AT AN IRISH INQUEST.

An Irish quack doctor was being examined at an inquest on his patient:

"I gave him ipecacuanha," he said.

"You might just as well have given him the Aurora Borealis," replied the coroner.

"Indade, yer honour, and that's just what Oi'd have given him next if he hadn't unfortunately died."

TEACHING A CHILD TO SWIM.

While there are children who learn to swim in babyhood, it is the general experience that between the ages of ten and fourteen years is the proper period for acquiring this art. Before ten, according to many authorities, the muscles are rarely strong enough to enable a child to swim. It is really such a necessary part of a boy's education—and a girl's too, for that matter—that one feels astonished nowadays to learn of an adult who cannot swim.

The following rules for the novice in the water are given:—

"With the lungs full of air, a person may float in salt water submerged to about the nose. He can exist on this amount of air from 45 seconds to two or three minutes, according to his lung capacity. The slightest motion of the arms and legs in a downward direction will bring the mouth clear of the water.

"This breathing exercise, which can best be practised in deep water, is the fundamental step of the whole thing. Once the knack of filling up with air at the proper time is acquired the pupil gains confidence and self-possession.

"In the beginning all movements should be made slowly. It is fighting the water that drags a drowning man beneath the surface.

"Use no particular stroke other than the natural paddling. Always keep the body and head parallel to the surface of the water, lifting the face and inhaling only when necessary. If the swimmer attempts to keep the head above the water the body will offer more resistance to the ahead movement than when lying in the plane of its surface."

A famous way to teach a child to swim is to suspend him from the end of a strong pole, such as a boat hook. A rope attached to the end of the pole has the other end formed into a noose which is placed round the child's body under his arms. Then the swimming instructor stands on a dock or runway and holds the pole like a fishing rod. The child sinks in the water as far as the instructor considers wise, but, of course, there is no danger, as he can be pulled up at any moment. When he starts to paddle and so keeps himself up in the water to some extent the rope becomes slack and the instructor then knows that the child is beginning to learn. He can then say to the beginner, "You were swimming then; you swam 10 or 12 strokes." The child probably did not realise that he really was swimming, but when he finds out that he has done so it increases his confidence. The child is more likely to retain self-control by this method than when others are used, because his first efforts to swim will be almost unconscious. With other methods he very often becomes excited and begins to fight the water.

This lesson is more effective when given in deep water, where buoyancy helps to keep the child up.

The breast stroke, believed by many to be the only proper one for a beginner has three leg movements:—

First: Legs drawn up under body, knees apart and bent, soles flat, just under the water surface.

Second: Outward kick from hips as far and as hard as possible.

Third: Bring the feet together as nearly as possible with energy, soles turned inward a little.

The arm movements are:

First: Place hands under chin, then thrust them out quickly but firmly, directly forward; thumbs under first fingers, knuckles bent a little so that when hands are brought together a hollow is formed by the palms.

Second: Spread the arms apart as far as possible; keep hands below the surface of water.

Third: Bring hands together under chin as before first movement.

Children may practise these movements out of the water, first learning the arm movements and then clinging to the side of a veranda or some similar support while learning the leg movement. Such efforts are bound to strengthen the muscles and lead to self-confidence.

READING EN BLOC.

A printer's devil persuaded Edison to join him in changing his publication's name to "Paul Pry," which contained so pointed personal gossip that one victim threw the youthful editor into the river, and "Paul Pry" died shortly after. Edison's literary abilities had been greatly aided by his extremely zealous reading in the Detroit Library during the long period he spent in that city between the early arrival and the late departure of his train. His method was to tackle the books shelf by shelf and read everything indiscriminately.

SOLDIER SETTLEMENT.

The following review of the progress of land settlement under the Discharged Soldiers' Settlement Act has been supplied by the Minister of Lands at the request of "Quick March." There are few problems of repatriation of more interest than this matter of putting the returned soldier on the land, and the Hon D. H. Guthrie's authoritative survey of the accomplishment to date has particular value as a summary of what New Zealand has done in providing opportunities for soldiers to become farmers. The Minister expresses his satisfaction with the steady progress that has been made since the passing of the D.S.S. Act.

Up to the present time a total area of 1,477,295 acres has been settled by returned soldiers, this area comprising 222,651 acres of settlement land taken up by 1020 settlers, the land having been purchased by the Government from private owners and subsequently opened for selection, together with 643,893 acres of Crown Land and National Endowment land taken up by 656 settlers, and 600,751 acres of private freehold land which has been purchased by 2968 returned soldiers with Government assistance.

At the present time there is available for immediate selection an area of 130,807 acres of Crown land, whilst nearly 700,000 acres of Crown land is available and suitable for selection, but is not yet ready for offering. In addition to this, 58 private freehold estates have been purchased by the Government, and are being prepared for selection by soldiers, the areas aggregating 179,270 acres.

The above figures relate to the settlement of rural land, but it may be added that nearly 5000 returned soldiers, whose avocations are in towns, have been assisted with Government grants in the purchase of town residences.

It is generally known that the Government, in addition to providing land for returned soldiers, also provides financial assistance for the erection of houses, purchase of land, implements, stock, machinery, etc., and for the making of improvements, and in every way assists the soldiers to establish themselves on the land. Over £10,000,000 has now been expended under the Discharged Soldiers' Settlement Act for these purposes, and each day further advances are being made, and every endeavour is being made to continue the settlement of the discharged soldiers on satisfactory lines.

It may be mentioned that the benefits of the Act applied primarily to members of the Expeditionary Forces (either naval or military) who had left New Zealand for the front and had returned to New Zealand and been discharged from service with an honourable record. Amendments to the Act provide that benefits were also to be given to members of the Expeditionary Forces who were in Camp at the signing of the Armistice and had not left New Zealand, and by the latest amendment members of the N.Z. Army Nursing Service who have served abroad are also entitled to some of the benefits of the act.

Parliament also provided that instructors at a Camp for military training conducted for the purpose of Expeditionary Forces should be eligible for benefits together with members of an Expeditionary Force who had been classed as medically fit, and served in a training camp in New Zealand, and, through no fault of their own, were discharged from the Forces.

The terms under which land is acquired are varied so as to suit the requirements of the applicants. Land may be purchased for cash occupation with right of purchase, or renewable lease, whilst there is a special tenure providing for purchase under deferred payment, the term of purchase extending over 20 years, or for the occupation of the land under renewable lease with the right of acquiring the freehold at any time, if necessary under deferred payment.

Special supervisors have been appointed in each district to visit and advise settlers, and in addition the Crown Land Rangers of the Department, and the expert officers of the Agricultural Department and other Departments, from time to time assist with advice any settler who may desire it.

It may be stated that the majority of the settlers are establishing themselves in a satisfactory manner, and had every prospect of doing well at an early date. Necessarily some of the settlers are not so experienced as others and may have met with misfortune in the progress of settlement, but the provisions of the Act which provide, where necessary, for postponement or remission of rent, and other concessions, have been interpreted by the Land Boards, and the Government in a liberal manner, and every endeavour has been made to see that the settlers are assisted to maintain themselves under the most favourable conditions.

SCIENCE NOTES.

FISHING BY TELEPHONE.

Norwegian fishermen are adopting the telephone to warn them when great numbers of fish are about. The submarine war has taught them the value of the telephone. A microphone, which in the ordinary way is called the mouthpiece, is lowered from a fishing boat and connected by a wire with the listening instrument in the boat.

NEW WAY OF FINDING OIL.

A new method has been invented for locating oil, which saves the enormous expense of drilling in all sorts of likely places which may not eventually yield. The earth is a conductor of electricity, and a known electric current is passed through it from one spot to another in the region where oil is sought and is carefully measured, so that the resistance of the earth between the two spots is found. As oil-bearing deposits are bad conductors, the resistance will be great if oil is at hand, or small if not, and by this difference, the presence of oil can be detected.

A SCIENTIFIC ROMANCE.

Twenty-five centuries ago. Persian soldiers were armed with swords and spears made of a wonderful bronze, which could never be produced by the most skilled of modern metallurgists. A metallurgist named Samuel R. Dawson has now discovered the secret of the ancient bronze, which has been tested, and proves to be able to do just the things which the finest modern steels cannot do. The Persian bronze, used at the battle of Marathon in 490 B.C., and now re-made, polishes with the lustre and colour of gold; it does not corrode, it is harder than finest carbon tool-steel; yet it can be drawn out to a wire of incredible thinness. Trolley wheels made of it have run 30,000 miles with little sign of wear. It is also being used for watch hair-springs; being non-magnetic and rust-proof, it is an ideal substitute for steel.

300 WORDS A MINUTE.

As an indication of the rapid progress made in the transmission of wireless messages, an apparatus for sending 300 to 400 words a minute is to be installed at the naval radio station at Sayville, U.S.A. The present speed is ten words a minute. Ordinary conversation seldom exceeds 200 words a minute. Some cable-sending machines do 100. The apparatus cost about £10,000. An automatic sending machine, either of the disc or tape variety, operates a master break key controlling thirty eight small break keys. In receiving messages, air waves are photographed and from the developed films is printed a strip of paper with letters forming the words indicated by the waves. An operator translates from the tape for transcription of the message on a typewriter. The photographing and developing process takes twenty seconds..

SILK FROM SPIDERS.

In Madagascar, experiments have been made with spider's web as a substitute for silk, and the results are so encouraging that the opinion is that a great and lucrative industry will result. Many persons have tried to utilise spider's web. In 1708, Bon Saint Hilaire, president of the Court of Accounts at Montpellier, actually made a few pairs of stockings and gloves of spider's web. In Madagascar, the spiders are bought for about 8 cents a-piece and put to work. About four or five times every ten days they start to spin and continue until exhausted. Their product is wound on spools as fast as they spin it, and at each spinning 300 or 400 yards are obtained. The threads of a dozen spiders are twisted together, and two of these twisted strands are again twisted so that a thread of twenty-four finer threads is obtained. For fineness, strength, and beautiful yellow colour, this silk is much superior to that of silk worms.

TRAINS TO FIT ANY LINES.

A French inventor has designed a novel arrangement of axle and suspension where by a railway carriage or truck may pass from a broad gauge to a narrow one or vice versa; the axles and wheels suspension are so arranged that the distance between wheels automatically adjusts itself, in passing from one gauge to another, in such a way as always to fit the gauge of the rails. In its simplest terms, the solution consists in extensible axles. To go a little further into the means of extension, we find that the wheel suspension is by special platforms, installed laterally beneath a central "chassis," which is attached to the underbody of the car. Each axle is in reality formed of two semi-axles connected at the centre by a special arrangement enabling the system to be telescoped by a distance which is limited by a set of connecting rods.