to steam under pressure for a correct period of time. The aim is to ensure complete sterilisation which is carried out in large automatic pressure cookers.

In these the cans are conveyed through a steam pressure chamber for a set period of time, and then on into a cooling section where they are subjected to cold water sprays. The cans leave the pressure cooker cooled down to 90 degrees F., and as they are still wet with cooling water they automatically pass through an air blast drier, leaving them in a suitable condition for labelling.

The labelling machine is connected behind the can drier so that cans run continuously on through the labeller and into the automatic case packing machines. All that remains now is the lidding and wiring of cases or the glueing of cartons, which is carried out by the latest mechanical operations.

Directors (left to right): A. I. Rainbow, H. G. Carr, J. Wattie, J. E. Clapcott (secretary), A. F. Redgrave, G. J. Wattie.



The cafeteria at the Hastings factory.



# de PELICHET McLEOD & CO. LTD.

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Branches at

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P.O. Box 22, Ahuriri

**STOCK AND STATION AGENTS**

**WHOLESALE MERCHANTS**

**PRODUCE MERCHANTS**

**FARMING MACHINERY**

**SHIPPING AGENTS**

**WINE AND SPIRIT MERCHANTS**

**GRAINS, SEEDS, SEED CLEANING**

**WATER SYSTEMS, SHEARING PLANTS**

**INSURANCE AGENTS**

**WOOL BROKERS**

*New Zealand Representatives for*

## DESOUTTER BROS. LTD. LONDON

Manufacturers of

### **PNEUMATIC & ELECTRIC PORTABLE TOOLS**

**DRILLS**

**SPANNERS**

**SHEARS**

**SCREWDRIVERS**

**GRINDERS**

**TAPPERS**

**NIBBLERS**

**MORE THAN 70 TYPES OF MACHINES IN STOCK**

RESELLERS ESTABLISHED THROUGHOUT NEW ZEALAND — ASK US FOR THE  
NAME OF YOUR LOCAL SOURCE OF SUPPLY

# de PELICHET McLEOD & CO. LTD.

HASTINGS

EVER SINCE **1907**

**VIDAL'S  
HAVE FLOURISHED  
IN THE HAWKE'S BAY  
SUNSHINE**



VIDAL'S vineyards were first established in the ideal Hawke's Bay climate before 1907, but from that year dates the actual establishing in the province of an enterprise that has done so much to put Hastings on the map as a wine-growing centre.

Today VIDAL'S wines, which have won several gold medals for excellence, are known throughout the length and breadth of New Zealand for their reliability and first-class quality—for a bouquet and a flavour that has drawn enthusiastic comment from connoisseurs both here and overseas

Sherries, Port, Burgundy, Claret, Madeira, Hock—all these fine wines are vinted by Vidal's and available from Hotels and Bottle Stores throughout New Zealand.

**Vidal's**

*wines*

**TRUE CONTINENTAL FLAVOUR**

# HASTINGS BRANCH

of

## Williams & Kettle Ltd.



**"A Modern Service to Farmers  
in a High-producing District"**

Hawke's Bay is responsible for a considerable proportion of this country's prosperity; it is a sign-show the quantities of wool sold by auction at Napier than at any other centre. The following figures show the quantities of wool sold at auction at individual centres in New Zealand for the season 1953-54:

NAPIER ..	164,322 bales
Auckland ..	149,436 bales
Wanganui ..	106,889 bales
Wellington ..	130,726 bales
Christchurch ..	134,487 bales
Timaru ..	63,083 bales
Dunedin ..	137,743 bales
Invercargill ..	116,177 bales

### WOOL A MAJOR ACTIVITY

One of Williams & Kettle's major activities is the disposal of wool, and over the years the Company has led the movement towards improved wool marketing. Years ago this Company recognised the importance to the wool-grower of presenting his wool for sale in the best possible manner. As a routine part of the Company's service they developed the Binning System. Since those early days they have constantly improved their methods of classing and binning. The system assures to the grower the maximum prices for his offering. In order to store and dispose of the growers' wool to the best possible advantage the Company has invested a very considerable sum in providing commodious wool stores at the point



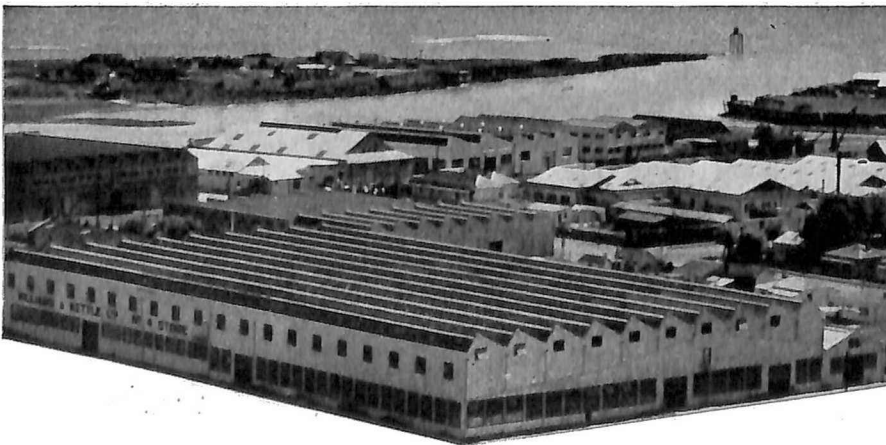
of shipment, Ahuriri, as well as at other convenient parts of the district. At Ahuriri alone there are three large stores with a storage area of over 4½ acres. These stores are the last word in careful storage of a very valuable product, protecting it against the elements and possible inroads of vermin, etc., and providing well-lighted attractive space for the convenience of wool-buyers and the best possible display of the growers' wool. Many of the Company's innovations for the better display and sale of wool have become standard practice in the industry today.

### SKINS AND HIDES

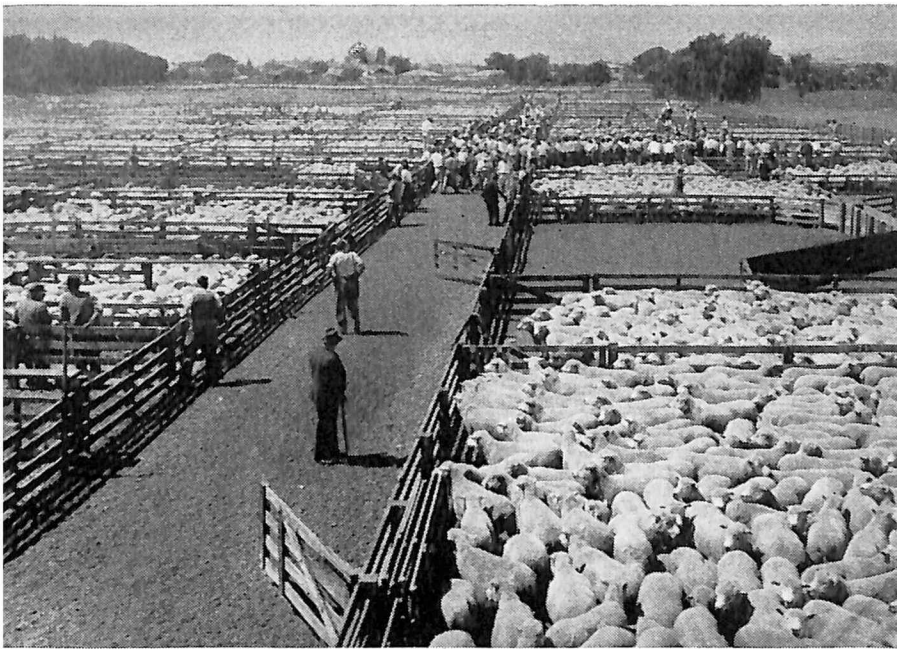
Similar careful management of the sale of these valuable by-products encourage the grower to turn them to good account by preserving them and forwarding them in good condition for sale at best rates.

### STOCK DEPARTMENT

The W. & K. Organisation includes a group of livestock auctioneers and agents second to



Largest Wool Store in the Dominion; No. 4 Store at Ahuriri, one of W. & K.'s six Wool Stores.



W. & K.'s Stock Business is not exceeded in their territory.

none in the business. It is not an uncommon thing for a client to entrust to one of these experts the expenditure of thousands of pounds on stock to be purchased hundreds of miles away. Auction Sales are conducted in all sale-yards throughout Poverty Bay and Hawke's Bay, but of course Stortford Lodge at Hastings is this Branch's special interest. W. & K. make it their business to keep a complete register of all breeds of rams and bulls for sale—breeders have confidence in the above-board methods which have given satisfaction all round.

#### PRODUCE DEPARTMENT

The past quarter of a century has seen a marked step forward in pasture improvement in Hawke's Bay and Poverty Bay. An important part in this work has been played by W. & K.'s Produce Department which is assisting the company's clients to obtain higher wool and meat cheques from increased production.

W. & K.'s Produce Department also interests itself in the promotion and sale of scientific weed control preparations, fertilisers of all kinds, seeds for every need, and has recently accepted the agency for a privately owned laboratory for Soil Testing which is giving a personal service to farmers.

#### LAND DEPARTMENT

W. & K.'s knowledge of conditions and values enables this Department to operate to the advantage of both the buyer and the seller of land. It is an important service to the busy farmer.

#### MERCHANDISE

Dating back to the days when merchandise was distributed by bullock waggon, by pack saddle

and by small coastal steamers, W. & K. Merchandise Department now controls a group of modern up-to-the-minute stores, of which that at Hastings is a typical example. While this development is of great convenience to the town shopper, it is still necessary for the Company to maintain prompt delivery service to its clients in the country areas. To render still better service the Company acts as Hawke's Bay Agents for an important group of principals covering a wide range of merchandise. These Agencies besides ensuring supplies during difficult times enable W. & K. clients to obtain high-grade goods at fair prices.

#### INSURANCE: SHIPPING

These important phases of a farmer's needs are well taken care of. Leading Companies are represented and the business written each year reaches very considerable proportions. All in all, it is a many-sided service to farmers operated by this old-established yet modern, progressive Company.



A corner of the Hastings store.

# PERIOD UPHOLSTERY

*By Modern Craftsmen*



**WE SPECIALISE IN NEW DESIGNS AND  
ORDERS TO CUSTOMERS' REQUIREMENTS**

**J. A. TOWNSEND & CO.**

LIMITED

**Wholesale Upholsterers & Bedding Manufacturers**

P.O. BOX 534  
HASTINGS



# *Mirrors :*

*Push back walls—make  
rooms seem larger,  
lighter,  
more liveable . . .*



## **AUTO GLASS:**

**SAFETY GLASS PROTECTS  
YOU AND YOUR FAMILY**

**SAME DAY SERVICE**

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MIRRORS - GLASS - AUTO GLASS  
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REMODELLING - PICTURE MIRRORS  
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# **HASTINGS MIRROR CO.**

**LIMITED**

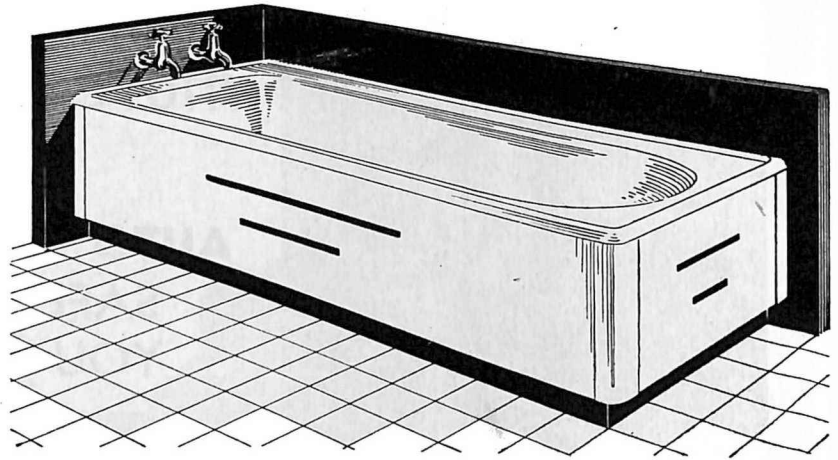
**705 Heretaunga Street**

## **HASTINGS**



# *Yours* for Beauty, Durability!

Baths  
Wash  
Hand-Basins  
Lavatory  
Seats  
Shower  
Floors  
Cistern Boxes, etc.



Tried, tested and proved in thousands of homes throughout New Zealand . . . a smooth-as-silk gleaming surface that maintains its original gloss for years and years.

Resistant to acid and alkaline action, so easy to clean!



Light as a feather . . . The ideal kiddies' bath. No sharp edges — easy to handle — comfortable to use and extremely durable. Made in attractive colours.

**IN  
PERMANENT  
PASTEL  
SHADES**

# PLIX

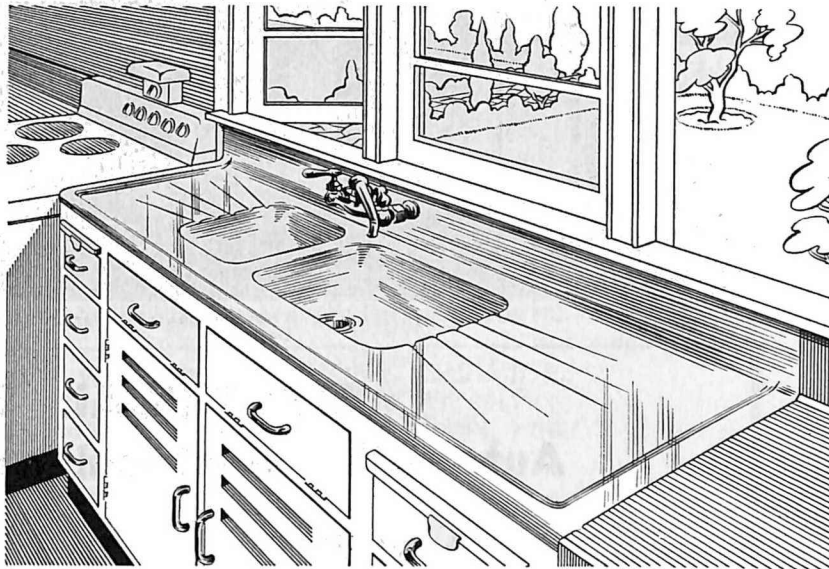
All **PLIX** Products are manufactured from **PERSPEX**, the Imperial Chemical Industries sensational material which has rocketed to the forefront in domestic and industrial service.

Manufactured by **PLIX PRODUCTS LTD.** P.O. Box 247, Hastings

your Sink will be the Focal Point of your Kitchen if installed with a

# PLIX

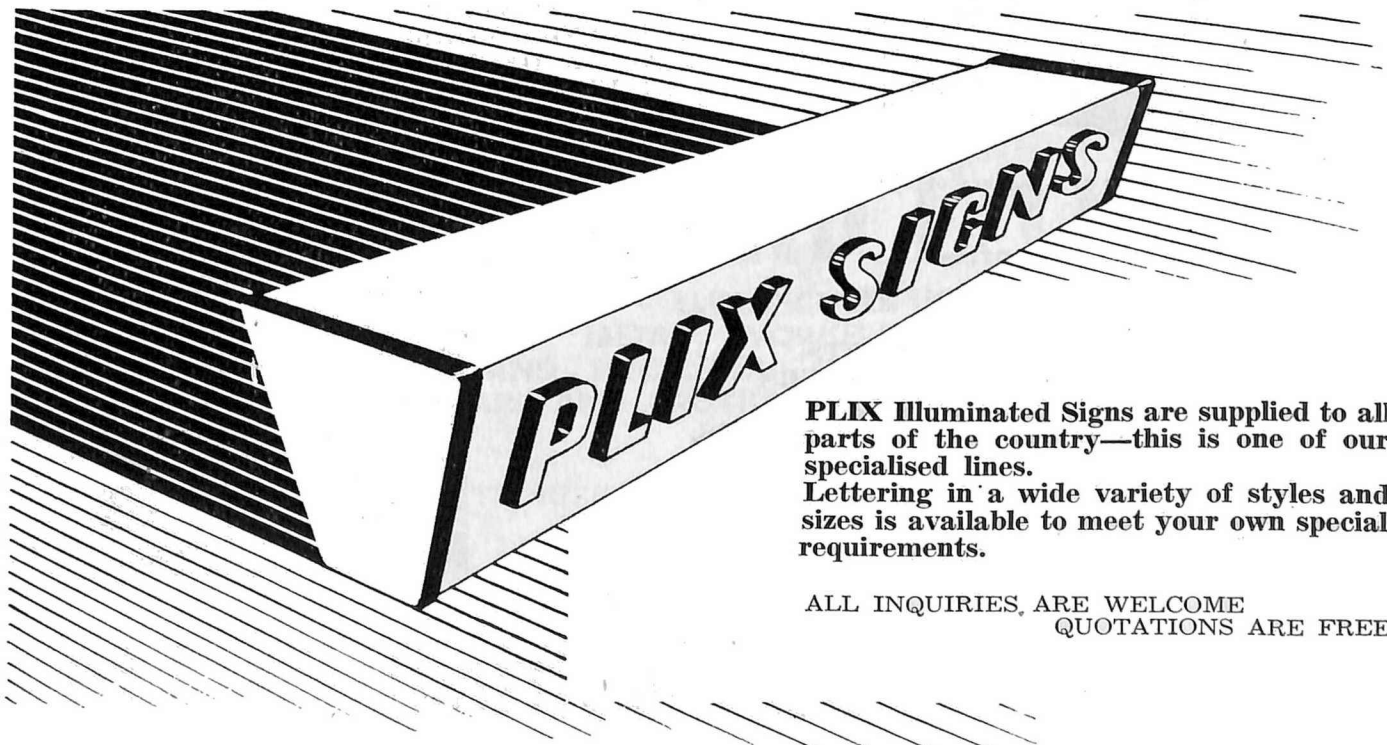
## SINK TOP



**SHOCK PROOF:** This means freedom from crockery chips and breakages.

Order Plix Sinks from your nearest Merchant.

Fruit juices, sour milk, soaps and detergents have no effects on this amazingly durable, all-one-piece construction. There are no crevices to harbour germs—they are so easy to keep clean. Just wipe over with a damp cloth to maintain the original lustre and sparkle.



PLIX Illuminated Signs are supplied to all parts of the country—this is one of our specialised lines.

Lettering in a wide variety of styles and sizes is available to meet your own special requirements.

ALL INQUIRIES ARE WELCOME  
QUOTATIONS ARE FREE

Manufactured by

**PLIX PRODUCTS LTD.**

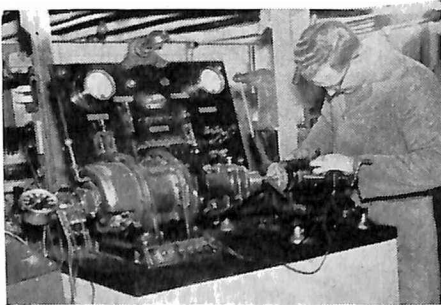
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A recent photo of our large modern premises.

## ELECTRICAL ENGINEERS Automotive Electrical, and Battery Specialists

*Official agents for:—*



Up-to-date equipment is a feature of our service.

**LUCAS—C.A.V. ELECTRICAL EQUIPMENT.  
LUCAS—BATTERIES.  
GIRLING—SHOCK ABSORBERS.  
HOFFMANN—BEARINGS.  
AUTOLITE—ELECTRICAL EQUIPMENT.  
WICO—MAGNETOS.  
FAIRBANKS MORSE—MAGNETOS.  
BLACK & DECKER—ELECTRIC TOOLS.  
CARTER—CARBURETORS.  
TELLUS—VACUUM CLEANERS.  
KENWOOD—SERVICE AGENTS.**

*We are stockists of:—*

**DELCO REMY—EQUIPMENT.  
S.U. PETROL PUMPS.  
S.U. CARBURETORS & PARTS.  
SILVERCO—BATTERY CHARGERS.  
COLLETT—WIRE TERMINALS.  
BATTERY CABLES & EARTH STRAPS.  
AUTO CABLE.  
VEE PULLEYS.  
VEE BELTS.  
ELECTRIC MOTORS.  
DOMESTIC APPLIANCES.**

First class equipment is well displayed and serviced.



**FOR SERVICE**

# Hector Jones Electrical Co. Ltd.

P.O. BOX 54

KING STREET, HASTINGS

TELEPHONES 4359  
5356



# **SERVICE** to the **Community**

Since 1907 Loach & Price Ltd. have served the needs of Hastings and the surrounding districts. During these years, Hastings has grown from a small country town to a thriving provincial centre.

Times have not been easy—we have passed through two World Wars with the inevitable reaction on business—the post-war years have brought their problems and readjustments. But we face the future with confidence and a determination to maintain the high standards of service and good workmanship that have been the basis of our business over the past years.

The establishment, over the later years, of our HOME SERVICE SECTION has enabled us to offer the general public a further service which has proved to be a very welcome addition to our business, and enables us to offer

## **EVERYTHING ELECTRICAL FOR THE HOME**



# **LOACH & PRICE Ltd.**

**PLUMBERS - ELECTRICIANS  
SHEET METAL WORKERS  
RADIO AND ELECTRICAL APPLIANCES  
HARDWARE AND CROCKERY RETAILERS**

AUTHORISED DISTRIBUTORS:

**PRESTCOLD**  
Refrigerators

**EASYWAY**  
Washing Machines

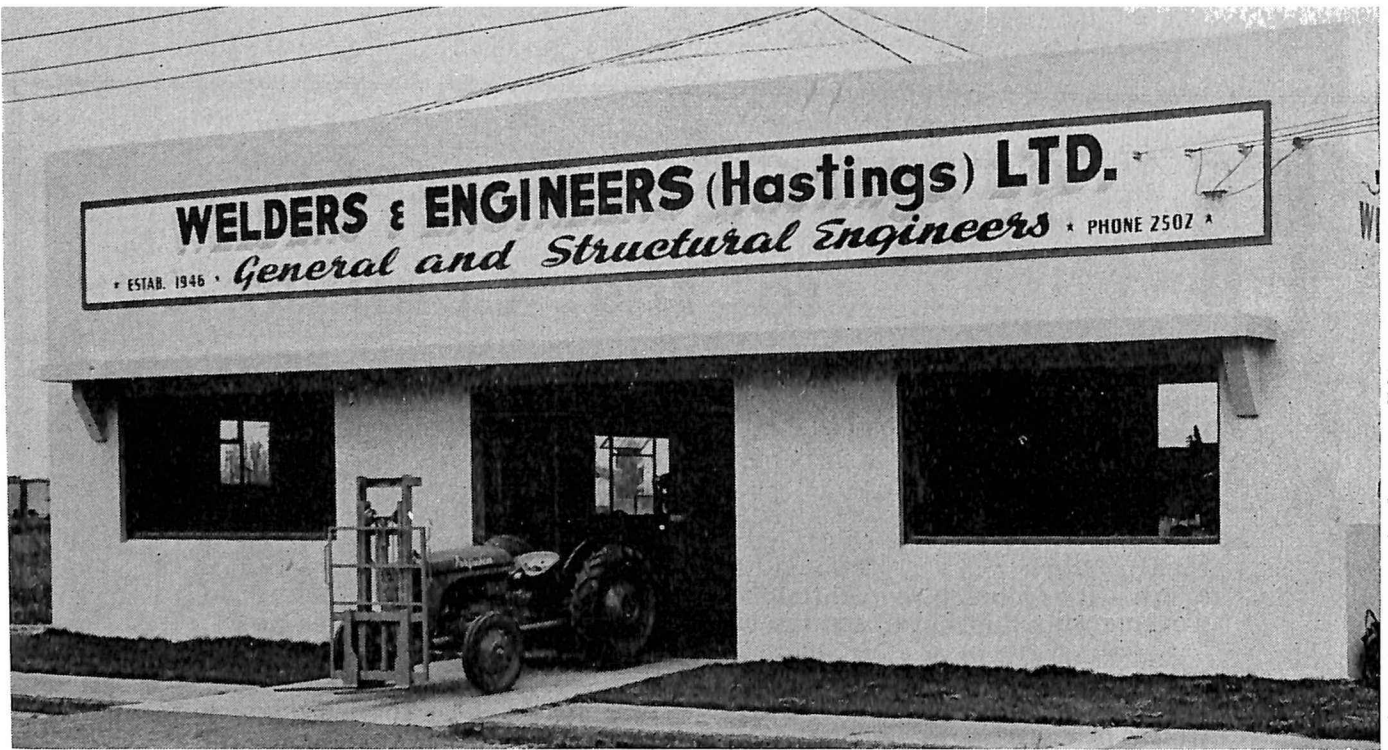
**HOOVER**  
Home Appliances

**ULTIMATE & PHILIPS**  
Radios and Radiograms

**HERETAUNGA ST. W.**

**PHONE 4157**

**HASTINGS**



## Experts in Engineering Repair Work

IN 1946 Mr. R. B. Jordan took over the managing-directorship of Welders and Engineers (Hastings) Limited, then a comparatively small business. In the nine years that have followed the Company has made rapid advances and is now one of the largest businesses of its kind in the thriving Hastings district.

In 1952 the Company moved to its own new premises of 4,300 square feet at 409N King Street.

Employing a qualified staff of eight, the firm has been undertaking considerable work in the engineering industry, handling repair work and specialising in rebuilding crawler

tracks and carrying out repairs to all types of farm machinery.

On the production side extensive structural steel fabrication is being undertaken. Offal barrows for freezing works, soil pulverisers, moulds for concrete and plastic products and trusses for structural work are all manufactured by the Company.

### FORK-LIFT ATTACHMENT

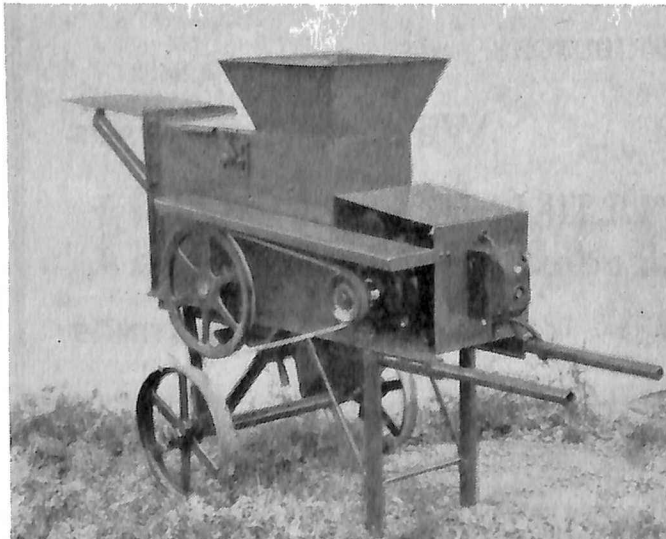
Mr. Jordan is the Patent Holder for a fork-lift attachment to tractors. This attachment has been in great demand by orchardists and farmers who find after demonstrations that

one of these units is an essential item of their equipment.

Capable of lifting 35 bushell cases of fruit at one time, it has solved the orchardists' handling worries. The attachment has now been adapted for bulk handling of fruit in the orchards and for the picking up of orchard prunings. The unit may also be used for farm work in the transport of concrete posts, timber, etc.

Horndraulic (Australia) Ltd. has taken over production of the unit for the Australian market. Authorised selling agent for New Zealand is the New Zealand Fruitgrowers' Federation Limited. ●

This soil pulveriser made by Welders and Engineers (Hastings) Ltd. has proved its efficiency and sturdiness.



The fork-lift attachment is in great demand among orchardists and farmers.



1905

1955

# **McLEOD & GARDNER LTD.**

**TIMBER & HARDWARE MERCHANTS**

**Market Street, Hastings**

**STOCKISTS OF**

**Indigenous, Exotic and Imported Timbers,**

**GC Iron, Cement, Steel, Pipes, Wallboards,**

**Doors, Fibrolite Building Sheets, etc.**



*We thank the Public of Hastings  
and district for their patronage  
during*

*50 Years of Service*

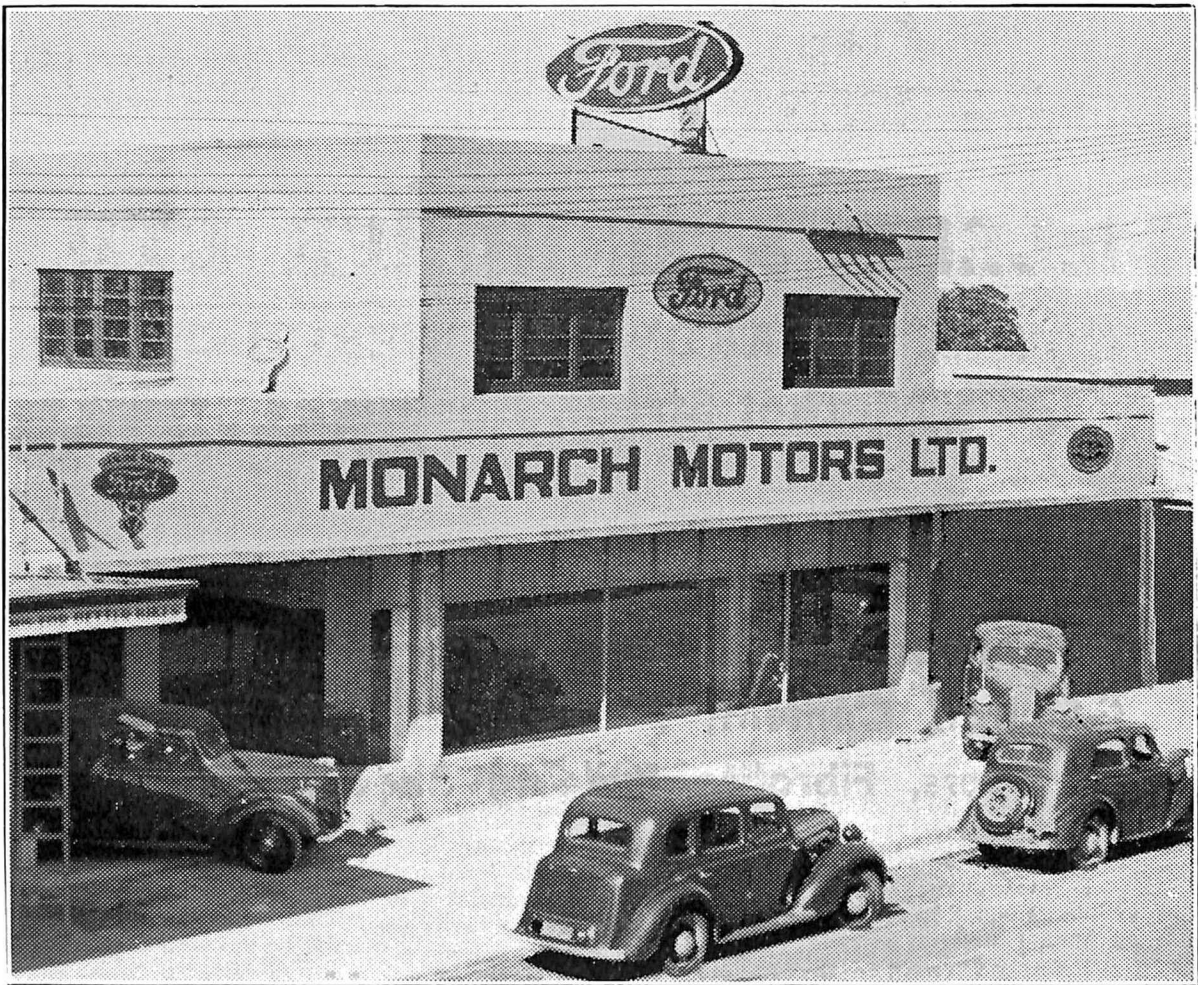
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**WRITE, PHONE OR CALL**

TELEPHONES 2729  
5426

1905

1955



# MONARCH MOTORS LTD.

*Authorised FORD Dealers*

- ZEPHYR - CONSUL - PREFECT - ANGLIA - POPULAR CARS
- FORD V8 SEDANS - RANCH WAGONS - COUNTRY SEDANS
- THAMES  $\frac{1}{4}$  TON -  $\frac{1}{2}$  TON - 2 and 3 TON TRUCKS
- FORDSON MAJOR TRACTORS - PETROL - DIESEL - CRAWLER

STOCKISTS: GENUINE FORD PARTS, RADIOS, HEATERS, SEAT COVERS, BATTERIES AND ALL THE MOTORIST'S REQUIREMENTS

Napier, Phone 4937

Hastings, Phone 5052



# **MURRAY, ROBERTS & CO. LTD**

KING STREET NTH.

**HASTINGS**

**Stock & Station Agents**

**Wool Brokers**

**General Merchants**



Distributors of:

**STANTOX HORMONE SPRAYS**

for **GORSE, BLACKBERRY, THISTLE, RAGWORT,  
DOCKS, BUTTERCUPS** and **ALL NOXIOUS WEEDS**

ALSO AVAILABLE A COMPLETE RANGE OF  
SPRAYING EQUIPMENT

**Our HARDWARE DEPARTMENT**  
**carries a large and varied stock of Farmers'**  
**Tools and Hardware including**  
**KITCHEN HARDWARE**

Also

**CHAFFEY REVOLVING DOCKERS - WOOL  
PRESSES - BUTTERS IRON FENCING POSTS,  
FENCING POSTS AND BATTENS  
WARATAH STANDARDS**



The firm's head office in Karamu Road, Hastings, incorporates showrooms, offices, bulk stores, service departments and an engineering department.

## A STORY OF STEADY EXPANSION

**A** GNEW REFRIGERATION LTD., began business in July, 1937, handling at that time commercial refrigeration. In 1939 a branch was opened in Palmerston North.

From the outset the business prospered, and as time went on other divisions were added—first a machinery division and then a home

appliances division. In 1950 three modern retail selling establishments were set up in Napier, Hastings and Palmerston North.

The Company now covers Hawke's Bay Province and the Manawatu with field salesmen and service organisations covering two divisions—machinery and refrigeration.

### LINES HANDLED

In the refrigeration division the Company handles "Kelvinator" commercial and household refrigeration, in the home appliances division all types of modern electrical home appliances and labour saving devices for the home including Bendix home laundry, Whiteway washing machine, Goblin Ace vacuum cleaners and Neechi sewing machines.

In the machinery division the firm specialises in irrigation and pumping equipment for market gardens, orchards and farms. It also handles diesel and petrol engines, chain saws, motor mowers and small power cultivators. A new division recently added is one in which the Company specialises in the sale of cine cam-



An interior view of one of Agnew Refrigeration's retail shops.

eras and projectors, both to the public, schools and other organisations.

#### STAFF

Staff employed consists mainly of specialised technicians and salesmen and totals—with untrained personnel and office workers—46.

Head office, situated in Karamu Road, Hastings, consists of a modern building of 6,500 sq. feet. In Napier there are retail premises in Emmerston Street and there is also a retail branch in Heretaunga Street, Hastings. The Palmerston North retail shop is in King Street, with a work shop in Grey Street.

Amenities for members of the staff are a feature of all the Company's establishments, and social life is organised by staff members through their own Social Club.

#### POLICY

The managing director is Mr. J. K. Agnew, the founder, and associated with him is Mr. E. A. Tucker, a director, and manager of head office in Karamu Road. Mr. John Agnew is manager of the Palmerston North branch and Mr. A. Hocking is manager of the Napier branch. All these

executives have been with the Company since its inception. Mr. A. French is manager of the Heretaunga Street branch, Hastings, and Mr. K. Lomas is machinery manager at Head Office. Mr. H. G. Carr is secretary, Mr. J. R. Chapman is accountant.

#### GROWTH

Since the Company's inception there has been steady expansion over the whole of its activities, most of it due to the satisfaction and good will of clients, and requests to supply other lines and services for them. The Company's policy at all times is to keep premises modern and attractive as possible, and to introduce new ideas and methods as time permits. A fairly extensive modernisation programme is in progress at the present moment.

#### MODERN PLANT

At all times the Company's aim is to purchase or incorporate in their work shops and offices modern efficient plant and equipment to achieve maximum efficiency. All materials and plant are secured on the best markets through overseas suppliers or local manufacturers.

These lines handled by Agnew Refrigeration Ltd. were prominently exhibited at the Napier Industrial Fair.



# **Robert Holt & Sons Ltd.**

Established 1859

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**The Oldest Timber Firm in Hawke's Bay**

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*Everything for Building:*

**TIMBER  
JOINERY  
HARDWARE  
PAINT  
WALLPAPER  
GLASS**

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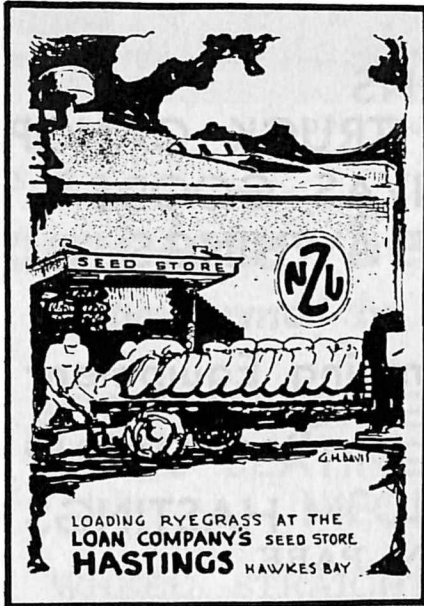
Visit Our Modern Store and Showrooms

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**HASTINGS**

P.O. BOX 95

PHONES: 3568 : 2562



- Aspects      • HIGHEST PURITIES
- of Seed      • MINIMUM DRESSING LOSSES
- Dressing    • MAXIMUM RETURN GROWER

# S E E D S

■ ■ ■ ■ ■ Seed is a basic commodity. Without seed there would be no pasture and consequently no stock — no wool or butter — no wheat . . . **SEED IS WEALTH.** Wastage in seed dressing represents money subtracted from the return to the grower. Efficient seed dressing is largely a process of discovering the best machine — one that reduces seed wastage to a minimum and increases purity at a single dressing. We have machines of this kind installed at Hastings. Our SPECIFIC GRAVITY machine for dressing peas is the only one of its kind in Hawke's Bay. We are distinctly proud of this machine which is now handling 90 per cent of the peas grown in the district. . . . In London, our Head Office operates a world-wide marketing organisation through its many branches and connections both within the British Commonwealth and without. Hence we believe the facilities we possess — experience — plant — markets — will ensure to the grower the maximum return for his seed. ■ ■ ■ ■ ■

## N.Z. LOAN & MERCANTILE AGENCY CO. LTD.

HASTINGS, HAWKES BAY

(Incorporated in England)

Code Address: ALEXIS

# CRAWFORDS CANVAS CO.



TENTS  
TARPAULINS  
of TRUCK CANOPIES  
ALL CANVAS GOODS  
WINDOW AWNINGS

Complete Stock of All Camping Equipment

IVAN & LEN CRAWFORD :: Proprietors

710 KARAMU ROAD — HASTINGS  
NORTH END NELSON PARK

## THE H.B. MACHINERY & ENGINEERING CO. LTD.

*General Engineers*



SHEARING PLANT EXPERTS • PUMP INSTALLATIONS  
HYDRAULIC TRACTOR EQUIPMENT • BOILER REPAIRS  
SAW BENCHES • WIRE ROPE • BELTING • ENGINES

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**406 Karamu Rd.  
HASTINGS**

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"R.D.M." Workshop and Bowser Station Corner

There is a . . .

## Complete Service for Motorists

*performed by trained personnel offering*

BODY BUILDING      CELLULOSE PAINTING  
 PANEL BEATING      and all  
 MECHANICAL REPAIRS

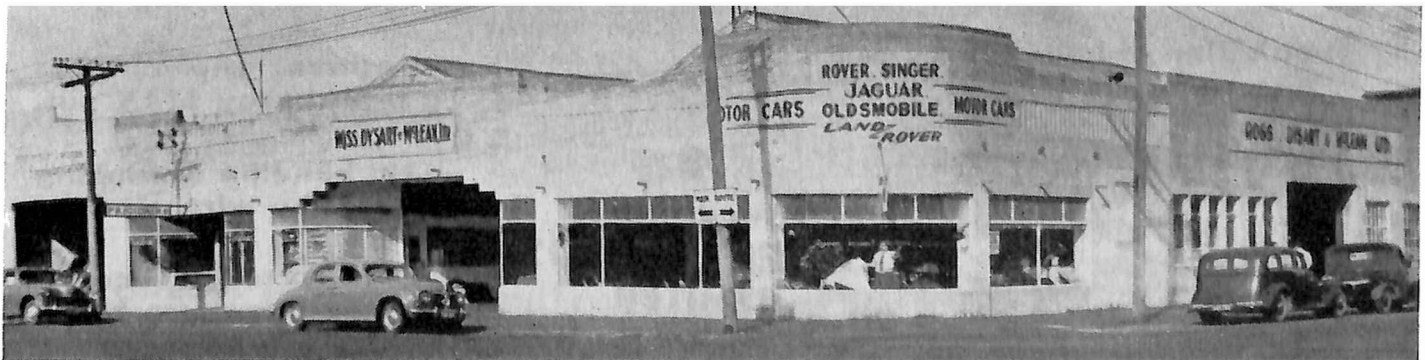
WHEEL STRAIGHTENING, BALANCING, CHASSIS  
 CORRECTION with COMPLETE "BEAR" EQUIPMENT

## NEW AND USED CAR SALES

*Direct Importers of the  
 Famous  
 Singer Hunter Cars*

*Distributors of  
 Jaguar - Daimler - Renault  
 Lanchester - Skoda*

DEMONSTRATIONS BY APPOINTMENT



"R.D.M." Showroom Corner

# ROSS, DYSART & McLEAN LTD.

200 KARAMU ROAD (South) HASTINGS

Telephone 4114

# FOR HIGH-CLASS FURNITURE



# LANE & HORTON

405 Avenue Road, E.  
HASTINGS

●  

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**AT YOUR SERVICE!**

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Specialists in Reproduction Work

## “WEDGFAST” STEEL BATTENS

(Pat. 106257 N.Z.)

For general farm fencing.

Close battening of pens and pig fences.

Subdivision of building sites.

All fencing jobs where strength, lightness, and tightness are required.

Accurately made to fit all fences.

“WEDGFAST.”

“WEDGFAST.”

“WEDGFAST.”

The wire is wedged against the flat surface of the batten.  
**SAFE, SECURE. LOOK FOR IT.**

●  
Made by

**OFFEN BROS.  
LIMITED**

Manufacturing Engineers  
**PAKI PAKI**  
(Wholesale only)

Strong channel construction.

Easily handled in rough country.

Positive grip ensures that they **STAY** put.

No bending or kinking of the wire.

Constructed to accommodate up to No. 6 gauge wire.

**Distributors: Messrs. WRIGHT, STEPHENSON & COMPANY, Limited**



# HARVEY, FULTON & HILL

*represent a vital link, in the way of friendly practical counsel, with the progress of Hawkes Bay in matters of*

**REAL ESTATE AGENCY,  
VALUATIONS, and AUCTIONEERING**



- MEMBERS OF REAL ESTATE INSTITUTE
- REGISTERED VALUERS
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We have established Branches at —

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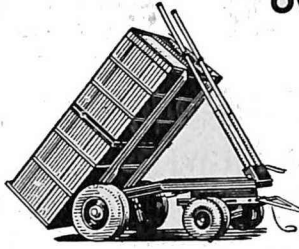
SUN INSURANCE OFFICE

CHIEF DISTRICT AGENTS FOR:  
T. & G. MUTUAL LIFE ASSURANCE SOCIETY

SOUTH BRITISH INSURANCE CO.

**POSTAL ADDRESS: P.O. BOX 232, HASTINGS, N.Z.**

**Transport Operators & Truck Owners**



**MODELS AS UNDER —**

**FRONT OF BODY**

- 1 LN - - 5 ton capacity, single ram, weight 2 cwt.
- 2 LN - - 7½ ton capacity, single ram, weight 2½ cwt.
- 3 LNC - 10 ton capacity, single ram, weight 3½ cwt.
- 4 LN - - 13 ton capacity, twin ram, weight 3¾ cwt.

**TWIN RAM UNDERBODY**

- 2 AT - 7½ ton capacity, weight 3¾ cwt.
- 3 AT - 10 ton capacity, weight 5 cwt.

**SLANT-TYPE UNDERBODY**

- HN 1 - - 5 ton capacity, single ram, weight 3¼ cwt.
- HN 2 - - 7½ ton capacity, single ram, weight 3¾ cwt.
- HN 3 - - 10 ton capacity, twin ram, weight 5½ cwt.

# “EDBRO” Tipper

A model to suit any Truck

**Steel Truck Body-frames and All Steel Bodies Built.**

**"B.P.W." Axle Equipment.**

**Ringfeder Automatic Tow-hooks.**

ANY MAKE OF HOIST SUPPLIED AND FITTED. Call or write for advice and pamphlets on all “EDBRO” HOISTS to:—

## E. L. WHITE

**General & Transport Engineers**

Cnr. Heretaunga and Beresford Sts.,  
**HASTINGS** Telephone 2082



Part of Transport Hastings fleet of modern trucks and service waggons used for the general cartage of wool, stock, bulk manures, parcels and goods of all descriptions. A first-rate service is rendered to the community—support it by using—

# TRANSPORT HASTINGS

**H. H. McHARDY, Proprietor**

**LIVESTOCK AND GENERAL CARRIER  
HASTINGS-NAPIER-PUKETITIRI DAILY SERVICE  
BULK PETROL SUPPLIES  
BATTENS.**

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Residence - - - 2870  
Foreman - 9-9181U

**POSTAL ADDRESS:**

P.O. Box 74  
517W Heretaunga St.

# Names to the fore in Hastings Industry and Commerce

Some Hastings concerns are known not only throughout Hawke's Bay, but all over New Zealand as well.

## CARS . . .

A "FRIENDLY" business in which the "personal touch" is definitely outstanding is **Ross, Dysart and McLean Limited**, a Hastings motor car trading concern that has a comprehensive range of representations of universally known automobiles.

The firm was established in 1912 as a partnership and in 1934 was made into a limited liability company. The business has always moved with the times and today possesses plant and machine tools that make it unusually self-sufficient.

Apart from new and used car sales, body building is handled as well as cellulose painting, panel beating, mechanical repairs of all kinds and chassis and wheel fault correction by means of "Bear" equipment.

A staff of 25 is employed, some of them having served the Company for over 20 years. Others have terms of service ranging from 10 to 15 years.

Best testimony to the service that "R.D.M." have given the public over the years is the fact that sons of early customers are carrying on the tradition.

## AUTOMOTIVE ELECTRICAL

Oldest automotive electrical concern in the Hastings district, **Hector Jones Electrical Co. Ltd.**, was established in 1918 by the late Mr. Hector Jones, who died in 1930. The building was destroyed by the 1931 earthquake and subsequently rebuilt.

The firm specialises in the supply and repair of electrical equipment for motor vehicles, also domestic and industrial equipment. A special section covers the rewinding of electric motors, armatures and coils.

Modern instruments and equipment are used in all departments for the diagnosis of faults and the repair and testing of the wide range of electrical equipment serviced by the firm.

The Company has held the official Lucas-CAV agency since 1928 and is also agent for Girling shock absorbers, Hoffman bearings, Autolite electrical equipment, Wico and Fairbanks morse magnetos, Black and Decker electric tools, Carter carburetors, Tellus vacuum cleaners and Kenwood service.

## BEDDING . . .

Since business began in Hastings in 1938, **J. A. Townsend and Co. Ltd.**, wholesale upholsterers and bedding manufacturers, has extended its marketing area to the Manawatu, Taranaki, Wellington, Wairarapa, Poverty Bay and Auckland. All styles of furniture are handled—period, contemporary and steel.

At the outset the firm employed one upholsterer and operated in small premises. Expansion began early, however, and has continued ever since. Negotiations are in fact at present under way for the purchase of additional land for the erection of a modern factory to be equipped with the latest plant and machines.

The Company has over the years become widely known for its furniture in new designs and special orders supplied to customers' requirements. Period work requiring deep buttoning, which is almost a lost art, is extensively produced in the factory alongside of contemporary designs from overseas which incorporate the latest types of springing.

## TIMBER . . .

Established 97 years ago by the late Mr. Robert Holt, the firm of **Robert Holt and Sons Ltd.**, Napier and Hastings, has been closely linked with the growth of Hawke's Bay, and the business today is being carried on by the third generation of the Holt family.

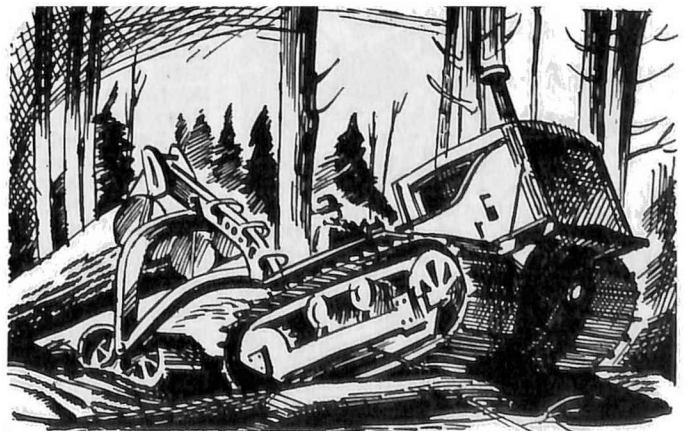
Commencing in a small way in 1859, Mr. Robert Holt established the first timber yard in Hawke's Bay on the site at present occupied by Messrs. Blythes Ltd., Napier. There were several subsequent moves and now the Company's head office, yard and modern shop is situated in Thackeray Street, Napier.

To keep pace with the progress of the province, the Hastings branch was established in 1896 at the corner of Russell and Heretaunga Streets. By 1911 this area had become too small and a move was made to the present site. The rapid expansion of the business, matching the growth of Hastings itself, recently necessitated the building of a modern shop and showroom catering for builders' and general hardware.

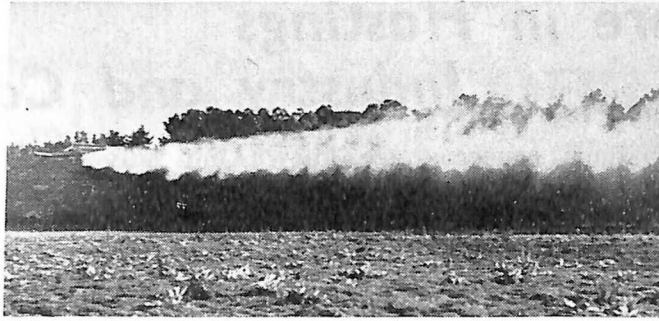
The Company's buildings, yard and mill cover 30 acres in Napier and Hastings. The modern mill in Napier has the largest output in Hawke's Bay, cutting 16,000 superficial feet a day. To keep pace with modern methods of treating and handling timber, the Company has two kiln drying plants and a tanalising plant, two straddle trucks and three fork lifts.

The present source of native timber is the Company's mill at Ohukura, and cutting rights for 25 years have been secured for native timber at Rangitaiki and exotic timber at Te Pohue and Puketitiri.

Some of the present staff have been in the continuous employ of the Company for 50 years and last year one staff member retired after 63 years' unbroken service.



Aerial top-dressing near Hastings.



## IMPLEMENTS . . .

In the space of five years a new Hastings partnership trading as **Implement Sales and Service** has shown rapid growth. In 1950 a small business was started by Mr. J. T. O'Neill, formerly a farmer and agricultural contractor. It was his aim to put into practice in the repair shop the valuable experience he had gained in the field. The year after Mr. O'Neill began business he was joined in full partnership by Mr. W. E. Osborne.

To the firm Mr. Osborne brought his wide experience as blacksmith, springsmith, welder, wheelwright and general engineer. With this combination the partners were in an excellent position to offer farmers a first-class service of top workshop ability supported by field experience, the two main essentials of agricultural engineering. Round-the-clock service has always been maintained.

In August 1954, the firm was appointed Boothmac agents for the Hawke's Bay territory and took over the previous agency's spacious premises in Market Street, Hastings. Implement Sales and Service now has a first-class staff, trained in all phases of farm and pumping equipment, and is in a position to give unsurpassed, round-the-clock service to farmers and contractors. The firm has agencies for Boothmac Farm and Pumping equipment, Peruaia-built prefabrications, Moffat Virtue shearing plants and spraying equipment, Waldor glasshouses, Atom tractors and Mono pumps.

## TIMBER AND JOINERY . . .

The story of Messrs. **H. H. Campbell and Sons**, timber, joinery and hardware merchants, is typical of the steady growth of the thriving borough of Hastings in the past three-quarters of a century. In its 62 years of existence the firm has progressed from humble but far-sighted beginnings to its present position of eminence in the commercial life of Hawke's Bay.

Mr. Hugh Henry Campbell established the business in 1893 when Hastings was no more than an

unimposing collection of buildings on the expanse of the Heretaunga Plains. Large contracts soon came the way of Hugh Campbell. In the early years he built the original Woodford House College at Havelock North, the Hastings Club, and many of the homesteads on Hawke's Bay farming estates.

Immediately after the First World War Mr. H. H. Campbell retired and the business was taken over by his two sons, Messrs. R. F. Campbell and the late W. I. Campbell. They expanded the business and began trading as timber and hardware merchants and direct importers. The original staff consisted of 12. Today 30 are employed by the firm. Set-backs have also come the way of the firm. The joinery factory has twice been destroyed by fire, and it was one of the many Hawke's Bay buildings which fell victim to the 1931 earthquake.

Mr. W. I. Campbell retired in 1951, when the business was taken over by Mr. R. F. Campbell who converted it to a limited liability company with himself and his three sons as shareholders.

## STEEL BATTENS

The steel fence batten has come into its own and there is no doubt that it is here to stay, as practical considerations such as lightness, durability and cheapness must have their effect on the cost of erecting, and the maintenance of farm fences.

Any factor which contributes to a reduction in costs with special reference to high country fencing, must be taken into consideration, and in this respect the "Wedgfast Steel Batten" should have a special appeal to farmers, as with their "made to measure" product, **Messrs. Offen Bros. Limited** have evolved a steel batten which should meet all the requirement of modern fencing. As its name implies, the "Wedgfast Steel Batten", embodying the wedge principle, holds the wire firmly positioned however slack it may become.

The popularity of the product may be gauged from the fact that from a small beginning the "Wedgfast Steel Batten" now enjoys a demand which is Dominion-wide.

## AERIAL AGRICULTURE

**Aerial Agriculture Limited**, formed in 1950, was the first farmer-owned aerial farm work company in New Zealand. The aerial work it undertakes today includes topdressing, seeding, trace element spraying and dusting, supply dropping and aerial rabbit poisoning.

Additional plant and equipment is constantly being put into operation, and the Company is at present re-equipping with Fletcher FU 24 "utility" aircraft and "Airtop" MK 2 loaders. At the same time the latest "Simplex" spray equipment is being fitted to spray aircraft. Plans are in hand for the Company's territory to be extended to cover the Wairarapa.

Directors of the Company are:— Mr. E. S. Caro (managing director), Mr. H. W. Smith (chairman), Mrs. P. Wall, Mr. J. M. Chambers, Mr. R. A. Edgecombe, Mr. T. S. Ellingham, and Mr. H. Worsnop.

## PIPES . . .

The Hastings factory of **Hume Industries (N.Z.) Limited** is part of an organisation that is known throughout Australia and New Zealand for the leading part it plays in providing the pipe requirements of big and small users in both countries.

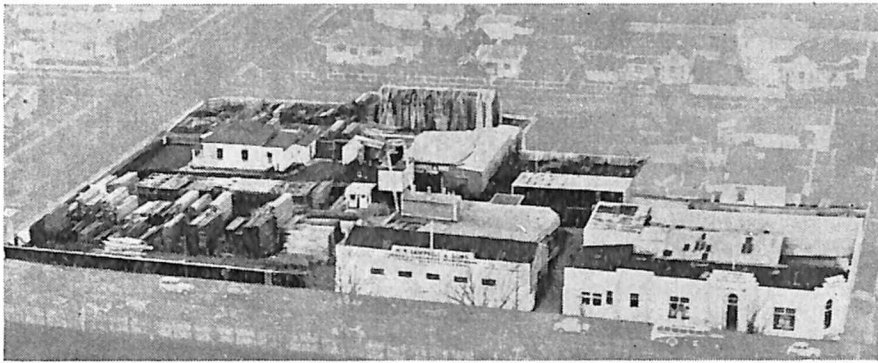
In 1910 the Hume Brothers in Australia founded a small company for the development of the centrifugal casting of concrete pipes. This was a unique invention of theirs and from it sprang the present day enormous organisation.

In 1920 Hume Pipe (Australia) Ltd., was formed and development became intense. In 1923 the Company started the electric welding of steel pipes and manufactured new plant for this purpose. About this time also factories were started in Malaya and a large subsidiary company was formed there.

Since then development and expansion has been consistent and rapid, so that at present there are 13 concrete pipe factories and four steel pipe and fabrication factories in New Zealand alone.

It is interesting to note that virtually all the plant and equipment used in the manufacture of both concrete and steel pipe in all the companies' factories are the inventions of the firm, and have been developed and largely manufactured by the company.

Hume Pipes are used extensively by virtually every local body in New Zealand, as well as by the Ministry of Works, contractors and farmers.



Hastings premises of Messrs. H. H. Campbell & Sons, timber, joinery and hardware merchants.

## FURNITURE AND

Interiors of homes throughout Hawke's Bay reflect the same care and thought as are given to garden and farm. With sunny days and gay surroundings, a bright and cheerful atmosphere is only to be expected in the homes, and this is achieved with a quiet restraint which reflects the good taste and discrimination of proud owners.

Though in industry and agriculture modern, up-to-the-minute methods are quickly adopted, new and undeveloped furnishing ideas are approached with caution, and the commonplace, poor design and doubtful quality are not acceptable in Hawke's Bay homes.

With the intention of offering a choice of the furniture and furnishings appealing to the residents, the firm of **Gill and Fenton Ltd.**, was established in Hastings and it was soon abundantly clear that the enterprise was welcomed by the Hawke's Bay householders. By adopting a policy based on fundamental principles of retailing — selection supported by service — and through conventional business methods, a high reputation has been earned with the public, manufacturers and fellow retailers alike.

Close links with only first class cabinet-makers assures quality of materials and guarantees faithful workmanship, while importations from only world famous manufacturers provide a selection of carpets and fabrics second to none in the district, ranging from long established favourites to lively contemporaries.

An ever increasing turnover, now larger than that of any other similar establishment in the province, is a sure indication that the firm recognises and fulfils the furnishing demands of Hawke's Bay home-lovers and that the policy of large, varied stocks, openly displayed, and backed by a skilled, experienced service, is everywhere appreciated. A courteous staff, capable, attentive and always willing to assist, has created a goodwill amongst all classes which is considered by Gill and Fenton Ltd. to be its greatest asset.

## FURNISHINGS

**Furniture and Woodware Ltd.**, of Hastings has made and is making an important contribution to the rapid increase in housing construction achieved in the Dominion over the past few years. By its service to the building industry in providing pre-fabricated, fully-assembled kitchen units to a uniform, approved standard it has relieved the builder of much worry and trouble.

Further, the availability of these standard fittings of approved design has simplified the work of the architect in planning the kitchen of the modern home.

From the builders' point of view, perhaps the greatest feature of "Furnware" service is the reliability of supply. Delivery dates are given ahead, even on the largest contracts, and the builder can rely with confidence on the units being on the job to keep pace with his scheduled progress. This well-organised service has resulted in an ever-growing organisation in Hastings, known equally for its up-to-date plant and its highly-qualified staff.

**Furniture and Woodware Ltd.**, originally Fowler and Rae Ltd., was incorporated in 1935 and is essentially a Hastings enterprise, both in shareholding and staff. From quite early in its history it aimed at bulk production of standardised designs and the success of its policy has resulted in an expansion of business which is today Dominion-wide.

In recent years the firm has specialised in the following lines, which are particularly suited to large-scale manufacture by the company's methods: Kitchen cupboards and benches, school furniture, Government furniture contracts, household furniture and industrial components (rubber stamp handles, mower rollers, brush stocks, etc.).

A staff of over 100 is employed.

With seven of a staff Messrs. Fowler, Son, and Drummond — later to become **Fowler, Drummond and Waddell Ltd.** — began manufacturing furniture in a modest factory at Hastings in 1936. Over the years the firm has expanded its staff to more than 50, more than trebled the size of its premises, and has established steady markets for its high-class products in districts from Wellington to Whangarei.

As Fowler, Son, and Drummond the firm began business in 1936. A little more than three years later Mr. Waddell joined the firm and the present name was adopted in 1941. By this time the staff had doubled and despite many difficulties brought about by the war, the range of products and their volume were steadily increasing.

Over the years this progressive firm has adopted a policy of installing the most modern machinery available. Since the war all the original machinery has been replaced with new, time-saving more efficient equipment. The range of products includes bedroom, dining-room and occasional furniture. The present factory covers 14,500 square feet and occupies a site on the north-east boundary of the rapidly-growing Hastings borough.

Some indication of the high rate of production maintained by Messrs. Fowler, Drummond and Waddell is given by their annual consumption of materials. Figures are: 65,000 ft imported oak and mahogany; 115,000 ft New Zealand-grown timber; 45,000 ft imported and New Zealand plywood; 36,000 ft New Zealand hard-board. In addition the firm uses New Zealand-made mirrors and lacquers of a total value of £5,500 each year.



## TRANSPORT . . .

Transport Hastings is one of the oldest transport firms in Hastings. It started as K. Stirling Ltd. which operated a large fleet of trucks serving Elsthorpe, Puketitiri and inland Patea.

After many years it changed its name to Transport (Hastings) Ltd. and, after the war, changed hands. It changed hands again just recently, the present owner being Mr. H. H. McHardy who purchased the trucks and plant and is now operating under the name of Transport Hastings.

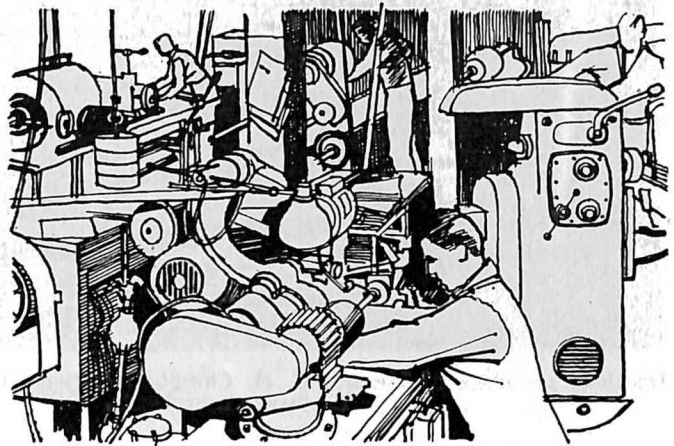
The farms over the Gentle Annie on the Taihape Road are still served by the firm — places such as Ngamatea, Otupae, Mangoehane, Timahanga and Kuripaponga, where large quantities of super are taken and hundreds of bales of wool are brought out to Napier. Convoys of sheeptrucks can be seen winding their way through the mountain road, too. This road is closed during the winter months due to snow and wet conditions.

Just recently Mr. McHardy has added to the fleet a light service car which now runs a daily passenger goods service to Puketitiri via Napier and back along the Waihau Road, delivering the daily paper, goods and parcels. This service is very popular among the back country farmers.

In addition to general cartage, the firm also deals in bulk petrol supplies and fencing battens, thus helping the farmer as much as possible with his requirements.

Transport Hastings is more or less self supporting, the drivers doing most of the servicing of the trucks, building crates, decks, and painting the vehicles (which are yellow, green and black).

Each truck operated by the firm travels about 20,000 miles a year — most of the distance over metal and rough roads in the back country. In spite of this the safety record is an impressive one — not a single accident for well over 100,000 truck miles.



## MOTOR MOWERS . . .

Motor Mowers Ltd., well-known Hastings manufacturing engineers, began making mowers in 1939 and since then over 30,000 Morrison mowers have been sold. Apart from selling throughout New Zealand, the machines have been introduced into Canada and at the present time are selling well in Australia. A few are also exported to the various Pacific Islands.

Since the war the firm has been engaged principally in the manufacture of 16" and 20" motor mowers and a 22" rotary mower. A single, wheel type garden cultivator is also made.

### FEATURES

Features of the firm's mowers are automatic clutch, one-handed control and divided type reel which throws the grass to the centre of the catcher. All moving parts are equipped with ball bearings. The mowers are equipped with Villiers 1 h.p. two stroke motors.

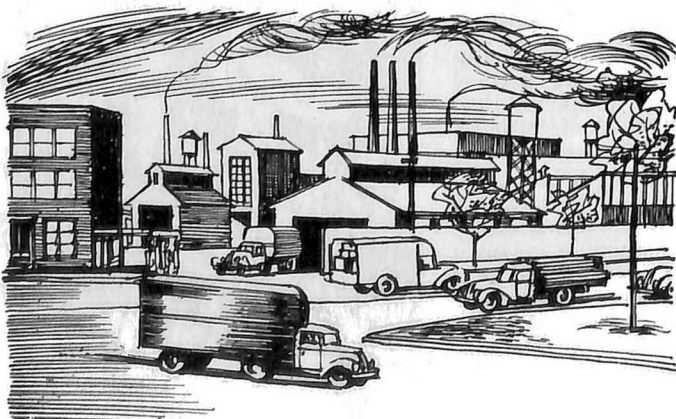
Production is at the rate of 5,000 units a year.

There are nine presses in the factory, capacities ranging from one ton to 50 tons. A 100 ton press is due to be installed later this year. Nine lathes and capstans are in operation and a further capstan lathe is due to arrive in October. In the welding shop there are two electric and three gas welders. A fully equipped tool room handles all necessary new dies and repair work. Also attached to the factory are a paint shop with three spray booths, a metal shop, a grinding department and a modern assembly bay.

### STAFF

A staff of nearly 80 is employed. They operate an active social club and other amenities include a super-annuation scheme and a P.A.Y.E. system for income tax.

Managing director is Mr. J. H. Mason and the manager Mr. A. Duncan.



# How to decide on the right

[From Small Plant Administration]  
Conveyors — Cranes, hoists, grabs — Industrial vehicles  
Positioning and transferring equipment—Weight considerations

## Materials Handling Equipment

**T**HE number of devices and types of materials-handling equipment are legion. Sometimes it seems as if there are almost as many kinds of equipment as there are materials to be handled. To add to the confusion, there are almost as many classification systems for such equipment. In one, moving stairs or elevators will be classed as "cranes"; in another, they are, more logically, listed under "conveyors".

In many classifications, there is a sharp division between equipment for handling liquids, bulk (loose) solids, parts and equipment, and packaged goods. Yet pipelines, traditionally reserved for liquids, are now being used for many finely divided solids; a belt conveyor that will handle parts and equipment will also handle packages, and so on.

However, there are four major classes of equipment on which there is general agreement, and with which every manufacturer should be familiar. These are outlined below.

### Conveyors

By dictionary definition, a conveyor is a device used to carry material over a fixed route. The breadth of that definition makes the classification "conveyor" a real catchall.

Among the types of materials-handling equipment classed as conveyors are the familiar moving belts; screw conveyors, which use a propellerlike helical fin or "screw" to push materials along; and pneumatic and hydraulic conveyors, which are actually pipelines through which materials are sucked or pumped.

Each of these types has myriad subdivisions. There are flat belt conveyors, troughed belt conveyors, bucket conveyors, metal-slat conveyors, Monorail conveyors, gravity roller conveyors, and many others.

There are conveyors to handle bulk or packaged materials, small items or big ones; to move parts up, down, or horizontally; or simply to hold them suspended in midair. Not every type of conveyor can do every job, of course; or move in all directions.

For instance, a screw conveyor will handle only bulk materials—and only those which will not be damaged by crushing—and it will move them in only one direction. A belt conveyor, on the other hand, can be designed to handle almost anything—even people, according to one company which is promoting the idea of using conveyors for mass transportation. Manifestly, this type of conveyor won't handle liquids unless they are in some type of container.

While conveyors carry materials along a fixed path, this does not necessarily imply lack of flexibility. For example, though the conveyors remain fixed, materials can be directed to any one of several end-points by arranging groups of conveyors so that material can be fed into any one of them by a gate or switching system. Furthermore, the conveyors themselves need not be stationary except while in operation. It is possible to obtain portable, light-weight units that can be moved from one part of the plant to another, and set up as the need arises.

Monorail systems, sometimes classed as conveyors and sometimes considered with hoists and cranes, deserve special attention. These are, essentially, an overhead or underfloor track to which can be attached any one of a number of types of hooks, racks, baskets, and dollies for transportation of a variety of objects. The overhead monorail conveyors are particularly useful as "live storage" conveyors. Racks or baskets suspended from a closed-circuit track will simply ride parts around overhead—in space often wasted—until needed, bringing them past the point of use at regular intervals.

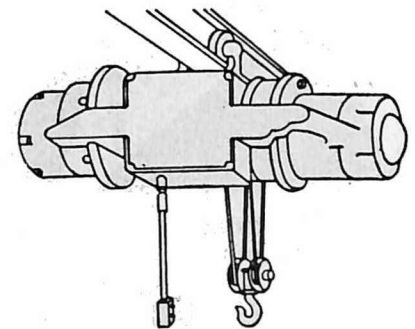
### Cranes, hoists, and grabs

This classification is generally reserved for lifting devices—at least, for devices which, as part of their operation, pick up the material being handled.

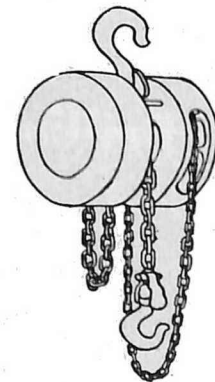
Except for small cranes, hoists, and grabs mounted on castors or on crawler tractors, these devices generally are stationary or move along a fixed track. They can be hand- or power-operated, and range from the simple jib crane to highly complex and expensive travelling cranes, complete with air conditioning for the operator.

Cranes, hoists, and grabs are especially good for lifting heavy or bulky parts (dies, big coils of steel, loads of lumber, etc.), and for use where aisle space is at a premium—provided there is sufficient room to manoeuvre the equipment. However, it is important to remember that the area which can be covered by a crane, hoist, or grab is limited by the rails or trolleys on which it travels or the length of its jib. It is possible, by using switching devices, to carry parts from one room to another, but installations of this type are rather expensive, and the volume of material handled must be quite high to justify their cost.

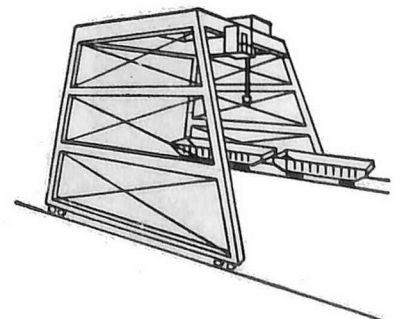
Two types of cranes (the simple jib crane and the gantry crane) and two types of hoists (the chain and monorail) are illustrated.



Monorail Hoist



Chain Hoist



Gantry Crane

# SIEBE GORMAN

## Safeguards the Worker



**"THE DUSTGUARD" Dust Respirator** (left) gives complete protection against fine dust, including finely divided silica. It is held firmly in position on the face by two adjustable rubber straps.

**THE "TWINCAR" Cartridge Respirator** (right) an improved type of respirator for protection against fine dusts and low concentrations of vapours. With moulded rubber ori-nasal face-piece and two filter cartridges.



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Photograph by courtesy of Fraser & Chalmers Engineering Works, Erith.



## Industrial Vehicles

Here are grouped the many types of trucks and tractors developed for plant use. They range from the simple wheelbarrow to powered equipment like fork and platform trucks. All are characterised by freedom of movement—they can go almost anywhere, and, if necessary, in nearly any direction.

Often classed separately, and worth remembering in considering materials-handling equipment, are standard motor vehicles and railroad cars. Many of these are used within plant areas, as well as for long-distance transportation.

The industrial truck is, by all odds, the most versatile type of handling equipment from the point of view of variety or materials accommodated and mobility. In addition to the standard fork and platform types, used to pick up unit loads, pallets, and skids, there are a variety of special attachments; single prongs which can be used to handle rolls of paper or metal, special clamps for unit package loads, rotating heads to facilitate dumping of bins, and numerous others.

Industrial trucks are available in both guided and driven models, with diesel, petrol, or battery power; long or short wheel-bases; plain or extensible lifts, and so on. In fact, there are at least as many types of industrial trucks as there are passenger automobiles.

In addition, there are industrial tractor-trailer systems which combine a puller unit (an industrial truck or a specially designed tractor) with a train of wheeled dollies on which loads—including pallets—can be handled. Less manoeuvrable than the industrial truck alone, these systems are particularly valuable for relatively long-distance movement of fairly large amounts of material. They also permit dropping material at several different points, simply by unhooking a dolly or two.

## Types of Pallets

For handling material in unit loads (that is, in groups, rather than singly—see below) with industrial trucks, there is a variety of pallets, skids, skid boxes and special racks (see illustrations). It is also possible to make up unit loads without skids or pallets, and pallets may be used to handle single items.

Basically, a pallet consists of two flat decks, separated by spacers so arranged that forks or prong can slip in between them to permit lifting and moving of the load. A skid is a single-deck unit with legs or runners near the outer edges so it may be picked up by a platform truck. Single-deck units with pallet-type spacers acting as legs are also available. They are sometimes called pallets, and sometimes skids.

A unit load, as we have indicated, is a group of parts, products, or packages, fastened together for handling as a unit—with or without a skid or pallet. The advantage of the unit load, of course, is that many items can be handled as one. The pallet forms a natural base for such a load, but it is possible to make up and handle a unit load without a pallet or skid. Sometimes, runners can be attached to the bottom of the load itself; in others, spaces can be provided within the load for entry of truck forks. The normal method for holding unit loads together and for keeping products on pallets or skids involves steel strapping, industrial tape, glue, or rope.

Unpalletised unit loads do away with the necessity for returning the pallet to the point of shipment. However, use of such loads is limited to certain types of products. Another way to get around need for returning pallets is to use "expendable" pallets—relatively low-cost cardboard units. These, too, however, have certain limitations.

While skids and skid boxes are still widely used, and unpalletised unit loads have special applications, pallet-handling is today the most popular method. The savings in time, effort, and actual cash which can be achieved through proper use of pallets are remarkable. One furniture manufacturer, for instance, adopted pallet-handling and cut his handling costs in half. A can manufacturer reduced car-loading time from 2½ hours to less than one hour by palletising cans instead of handling them singly.

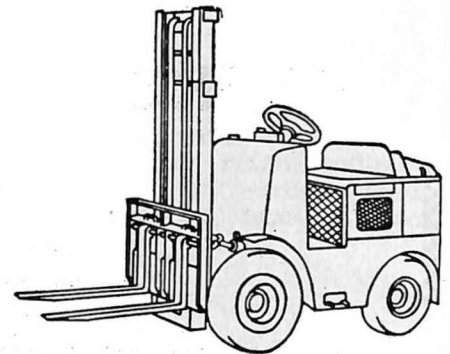
Savings like this explain the mushroomlike growth of pallet-handling in recent years. In 1939, only 16 companies made pallets. By 1950, there were well over 1,000 producers. At present, it's estimated that over 20 million wood pallets are produced each year—and a good many steel, wire, and cardboard ones as well.

## Positioning and Transferring Equipment

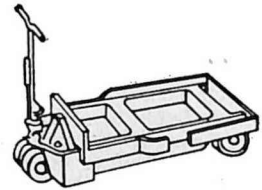
Many special devices have been developed for placing materials and parts, transferring them from one machine to another, etc. These include furnace-charging cars, forging manipulators, welding positioners, turntables, and so on. Several of these will be discussed in a future article, since they are particularly important in handling materials at and between machines.

## Weight Considerations

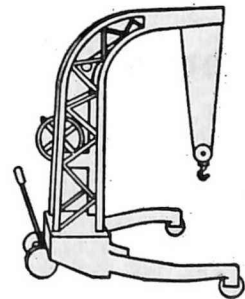
Light-weight substances such as plastics, fibrous glass and aluminium, are being added to the list of materials used in handling equipment. While equipment made of these materials is typically more costly to buy, ultimate savings often result because less manpower is needed to move and use the equipment. Light-weight items include conveyors, dock boards, ramps, pallets, and tote boxes. Lightness may also afford other advantages such as larger payload per pound and added safety.



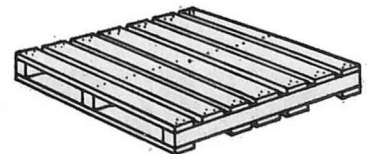
Power Operated Fork Truck



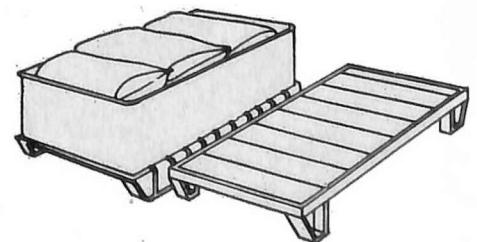
Handlift Truck (Platform)



Jib Crane



Standard Double-Deck Wood Pallet



Skid and Skid Box

# "SURCO" GIVES NEW QUALITIES TO CONCRETE

*Surco (N.Z.) Limited, a recently formed company, is shortly to introduce to New Zealand a new material for combining with terrazzo, plasters, mortars and concretes.*

"Tough  
Durable  
and  
Waterproof"

"SURCO" itself is a special concentrate in the form of a new latex emulsion which, when combined with cement-like materials and aggregates, gives these normally brittle materials the qualities of resilience, elasticity, exceptional adhesion and durability.

The entire process is based on the simple idea of substituting liquid rubber for much of the water generally used in cement mixes. Synthetic latices are used in a form that furnishes the necessary moisture for the hydration of the cements and at the same time disperses film-forming latex solids throughout the mixtures.

Two main types of latex have been produced. Both are similar in qualities of adhesion, elasticity and resilience but dissimilar as to water-resistance. Toughness and durability together with high grease and oil resistance are the prime qualities of "Surco" Red Label. Its water-resistance is however usually adequate for any installation not constantly in contact with water. The waterproofing qualities of "Surco" Yellow Label are so outstanding that its uses for this purpose are almost unlimited.

Qualities of the material are:—

(a) Resilience and impact resist-

ance: The normal brittle qualities of cement mixes have been replaced by a resilience which permits thin coatings to withstand repeated severe blows without shattering.

(b) **Elasticity:** "Surco" materials retain sufficient elasticity to conform to the normal expansion and contraction of any base to which they may be bonded.

(c) **Water resistance:** "Surco" Yellow Label mixes are outstanding for almost any waterproofing task. In stringent laboratory tests, average absorption after 24 hours immersion in water was less than half of one per cent. by weight.

(d) **Adhesion:** "Surco" plasters, mortars and concretes will bond to concrete, tile, masonry, metal, wood and even glass.

(e) **Non-skid:** This non-skid property, plus excellent adhesion, makes "Surco" materials ideal for application to rigid floors requiring protection and durable, non-skid surfaces.

(f) **Colours:** "Surco" materials may be coloured during mixing or can be painted, varnished, or shellacked.

(g) **General:** Full-scale experimental installations of a Georgia Tech-developed flooring and surfacing composition indicate that it has definite commercial potentialities. Applied over concrete, it provides a long wearing surface which is resistant to water, impact and abrasion. Its flexibility and its ability to bond to metal, glass, plaster, plaster board, wood and all types of masonry permit applications to be made over large areas of various substrata without use of anchoring clips or expansion joints.

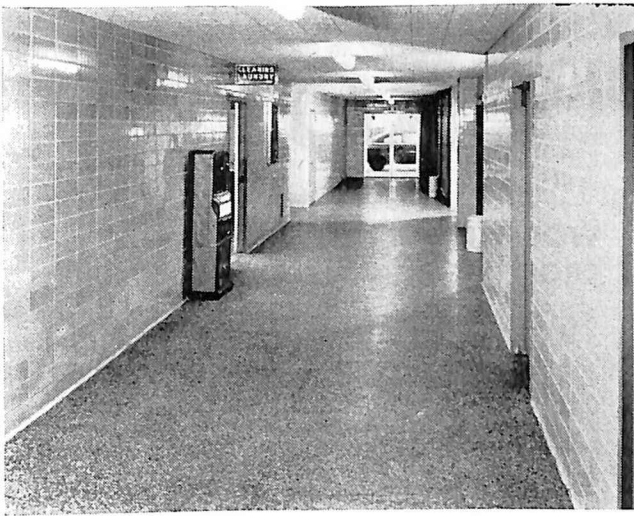
## SURCO USES

The uses to which "Surco" materials may be put are many and varied; their possibilities are almost without limit. Listed below are but a few of the more common uses.

(a) **Flooring—industrial:** "Surco" coatings only  $\frac{1}{4}$  inch thick give a low-cost, long wearing floor with the resilience of wood, and resistance to traffic impact far superior to that of concrete fortified with the best hardener. This resilience gives comfort underfoot and adds a safety



Applying a film of "Surco" to a terrazzo surface.



A floor after treatment with "Surco". The various "Surco" materials retain sufficient elasticity to conform to the normal expansion and contraction of any base to which they may be bonded.

factor by killing "bounce" where dropped objects might constitute a hazard to industrial workers.

(b) **Flooring—residential:** "Surco" coatings, in colour or plain, are well adapted to housing using concrete slabs. Float finishing of the slab during construction is eliminated. The accumulated saving of final finishing and repair caused by damage during construction makes possible a low-cost resilient flooring.

(c) **Terrazo-type:** Applications of this decorative flooring in thicknesses of  $\frac{1}{4}$  to  $\frac{3}{8}$  inch eliminate structural changes. Beautiful and resilient terrazo-type flooring can be obtained at prices much less than those of conventional installations. Many colours are possible.

(d) **Roofing and waterproofing:** The adhesive, elastic and waterproofing qualities of "Surco" mixes indicate many new uses such as for lining swimming pools, roof parking decks, and play areas.

(e) **Stucco and plaster:** Coatings that will not shatter under repeated blows, and which can be brought to almost any desired degree of water-resistance permit many new and varied uses for these brittle materials.

(f) **Repairing concrete:** New concrete can be bonded to old by either adding "Surco" liquid to the new concrete, or by using a thin "Surco" mortar as the bonding agent between conventional concretes, or by accepted spray methods.

(g) **Setting bed for tile:** "Surco" mortars bond to practically any surface, including metal and glass, and make a perfect tile setting bed. "Surco" is used to level up walls or floors and its adhesion of 86 pounds per square inch makes tile stay put.

(h) **Other uses:** "Surco" products may be used for walks, driveways, highways, airfields, flashing, caulking, pipe joints, concrete pipe and lining, concrete blocks, and as a grout.

#### DEVELOPMENT

"Surco" was developed by the Research Institute, Georgia Institute of Technology, Atlanta, Georgia. Testing covered a period of over two years during which 500 laboratory experiments were performed and recorded. Research and development is continuing.

Some advantages of the material are:—

In multi-storied building there is tremendous saving in weight through the lightness of the floor covering as well as the walls.

Saving in cement and aggregates due to the bonding qualities of "Surco".

The ease of application, it being capable of being sprayed on to  $\frac{1}{4}$  in. thickness by gunite process.

Besides interior floors, its potential uses include walls and stairways, exterior platforms, walks, concrete aprons, buildings, bridges and other structures requiring protection or patching. The composition's good adhesion to metal suggests application to ship decks and other steel floors requiring both protection and durable non-skid surfaces.

The composition, basically off-white in shade, can be produced in a variety of pleasing colours by incorporation

of certain types of aggregates. Properly compounded, it can be sanded down as easily as hardwood floors to produce attractive terrazo effects.

While many of its uses in commercial buildings, apartment buildings and homes would parallel its industrial applications, decorative treatments could be emphasised. The terrazo-type floors should prove particularly popular in view of the potential savings obtainable from use of simplified application techniques. Much-needed recreation areas might be provided in crowded urban centres by using the new material as a waterproofing coating over concrete roofs.

Application of the terrazo-type formulation to transite panels, followed by sanding and polishing, produces a kind of artificial stone. Tests indicate that such precast products would be inexpensive and attractive for use as store fronts, as window sills, as floor moldings, on hearths and for numerous types of decorative trim.

Slight modifications of the composition result in a mortar suitable for setting marble, tile and similar products. Other modifications can be used as premium-quality putty, pointing material and spackle.



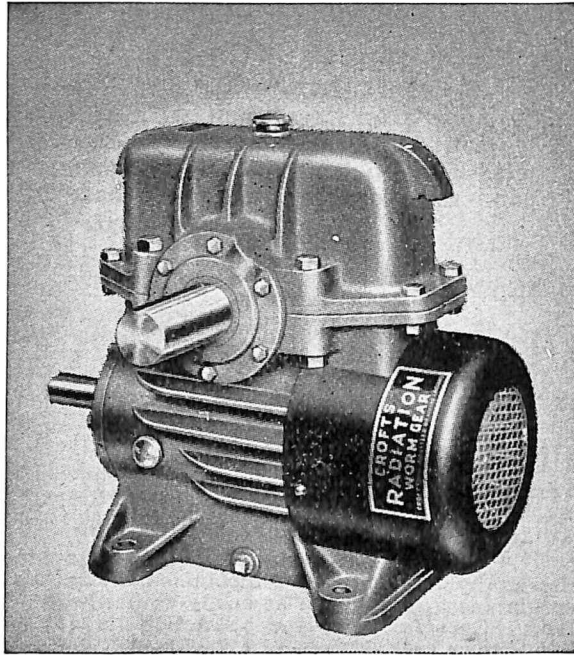


ILLUSTRATION: CROFT STANDARD FAN-COOLED UNIT

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**WORLD RENOWNED** for the utmost  
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# Electronic Automation Controls in U.S. Industry

**T**HE use of electronic automation controls, especially in mechanised production lines, will double in the United States within the next five years and triple by 1965, according to Dr. L. T. Rader, general manager of the Specialty Control Department of the General Electric Company, a leading electrical equipment manufacturer.

Recently the General Electric Company opened the doors of a new multi-million dollar manufacturing plant at Waynesboro, Virginia, which is the first new industrial plant ever built for the specific purpose of producing electronic controls for use on automatic and semi-automatic production lines.

A second General Electric plant for the production of electronic controls is under construction near Salem, Virginia, and is scheduled for completion early in 1956. Additional new plant capacity for electronic controls production is already in the planning stage.

Dr. Rader says that the new plants being built by General Electric are dramatic evidence that the trend toward automation in U.S. industry will result in an even stronger and healthier economy, with more jobs and increased prosperity. He pointed out that the recently opened plant at Waynesboro will employ between 500 and 600 persons with an annual payroll of approximately \$2.5 million.

## PRODUCTS

Among the products to be manufactured at the new Waynesboro plant will be complex electronic systems that automatically control the operations of giant 100-ton punch presses. Other products will include ultrasonic generators, which produce

sound waves beyond the range of human hearing and are used to clean miniature parts, and pinhole detectors, which can spot a flaw in a sheet of steel moving at 60 miles an hour.

"These controls are vital components of high-speed production lines," Dr. Rader says, "detecting and correcting flaws, controlling production, and co-ordinating intricate machinery in less time than it takes for a man to see a red light and push a button. This leads to more jobs in producing this type of equipment, and to better jobs in its utilisation in production lines, since it relieves the worker of more monotonous chores and frees him for more creative and interesting work."

A major feature of the new Waynesboro plant, which contains 190,000 square feet of floor space, is its flexibility, according to Dr. Rader. The complete plant can be reorganised with new production lines and a new layout within two weeks. All machinery is free standing, including presses, brakes, lathes, and mills, with no in-floor bolting. Connections for water, air, and power are made to overhead supplies with flexible couplings.

A one-direction production flow has been achieved, despite the custom-engineered nature of many of the products. Standard and special parts for a complete assembly

are put on specially designed conveyor carts, then towed by overhead conveyor to individual work stations, thus eliminating the stocking of parts at work stations and simplifying assembly techniques.

A special punched card system is also an integral part of the plant's production flexibility. It co-ordinates and records inventory, stocking, assembly, piece work credit, schedule, delivery and other functions, of both standard and special components, as well as the completed assembly.

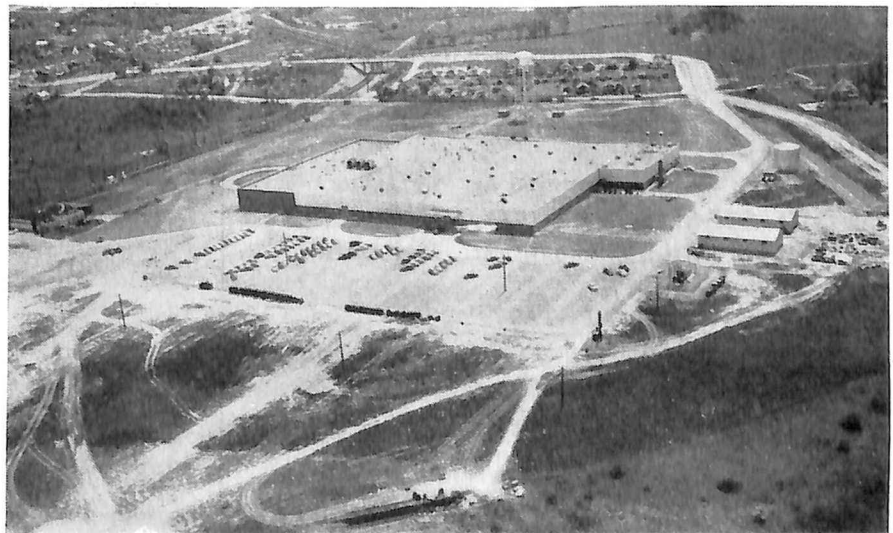
## SPEED AND FLEXIBILITY

Speed and flexibility have been designed into office operations. A telephone dictation system, one of the first of its kind in the U.S., utilises a central stenographic bureau.

To dictate a letter, office personnel dial a single numeral on a standard telephone, which automatically connects them with a transcribing machine in the central stenographic bureau. Corrections are noted with another dialed numeral. At the central bureau, relays shunt incoming calls to idle machines and also signal when a given machine's recording surface should be changed.

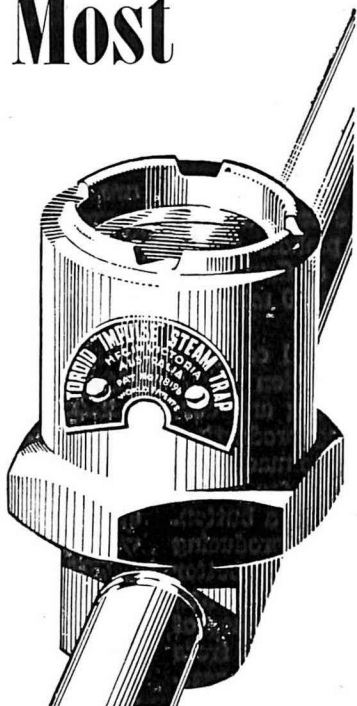
In addition to its assembly lines and air-conditioned offices, the ultra-modern plant contains a completely equipped product-development laboratory, a cafeteria, a first-aid dispensary, and an auditorium.

**View of the new General Electric plant at Waynesboro, Virginia, U.S., built to produce electronic controls used for automation of production lines.**



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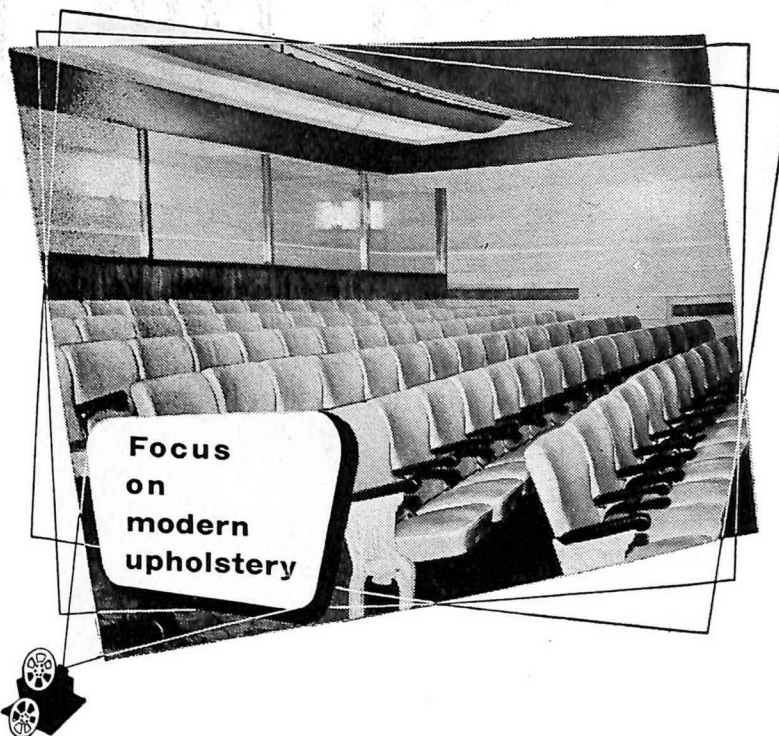
A new rubber hose, fortified with a "stomach" made of the toughest abrasion-resisting rubber known, swallows 10 lb. chunks of iron ore and coal without wincing. Heavy chunks, up to eight inches in length, are borne along inside the hose, carried in a stream of water at pressures as high as 250 lbs. to the square inch.

Designed primarily for use in the mining industry, the new hose, developed in the U.S., will find general use in industry to convey metal shavings and chips, sand and gravel, ground or powdered chemicals and a variety of other sharp and abrasive materials. The hose, known as "Convertapipe", moves such loads with about the same ease as other hose handles liquids. Secret of the durable "insides" of the hose is a special rubber compound called Armorite, which is said to out-last steel 20 to 1 in many applications.

Where metal pipe is now installed to convey abrasive materials, the new hose may be used to advantage wherever pipe systems must turn a corner or negotiate a bend. Abrasive particles travelling at high speed cause severe wear on metal pipe at such points.

Rubber in liquid form is now being produced commercially in the United Kingdom by a large manufacturer according to a report in "Rubber Developments", a journal of the British Rubber Development Board. The report explains how raw, natural rubber, normally tough and elastic, can now be easily converted by heat and the addition of chemicals into a liquid which can be poured. This new process eliminates the need for heavy presses and other machinery, and enables complicated mouldings to be made by a simple casting process.

A number of uses for this form of rubber have already been found. Printers' rollers made by this new process, for example, have shown themselves to be superior in many ways to the more conventional roller. They last longer, do not become soft in hot weather and stand up to hard wear. The process is also finding increasing application in the paint and toy manufacturing industries.



Comfort and distinctive modern decor is the design theme for the auditorium, Embassy Theatre, Auckland owned by Kerridge-Odeon. Patrons will applaud the choice of "Vynide" as the upholstery material for the seats. This elegant plastic coated fabric will withstand years of hard wear and still maintain its handsome appearance. It is scratchproof, scuffproof, and will take any amount of flexing; it requires only a wipe with a damp cloth to keep it spotlessly clean. "VYNIDE" is available in a wide range of tasteful patterns and pleasing colours.



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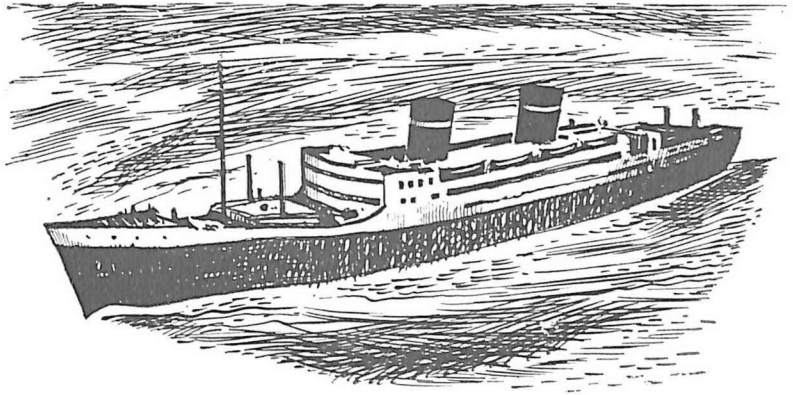
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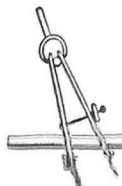
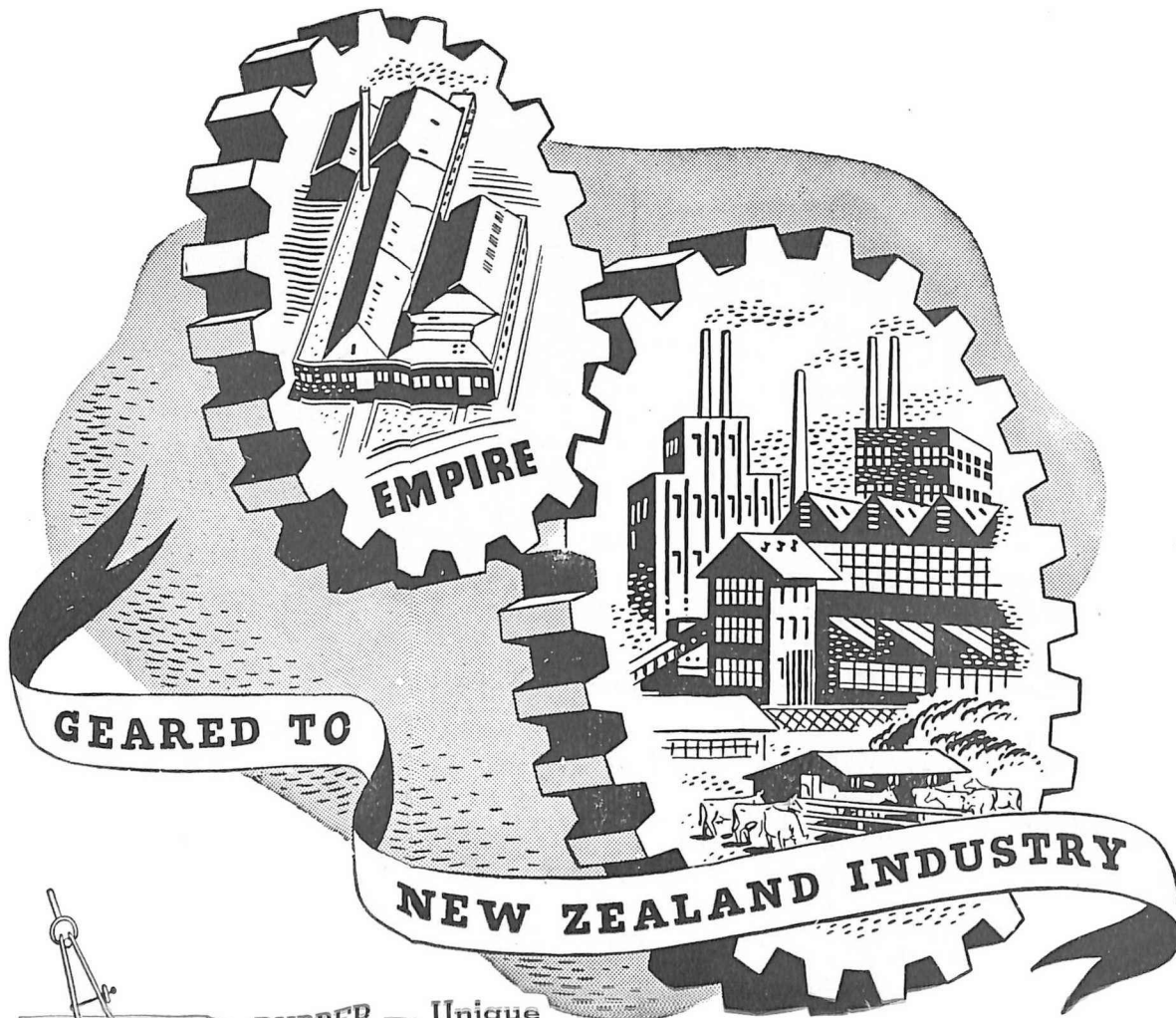


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