L.G

IN THIS ISSUE....

FAMOUS names have been appearing in the news again, names that never failed to capture the imagination in the years before 1939 but which, in the way of things in times of war, were kept largely hidden behind a cloak of security while the struggle raged.

Who could deny a thrill of interest, for instance, on reading that Britain's newest luxury liner, the *Mauretania*, had completed a record run from Fremantle to Durban, or that the French *Ile de France* and the German (or ex-German, since she is to become American property as a prize of war) *Europa* are carrying troops homeward across the Atlantic? Or that Cunard-White Star, becoming restive about the prospects for the trans-Atlantic service are anxious to have their two great liners, the *Queen Mary* and the *Queen Elizabeth*, withdrawn from troop service as soon as possible and refitted for normal passenger traffic?

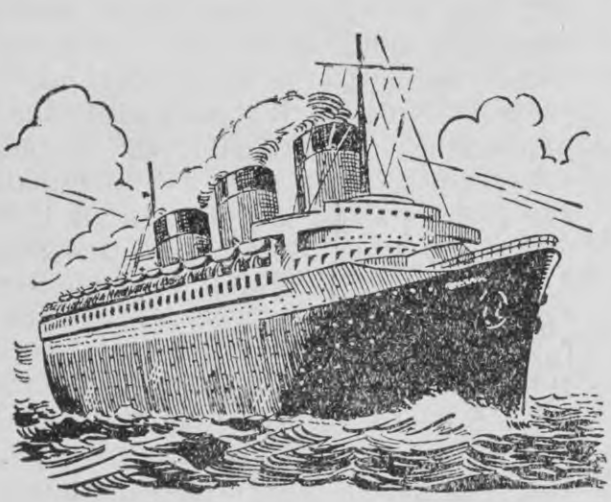
Mention in the same breath of the names of such a galaxy of ocean queens inevitably calls to mind the pre-war international rivalry in the trans-Atlantic service, a rivalry that gave rise to the contest for the Blue Riband of the Atlantic. Soon, very soon according to the signs, the service will be in operation again and the mammoth liners which have figured with varying degrees of fortune in the fighting of a global war will once more be competing for mastery on the world's most important sealane. Some there were that failed to survive the recent upheaval (the Italian *Rex*, lying on her side not far from Trieste, the German *Bremen* and the British *Empress of Britain* are cases in point); others, such as the French *Normandie*, have not escaped misfortune, but are capable of restoration to their former utility and magnificence.

If some of the giants of the Atlantic have fallen by the way, there will be others to take their place, though possibly it will be a long time before either Germany or Italy again enters the field. Britain and France, and doubtless America if she intends to retain the *Europa*, will dominate the scene in the meantime, and it is no secret that Cunard-White Star have in mind the building of another "*Queen*"—the *Queen Victoria*—to swell their fleet of proud luxury liners. Whether the *Queen Victoria* is intended to be larger than the *Queen Elizabeth*, the biggest ship in the world today, is not clear at present, but it may safely be assumed that she will not be smaller than the other two ships which, as war transports, have

carried a million troops during their long period of war service, each of them accommodating about 15,000 men per voyage. One authoritative estimate has it that the maximum number of troops which could be carried aboard either ship without baggage is 23,000, despite the fact that the *Queen Mary's* normal full passenger complement is only 2,119.

The *Queen Elizabeth*, which was launched in 1938, was moved from her fitting-out berth on the Clydeside to make room for the launch of the new battleship *Duke of York* in 1940. She was taken to sea and run up to her normal sea speed of 28½ to 29 knots, and then crossed the Atlantic to join the *Queen Mary* at New York. Since the spring of 1940 the two ships have steamed a million miles as transports.

There was, after the 1914–18 war, a sharp reaction against the large ship doing fantastic speeds, and there may be a similar reaction this time, in spite of the fact that the world in the past decade or two has become luxury liner-conscious. The close of the second world war, however, is accompanied by a new factor in the threat of serious competition from trans-Atlantic air services. The recent route test flight from the United States to Britain by a Pan-American World Airways clipper presaged the early inauguration of high-speed land clipper services over the North Atlantic, in which both American and British commercial airways organisations will participate. In the face of this new and powerful competition, which may be expected to grow steadily in the post-war years, the shipping companies will not be able to remain inactive and will be compelled to strive continuously for faster and more attractive services. The new Cunarder, *Queen Victoria*, is probably the first answer to the challenge from the air.



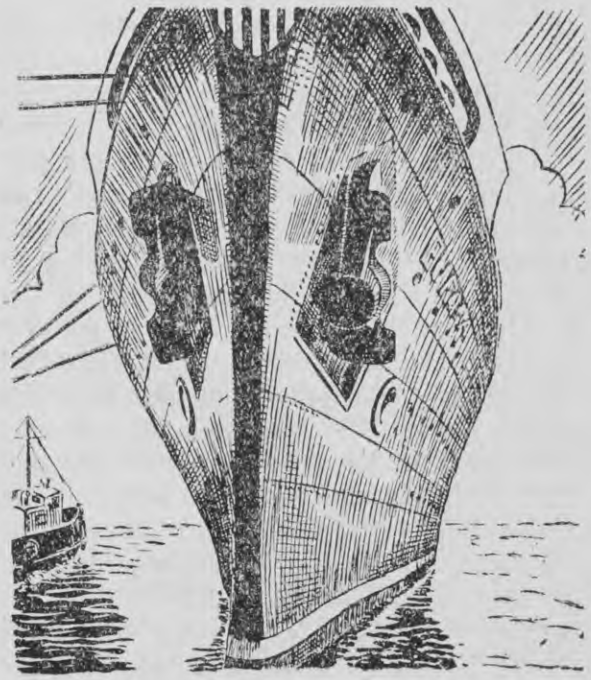
The French liner Normandie

The doubts cast at times on the advisability of constructing mammoth Atlantic passenger liners have been largely dispelled, at least in the case of the British and French, by the facts. It cost five millions to build the *Queen Mary* and eight millions for the *Normandie*, and both justified themselves financially in the peace years, the former handsomely. The fight for supremacy in speed on the Atlantic must, of necessity, force up the size of the ships employed. Disregarding for the moment a possible revolution in marine engines, a ship of ten thousand tons displacement, carrying fuel for the trip, cannot exceed 20 to 21 knots. To gain increased speed it is necessary to increase the size of the vessels, for it is a surprising fact that the larger the ship the lighter it becomes to propel *per ton*. At the same time, it stands to reason that the greater the speed at which a ship is propelled forward the greater will be the strain on the fabric, and consequently the hull must be correspondingly strengthened and thus made heavier. It has been calculated that, in the case of large ships, one-half of the displacement weight must be allowed for the hull, and it follows that in a 27-knot ship with a displacement of 43,000 tons the hull would account for 21,000 tons. With machinery and requisite fuel and

water taking another 19,000 tons there remains only 4,000 tons for passengers and their accommodation and an insignificant amount of cargo.

If the speed of the ship were to be increased beyond 27 knots the remaining space would diminish rapidly, and at somewhere between 28 and 29 knots there would be none at all. The struggle for supremacy reached its peak in the pre-war years with the building of the *Normandie* and the *Queen Mary*, which had to be built 30,000 tons greater than any other ship then afloat to increase the speed record by two knots.

Although regular trans-Atlantic services have been in operation for more than a hundred years, the chief interest in the contest for the Blue Riband centres in the period since the turn of the century—the era which produced the mammoth liner. British lines, led by Cunard, had maintained a definite superiority for sixty years, starting off with 210ft. paddle-boats and always spending enormous amounts of money in their bid for supremacy in speed, and, although the Germans held the ascendancy for a decade from 1897 onwards, it was Cunard who again took up the challenge. Negotiations with the Admiralty resulted in the company's undertaking to build two ships calculated to do 24½ knots; they were to be 750ft. long, and not only the fastest ships in the world but also the largest that had ever been built. The first of the two sister-ships, called the *Mauretania*, was launched in 1905 and was followed soon afterwards by the *Lusitania*, which was to meet a tragic fate in 1915. The *Mauretania* at once showed her extraordinary power by reaching 27.36 knots and averaging 26 knots on a 48-hour trial trip—a foretaste of a record which was to make her the most famous ship in the history of the Blue Riband. She captured it in 1908 and retained it for 22 years. Even in 1929, when she



A prize of war—the Europa

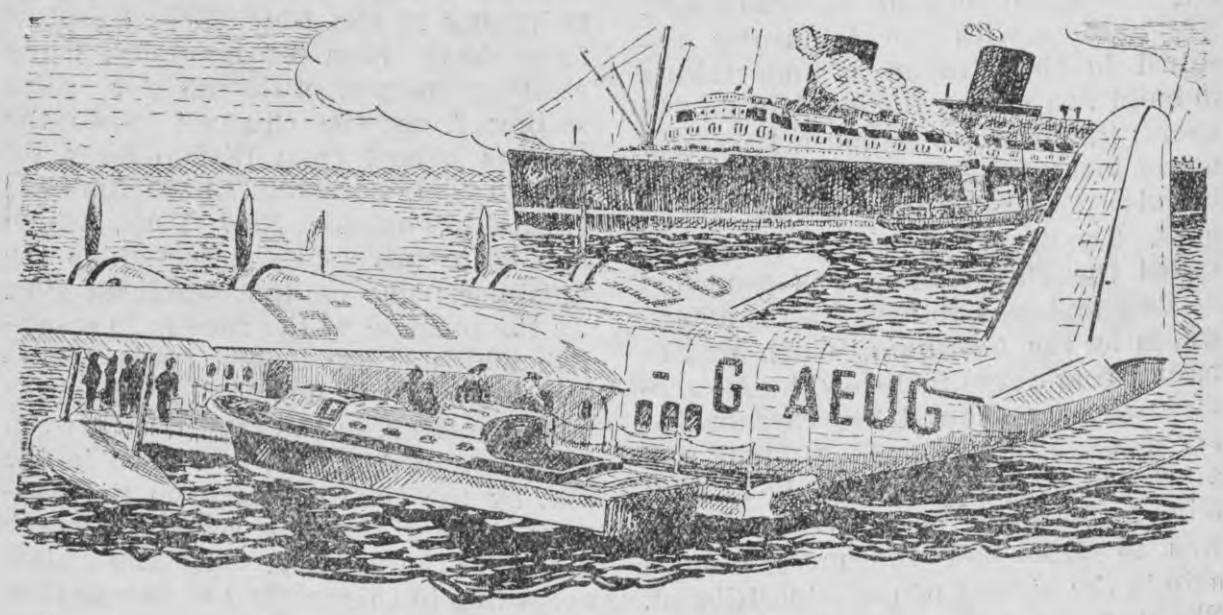
was 23 years old and still had her original engines after they had driven the ship more than two million miles, she averaged only a tenth of a knot below 27 in a gallant losing battle with the new German entrant, the *Bremen*.

With ships of several nations participating in the Blue Riband contest there have been, of necessity, many starting points, although for ships sailing from the Channel ports the time is judged from Bishop Rock, off Land's End, Cornwall, to the Ambrose Lightship, outside New York, which has been universally accepted as the finishing point on the American side. As the purpose of the race is to establish which is the fastest trans-Atlantic liner, this is done by dividing the distance the ship has travelled between Europe and America, as shown in the log, by the time occupied on the passage, thus giving the vessel's average speed for the journey. The ship which, according to this method of calculation, reaches the highest average speed is the holder of the Blue Riband.

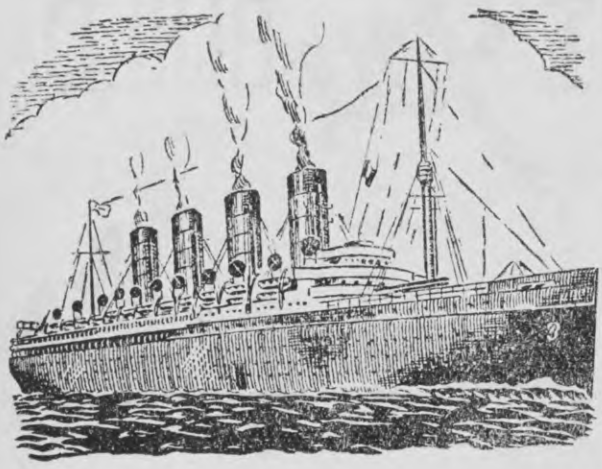
The *Mauretania* was the fastest ship on the Atlantic for over 20 years—until Norddeutscher–Lloyd launched, in 1928, the *Europa* and the *Bremen*, two super–ships of 52,000 tons that gained the admiration of the world. On her maiden voyage the *Bremen* captured the Blue Riband from the gallant old *Mauretania* and reached a speed of 27.91 knots on the return trip. In the meantime the French had produced, in 1927, the *Ile de France*, a vessel of 43,000 tons, but, designed for a speed of 23 knots, she was not intended to take part in the race for records, and the main immediate reaction to the German effort was the building by the Italians of the *Rex* and the *Conte di Savoia*, fine ships of 51,000 and 48,500 tons respectively. The *Rex* wrested the westbound record from the *Bremen* in 1934 by crossing from Gibraltar to the Ambrose Lightship at an average speed of 28.92 knots, giving Italy the Blue Riband for the first time. The *Rex* was built at Sestri Ponente, in the Gulf of Genoa, and she proved herself capable of considerably more than her designed speed of 27½ knots.

Neither France nor Britain could long remain idle in view of the German–Italian spurt, and their respective answers were the *Normandie*, which entered the service in 1935, and the *Queen Mary*, completed in the following year—the former with a gross tonnage of 83,423 and a length of 962ft. and the latter with a gross tonnage of 81,235 and a length of 975.2ft. The sensational turbo–electric–driven *Normandie* crossed to New York on her maiden voyage in 1935 at a mean speed of 29.53 knots to gain the Blue Riband by a generous margin, only to lose it in the following year to the *Queen Mary*. Supremacy swung from one to the other until in August, 1938, the British vessel achieved a record average speed of 31.69 knots on a trip from Ambrose Light to Bishop Rock. With the contest suspended owing to the war the Blue Riband has remained in the possession of the *Queen Mary*, although the *Queen Elizabeth*, which has maintained a speed under service conditions of about 28½ knots, is believed to be the faster ship. With a length overall of 1031ft. and a gross tonnage of 84,000, the *Queen Elizabeth* is bigger than either her sister–ship or the *Normandie*.

The construction of the *Queen Victoria* will enable Cunard–White Star to maintain a regular round–trip



Peace–time competitors: air and ocean liners



Held the Blue Riband for more than 20 years—the old Mauretania

schedule and will doubtless assure Britain of domination of the Atlantic service for at least several years. Whether it will be practical or economical to continue increasing the size and speeds of the world's luxury liners —the two must go together, for expert opinion has shown that, while 80,000 tons approximates to 30 knots, it would require 100,000 tons to give a speed of about 32 knots—only events can prove, and in the meantime the possible effects of competition from the air have to be taken into account. It may not be worth while to spend the tremendous additional sums necessary to raise the liner's speed beyond the present level, but, with such ships as the "*Queens*" and their rivals offering, this will not mean any great sacrifice. The giant Cunarders and their kind represent the finest achievements of man in their own field.

THE "WAHINE'S" SUCCESSOR

A new, 950-passenger vessel for the Wellington-Lyttelton steamer-express service, is at present under construction for the Union Steam Ship Company of N.Z. Ltd. She is being built in the yards of Vickers Armstrong Ltd., at Barrow-in-Furness from which the Rangatira and Awatea were launched.

It is hoped that she will be ready to enter the service, replacing the Wahine, at the end of 1946. The Wahine is at present engaged in transporting members of the R.N.Z.A.F. home to New Zealand for demobilisation.

Dimensions of the steamer are much the same as those of the Rangatira, overall length 400 ft. and beam of 58 ft. being identical but the gross tonnage will be 6,900 compared with the 6,152 tons of the Rangatira.

She will be a five decker and will embody many improvements—the result of wartime experience—including radar equipment among her new navigational devices and will be equipped with a radio telephone, in addition to normal radio equipment, for communication with shore.

The greatest innovation will be in her accommodation arrangements. Passenger accommodation will be laid out for one class only, the fares being graded from the present second class upward, according to size of cabin, number of berths and position. There will be approximately 30 one-berth cabins, 235 two-berth cabins, 20 three-berth cabins and 70 four-berth cabins. Instead of the dining saloon being below as in former vessels there will be a cafe on the promenade deck, together with a large smoking room.

Special consideration has been given to the carrying of motor vehicles and she will have room for about sixty-two.

The main propulsion units will develop 13,500 shaft horse-power and it is expected that a speed of 23 knots will be obtained in trials.

This New Zealand vessel will very likely be the first outstanding post-war passenger steamer to emerge from British shipyards.

The HOUSE THAT You BUILD

THE thoughts of most of us now are centred in our homes, either those homes that are established and waiting for us in New Zealand, or those future homes as yet merely a picture in our minds, about which we hope to build our new life on our return.

Those New Zealanders who visualise these future homes are to-day weighing the pros and cons of building or buying a house. With the present acute housing shortage it is unlikely that many houses will be for sale at a price within the bounds of the average soldier's pocket. For the great majority, building is the only solution. In this article E.R.S. hopes to give some account of the present building costs in New Zealand.

The primary consideration, presuming that an adequate section has been purchased, is to cut the suit according to the cloth. Costs have increased tremendously during the war and houses built for L800—L1000 in 1938 may now be valued at nearly twice that amount. Those of us who had hoped to build a house like the one Bill Jones next door built in 1938 for L1000, will probably have to be content with one considerably smaller after an outlay of L1,500. With no capital other than the Rehabilitation Loan of L1,500 available obviously a mansion is out of the question but a "desirable modern residence" *can* be built.

Building costs vary according to locality, being generally less in the South Island than in the North. They also depend on the nature of the site, the design of the house, the quality of the timber and fittings and the extent to which built-in wardrobes, cupboards etc., are fitted.

Where the quality of the materials and the fittings is up to the standard adopted in State Housing Construction, prices range from a minimum of about 27/- per square foot in parts of the South Island to a maximum of 33/- per foot in some North Island districts. Quotations as low as 25/- per square foot are given for certain South Island districts, but this represents a comparatively low standard of materials and finish.

The Housing Construction Department has set out to build a moderate-sized house of low enough initial cost to enable it to be let at a very moderate rental to the lower and middle income groups. Judged by the standards required by the average man, the fittings and finish are of excellent quality. If the State House is taken as a criterion a rough estimate of the size of houses which can be built within the limits of the Loan can be obtained.

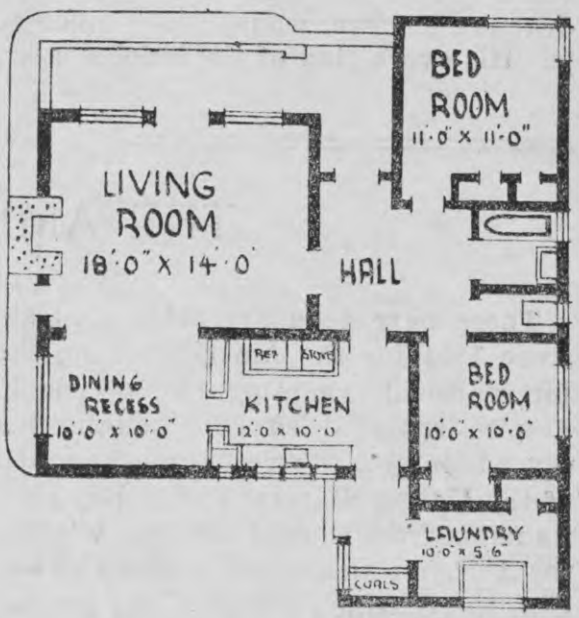
In the North Island at 33/- per square foot the floor space would be about 900 sq.ft., in the South Island at

27/– 1110 sq. ft., at 30/– 1000 sq. ft. The 200 sq. ft. difference between the lowest and highest estimates means the sacrifice of a considerable amount of room for a North Island builder.

With 1000 sq. ft. of floor area available, (taking the mean figure of 30/-), five rooms are probably the most that could be encompassed without cramping. This would permit two bedrooms, a living room, dining room and kitchen which would be sufficient for a family of four. In a State House for a family of this size, the floor area occupied by these five rooms is approximately 650 sq. ft. By enlarging the Government specifications slightly in each case this can be increased to a little over 740 sq. ft. to give the following dimensions:—living room (16'x14'), bedrooms (12'x10' and 10'x10'), dining room (14'x10'), and kitchen (12'x 10'), leaving 190 sq. ft. for hall, bathroom, w.c etc. Eight by eight is sufficient for the bathroom, permitting nearly 130 sq. ft. to be used for hall or sun porch and laundry. Halls are luxuries that many will dispense with in this battle for *lebensraum* utilising the saved space for extra cupboards in the kitchen and built-in wardrobes in bedrooms. For a larger family it can be calculated that an extra room of average size 14'x12' increases the cost by L250. These prices show very little variation whether wooden, brick or concrete outer wall construction is used so that it is either a matter of selection or of what is most likely to be available.

The preceding calculations assumed that the builder either owns a section or has enough of his own money to buy one. If the loan has also to purchase the section, then the area of the house will be correspondingly reduced. No estimate can be given of the cost of sections. They vary from L1000 for a quarter acre in fashionable suburbs down to L50 or L100 on the outskirts of a town. The price depends on popularity, on facilities and on the size of the centre. A section in Oamaru costs much less than one of the same desirability in Auckland. There are many considerations. The further out you go the cheaper the section but the higher the bill for bus or train fares. On the other hand, a bigger section with room for growing vegetables may offset this. Every man must settle this problem for himself.

Some estimate of timber costs may be gauged from the following examples of quotations from the Dominion Federated Sawmillers' Association price



Possible design for house with 1,000 square feet of floor space

list of April 16, 1945. Example: (Sizes 1" thick and over 6" wide but not exceeding 12" section, sawn sizes in random lengths):—

First class grades: Dressing A. grade —Heart Rimu 47/3, Rimu 29/3, Heart Matai 47/3, Matai 24/-, Heart Totara 67/9, Totara 38/3. Building A grade: Heart Rimu 36/3, Rimu 25/3, Heart Matai 36/3, Matai 19/6, Heart Totara 42/3, Totara 26/3.

Second class grades: Building B. grade—Heart Rimu 25/3, Rimu 15/9. Heart Matai 23/–, Matai 12/3, Heart Totara 25/–, Totara 19/–

Sales tax is included in these prices and the quotations are per 100 ft. B.M. Random lengths are lengths from 6' to 20' in Rimu, Matai and Totara and in heart wood from 6' to 15'.

Further expense which may necessitate reduction of floor area is the architect's fee for a house of individual design. A good architect will, however, save the amount of his fee by conservation of space in the plans, where an inexperienced amateur, drafting his own, would waste much of it. His overseeing of the builder, also, often pays dividends to the home-owner. It should not be forgotten that many building contractors are capable of drafting excellent plans to given specifications, the cost of which is included in their estimate.

Prefabrication has long been accepted in England and America as a method of reducing building costs, but there seems to be no immediate likelihood of the development of prefabrication in New Zealand on a scale large enough to make any appreciable difference in the price of dwellings. Under existing conditions, however, those dreams of building one's own house can become a reality. All that is required is care in planning.

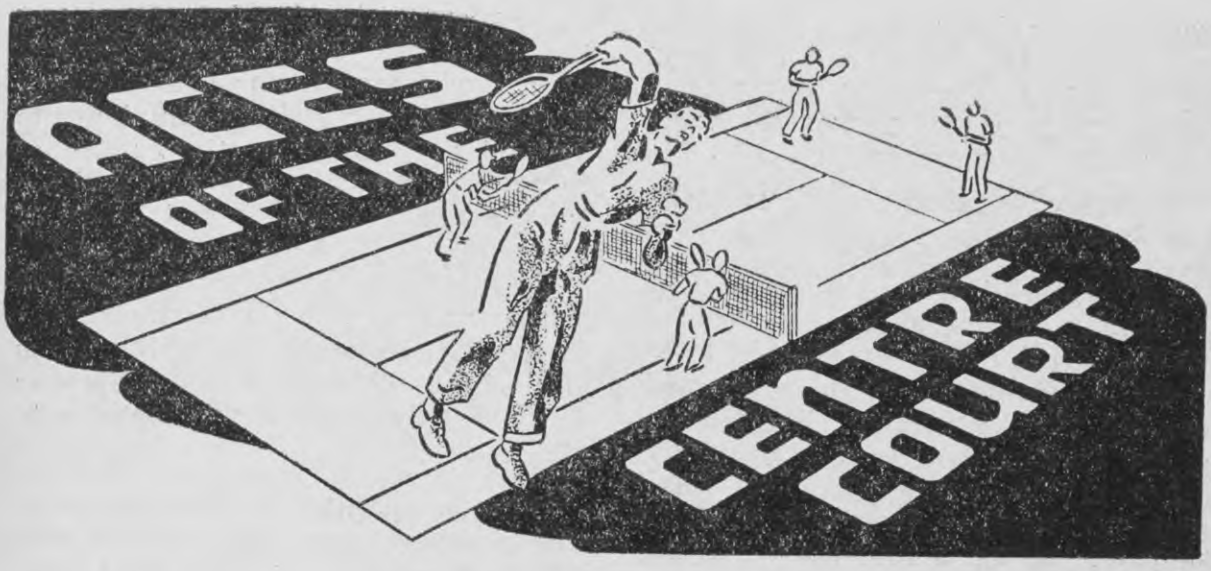
THE AMERICA'S CUP

There have been seventeen contests since 1851 for the America's Cup, the international yachting trophy which, despite repeated efforts, Britain has never been able to wrest from the grasp of the United States. The trophy took its name from that of the first winner, the *America*, owned and manned by the U.S. Navy, which defeated the British yacht *Aurora*.

Due to the extreme difficulty and great cost of building and entering yachts for the contest—the conditions provide that the challenging yacht must cross the Atlantic under its own power prior to the contest—the task of upholding the honour of Britain in the contests has fallen upon the shoulders of millionaire sportsmen, of whom the most famous was the tea king, Sir Thomas Lipton. Lipton made several abortive attempts to bring the America's Cup back to Britain, building for the purpose a series of famous yachts named *Shamrock I, II, III, IV*, and *V*, which crossed the Atlantic in quest of the trophy at various periods between 1899 and 1930.

On the death of Sir Thomas Lipton the famous old Irish sportsman's quest was taken up by another millionaire, Mr. T. O. M. Sopwith, who competed for the cup in 1934 and 1937 with his yachts *Endeavour* and *Endeavour II* (in Cue 32 Sporting Quiz ownership of this boat was incorrectly ascribed to Sir Thomas Lipton). In the 1937 event the magnificent American yacht *Ranger* defeated *Endeavour II* in each of the four races decided under the rules of the contest.

There were six races in the 1934 contest. Britain appeared to have the cup within her grasp when Mr. Sopwith's challenger, *Endeavour*, won the first two races, but the defender, the *Rainbow*, succeeded in winning the next four and thus retained the trophy in the possession of the United States.



THE International Lawn Tennis Federation is not allowing the grass to grow under its feet—not even the incomparable sward of the famous centre court at Wimbledon, where championships will probably be resumed next summer. For the last traces of bomb damage have now been removed from the surface of the Wimbledon courts, which are being prepared for a resumption of international tennis.

It is six years since there has been either a contest for the Davis Cup or a championship tournament at Wimbledon which is to British lawn tennis what Lord's is to cricket and Twickenham to Rugby football. Only in the United States, with its tennis headquarters at Forest Hills, California, has there been any tournament competition during the war, and already the Americans are anxious for an early resumption of contests for the Davis Cup, which was wrested from them by Australia in 1939. The next challenge round for the trophy will, of course, be played in Australia, but first there will have to be the usual series of elimination rounds to decide which country will send its team to meet the Australians.

It is too early yet to make guesses as to what is likely to happen next time the Davis Cup is up on the block. With the exception of the United States, none of the major contestants has had much opportunity for taking stock of the talent it has at its disposal, and while the promotion of sport is likely to be encouraged as part of the post-war reconstruction programme it is probable that many difficulties will have to be surmounted before the pre-war routine can be restored. But the sudden termination of the war means that the position can be viewed from a new angle, with every prospect of a much earlier return to the full pre-war set-up than could have been hoped for previously.

Since 1902 the United States has had the greatest number of successes in the Davis Cup challenge round (the final contest between the holders and the country which, by the elimination of the rest of the field, has earned the right of challenge). The United States has won eleven times, Britain nine times, Australia (or Australasia) seven times, and France six times. The trophy was in the possession of the United States continuously from 1920 to 1926—the Tilden era—while France, due to the brilliance of Lacoste, Cochet, Boretra and Brugnon, held it for six years from 1927 to 1932. Britain, with F. J. Perry and H. W. Austin dominating the scene, had it for four years

from 1933 to 1936, and then the Americans, led by Don Budge, claimed it in 1937 and 1938. Australia, defeated in the challenge round in 1938 by three matches to two, reversed the score in 1939 and have been the war-time holders.

Taking the four major Davis Cup contestants — Australia, the United States, Britain and France—it looks as if the advantage at the start will lie with the Americans. While most of the leading American players are either in the armed forces or have been until recently, their opportunities for participating in first-class tournaments have been a good deal more numerous than in the case of players of any other nation at war. The only two members of the United States Davis Cup team of 1939 who will be available after the war will be F. Parker, who is serving with the Army in the Pacific, and J. Kramer, who is an ensign in the Navy. R. L. Riggs, also serving in the Pacific, has joined the professional ranks, and the fourth member, Joe Hunt, was killed while flying with the Navy. Still available are such pre-war headliners as E. T. Cooke, E. Schroeder, Lt. Don McNeill, Lt. G. Mulloy and W. Talbert, while there is a promising crop of new players coming along.

Australia should have the services of J. Bromwich and Adrian Quist for a long time yet, and with this pair as the backbone of the defending team, any challenging combination would have to be powerful to have a chance. Quist and Bromwich have had their chances of first-class tennis restricted by their duties in the services, but they should have little difficulty in reaching top form by the time the next challenge round is due.

France and Britain are the least favourably placed of the four nations. In both countries tennis will need a lot of reorganising and rebuilding, and the chief problem will be to find players of international class. It may be years before Britain can hope to develop performers of the calibre of Perry and Austin. France's position is even more obscure and possibly more difficult. In both cases it appears as if it will be necessary to start off again from scratch. It is interesting to recall that in the qualifying round at Berlin in 1939 the British team was defeated by Germany, five matches to nil.

When competition for the Davis Cup was resumed after the 1914-18 war the United States refrained from challenging because the other nations had suffered much heavier losses. This time, however, she is certain to be in the Davis Cup arena from the beginning, and at the present stage appears to have a strong hand in prospect. Equally certain is it that she will have powerful representation at the first post-war Wimbledon tournament, to which, in addition to a formidable array of seasoned performers, she will be able to send a number of young players who, though promising enough, have yet to make their reputations in the international sphere. Two who have been mentioned in this connection are R. Falkenberg, brother of the film actress, Jinx Falkenberg, and "Buddy" Behrens, who is only 16 years old, but who has already revealed himself as a potential champion.

There will be some countries which will be less fortunately situated than others when the endeavours now being made to restore international tennis take definite shape, but that is not important. The main thing is that Wimbledon and the Davis Cup contests should be resumed, and that as soon as possible. A start has to be made some time, and if it can be made next year, as leading tennis authorities hope, so much the better.

There are and always will be a number of people who fill the ranks of "unskilled labour". It has its attractions, for the young man can start at what seem to him princely wages. The fact that they will never get any higher and that marriage will soon reduce their splendour does not occur to him. By the time he is married and finds out his mistake it is too late to start a long apprenticeship and his obligations are too heavy to allow it, even if that apprenticeship will mean higher wages, a more interesting job and better prospects.

Many unskilled labourers joined the Army. While overseas they have had time to think, to talk things over with tradesmen and perhaps to acquire some skills of their own. Many of them will return determined to acquire a trade. For them the Government has a plan, and it offers the same plan to the younger man who had not had the chance to start learning a job in civil life, and to the man who is dissatisfied with the job he had and feels that this time he is going to pick a better one.

This plan is put into action by the Trade Training Scheme. It overcomes, where possible, the two barriers to a man's acquiring a trade later in life. In the first place it guarantees a living wage, at present starting at L5. 5 0 a week, though there are indications that this will be raised to L5 15. 0, with further periodical increases at six monthly intervals during training. Secondly, it provides a shortened apprenticeship, except in certain trades, such as plumbing, where shortening is not feasible. This shortening is justified partly by the intensified nature of the training, partly by the greater maturity of the trainees.

Trade training is carried on in two ways. Wherever the numbers of trainees justify it, Government Trade Training Centres are opened. The trainees are required to attend these unless it is difficult or impossible for them to do so, and where such attendance involves married men living away from home a separation allowance of 30/- a week is payable. At present Carpentry Training Centres are open in the four main cities and others are being opened at Palmerston North, New Plymouth, Wanganui and Nelson.

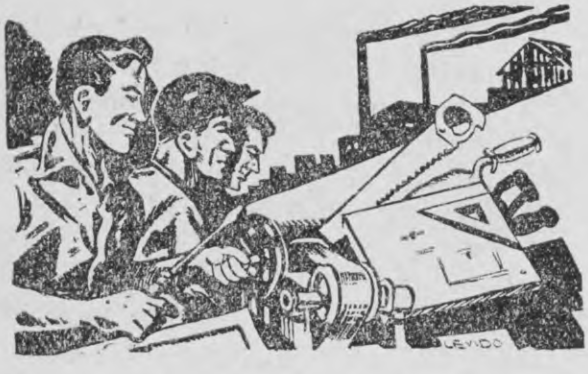
Painting, paperhanging and glazing, bricklaying and plastering have up till now been taught only at Petone but it is expected that this month training centres will open in these subjects in Auckland and Christchurch.

Where there are no such centres or where attendance at them is impracticable, "B" class training, *i.e.* subsidised training with a selected private employer, is available in many trades. It will be noticed that "A" class training is so far available only in trades

connected with building. This restriction does not apply to "B" class training, but there are certain trades, such as motor engineering, radio, electrical trades, fitting and turning in which it is expected that the services will have trained far more tradesmen than will be required for peacetime. Inexperienced men wanting training in these trades cannot expect either help or encouragement.

The principle then is clear. The Rehabilitation Dept. is offering training or subsidies to encourage men to acquire skills the country needs and to maintain them until they acquire those skills. As they learn the subsidy is reduced till at the end of the agreed term the employee is entitled to full journeyman's wages, but these the employer and not the Government must find.

As a rule it can be taken that, except in plumbing, the term of training will not exceed three years. Where the trainee requires his own kit of tools, an interest-free loan of up to L50 will be made. The terms of repayment are by arrangement. It will be appreciated that this training costs the taxpayer quite a lot. The Government feels that this is justified because of the advantage the country receives from the additional tradesmen produced. But



some safeguard is necessary against wasting money training men who do not mean to stick at the job so in the contract of training the student is asked to undertake to remain in the trade for a specified time, not less than three years, excluding the training period.

To obtain trade training application should be made through your Rehabilitation Officer soon after you get back to New Zealand. He will put the application before the Committee and if the training is recommended there should be little further difficulty. But remember that once you are qualified you must stand on your own feet, so make the most of the training. Quite possibly you can make a start now by taking a correspondence course with NZ School of Education. Or there may be a Unit or Formation Class in the subject. If you are interested see your Unit Education Representative and ask him what's doing.

The increase in interest in trade training has been very marked in New Zealand. In Auckland recently the authorities had on hand ninety-five applications for carpentry training, twenty-one for painting, paper-hanging and glazing, twelve for bricklaying and ten for plastering.

The figures to the end of July are interesting as showing the very real eagerness for training when it is made financially possible. To that date 3,570 ex-servicemen had been approved for various forms of trade training of whom 2,793 were ex-overseas; 782 men were under training at that date in the full-time training centres, 190 at the various branches of the Disabled Servicemen's Re-establishment League and 793 were training with private employers on a subsidy basis. In addition 232 men had resumed apprenticeships under subsidy arrangements. No fewer than 908 had already completed training. During July a further 288 were approved for training, 123 commenced their training and 49 completed their courses. These figures clearly show how the scheme has

grown. Of the total, 515, or about one in seven, have discontinued their courses before completion, some on account of ill–health, some for other reasons.

This scheme undoubtedly is going to be of tremendous value both to servicemen and to the country. If you wish to take advantage of it you will be welcome. Remember that if you start and fail to finish you are wasting time and money. So if you have any doubts talk your plans over with a Vocational Guidance Officer here or in New Zealand. But do not hesitate to use the scheme if you feel you can

benefit by it. Others can do the unskilled labour. Here's your chance to do a little better than perhaps seemed possible before the war, and to catch up some at least of the years that that war has taken.

Contract Bridge

Leads Against Slam Bids.—Slams are the plums of contract bridge. Rare as they are, the bonuses they earn can make all the difference between a profitable and an unprofitable session.

Suit and No Trump slams are very different propositions and a good lead against the one can be very bad against the other.

The Singleton can be a very good lead against a suit small slam, but against a grand slam it is not good, as it is practically certain that the opponent will have first round control of the suit (he shouldn't have bid otherwise) and that he will forthwith draw trumps before any ruffing can be indulged in. Against a No Trump slam there is no excuse for ever leading a singleton. It merely hammers home the nails in your own coffin.

Partner's suit where he has uttered at all, is a good sound lead against either sort of slam. It can do no harm and may do good.

An Ace is a splendid lead against a grand slam but seldom to be recommended against a small one. The opponent probably has one calculated loser in that suit. He is unlikely to have two and the early removal of the ace may leave him with a nice row of winners on which to discard losers in other suits, and in any case with complete control of the hand.

Top of a sequence of three honours is good against either sort of slam but best against No Trump. If the sequence is of only two honours it is better avoided as an opening.

Trumps can be a good lead where three or more are held as this may well upset a nicely calculated and essential cross–ruff. Where fewer than three are held it is a dangerous lead, however. The opponent is probably indifferent to one round of trumps and you may be putting your partner's possible trump winner under the hammer.

If none of these leads is available the top of nothing is a good refuge. A lead from Kxxx or Qxxx should almost always be avoided like the plague.

ASSISI—
Shrine of St. Francis

By "Chameleon"

THE little hill-town of Assisi, lying some fourteen miles east of Perugia, exists today by, for and on account of St. Francis. He is more than the patron saint of the town, he is its living. For hither in peace-time come a swarm of pilgrims, Catholic and Protestant, drawn by the fame of that man who seven hundred years ago started here a movement that shook the world, and that still flourishes. And the people of Assisi are just as good as the next man at turning an honest penny. So the tourist, in khaki or in mufti, finds guides and sacristans talking passable English, ready to show him around, histories of varying degrees of unreliability, printed in an approximation of English, and shops full of souvenirs, as well as a fully-stocked shop in the very precincts of the Church of St. Francis itself. Shades of the Poverello! But the inhabitants, though alert, are not troublesome, and it is possible to see the town very thoroughly almost without expense.

Many of the Franciscan associations are not in the town itself but round about, and it is well to give a full day to Assisi if these interesting spots are to be seen. The first and best known of them, Sta. Maria degli Angeli, can best be seen on the way to the town. This great domed Church, standing almost isolated on the flat below Assisi, is of surpassing interest not for itself but for what it covers, for under the dome, dwarfed by so much magnificence, is the little oratory of the Porziuncola, old even in St. Francis's day. Its wooden doors are half worn away and highly polished by the fingers of the faithful, and inside the stones of the walls are polished too by the frictions of centuries of worshippers. Behind the little altar is a primitive Annunciation by Ilario da Viterbo, painted in 1393.

Behind and to the right of the Porziuncola is the Capella del Transito where St. Francis died in 1226. It looks less obviously old as it is covered with frescoes, but its door, only held together by a coating of wire netting, gives an indication of its real age. The celebrated Lo Spagna executed the interior frescoes in the early sixteenth century. The terra cotta statue of the Saint is by Andrea della Robbia, who also executed the fine altar piece in the left transept of Sta. Maria. In the days of St. Francis these little chapels were set in a forest and here lived the brothers who were bent on service. Those devoting themselves to meditation lived at the Hermitage of the Carceri, up the hill behind Assisi, about an hour's walk from the Porta dei Cappuccini.

From Sta. Maria it is about four and a–half kilometres to Assisi. As one drives up to the town, the vast pile of the Church and Monastery of St. Francis dominates the scene. The earthly magnificence of this mass of buildings, started by Brother Elias, soon after the death of the Saint, makes it clear why the Zelanti, that group of brothers most devoted to Francis's Holy Poverty, fought the scheme with all the strength they had.

Swinging left on entering the town itself, one comes up a steep street into the fine Piazza of St. Francis, surrounded by arcades, while at the far end is the Romanesque portal of the lower church. St. Francis is a double church, the lower crypt–like church, built in 1228–32, being largely Romanesque, the upper, finished in 1253, being Gothic. The Lower Church is richly frescoed but so dark that it is almost impossible to appreciate the detail of the paintings. There is a Madonna by Cimabue in the north transept and in the vaulting above the choir is a number of frescoes reputed, rather doubtfully, to be by Giotto. The steps leading down from the nave go to a modern crypt where the coffin of the Saint can be seen. His remains, hidden by Brother Elias to prevent any neighbouring towns stealing them after the genial fashion of the Middle Ages, were only rediscovered in 1818.

After looking round the Lower Church, one can enter the Upper through the Sacristy, a stop being possible on the way to buy guide books, post–cards or souvenirs. The Upper Church is a great contrast to the Lower. High, light and uncluttered, the clear bright colours of the frescoes that cover all the walls give it a gaiety that seems much more in keeping with this happiest of Saints than the tomb–like Lower Church. Here, too, are reputed Giottos, the lower frescoes of the nave, which record the life of St. Francis. But this ascription is nearly as doubtful as that in the Lower Church.

Leaving S. Francisco, one follows the street of the same name, between tall old houses in pleasant–coloured stone. No. 11, the Public Hospital, on the right, is built of the remains of an old Pilgrim's Hospital, and has a fifteenth century Madonna and Saints on the facade. Opposite is the Giacobetti Palace, (No. 14), a seventeenth century palace that now houses the Municipal library. The way leads through the old Arch of the Seminary, marking the ancient limit of the walls, to the public square, a good centre for exploration of the town.

In the square itself the first and most striking thing is the Torre Communale on the left. It is the Gothic bell–tower of the Town Hall, and not in any way connected with the church next door. In the lower courses of the tower are set the old standard brick and tile measures used by the Commune. The church next door, Santa Maria della Minerva, is of interest not

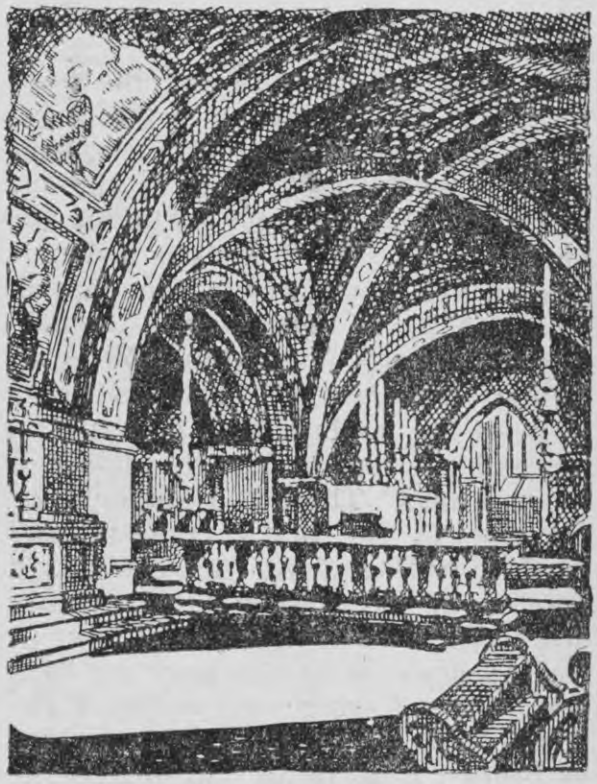
The double Church of St. Francis

as a church, but for its unusual front, for it is quite obviously and plainly the front of a pagan temple, and incidentally the best–preserved such temple in Northern and Central Italy. The six Corinthian columns are still in very good condition though the temple has lost somewhat by being sandwiched between a tall modern building and a taller Gothic tower instead of standing, as designed, in dignified isolation.

The existence of the temple clearly indicates that hereabouts must have been situate the Forum of the days when Rome ruled in Assisi, and, in fact, such is the case. The old Forum was well below the level of the present Piazza and no trace of it is visible, but by going back down the way one came and into the Crypt of St. Nicholas (a crypt without a church, by the way) entrance can be had to the Forum which it appears was arched over to make the modern Piazza. It is fascinating to roam around underground over cobblestones the Romans laid and reconstruct the life of ancient Assisium. A little museum of Roman bits and pieces helps in the reconstruction.

The old gentleman who keeps the key of the crypt may be found in the Palazzo dei Priori, a pleasant Gothic building in the main square nearly opposite the Temple of Minerva. He also looks after the picture gallery on the ground floor of the Palazzo. This should not be missed, as there are several extremely funny pictures. Perhaps the pearl of the collection is No. 27, where father and mother are lying in bed with their throats cut. The young man who has just performed the deed is standing at the foot of the bed with a sword in his hand and a ludicrously puzzled expression on his face while the daughter of the house, on whose behalf he has clearly done it all, is ticking him off in no uncertain manner. As plainly as if it were written she is saying "I told you it would be a messy business and you've ruined the sheets—you clumsy oaf". There is a collection of coins here, too, from old Roman ones to an English penny of 1907 or thereabouts.

The other points of interest in the town are fairly near the square. Facing east, the first street on the right leads down twenty yards or so to the Chiesa Nuova, a baroque church of



Interior of the Lower Church

no particular interest but sheltering behind it the little Oratory of St. Francis which may once have formed part of the house of Pietro Bernardone, the father of St. Francis, where the Saint was born. The sloping street leading east, up from the left–hand corner takes one to the Cathedral of St. Rufinus, in which Francis must have worshipped for it was built in 1140 on the site of a still earlier church. Rufinus was the first bishop of the town. He converted the townspeople in the third century and died a martyr's death in 239 A.D. Being a

bishop was in those days classed well up among the dangerous trades. The Cathedral has fine carved choir stalls and a good statue of St. Francis by Giovanni Dupre but its Romanesque facade, with three rose windows and its solid campanile, are most worth attention. The baptismal font is the original one in which St. Francis, St. Clare and the Emperor Frederic II were baptised.

From St. Rufinus it is but a short walk down the hill to St. Chiara, dedicated to St. Francis' disciple, St. Clare, founder of the Poor Clares or female Franciscans, whose devotion to the Franciscan ideal of poverty caused acute embarrassment to the church authorities until time and commonsense moderated the ladies' apostolic ardour. St. Chiara was built in 1260, a few years after the death of St. Clare, on the same plan as the Upper Church of St. Francis. Its frescoes are somewhat faded, and the chief point of interest is the miraculous crucifix which is said to have spoken to St. Francis at the Church of St. Damian, bidding him go and restore Christ's crumbling Church. This crucifix is not on show and one must ask the sacristan to unlock it.

This exhausts the main points of interest of the town but the energetic may walk up the hill to the old Suabian castle, the Rocca Maggiore. The present castle dates only from 1367 but it is based on foundations of a much older one destroyed by the Assisians in 1298. The view from its tower is well worth the climb.

Those who have taken their time in making the tour here described have probably used up their day, but the pilgrim, as distinct from the sightseer, should not go without visiting St. Damian's, the little church ten minutes from the Porta Nuova, where St. Clare founded her first convent. It is now occupied by the Brown Friars and its simple and unpretentious stones reflect the simplicity of St. Francis and preserve his spirit far better than the over-magnificent Basilica formally dedicated to his name.

SCIENCE IN WORK AND PLAY

Chromium plating of machine tools by a newly discovered oil bath process increases their life from three to fifty times.

* * *

Smokeless locomotives, which will mean cleaner railway stations, tunnels and sidings, may become universal as the result of new air jet installations that cause unburned gases in the firebox to ignite rather than wastefully going up the chimney in smoke.

* * *

By reversing variable pitch propellers on an aircraft their propulsive force may be directed backward making them serve as air brakes.

A new manufacturing method that will substitute sugar and water for the usual hard core of golf balls has been devised by an American company. The liquid cores are claimed to be superior to the normal type and will not solidify even at low temperatures.

* * *

A mammoth 35-ton robot calculator installed in a Harvard University basement, will solve almost any problem in applied mathematics—with results to 23 decimal places. The nerve centre of this mathematical wizard contains over 500 miles of electrical wiring and there are two million connections. It took six years to build and cost over L50,000.

N.Z. School of Education.—The correct address of the school is:

N.Z. School of Education,
2 NZEF, CMF.

Students in ITALY will avoid postal delay by using the above address. Students in EGYPT, unless individually directed otherwise, should address correspondence or assignments to ERS, 2 NZEF, MEF.

* * * *

Correspondence Courses with Approved Private Institutions.—In Cue 31 (p. 34) it was stated that students taking courses with British Institute of Engineering Technology on the recommendation of N.Z. School of Education could obtain refunds of fees under certain conditions. The Rehabilitation Board has now decided to widen this policy and to consider claims for fees paid in respect of other courses. The conditions are:

(a) The student will pay the full cost of the course.

(b) After discharge from the army the student may apply to the Rehabilitation Board for a refund of the actual amount paid. The application should be made to the local District Rehabilitation Office. The board will consider the claims on their merits, having regard to general rehabilitation policy. In certain cases the board may consider further assistance for the completion of uncompleted courses.

(c) Any refund made to a student who has paid for his course in sterling will also be made in sterling.

It should be noted that even though the course is arranged through and with the approval of N.Z. School of Education, a refund is not automatic but will only be made if the Rehabilitation Board thinks fit.

* * * *

ERS Study Courses.—The following are additional ERS courses now available but NOT listed in the booklet "ERS Study Courses". Copies of the booklet are obtainable from ERS Div. Det.

TRADES WING (TECHNOLOGY):

Steam Boilers is designed to cover syllabus for the Second Class Stationary Engine Driver's Certificate Examination. It deals with classification of boilers, boiler construction, multitubular boilers, boiler types (Scotch, Stirling, etc.) boiler mountings and accessories, firing and inspection, feed pumps and boiler management.

Steam Engines has been prepared to cover the same examination as Steam Boilers. It deals with history of the steam engine, condensers, the slide valve, valve setting, setting of link motion, care and maintenance of engines, and lubrication.

Water. This and the two courses outlined in the next paragraphs are designed to fulfil the requirements of the Plumbers' Registration Examination. Water deals with types of water, construction of wells, chemical properties of water, purification of water, and hydrostatic calculations.

Hydraulic Ram is a short subject concerning the operation and installation of this unit and the method of calculating the amount of water raised.

Air And Ventilation covers the composition of air, impurities and methods of purification, ventilation (natural and artificial) and air conditioning.

Front Axle And Steering is designed to cover the "A" Grade Motor Mechanics' Exams syllabus and deals with front axle types and designs, independent suspension, types of steering gear and steering linkage, steering geometry and front end servicing.

Micrometers. Deals with the construction, types, use and method of reading micrometers. It is particularly valuable to the engineer who has been away from his trade for some time and requires 'brushing up' on the method of reading a micrometer. This course is also issued to students studying for the "A" Grade Motor Mechanics Examination.

ARTS WING.

Students who wish to study English or a foreign language should note that if they propose to sit the examination in 1945 the courses available are suitable. If, however candidates wish to sit next year, 1946, a different syllabus will probably be in force for the set books and literature section.

Music (Additional) Composition Copies of Standford's "Musical Composition" are available. These will be of use to students in orchestration.

AGRICULTURE WING

There is now a Part III of the Poultry Keeping Course.

Forestry. A new course on Forestry is being prepared in New Zealand by the State Forest Service. A number of books are designed to cover the complete course, but so far only the first—"An Introduction to Forestry"—is available. This presents the objects and methods of Forestry as practised in the Dominion, and includes an historical review of the development and significance of the various branches of the industry. An outline of silviculture, the protection, measurement and management of forests, together with the harvesting and conservation of timber, its properties and uses are subjects touched upon.

* * * *

Concessions To Ex-servicemen Plumbers.—The Rehabilitation (Plumbers') Regulations, 1945, permit an ex-serviceman so wishing to sit for the examination of the Plumbers' Board provided he has been engaged in the trade for at least three years, including not less than six months after his discharge from the armed forces They also lay down the trade qualification period for servicemen as four years, as against six years normally, including not less than six months at the trade from time of discharge. Should a serviceman, however, be engaged on plumbing work while on leave with pay immediately prior to his discharge from the forces that time will be counted as part of the requisite six months. The concessions apply to servicemen employed in the trade either as apprentices or under any rehabilitation scheme.

* * * *

Rhodes Scholarships. Two special Scholarships are to be awarded to New Zealanders before the end of the year. Applications will be accepted only from those who have performed at least one full year of mobilised defence service or such other special service as may be approved by the New Zealand committee and by the trustees. Full details and application forms may be obtained from the following ERS units:—Div. Det., Advance Base Det., MEF Det., N.Z. School of Education, and HQ-ERS.

CLOTHES and the MAN

Costly thy habit as thy purse can buy,
But not expressed in fancy; rich, not gaudy;
For the apparel oft proclaims the man.
—Shakespeare: *Hamlet*

Those who make dress a principal part of themselves, will, in general, become of no more value than their dress.
—Hazlitt: *On the Clerical Character.*

The world must be getting old, I think; it dresses so very soberly now:
—J. K. Jerome: *Idle Thoughts.*

Mr. Pepys' Wardrobe

31st. Up and to the office, where we sat all the morning, and at noon home to dinner, where Creed came and dined with me, and after dinner he and I upstairs, and I showed him my velvet cloake and other things of clothes that I have lately bought, which he likes very well, and I took his opinion as to some things of clothes. Thence to the office where busy till night, and then to prepare my monthly account, about which I staid till 10 or 11 o'clock at night, and to my great sorrow find myself L43 worse than I was the last month. But it hath chiefly arisen from my layings-out in clothes for myself and wife; *viz.*, for her about L12, and for myself L55 or thereabouts; having made myself a velvet cloake, two new cloth suits, black, plain both, a new shagg gowne, trimmed with gold buttons and twist, with a new hat, and silk tops for my legs, and many other things. I hope I shall not need now to lay out more money a great while; but I hope I shall with more comfort labour to get more, and with better successe than when for want of clothes I was forced to sneake like a beggar.
—Samuel Pepys: *Diary (1660–69).*

The Husband's Petition

Come hither, my heart's darling, come sit upon my knee,
And listen while I whisper a boon I ask of thee.
I feel a bitter craving—a dark and deep desire,
That glows beneath my bosom, like coals of kindled fire . . . .
Oh, then, do not deny me my first and fond request;
I pray thee, by the memory of all we cherish best,
By that great vow which bound thee for ever to my side,
And by the ring that made thee my darling and my bride!
Thou wilt not fail nor falter, but bend thee to the task—
Put buttons on my shirt, love—that's all the boon I ask!

—*Bon Gaultier Ballads.*

My love she has a summer hat;
'Tis like a little boat,
A fairy shallop, broad and flat,
That on her head doth float.
Upon the billows of her hair
It resteth; 'tis so wide,
That I must tell you of the fare
It carrieth inside.
For first sits in the corner,
'Mid many a grassy tuft,
A swallow, like Jack Horner
(He's dead, of course, and stuffed).
Three fuchsias and an ivy bush
(A cargo, you'll allow),
And something else, I think a thrush
That carols in the bow.

— G. H. Powell.

If Society Reporters Were Men

The groom looked charming in a becoming bright navy blue ensemble relieved with a delightful shade of wine. The coat was cut on classic lines, with slightly-boxed shoulders, close-fitting at the waist and fastened with a blue link-button. The pockets were of conventional design but a white silk handkerchief in the left breast-pocket gave a pleasing relief. The trousers were not tight-fitting and were allowed to fall neatly over the black, pointed shoes. A wine-shaded tie against the powder-blue shirt matched perfectly the pin-stripe of the suiting. . . . When the happy couple left by car for the north, the bridegroom was wearing a smart checked suit of pearl grey, with shirt and socks to tone, and a figured tie of a delightful shade of bottle green. A grey felt hat and pigskin gloves completed the ensemble, and he was carrying a light grey overcoat, the gift of the Government. Mr. and Mrs. —— will reside for a time at the temporary housing camp at —— where Mr. —— has been rehabilitated on his return from overseas. . . . .

—Anonymous

PUBLIC SERVICE PAY ROLL

Public service officers in the forces due for demobilisation will be returning to civilian employment under conditions providing for increased rates of pay as approved early this year. The increases in salaries and wages took effect as from June 30, 1944, and were brought about on similar lines to those provided for railways employees under the order of the Government Railways Industrial Tribunal.

Although few servicemen will be affected, the fact that the increases were made retrospective to June 30 of last year means that arrears of salary have been paid where applicable. The scales approved for the classes of employees set out below were outlined in a memorandum from the office of the Public Service Commissioner in March.

In the tabulated information here given comparisons are provided between the scale as at April 1, 1944, and the scale approved from June 30, 1944.

1. Clerical and Professional Divisions:

	As at 1–4–44 £ per annum		From 30–6–44 £ per annum	
Class VII	80	Class VI	100	
	95		125	
	115		150	
	155		180	
	180		200	
	205		245	
	230		265	
	255		290	
	280		315	
	305		340	(a)
Class VI	320		360	
	335		380	
			400	(b)
Class V	355	Class V	410	
	380		435	
Class IV	400	Class IV	460	
	425		485	
Class III	445	Class III	510	
	470		535	
Class II	490	Class II	565	
	515		590	
Class I	540	Class I	615	
	565		640	
	590		665	
	615		690	
Class Sp. C.	665	Class Sp. C.	740	
B.	715	B.	790	
A.	765	A.	840	

(a) Efficiency bar: Unless otherwise approved by the Commissioner, officers are required to remain two years on this step.

(b) This rate may be paid to employees with not less than twenty years' continuous service after completing eight years on the previous step, *i.e.*, at the top of the former Class VI.

The Provisions of Public Service Regulation 201 have been amended to enable officers who have not passed the senior examination to proceed to the

new salary steps of L360, L380 or L400 per annum.

2. General Division—Special Groups

(i) Tradesmen: Scale as at 1–4–44, L300 per annum; new scale approved from 30–6–44, L330 per annum.

(ii) Male Office Assistants and Temporary Clerks:

As at 1–4–44 L per annum		From 30–6–44 L per annum
130–135		165
155	at 21 years of age	225
180	at 22 years of age	235
205	at 23 years of age	245
230	at 24 years of age	265
265		300
275–285		320
295		330
305		340
320		360
335		380

(*Note.*—Male Office Assistants on lower clerical rates of pay than indicated above receive the same increment as for the appropriate step of the Clerical scale.)

(iii) Sorters: Increased from L265 to L285, and from L275 to L295.

(iv) Messengers, Office Cleaners, Lift Attendants: Increased from L255 to L275, and from L265 to L280.

(v) Storemen, Timekeepers, Storemen–Timekeepers and Technical Assistants:

As at 1–4–44 L per annum	From 30–6–44 L per annum
265	290
280	295
290	305
295	310
300	315
305	325
320	340

(The last five groups refer to senior positions with maxima at various points.)

3. General Division, with salaries up to and including L300 per annum:

Scales covering this group have been adjusted by the addition of L30 per annum to the scale that was in force on March 31, 1944, with the exception of the special groups mentioned in Clause 2. Male employees receiving L65 or L70 per annum now receive an increase to L90 per annum only.

4. General Division, with salaries over L300 per annum:

Salary L per annum	Rate of Annual Increase L per annum
301–305	35
306–320	40
321–335	45
336–345	50
346–380	55
381–425	60
426–470	65
471–489	70
490 and over	75

5. Employees on hourly or weekly rates of wages:

Employees paid on an hourly or weekly rate of wages are paid an increase calculated at the rate of 3½d per hour. Workers covered by special Workers' Agreement and employed in such Departments as Public Works, State Forest, Native, Lands and Survey, Navy and International Marketing Department receive corresponding increases to those granted to such casual employees of the Public Works Department.

6. Minimum rates of remuneration for Adult and Married Officers.

The rates of minimum remuneration approved as from June 30, 1944, for adult male and female employees and for male married employees appear below.

Adult males in Clerical or Professional Divisions:

	L per annum
On attaining age of 21 years, irrespective of service	225
On completion of five years' permanent service	2.5
On completion of six years' permanent service	260
On completion of seven years' permanent service	270
After one year at L270 p.a.	275
Adult minimum (females)	175

Male married employees:

(a) If employed at an annual remuneration or annual rate of remuneration . 275

(b) If employed at a remuneration or rate of remuneration otherwise fixed or computed, the minimum rate shall be a rate proportionate to that set out in (a). In accordance with the usual practice the difference between classified salary and the minimum rate is paid by way of allowance.

7. *Temporary Staff employees* (not specified elsewhere) are paid the same rates of increase as apply to the corresponding groups on the permanent staff.

8. *Technical trainees.* Increases are based on clerical scales.

In addition to the scales which have been indicated, changes regarding other forms of payment have been approved. They include:—

Lodging Allowance. The new rates of lodging allowance are:

Salary (new scale) L per annum	Lodging Al'ance. L per annum
90	55
95	55
100	50
115	50
125	40
130	40
145	25
150	25

Travelling and Relieving Allowance.

These are governed by the salary the employee would have received if the new salary scales had not been made.

No alteration has been made in the rate of meal allowance.

No change has been made in special allowances, bicycle allowances, field allowances or other miscellaneous allowances. The first cost-of-living bonus of L13 is reduced at the same salary points as in the old scale. Officers who were formerly on Class Special steps of L715 and L765 are not entitled to any cost-of-living bonus at the new steps of L790 and L840. Overtime rates are calculated on the new salary rates.

An officer in receipt of salary that is shown as "over-scale" is not paid the full increase based on his over-scale salary. The amount of increase is calculated on what should have been his correct salary and added to such salary, *i.e.*, the amount he is paid over-scale is deducted from the amount of increase. Allowances paid to officers temporarily performing higher duties are re-calculated on the basis of the difference between the appropriate salary steps on the revised salary scale.

Salary scale increases have also been approved for female employees such as short-hand typists, office assistants and machinists. Details, if desired, may be obtained from HQ ERS.

A NEW MOLOTOV COCKTAIL

BOTH wars with which the modern world has had such painful acquaintance have been followed by hard bargaining. At Paris in 1919 several months were consumed in securing agreement, not between the Allies and the defeated nations, but between the victorious Allies themselves. It is perhaps not surprising that now and then during the conference of the Council of Foreign Ministers which has been sitting in London side currents should have been observed which have carried attention for the moment from the main theme of the parleys—the drafting of peace treaties.

Such a diversion was provided by the Press conference given in London by the Soviet Foreign Commissar, Mr. Molotov, at a time when the Italo–Yugoslav frontier—one of the most important issues in the framing of a peace treaty with Italy—was under consideration by the conference representatives. Although Mr. Molotov dealt at length with the Yugoslav claims on the Julian March (Venezia Giulia) and emphasised the strong support of his country for the present regimes in Hungary, Rumania and Bulgaria, the most noteworthy passage from his statement to newspaper correspondents dealt with his country's attitude to the Italian colonies. He gave a clear hint that the Soviet Union desired to be given a trusteeship over Tripolitania (the western portion of Libya) and admitted Russian interest in Eritrea, the Italian colony on the Red Sea. Mr. Molotov went further than that. Asked whether collective trusteeship was not the more satisfactory solution, he replied that collective trusteeship was a great principle and should be applied in some areas, as suggested by the San Francisco conference, but that in regard to the Italian colonies the principle of individual trusteeship should not be ignored.

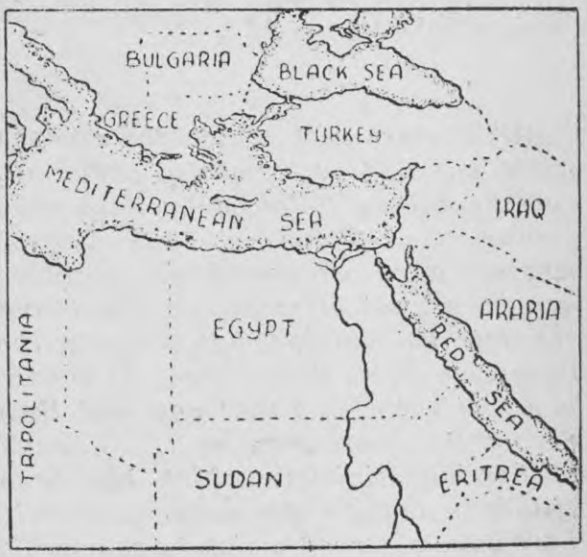
Mr Molotov's chief argument against collective trusteeships was that there had been no instances of such methods of control in the past, and he therefore felt that care should be taken in applying them now. On the other hand, there had been examples of trusteeships or mandates by individual nations and. while not all had proved satisfactory, the experience was there. He suggested that some might be "emboldened to try collective trusteeship in practice if those who are confident that it will be a success pointed to other territories—not necessarily Italian—where it could be applied." He did not indicate which other territories

he had in mind, but it seemed an oblique reference to existing mandates in the Pacific.

Adroit diplomatist that he is, Mr Molotov knows all the tricks of the political game. As usual, his Press interview left the world quite uncertain as to what Russia really wants. Were his references to the Italian colonies thrown out for retraction later as "concessions" in exchange for the Dodecanese Islands, or was he indicating that Russia—as is only just and right—should share with Britain and France the control of the Mediterranean? Are the Dodecanese being used by the Soviet to screen her true aims in the Dardanelles, or is she seeking to improve her own position at the expense of others?

It is an undeniable fact that Russia, among all the Great Powers, has suffered most as the result of the war. At the same time it can be said, with almost equal truth, that she has gained the most. She has recovered, as she fully deserved to do, all the territories wrested from her in the past and has taken Ruthenia, Koenigsberg and parts of Galicia, as well as winning back Port Arthur, Sakhalin and the Kuriles in the Far East. But she has gone still further by demanding concessions from Persia and Turkey and making plain her ambitions in Tripolitania, Eritrea and the Dodecanese, a path which, it is not unreasonable to assume, indicates the pursuit of a frankly imperialistic policy.

The Soviet Government has apparently put forward its request for the trusteeship over Tripolitania on two main grounds—firstly, that the Italians joined with the Germans in invading and occupying Soviet territory; and secondly, that the Soviet Government believes that its experience in developing the backward peoples of Central Asia qualifies it to take its place among the trustee Powers. Such claims can hardly be refuted, especially at a time when the United States is asserting herself in the Pacific and France and China are making plain their little hopes and ambitions. But, harking back to the Atlantic Charter (endorsed by Russia), which stated that the Powers would "seek no aggrandisement, territorial or other", it seems only logical that those places or territories of vital strategic importance which cannot safely be allotted to any one power should be placed under the control of the United Nations. The hopes of the world lie in complete co-operation between the Great Powers. And mutual suspicion between Russia and the West is the one fear that mars it.



Not the least of the issues arising from Russia's dealings with the States of the Balkans and south-east Europe is that associated with the Dardanelles. In her overtures to Turkey Russia has again approached the vexed question of the control of the Straits, an item which has cropped up regularly at international conferences for more than a century. Russia's strategic aims as far as the Straits were concerned have always been to prevent foreign warships entering the Black Sea and to be allowed to send her own warships into the Mediterranean.

If it is reasonable for the United States to desire strategic bases in Newfoundland and the British West Indies, it is equally reasonable for the Russians to desire strategic bases at the Straits and unreasonable to expect them to depend on the good graces of the Turks, however good those graces may be. Britain, holding strategic bases all over the world, cannot grudge the Russians the right to protect the seaway to their greatest industrial and agricultural area, the Ukraine. Fifty years ago the Russians would have been content, and secure, with Russian garrisons at the mouth of the Bosphorus; now the zone extends, as the result of the advent of the aeroplane and the submarine, from Constanza, in Rumania, to the Dodecanese Islands, at the outer edge of the Aegean.

In the event of the Straits coming under the exclusive control of Russia, then no doubt Britain will retain exclusive control of the Straits of Gibraltar and the Suez Canal. If the Straits are internationalised, then the exits from the Mediterranean must be internationalised, too, for co-operation in joint undertakings inevitably lessens strategic barriers. The Montreux Convention of 1936 which left to Turkey the sole responsibility for the custody and defence of the Straits had the strong approval of Russia at the time. Now that Russia has made out a case for the revision of the Montreux system, the correct remedy would appear to be joint custody on behalf of the United Nations rather than a bilateral arrangement as between Russia and Turkey.

The recent outburst by Field-Marshal Sir Henry Maitland-Wilson, chief of the Joint British Staff Mission in Washington, that "I cannot see why there is talk of security by Russia and all the demands for bases unless she is bent on territorial gain", was unfortunate and has been frowned upon by official circles in London. There have been sharp words from the Russian side, too, such as the allegation by the semi-official newspaper, "Pravda" that the Powers of the West were endeavouring to form an anti-Russian bloc. The published text of the letters from Mr Churchill to General Franco fortunately gave that assertion the lie direct.

There has been ample evidence since the war ended of differences of outlook between Russia on the one hand and Britain and the United States on the other, with France sensitively pushing her own case to the fore, but there can be no room for suspicion on either side when the security of the entire world depends on fruitful co-operation. And in the Mediterranean as much as in any other zone to which the outcome of the present international deliberations will apply the task of making peace must be pursued with the same united purpose as brought victory in the war.

PACIFIC AIR SERVICE

Landplanes will replace flying boats on Pan American Airways' San Francisco New Zealand service which will be resumed in the near future. The route will be much the same as that followed before the interruption of the service. Flying time will be 36 hours and the fare L37 sterling plus any Government Travel Tax. Douglas D.C. 7s or Lockheed Constellations will be used, the former carrying 100 passengers and the Constellations 60 in addition to mail and baggage.

The Deeds of MAUI

ALL the way across the Polynesian Pacific men still talk of Maui the demi-god as men talked of him nearly two thousand years ago. On every island and in every tribe he occupies a high position among the supernatural beings of tradition, though it is chiefly among the Maoris of New Zealand that the details of his deeds and adventures are preserved.

Maui's place is partly in mythology and partly in folk-lore. It is probable that there were several ancestral heroes called Maui, and that they eventually merged into one personality in Polynesian-Maori mythology. At times he is represented as having possessed the powers of exalted deity; at others he is portrayed as a mischievous mortal, full of fun and frolic. But it is a remarkable fact that throughout the Pacific the story of his exploits has been preserved in vivid detail through differing dialects and under changing conditions without any serious distortion of the original theme.

Maui is first mentioned at a time when the Polynesians were still in Indonesia. He is said to have been the son of Tangaroa (not the god of the same name, though it is possible that the attributes of the two have been confused at times), and legend has it that he was of miraculous birth. After being thrown into the sea in an immature form he was nourished to adolescence by the sea-gods and later arrived at his mother's home, where he lived for a while among his brothers. He joined in their games and proved himself expert in sports and exercises, and is credited with all manner of tricks and mischievous performances.

The earliest Maui tales deal with the snaring of the Sun and the finding of fire for the use of man. The first legend refers to the steps taken by Maui to restrain the too-rapid progress of the Sun through the Heavens. Due to the short period between the rising and setting of the sun the inhabitants of the earth did not have sufficient time for their work in the fields and the forests, and Maui, having persuaded his brothers to accompany him, armed himself with a huge snare and the jawbone of his grandmother and went to the place of the Sun's rising. The brothers lay in wait with their snare, and as the Sun (Tama-nui-te-ra) rose he became trapped in the snare. With his brothers holding the ropes of the snare taut, Maui belaboured the Sun with his jawbone club until, after many protests, the Sun agreed to give heed to Maui's demands. Then he was released from the snare and ever afterwards was more leisurely in his daily journey across the heavens.

The story of the deception of the fire goddess, Mahuika, by Maui is an example of the artful cunning with which the demi-god was credited. Learning from his parents that a certain strange glow on the distant

horizon was the fire of Mahuika and that flames glowed at her finger-tips and toes. Maui set out to visit her, determined to outwit her. In response to Maui's request that he should be given a particle of her magic fires, the goddess plucked off the end of one of her big toes, which contained the fire, and gave it to him. Pretending to return to his home with the fire, Maui instead threw it in a nearby stream, where it was extinguished. He returned to Mahuika and begged her to replace the lost flame, which she did. Maui repeated the trick several times. Only when she had given him the fiery nails of all her fingers and toes except one did Mahuika realise that Maui was deceiving her, and in her anger she plucked off the remaining finger–nail and threw it at him with a curse for the destruction not only of her tormentor, but also of the earth and the forest. Desperately Maui ran from the flames, but he seemed to be trapped and in his extremity he called upon his ancestral gods for succour. To his delight rain came from the skies and quelled the fires—even though in saving Maui the Great Rain flooded the earth.

Legend says that when the flames were extinguished the seeds of fire were retained in a number of trees, notably the *kaikomako* (the timber with which the Maoris secured fire by friction), the *hinahina*, the *patete* and the *totara*. The story of Maui and the fire deity is preserved in the expression, "Te Ahi–a–Mahuika", which occurs frequently in ancient poems. It really means volcanic fires, and the legend probably refers to Maui's visit to some great active volcano and the peril in which he found himself from an outburst of lava.

Maui's jawbone "secret weapon" figures in the legend of the demi-god's "fishing–up" of islands, including New Zealand, from the ocean—the jawbone was his hook. According to Ngai–Tahu genealogy, Maui discovered New Zealand some fifty generations ago, arriving in a canoe called *Nukutai–memeha* in the North Island and *Maahunui* in the South Island. The Maoris on the east coast of the North Island say that the canoe may be seen in a petrified form on the summit of Hikurangi mountain. The South Island version is that their island itself was Maui's canoe *(Te Waka–a–Maui)* and that he stood in the canoe while drawing up the North Island *(Te Ika–roa–a–Maui)*.

A man of many parts was Maui. Not only was he responsible for many supernatural acts, but he is also credited with such mundane inventions as the barb for the fishing hook and the cunning arrangement of the eel–

The legends of Maui are handed down from generation to generation

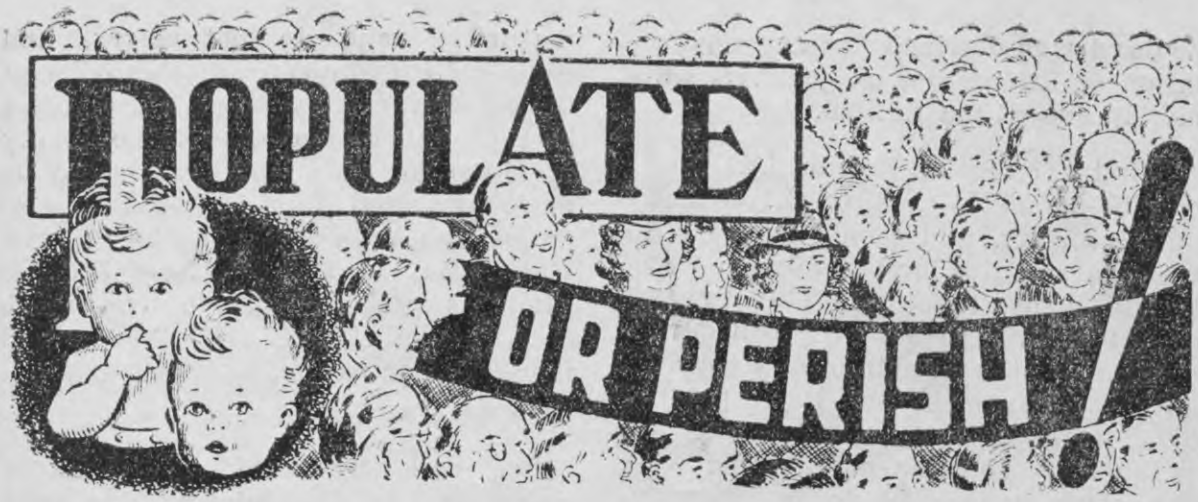
basket in which the doubled–over centre–piece prevents the fish from getting out again. In his name, also, stands the *kumara* planting chant—the "Tewha–a–Maui"—which, according to tradition, he first sang while in the guise of a bird. The song has been handed down by word of mouth to this day.

The last great feat which Maui is said to have attempted was an effort to win immortality for mankind by passing through the mysterious personality of the Great Lady of the Night, the death goddess Hine-nui-te-Po. There are many versions of this ancient myth, but they all agree in their general theme. Maui entered the "Dark Valley" accompanied by his little companions, the birds of the forest, whom he had invited to witness the wonderful feat with a warning that they must keep silent lest Hine-nui-te-Po should awaken and prevent the attempt. However, just as the act had reached its crisis the *tiwaiwaka* (fantail) gave a shrill twitter of laughter, which awakened Hine. The angry goddess slew Maui, and thus man's opportunity of securing eternal life was lost.

Maui's encounter with the death-goddess is almost certainly the story of the attempt of the sun, or sunlight, to overcome darkness. It is felt that support is lent this contention by the choosing of Maui's companions, for the small birds always signal the setting of the sun with song, just as they greet the sunrise with song. Further, as the shadows of darkness close over the world the lilting notes of the fantail are among the last to be heard. The sun stoops to enter the Great Lady of the Night, but meets his death and his blood suffuses the evening sky.

There have been suggestions that Maui may have been one of the leaders of the Polynesians in their journey into the Pacific, but there are authorities who consider that some of the tales concerning him have their origin in times yet more remote, when the Polynesians were located in some continental area. At all events, it seems extremely likely that the deeds of many heroes (for the name "Maui" was by no means an uncommon one) have been grouped together by mythology under the name of one outstanding Maui.

As god or man, in weakness or in might, Maui occupies the same high place in Polynesian mythology. His miracles are legion and his influence is great. And among the Maoris, as much as with any other branch of the Polynesian race, his stature in the realm of tradition is unchallenged.



WHEN the results of the census taken in New Zealand last month are published they will furnish a valuable survey of population trends. At a time when the post-war reconstruction plans of the Dominion are being shaped extremely useful statistics will be made available upon which to base measures aimed at meeting the urgent domestic issues of rehabilitation and housing. They will close a gap of nine years—for the last census was taken in 1936—in the information offering as to social and industrial tendencies; and they will assist the readjustment of electoral boundaries in time for next year's general election.

But they will have yet another result. Once again they will serve to underline, as have returns from census after census in years gone by, the inescapable fact that New Zealand, for a country with a century of progress and development behind it, is still under-populated. Not that the position has eluded notice in the past—far from it. The Government, on the contrary, has indicated its desire for a greater population in the Dominion and its recognition of the importance of such an expansion to the development of the country's resources. On the principle of first things first, however, it has made clear its inability to contemplate entering on immigration commitments until it has dealt with the rehabilitation of men discharged from the New Zealand forces and remedied the Dominion's extreme housing shortage.

For the time being, therefore, the matter stands in abeyance. The New Zealand Government is ready to welcome migrants from the United Kingdom and other parts of the British Commonwealth who do not require special assistance, financial or otherwise, in establishing themselves in the Dominion, but until rehabilitation and housing problems have been overcome there is to be no planned programme of assisted immigration.

Although the question of increasing the Dominion's population has received a good deal of attention for a number of years, little unanimity has been apparent as to the extent to which that expansion should be carried out. New Zealand's High Commissioner in London, Mr. W. J. Jordan, gave a lead a short time ago when he made the statement that New Zealand would need three million immigrants after the war. Mr. Jordon, it may be assumed, is acquainted with what is in the Government's mind, and his assertion may indicate an immediate population goal of five million. Less significant, but equally interesting, was the statement made some months ago by the deputy-Prime Minister of Australia, Mr. F. M. Forde, that New

Zealand was destined to have a population of five million people, and ultimately one of ten million.

Whatever the figure aimed at, there can be no side-tracking the urgency of the matter, and sooner or later, in two years or five, or possibly even ten, it will demand action. The reasons, of course, are obvious—the full development of the Dominion's resources, as the Government has itself pointed out, is dependent upon population expansion. But the over-riding consideration is that of future security. Three years ago this fact was driven home when Japan began her career of conquest in the Pacific, leaving both New Zealand and Australia painfully aware that from a defence point of view they were hopelessly outnumbered. Through a fortunate combination of circumstances, which they could not have counted upon to occur, their own efforts to protect themselves were supplemented enormously by those of the United States. The danger has now passed, but the lesson has been learned.

There is no immediate prospect, for reasons reflected in the country's vital statistics, that New Zealand's population needs will be met to any extent by natural increase. Official figures reveal that between 1878 and 1944 the Dominion's birth-rate declined from 41.96 to 21.58 per thousand of population. The marriage rates for 1939 and 1940 were each higher than those for any previous recorded year, yet the birth-rates for 1941 and 1942, the highest in the last twenty years, were each lower than those for any of the forty-six years from 1872 to 1918, and were little higher than the pre-depression rates.

The size of the average family is not a reliable indication of whether or not a population is reproducing itself. The first impression that an average family of two children should be sufficient is dispelled by the fact that of those born, some die before reaching maturity, some do not marry, and some who do marry are incapable of having children. To meet those losses in each generation an average family of three to four children would be necessary, and families of that size do not appear to be the rule these days. Rather is the average New Zealand family a little more than two, which is barely sufficient to provide a natural increase that will maintain the population.

The expansion, and even maintenance, of the Dominion's population thus depends on what the future may bring in the way of planned immigration. The question arises: from where are the needed immigrants to be drawn? Few will contest the desirability, if there must be immigration, of confining it as nearly as possible to persons of British stock. There appear to be two schools of opinion in this connection. One leans to the view that in the years of post-war reconstruction Britain will be anxious to keep all her able-bodied men at home; the other contends that a great number of British families intend to emigrate as soon as arrangements can be made. One of the leading figures behind the movement for immigration in New Zealand, Sir Clutha Mackenzie, maintains that from the British fighting forces at present in process of demobilisation the Dominion would not have the slightest difficulty in recruiting four hundred thousand "splendid young people, made up of 150,000 men and 250,000 young wives and children". He has pointed out, however, that it may be a great deal more difficult to attract immigrants in a few years, when men from the British fighting services have settled down, than it would be now, when prospective immigrants are making up their minds as to their future.

There is little doubt that if immigrants in sufficient numbers could not be obtained from Britain, people from the Scandinavian countries would

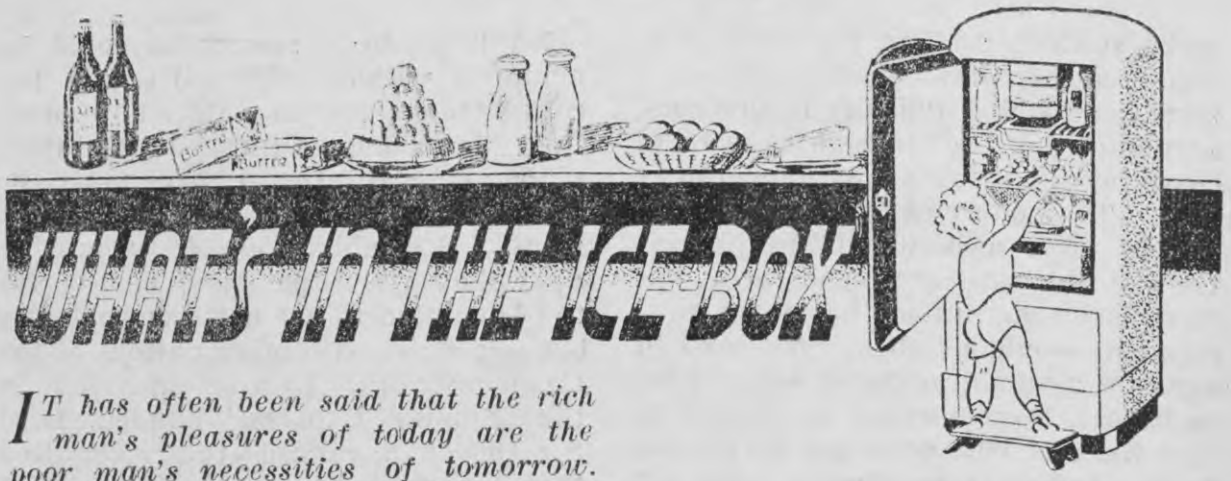
make suitable settlers for New Zealand—as they have in the past—but there is an added difficulty in this connection in that the birth-rates in these countries have become dangerously low. The countries of south-eastern Europe offer a better proposition as far as numbers are concerned, but there is no guarantee that their governments would let them come, and in any case it would probably not be wise to have a large number of people in New Zealand who were not of British stock. Infinitely preferable from all points of view, in any endeavours to increase the Dominion's population

would be a planned scheme embracing a combination of a natural increase—the raising of the birth-rate and the lowering of the death-rate—and the bringing in of British immigrants.

By those who favour systematic immigration it is contended that the introduction to the country of hundreds of thousands of new inhabitants would not threaten employment stability; it would, on the contrary, be a big factor in providing employment, as an expanding population means a growing market for all products. A 25 per cent. increase in population automatically means a 25 per cent. increase in the amount of work offering for carpenters, electricians, painters, doctors, dentists, teachers and workers in every class.

No large-scale movement could be achieved without difficulties and inconveniences, and no matter how carefully laid any future immigration plans may be the influx must be accompanied by a process of adjustment. Probably, too, it would be advisable, when the time comes, for the Dominion to act not independently but in concert with other nations of the Commonwealth. In a recent article in the "Sunday Express," London, Lord Strathspey advanced the suggestion that a permanent organisation should be set up as soon as possible, under the aegis of the British and Empire Governments, to act as an information centre and control room for Empire population movements. Its files would record officially, month by month, just how many immigrants of what ages, sex and occupations were needed in Canada, Australia, New Zealand and so on; just how many immigrants of what categories Britain and each other country could spare; how each trade and group could best be served in each country; and how suitable emigrants could be attracted and helped to make the passage and find suitable new employment and homes.

It is possible that the people of New Zealand would be happier and better off if the population of the country remained at about a million and a-half instead of being increased to five millions, with all the reshuffle and adjustment that that would entail, but it is problematical whether the country can be held indefinitely without population. The war is over and for the moment the danger has passed. But without knowledge of what the future holds in store there can be no guarantee that the danger may not some day return. Not long before the war New Zealand heard the slogan, "Populate or Perish!" from those who believed a greatly increased population vital to the defence of the Dominion. In spite of the passing of the recent crisis that slogan will have to be borne in mind in the coming years.



WHAT'S IN THE ICE-BOX

IT has often been said that the rich man's pleasures of today are the poor man's necessities of tomorrow. Ten years ago this could rightly have been applied to the refrigerator, for, with the ever-increasing research in the field of bacteriology, it has become evident that if disease is to be successfully combated then the food of the working man must be kept clean and wholesome. Pasteur in his struggle against tuberculosis brought home to the masses the importance of bacteria-free food.

As yet, prices and war-time conditions have denied the majority of New Zealand housewives this kitchen necessity, but with the cessation of hostilities the day may not be far distant when refrigerators will be almost as common among domestic appliances as the iron or the saucepan.

The refrigerator, or, as it is sometimes called, the "ice-box", is to most people the place where perishable foodstuffs are kept—few stop to think just how it works. In the commercial sense "refrigeration" is the science of maintaining a space at a temperature lower than that of its surroundings. The science of refrigeration came into prominence when, in 1928, a Food Act came into force prohibiting the use of all chemical food preservatives. Certain specified exceptions, however, were made. This left but one other method of arresting the breeding of bacteria in food, and that was sterilisation. However, this method is not always convenient and may affect the flavour of the food. Immediately after sterilising, food must be completely sealed off from the air, as bacteria would be introduced into the warm food—an ideal breeding ground. Refrigeration does not kill the bacteria, but keeps them in a comatose condition. At 50 degrees Fahrenheit breeding practically ceases and becomes progressively slower as the temperature falls.

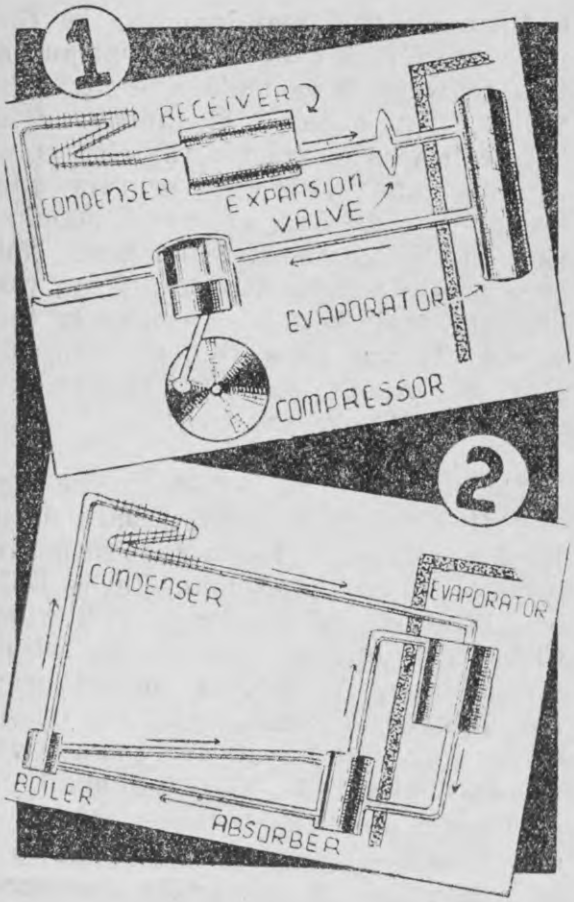
There are four types of domestic refrigerator—water cooled safes, ice-boxes, compression-type refrigerators and absorption-type refrigerators. The basic principle on which they all operate is that when any liquid evaporates heat is absorbed, a phenomenon which is met with in many ways in our daily life. Any soldier who has removed his "tin hat" from his head after a hot route march and then stood in the breeze will have noticed how much cooler the breeze seems on the moist area of the face than on the dry. The explanation for this is that the evaporation of the sweat absorbs heat rapidly from the skin and lowers the temperature.

The simplest type of refrigerator to be found in New Zealand homes is the water-cooled safe, consisting of a box with porous sides covered with material such as flannel, which will absorb moisture. The flannel is kept wet by a water reservoir or a sprinkler system and as the water evaporates the temperature inside the cabinet falls below that of the surrounding air. This type of refrigerator works

best if erected in a draughty place.

Most electrically-operated refrigerators are of the compression type. To put it technically, they operate by the alternate compression and expansion of a "refrigerant"—a "refrigerant" is a substance which exists as a gas at ordinary atmospheric temperatures and pressures, but which, when compressed, becomes a liquid. Exposed to lower temperatures the liquid will immediately evaporate, thus becoming a gas again. This evaporation is the crucial point of the whole process, because, as in the case of the perspiring soldier exposing his humid brow to the breeze, evaporation absorbs heat from the surrounding surfaces.

The whole process may be followed in Figure 1. When the electric motor is started it works the pump which compresses the refrigerant to a pressure of about four or five atmospheres.



The compressed gas, which is warm, now passes in the direction of the arrow until it reaches the condenser, a series of pipes with fins over which air can circulate. The gas now cools and becomes a liquid which is pushed along to a receiver and then to the expansion valve. This is a small hole on the outlet side of which is a large container—the evaporator. The pressure in the evaporator is much lower because the pump is sucking from it, so that as soon as the liquid passes the expansion valve it evaporates in the evaporator. The evaporator is the only working part inside the cabinet, and constitutes the cooling unit.

The evaporating liquid, being very cold, absorbs heat from the air surrounding the cooling unit. The gas in the evaporator is sucked into the compressor and recompressed, and the whole process continues automatically as long as the motor is running. The motor is switched on and off by a thermostatic switch, which keeps the temperature inside the cabinet around 50 degrees Fahrenheit.

The absorption-type refrigerator, the principle of which is depicted in Figure 2, makes use of the application of heat instead of a compressor. Gas or oil may be used to produce a flame which, by boiling water in which the refrigerant (ammonia) is dissolved, drives off the refrigerant under pressure. After cooling in the condenser the gas, because of its high pressure of about eight atmospheres, becomes liquid. The liquid ammonia, without passing through an expansion valve, now flows into the evaporator inside the cabinet. The ammonia in the evaporator is able to evaporate because of the presence of hydrogen and so absorb heat from the cabinet. A mixture of ammonia vapour and hydrogen flows into the absorber where it is separated. The liberated hydrogen returns to the evaporator and the cycle is repeated.

"Alex"

WHEN the sights and attractions of Cairo begin to pall most New Zealand soldiers seek a short leave in Alexandria—always known to them as "Alex". Compared with other places in Egypt, Alexandria is neat and clean. It has many smart shops, excellent cafes and restaurants and some good service institutions.

Alexandria's origin was Grecian. Its architectural appearance today is Italian. Founded in 332 B.C. by Alexander the Great, it has contributed many passages to history but little trace of history remains. Ptolemy, Caesar, Antony and Cleopatra, Augustus, and Caracalla figured there when it was the second city in the world. But no one tries to show visitors where Cleopatra died. No one appears to care that Venetian merchants carried the bones of St. Mark away from the city. The present inhabitants cherish no memories of the past. Their ruling interest lies in trade and commerce. Alexandria, the modern commercial city, stands on the site of the ancient one but has preserved few signs of its former greatness.

When Alexander decided to found his new city, there was already a small fishing and pirate village called Rhacotis on the site. Alexander saw that within the shelter of the island of Pharos he could construct a good harbour which would be of great use as a naval base for his designs on Persia. He commissioned Democrates to plan a town on the mainland to be the principal Greek centre in Egypt and a link between Macedonia and the Nile valley. Although Alexander died before it was completed the city grew rapidly and within a century had become the greatest centre of population on the North African coast. Not only was it a great Greek city; it was also the largest Jewish centre in the world. It was there that the Septuagint, the translation of the Old Testament into Greek, was written.

The early Ptolemies fostered the city and it retained its own senate until Roman times. It was formally bequeathed to the Romans in 80 B.C. by Ptolemy Alexander. Following Cleopatra's intrigues with both Julius Caesar and Antony, a prefect was placed over Alexandria by Octavian. In the Augustan age its free population was estimated to be 300,000 in addition to a large number of slaves. Alexandria became the centre of Christianity and in spite of a terrible massacre

inflicted by the Emperor Caracalla the city continued to prosper.

When, in the third century, the peace of the Roman Empire weakened and native influence began to assert itself in the Nile valley, Alexandria declined in importance and splendour. The Persian king, Chosroes, captured the city in 616 and twenty-four years later it fell to the Arabs. With the building of Cairo in 969 and the discovery of the Cape Route to the East in 1489, Alexandria almost faded from history, and in 1798, when Napoleon brought it into prominence again, the canal which supplied water from the Nile was blocked and the population had dwindled to about 4,000 people.

Within the next twenty years, Alexandria commenced to increase in importance again. It became the starting point of the overland route to India and acquired a European character which has been preserved to the present day. Negotiations between Mehemet Ali and the powers were conducted there and it was the base for Egyptian naval excursions to Crete, the Morea and Syria.

It can be fairly said that the new city of Alexandria is the work of Mehemet Ali. He developed new port facilities (still inadequate) and put in hand the construction of the Mahudiya Canal which joins the port with the Nile. The railway between Alexandria and Cairo was opened in 1856. Alexandria's new progress suffered a check in 1882 when riots broke out in the city following the bombardment of the forts by British naval vessels under the command of Admiral Seymour. Some quarters of the city were laid in ruins and the industrial and commercial system collapsed but after the British occupation of the whole country recovery was rapid. Alexandria now has a population of about 600,000 and over eighty per cent. of the total imports and exports of Egypt pass through the port.

The town is laid out on a T-shaped strip separating the Mediterranean from Lake Mareotis. Its ancient founder joined the island of Pharos to the mainland by a pier which time has sanded up to form a narrow strip of land—the stem of the T. Thus it is that Alexandria now has two ports. The Western harbour has been dredged and protected by breakwaters, and is a busy commercial port like Genoa. Its quays will accommodate ships drawing up to twenty-eight feet and there is a large graving dock. This harbour was a key supply centre and naval base during the war and was subjected to intensive air raids, the scars of which are still visible. The

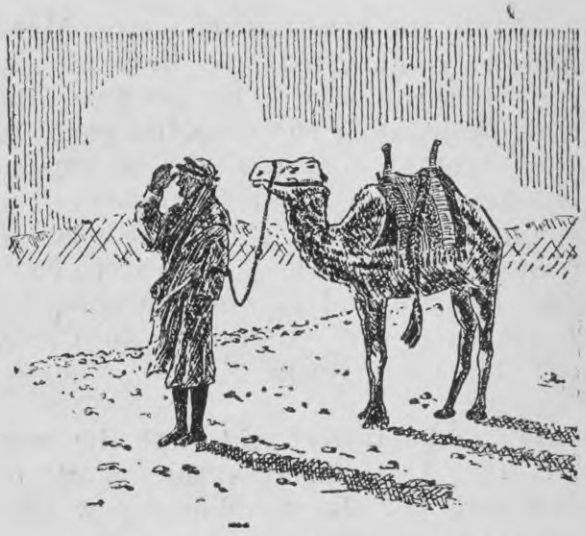
Pompey's Pillar

eastern harbour is shallow and more exposed and is used mainly by fishing vessels, although a breakwater was constructed in 1916.

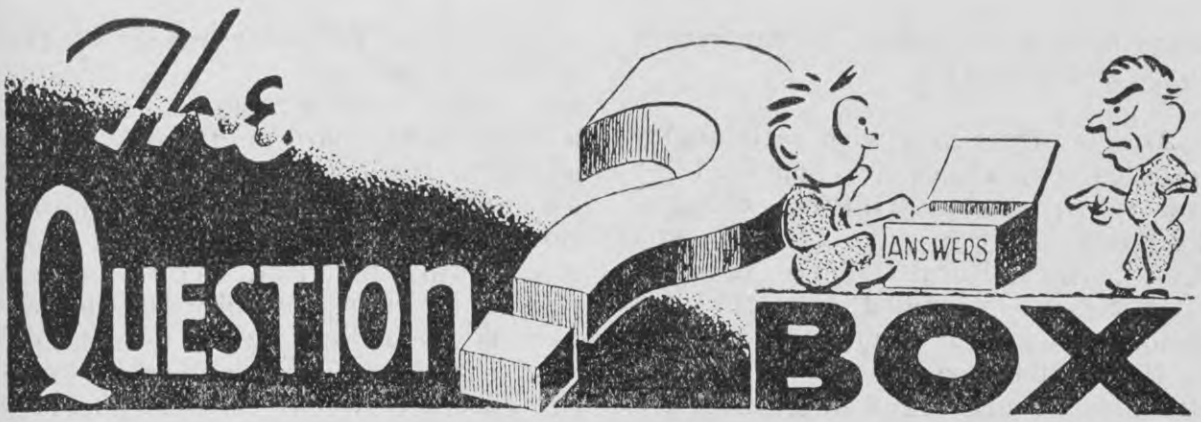
Mehemet Ali built modern Alexandria on a spacious scale and the large square which bears his name is a handsome centre for the city. The square—often referred to as the Grand Square—is lined with handsome trees and in the middle is an equestrian statue of Mehemet Ali. The main shopping area is on Rue Sherif Pasha which leads off the south end of the square. The Rue Tewfik Pasha leads to the boulevard or Rue de Rosette. In it is the municipal palace containing the public library. In a street running south from the boulevard to the railway station is the mosque of Nebi Daniel containing the tombs of Said Pasha and other members of the Khedival family. A splendid marine drive connects the city with the fashionable beach at Stanley Bay. During the months when the weather is hottest in Cairo there is usually a cool wind at Alexandria and the wealthier residents of the capital spend a period there each year.

There is little for antiquarians to see in Alexandria apart from the Museum and the neighbourhood of Pompey's Pillar, which incidentally has nothing to do with Pompey but was put up in the third century by an unimportant individual of the same name, in honour of the Emperor Diocletian. The latter's main claim to fame was that during his overlordship of the city he arranged the death of all his enemies among the population. Pompey's (or Diocletian's) Pillar is a splendid sight when seen against the setting sun. It is of polished red granite, about one hundred feet high, thirty feet round at the base and fifteen feet at the top. It stands on the highest point in Alexandria. Almost under the Pillar lies the Serapeum. What remains of it is mostly catacombs. It was here that the famous basalt Apis bull of Emperor Hadrian was found—in the women's catacomb. In the days when books were the glory of Alexandria and the world acknowledged the city as one of the great centres of culture the Serapeum housed an extensive library.

The Alexandria Museum has few ancient Egyptian exhibits but contains an interesting collection of Grecian and Roman antiquities and Ptolemaic coins, found during excavations. The ruins of Kait Bey's fort hold interest only because it was the site of the great lighthouse of the Ptolemies, the Pharos of Alexandria, *one of the seven wonders of the ancient world.* It was



of pure white marble, four-tiered and 500 feet in height. The base was square, the second tier octagonal, the third circular, and at the top was the lantern covered by a dome on which stood a statue of Poseidon. It stood for nearly 1,500 years and then, it is said, simply slipped from the rocks into the sea. Some authorities are of the opinion that it was destroyed by an earthquake. A few squared blocks are all that can be seen today.



Question (from a W.A.A.C): My fiancee is not, and has not been, in the services. When we get married can I apply for a housing loan?

Answer: Such a loan is unlikely to be granted as the department considers the responsibility of home and furniture as normally the husband's. New Zealand still does not recognise the equality of the sexes, unfortunately for you. Unless your service in the forces has affected your mutual financial position for the worse, which is unlikely, the loan will not be considered.

* * *

Question: Is it necessary for an ex-serviceman, in applying for rehabilitation farming assistance, to disclose the assets owned by him when lodging his application?

Answer: The withholding of information regarding assets is not in the ex-serviceman's interests, for the reason that quite often properties are offered to the Rehabilitation Department for which finance in excess of the loan limits is required and for which only those ex-servicemen who have finance of their own are eligible to apply. Registers of ex-servicemen who have private finance are kept by Rehabilitation Officers which are referred to immediately such a property is offered to the department. It will, therefore, be obvious to you that if an ex-serviceman has finance available which he does not disclose on his application form, he may lose an opportunity of acquiring one of these properties which are valued in excess of the rehabilitation loan limits. Further, even if an ex-serviceman lodges an application for the purchase of a farm which is within the loan limits, it is considered that it is in the ex-serviceman's own interests to make any surplus cash he has available to assist his settlement thereon.

* * *

Question: Is it possible for a civil servant on his return to New Zealand to be granted a period of leave of absence without pay in order to study for another occupation and yet not jeopardise his position with the Government service should he be unsuccessful in his new venture and wish to return?

Answer: In order to assist the rehabilitation of ex-servicemen the Public Service Commissioner will consider granting up to eighteen months' leave without pay to officers who desire to undertake employment outside the Public Service. From experience it has been found that many ex-servicemen are unable to settle down in the service on the completion of their military duties, and the object of this concession is to facilitate their re-employment if they so desire.

* * *

Question: What possibility have I of going to Massey College, or similar

institution, for a course, on my return to New Zealand?

Answer: Only men with satisfactory practical experience are approved for courses at the agricultural colleges. Full-time tuition at Lincoln and Massey Agricultural Colleges, where it is approved, is provided under the conditions and for the periods appropriate to the available courses. While pursuing such courses student trainees are paid at the following rates by the board:—Single men L2 a week plus board and lodging; married men L4 a week plus board and lodging. In addition, the board meets the college fees and expenses incurred in connection with books, instruments and other study material. The value of refresher courses for fully experienced men is recognised by the board and local committees and application from this class receive careful consideration.

THE ORIGIN OF CRICKET

Wherever Englishmen and especially English soldiers have gone, they have taken their national game with them. But for the outbreak of the Revolution it would have been played in Paris in 1789 under the auspices of the British Ambassador. It was introduced to Lisbon before the Battle of Busaco and later in Vienna during a Congress there. It had been played in Italy by 1828 while a cricket club was formed in Geneva as early as 1850. Of European countries to-day the Dutch and the Danes are the keenest and the most proficient.

Cricket is by no means unknown in America—in fact it has been played all over the American continent and a match at New York took place in 1751. The first team of professional cricketers that ever left England toured the U.S.A. and Canada in 1859 and they have been followed by many subsequent teams. The compliment has been returned by the Philadelphians, Pennsylvania and Haverford Universities.

In England it was being played by boys of the free school of Guildford in or about 1550 for in 1598, one John Derrick then 58, giving evidence before a jury testified to his having played there as a boy himself at "crikett and other plaies". However, its origin may be even earlier still as various authorities have tried to identify its infancy with a fifteenth century game called "Handyn or Handoute", stoolball or the Scottish "Cat and Doug" all of which seem to have contributed something. It was not born but evolved itself slowly as a specialised variety of the generic club-ball.

Dr. Johnson gave the derivation of "cricket" as being from "cryce"—Saxon—a stick.

When You Return, Remember

Traffic keeps to the left-hand side of the road.

Hotels close at 1800 hours (six o'clock in civvie street) and drinking after hours is frowned upon.

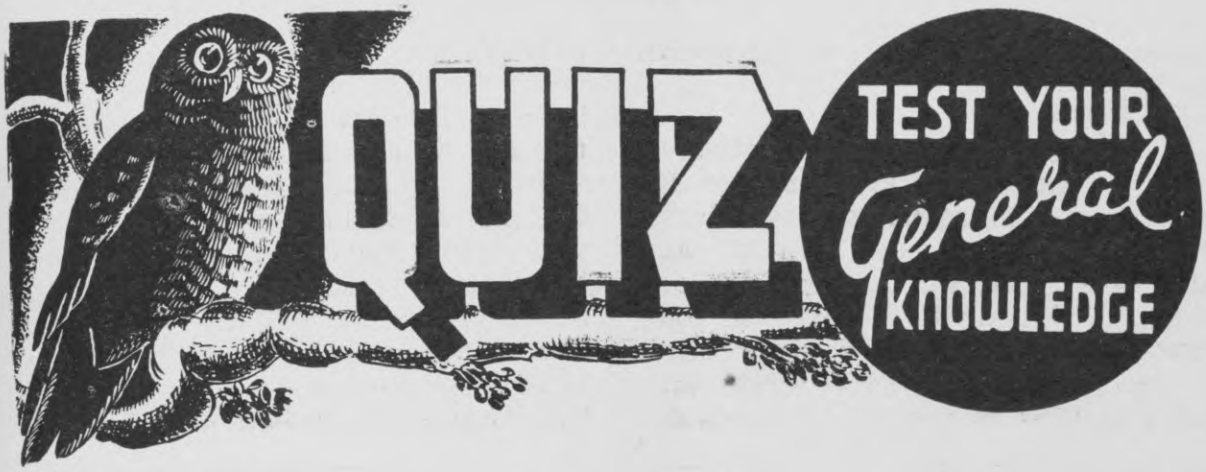
Jay-walking is an offence in urban areas *(including* Wanganui and Timaru).

Robbing of orchards and vineyards is not altogether popular with the owners, and laws of trespass are strict.

Numerous items of food and clothing can be bought only when the necessary coupons are produced.

It is by no means fine every day during the summer as it is in Italy. Ask any Southland man.

Once army pay ceases it will be necessary to work in order to eat, drink and be merry—in fact, in order to live.



1. How many flags are there in the International Signal code—26, 35, 40, 32?
2. Which is the highest building in the world:—Empire State Building, Palace of the Soviets, or the Chrysler building?
3. The Governor–General of New Zealand has a salary per annum of:—L2,000, L20,000, L7,500 or L10,000?
4. Every soldier knows the meaning of A.W.O.L. but what do the following abbreviations stand for:—I.O.W., G.M.T., W.P?
5. Seven of the following comprise the "Wonders of the world". Which are they—The Pyramids, The Leaning Tower of Pisa, The Hanging Gardens of Babylon, The Tomb of Mausolus, the Statue of Liberty, The Temple of Diana at Ephesus, The Sphinx, The Colossus of Rhodes, Stonehenge, The Coliseum, The Statue of Jupiter by Phidias and the Pharos (lighthouse) of Alexandria?
6. Which language is spoken by most people:—English, Russian, Chinese?
7. In England the monetary unit is the L sterling, in the U.S.A. the dollar, but what are the units in Burma, Denmark, Spain, Netherlands, Switzerland, Yugoslavia?
8. In Greek mythology Damon's name is most often linked with Agamemnon, Aphrodite, Hermes, Pythagoras, Pythias?
9. Who wrote—"All hope abandon, ye who enter here"?
10. Here is one for the topers. Which boils at a lower temperature—alcohol or water?
11. If you drive a nail into a tree trunk how much higher from the ground will it be in five years—assuming that the tree grows 1" per year?
12. Did Michelangelo classify himself as a painter, sculptor or architect?
13. Who was the last negro heavyweight boxing champion before Joe Louis?
14. Was Captain Kidd a fictional character or did he really exist?
15. If you were to stand on your head in the main street of Auckland or Dunedin with your nose pointing due North and your arms outstretched, in which direction would your left arm be pointing?

(Answers on Back Cover)

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Answers to "General Knowledge Test"

1. Forty.
2. The Palace of Soviets will be the tallest when completed—1,365 feet high including a 328 foot statue of Lenin. The Empire State Building is at present the tallest. It is 1,248 feet high.
3. L7,500.
4. Isle of Wight, Greenwich Mean Time, Weather Permitting.
5. The Leaning Tower of Pisa, Statue of Liberty, Stonehenge and the Sphinx are NOT included.
6. Chinese is spoken by 260 million people, English by 200 million, and Russian by 120 million.
7. Rupee, krone, peseta, gulden, franc, dinar.
8. Pythias.
9. Dante.
10. Alcohol.
11. It will be no higher as the tree grows from the top.
12. Sculptor.
13. Jack Johnson.
14. Captain William Kidd was an American shipmaster commissioned by the British Government to capture pirates but he also seized English ships and East Indiamen. He was hanged for piracy in 1701 in London.
15. East.

CUE is a bi-monthly publication produced by the New Zealand Education and Rehabilitation Service for the benefit of members of 2 NZEF. In addition to information on ERS activities, articles of general interest are published, to provide both entertainment and information for New Zealand troops. Contributions of articles, verse, and sketches will be welcomed. They should be addressed to: "The Editor, CUE, HQ-ERS, 2 NZEF, CMF."

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