

Wireless Romance.

The Career of Dr. W. H. Eccles.

By ROBERT DONALD, L.L.D., in John O'London's Weekly.

Modern invention is invested with so much of the glamour of romance or sits the imagination so easily as wireless telegraphy. To the majority of people it is wizardry, something which they do not understand, uncanny, unexplainable, mysterious. One of the leading exponents of this science which is bridging continents and rapidly making the world smaller is Dr. W. H. Eccles, wireless for the British Government. He is one of the ablest wireless authorities on wireless—second only in this country to Mr. Marconi—and yet he is only forty-six years of age.

Dr. Eccles is a Lancashire man. He was born in 1875 at a constructional engineer. At the age of sixteen he began work as a draughtsman with his father. After some practical experience he went to the Royal College of Science with the intention of training for a mechanical engineer. He broke away from the usual course and took up electrical engineering in his third year. He was afterwards a demonstrator at the college. In 1899 he joined Marconi's small establishment in England for carrying on the initial experiments in wireless. The great inventor had set up the first wireless installation in the world, and was trying to send wireless messages from Wimereux, near Boulogne, to Dover.

MARCONI INSPIRED. With superb confidence in himself and in the future of his invention, Mr. Marconi had also started small works at Chelmsford, employing a few dozen men. The young graduate of the College of Science entered into this new and unexplored sphere of research and experiment with great zest and enthusiasm. A new world was opening to him for the service of mankind. Dr. Eccles had great admiration for Marconi. "At that time," says Dr. Eccles, "Marconi was an inspired man. He had taken the Marconi wireless from the laboratory and with the touch of genius turned them to account for practical science. In those early days he was perfecting the coherent and including the high-frequency transmitter into wireless. Marconi's ambition then was to communicate for a distance of forty miles." As is well known, that pioneer work of patient scientists and electrical engineers, carried on at Wimereux and elsewhere, was the start of a revolution which has provided the world with a new wireless system.

The year or so which Mr. Eccles spent with Marconi was a formative period in his life which shaped his future career. At that time it gave him a great deal to think about. He carried away a lot of new problems, which he did not at once start to probe. He joined the staff of the Admiralty as assistant editor, at a salary of about £4 per week, and was permitted to write on technical subjects, especially electricity. Mr. Eccles next occupied the position of lecturer on engineering and physics at Chelsea Polytechnic. He was given his doctorate in science with two papers on wireless. During his eight years at Chelsea Polytechnic Dr. Eccles advanced rapidly in his scientific attainments, and this became

known, as he was invited to occupy the coveted post of Reader of Graphic Statics and Lecturer in Structural Engineering at University College. He remained here for six years, and during this period made great progress as an authority on wireless telegraphy.

A VOLUNTARY WORKER. Early in the war the War Office obtained Dr. Eccles's services at the Woolwich Signals Experimental Establishment—which was chiefly engaged on wireless work. On the death of Professor Silvanus Thompson, Dr. Eccles was appointed Professor of Applied Physics and Electrical Engineering at the London Technical College, Finsbury—a position which he still holds. During the war Dr. Eccles worked in the college laboratories for the Admiralty. In fact, during the whole of the war he was a voluntary worker in the service of the State, and a member of the Admiralty Department of Research, giving attention, amongst other things, to wireless. He was responsible for six useful inventions which he presented to the Government. When Lord Milner appointed the Imperial Wireless Telegraphy Committee, Dr. Eccles was selected as a member of it, and afterwards appointed to the Expert Commission which followed the Committee's recommendations.

PAINTING STUDY. While Dr. Eccles held his professorship he was always a student himself. He travelled about the world, he inspected all important wireless installations. He was in demand as a consulting wireless engineer and an expert witness. He is the author of several standard books which are models of painstaking study and scientific exposition.

As the reader will appreciate, Dr. Eccles had led a very full life. He has concentrated on study, science, work. He has been too busy to get married up to now. At any rate, he is a bachelor. He lives in London, in a flat in St. James's, and has a cottage at Southend. His recreations are riding and sailing. Dr. Eccles is not a dry-as-dust scientist. He is exceedingly pleasant and cheerful, and has a knack of explaining things with a happy smile or a touch of humor. Dr. Eccles occupies high positions in his own world. He is vice-president of the Institution of Electrical Engineers, chairman of the wireless section of the Institution. He is vice-president of the Institute of Physics and of the Physic Society of London. He is also one of the youngest Fellows of the Royal Society.

Dr. Eccles is now designing the stations for the Imperial Wireless Chain, and his early experience as a constructional engineer is proving of great value to him in connection with the erection of the high towers of wireless installations.

Wireless telegraphy is an exceedingly difficult subject to explain in a popular way. It involves so many things. In order to understand wireless one should be a mathematician, a physicist, an electrical engineer, a chemist, a meteorologist, with a knowledge of graphic statics, trigonometry, electricity, magnetism, geometry, hydrography, relativity; in fact it would be almost impossible to say what branch of industrial science is not of value to the wireless engineer.

THE EMPIRE CHAIN. Dr. Eccles having to deal in the case of the Empire Chain with comparatively low-powered stations, for young intensifying them, so that in favourable conditions messages can

be carried a far greater distance than the 2,000-miles stage. Wireless messages now encircle the globe, but cannot always be read. Readers know that communication by wireless over vast distances is made possible by the sending of electric waves into space. You see at every wireless station high masts of wood or steel with antennae or an aerial attached. The carrying capacity of a station depends on the electric power used to discharge the waves at the sending end of an antenna, and also on the height of the aerial.

The chief cause of the failure of messages to carry long distances is what is known as "atmospheric" local electric storms which the waves carrying their words in the Morse code are unable to pierce. To guard against these interruptions, which are more prevalent overland than over water and in tropical countries rather than in temperate zones, Dr. Eccles favors at this stage more stations with shorter effective range under all conditions, than higher-powered stations, with much longer range only under favourable conditions.

WIRELESS TELEPHONE. Wireless telephony is a more varied and fascinating subject than wireless telegraphy, but Dr. Eccles brings the cold, calculating mind of the practical engineer to bear on it and puts a limit to its application. When the actual sound is flashed through the atmosphere, instead of continuous waves with electric dots and dashes, it tempts the ether to such an extent that the wireless telephone becomes generally out of action. Therefore until some development takes place its scope will be limited.

There is perhaps no sphere of invention where there is more going on. Methods of transmission new only a few years ago are becoming old, new systems are tried with varying degrees of success, more and more ambitious schemes are launched. There are disappointments, set-backs, little successes, and glorious triumphs. The wireless engineer is conquering the world anew and annihilating space.

An Aftermath of the War

SALVING GOLD FROM ILL FATE.

London, Nov. 30 (By Canadian Press).—Gold bullion to the value of between £5,000,000 and £6,000,000 has been recovered from the sunken steamship *Laurentic*, off the Irish coast, and there is still as much more of the precious metal to be salvaged. The work of recovering the bullion has ceased for this year, but operations will be resumed next spring, when it is expected that £2,000,000 or £3,000,000 worth of the ore, which is still in the ship will be brought to the surface.

The ill-fated *White Star* liner *Laurentic*, a ship of 14,800 tons, was well-known to Canadians. For some years she was in the merchant marine service between Liverpool and Montreal. She was commanded by the British Admiralty while the war was on, and was in the service of the Government as an armed cruiser. She was sunk by the Germans in January, 1917, off one of the widest parts of the north coast of Ireland and has been at the bottom of the sea ever since. The *Laurentic* could not be lifted, but the gold she was carrying at the time of the disaster was too valuable to be left in "Davy Jones' locker," so expert divers were set to work to lift the gold.

ADMIRALTY TO THE RESCUE. The Admiralty salvage tug *Racer* and her tender, the Canadian tug *No. 1*, left Portsmouth last spring for the scene of the wreck and returned recently to Portsmouth, where they will lift up for the winter and prepare for the summer of the work of salvage next spring. Unfortunately more than gold treasure was sunk when the *Laurentic* went down—many lives being lost at the time. Of her crew of 475 officers and men only 121 were saved, among the survivors being her commander, Captain R. A. Norton, R.N.

She was sunk in over twenty fathoms of water. More than three years' pounding by the Atlantic waves has transformed the big liner into a heap of twisted debris; and her decks which settled down on the sea bottom, cover an area of several hundred feet. The wreck was practically covered with gravel and silt when the divers located it as it is in a position in which it receives the full force of the Atlantic gales. This obstruction had to be pumped away as far as possible by powerful pumps placed in position by the divers, as the gold was at the bottom of the huge mass of wreckage.

In consequence of this the *Racer* carried a re-compression chamber for the purpose of treating cases of illness which the divers might contract in the course of their hazardous task. The vessel engaged in salvaging the gold in the *Laurentic* is about all that remains of the splendid Admiralty Salvage Section which was brought into being during the war. With this exception the section came to an end with the completion of the wreck-raising operations on the Belgian coast. In the case of the *Laurentic* the rate paid is half-a-crown for every £100 worth of gold recovered, and this divided among all employed in the work is equal to about one half-penny per cent per head.

TO-DAY'S MESSAGES.

YELLOW PRESS IN ACTION. WASHINGTON, D.C., Dec. 2. (By Ben Deacon, Staff Correspondent Canadian Press).—The Anglo-Japanese Alliance is being used by the Anti-British section of the United States Press, which is making every possible effort to sow seeds of discord within the Conference. The local Hearst papers last night included editorials, declaring that under the ratio proposed by the United States, "if English-Japanese alliance stands, that this alliance would have sixteen naval fighting units to ten for the United States." There are indications that this propaganda is looked upon with great disgust and disfavor by the vast majority of United States citizens here.

OPEN WARFARE. BELFAST, Dec. 2. An attack on the fall at Londonderry, with the object of releasing the prisoners there was repulsed by police guards this morning. Two policemen were killed and several of the attackers wounded. The party were undetected until a patrol of policemen saw a rope ladder hanging over the wall, and gave the alarm. Investigation by the military guard found two constables who guarded Sinn Féiners, lying dead in the corridor, poisoned, drugged or strangled. A Republican rescue party had forced the doors of ten cells, when guards surprised them. The military opened fire, Republicans replying with revolvers.

LEAVING FOR WASHINGTON. LONDON, Dec. 2. It is Premier Lloyd George's present intention to start for Washington about the middle of December.

Brazilian Fish.

Samples of Brazilian cured fish received by the Monroes Export Co., were exhibited at the Board of Trade Rooms to-day. The fish was forwarded by Messrs. Mendes, Lima & Co., of Pernambuco. The samples, which were written to the Monroes Export Co., under date of October 7th, says: "By the captain of the Robert J. Dale, we forwarded you a sample of the native cured fish, of which large quantities are being poured into our city from the north via Para and Amazonia. This constitutes a serious menace for our cod-fish business. The native article is sold at a very cheap price, thus having a great advantage over the Newfoundland article, and demand for it grows daily, a great part of the population, who consume it, sacrificing quality to price. This is not to be wondered at, considering the high level of which the cost of living in this city has arrived."

Error in Air Stamp.

Have you a copy of the Halifax Air Mail stamp? If so, see if there is a full stop after the inscription. In thirteen out of the twenty-five stamps on each pane, the stop is missing. It applies to every pane of 25 stamps, those without the stop will be less valuable than those which do not show the error. Newfoundland seems ever ready to oblige philatelists with varieties. All the many errors in last year's mischances have not yet been unearthed.

Amy B. Silver Abandoned.

A message has been received in the city stating that the schooner *Amy B. Silver* has foundered in mid-ocean, and that the crew were safe having been taken off by a passing steamer. The *Amy B. Silver* was loaded at St. John's for Oporto on Nov. 2nd. The vessel was owned by Wakeley and Sons.

Here and There.

It will be a treat for lovers of good music at George St. Church Tuesday next—Dec. 21.

OFFICIALLY DRUNK.—Three of the drunks who appeared before the magistrate this morning had obtained liquor on 'scripts.

Fine programme of Specialties will be given to-morrow at the Deacon Public Hall.

STORAGE.—We have storage space for Codfish, Cod oil or Merchandise. RISHOR, SONS & CO., LTD.—Nov. 4, 1921.

DIGBY'S FOOTER TEAM.—A photograph of the "Digby's" football team taken on St. George's Field when they played the city in October last, appeared in a recent issue of the "Liverpool Sporting Echo." The paper states that the "Digby's" team played in three countries, St. John's, Newfoundland, Halifax, Nova Scotia, and Boston, Mass. It suffered its only defeat from the St. John's team.

If you want the best in High Class Engraving on Gold, Silver, or French Ivory, bring your goods to KARL S. TRAPNELL, 307 Water Street—Nov. 14, 1921.

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HEAVY WORK BOOTS, \$5.00
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BOX CALF BLUCHER BOOTS, \$4.50
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DARK TAN BOOTS, \$6.00
BLACK BUTTON BOOTS, \$5.00
PATENT LEATHER BOOTS, \$5.00
DARK TAN BOOTS, with Rubber Heel, \$7.50
BLACK KID BOOTS, \$7.50 (Formerly \$9.00)
BOX CALF BLUCHER BOOTS, \$7.50 (Formerly \$13.50)
GIRLS' BOOTS. (Sizes 11 to 2.)
BLACK KID LACED, \$2.50
BLACK KID BUTTON, \$2.75
BOX CALF LACED, \$2.95
BOX CALF BUTTON, \$2.95
TAN HIGH CUT LACED, \$4.50

CHILDREN'S BOOTS. (Sizes 5 to 10.)
BLACK KID LACED, \$2.25
BLACK KID BUTTON, \$2.30
BOX CALF LACED, \$2.50
BOX CALF BUTTON, \$2.50
INFANTS' BOOTS. (Sizes 3 to 6.)
INFANTS' BUTTON BOOTS, \$1.40
INFANTS' LACED BOOTS, \$1.30

WOMEN'S BOOTS.
BLACK KID BLUCHER BOOTS, \$4.00
BLACK KID BUTTON BOOTS, \$4.50
HIGH CUT LACED BOOTS, \$5.00
HIGH CUT BUTTON BOOTS, \$5.00
DARK BROWN LACED BOOTS, \$4.50
DARK BROWN HIGH CUT BOOTS, \$5.75
COMMON SENSE BOOTS, Laced, medium toe, \$4.50
BOX CALF LACED BOOTS, \$4.00
WOMEN'S BUTTON GAITERS, \$3.30
WOMEN'S BUCKLE GAITERS, \$3.50

BOYS' BOOTS.
BOX CALF BOOTS, \$3.35 (Sizes 1 to 4.)
BOX CALF BOOTS, \$3.30 (Sizes 9 to 13.)
GUN METAL BLUCHER, \$3.50 (Sizes 1 to 4.)
BLACK KID BLUCHER, \$3.50 (Sizes 1 to 4.)
BLACK KID BOOTS, \$3.00 (Sizes 9 to 13.)

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Customers who have Sequi Matches on order will be pleased to know that a shipment has arrived and will be sent forward first freight.

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EDDY'S BUFFALO MATCHES.
Large family box.

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Shipping Notes

Schooner *Manuata* has cleared for Trinidad taking 2,131 qts. of codfish and a quantity of herring, shipped by the Monroes Export Co.

Schooner *Little Princess* which left New York on Nov. 22nd with a cargo of hard coal is now due.

Schooner *A. B. Bataux* has loaded 234 tons coal at Sydney for this port. S.S. *Rosalind* leaves Halifax at noon to-morrow.

S.S. *Proteus* is expected to sail to-night for Alicante and Naples. The ship is taking about 20,000 qts. fish.

S.S. *Manos* is not likely to get away before next Tuesday when she sails for Halifax to load apples for England.

S.S. *Nordhav* went on dock to-day for repairs.

Schooner *Donald J. Cook* sailed this morning for Kingston, Ja., with a cargo of fish from A. S. Hickman.

S.S. *Daisy* sailed this forenoon on Revenue Service.

Organ Recital and Sacred Concert, George St. Church, Tuesday next at 8 o'clock—Dec. 11.

NAILS!

10 and 12 inch Wrot Nails.
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Buy your Winter Feed now. We have

100 Ton PRIME No. 1 TIMOTHY HAY.
1,000 Bags

HEAVY WHITE OATS.
We can give you a good price on this lot.
RING 812.

"Gilt Edge" Butter. "September" Cheese.

To-day, at lowest prices, ex "Sheba" from Montreal:
"GILT EDGE" CANADIAN CREAMERY BUTTER—28 lb. boxes.
"GILT EDGE" CANADIAN CREAMERY BUTTER—56 lb. boxes.
"Gilt Edge" Butter is positively the best Butter obtainable.

FANCY TWIN CHEESE—35 lbs. each, September make.
FANCY LARGE CHEESE—70 lbs. each, September make.

F. McNamara,
QUEEN STREET.
PHONE 393.

A prisoner at the Birmingham Sessions recently refused to plead, and a special jury was empanelled to decide whether he was mute of malice or by act of God. The jury returned a verdict "Mute of Malice," and a plea of Not Guilty was entered by the Recorder. The trial was then gone on with. He was lucky not to have been indicted a hundred and fifty years earlier, for in that case, had he refused to plead, he would probably have undergone the terrible "peine forte et dure," a barbarous punishment which disfigured our penal code until 1772. This consisted in pressing down the prisoner to the stone floor of his dungeon and pressing him to death with heavy weights. The weights were added gradually so as to give the sufferer an opportunity of avoiding further torture by consenting to plead. Some adopted this course, but there are many recorded instances of accused persons, submitting to be pressed to death rather than plead, their object being to preserve their estates from forfeitures on conviction as well as to save themselves from the ignominy of the gallows.

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