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# THE CHARLOTTETOWN GUARDIAN

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## LORD MINTO TELLS OF BRITISH RULE IN INDIA

SIMLA, India, Nov. .—Lord Minto speaking at a farewell banquet given by the United Service Club at Simla, made an important speech on the situation in India.

After reviewing the Government's successful frontier policy, he said he felt that there was in India widespread political unrest, quite apart from revolutionary sedition. Ambitions whose justice could not be denied had come into existence. These he would term loyal unrest. These were due to the ripening of the educational seed sown by British rule, and accelerated by the deep impression produced in Asia by the successes of an Eastern military Power. The Viceroy continued:

"There have always been undercurrents in India hostile to British rule, emanating often from traditional religious beliefs and superstitions by which political agitators have attempted to profit. But the problem with which the Government was confronted in 1906 was something much more serious. It was the assertion of political awakening.

"We had come to the parting of the ways, and to my mind there has never been a shadow of doubt which was the right road to follow. It was perfectly open to us either to refuse to recognize the signs of the times or to recognize them and attempt to deal with the new conditions. I can only say that if we had adopted the former course, we should have gone back on all we have said and done in the past and alienated from the cause of British administration many who have been brought up in its doctrine and built up hopes on a belief in its justice.

"They would have been driven into the camp of the enemy to become traducers of British rule. We should have perpetuated discontent in India. Holding these views we decided that the time had come for a further extension of representative principles in our administration. That decision was arrived at by the Government of India after mature consideration and was warmly accepted by Lord Morley, to whom we owe much for the eloquent and powerful support he gave us at a critical time."

The Viceroy next alluded to the Muzufferpore murderers and the Maniktollah garden discoveries which gave warning of the anarchial plot of British rule, and said: "The so-called repressive legislation was our reply to anarchy. What was the Government of India to do? Was it, on the strength of the Maniktollah discoveries and the crimes which followed in their wake, to withdraw the recognition it had vouchsafed to the justice of the political claims two years earlier? Were those claims to be bracketed with methods of outrage, dacoity, and assassination?

"I cannot attempt to say to what extent a refusal to reply to reasonable political hopes might have driven those who would otherwise have been loyal to sympathize with active rebellion. To me it has always been of vital importance to avoid the possibility of such a catastrophe. I have consistently refused to allow the whole of India to be branded as disloyal in deference to what it has amounted to—by anarchical conspirators. But the position had become complex. The Government had to play a double part with one hand to dispense measures calculated to meet novel political conditions and with the other hand sternly to eradicate political crimes.

"In the midst of such complications I could not enter light-hearted on a policy of reform, but I refused to lose faith in it. How we have played our part I leave to posterity to judge when the passions of the hour have subsided and the incidents of the story have assumed their true proportions.

"I have heard a good deal of strong men in my time, and can only say that my experience in our anxious days has taught me that the strongest man is he who is not afraid of being called weak. I have often wondered—I have no doubt many of you here tonight have wondered—whether the centralized political machinery of Great Britain, subject as it is to many influences and surrounded as it is, too, by the danger due to the false impressions which the marvellous increase in all means of communication has so much favored, could in the case of a really dangerous emergency do anything but hamper the hands of those entrusted with the preservation of the distant territories of our mighty Empire."

Lord Minto then proceeded to say that he believed that the enlarged councils had immensely strengthened the hands of the Government, and he especially alluded to the cordiality of the loyal response from the ruling chiefs. He then paid a high tribute to the able assistance of Mr. Sinha, the first Indian member of the Executive Council, far his absolute fairness and broadminded patriotism. His Lordship concluded as follows:

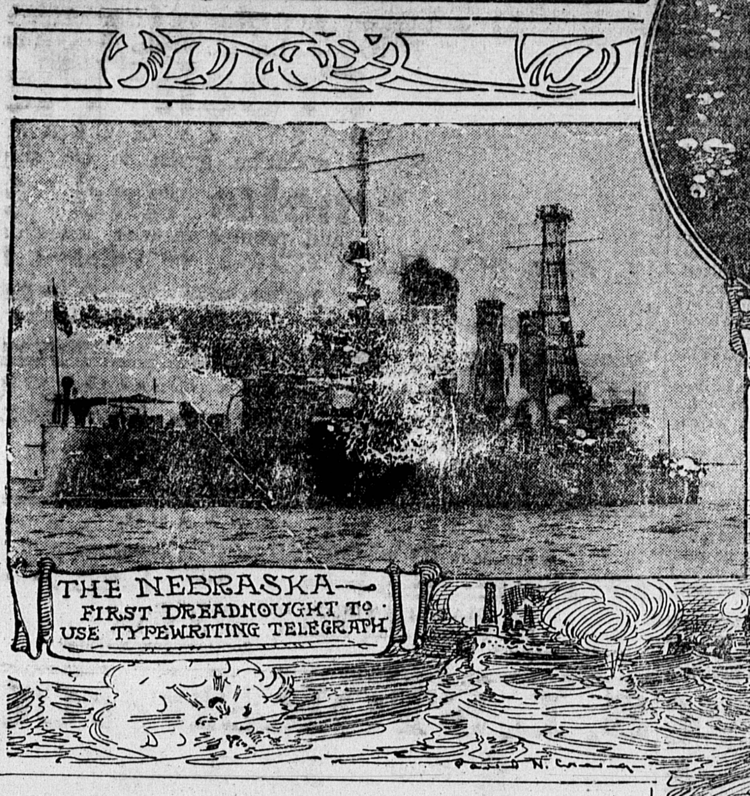
"The reforms have immensely cleared the air. They have helped to define the true intentions of the different political factors. Moderate political thought has throughout India rallied to their support. The representatives of extreme views have been located in their own camp. The machinations of anarchy have been disclosed.

"A line has been distinctly drawn between the supporters of political change and the instigators of political outrage. The Government of India, the leaders of Indian thought, and the Indian public can now judge much more correctly of the surrounding conditions. The depressing suspicion and apprehensions of mysterious influences have largely disappeared, and a happier feeling is abroad.

"I am far from saying that sedition has disappeared, or that we have seen the last of political crime—it would be a culpable disregard of that information at our disposal to do so.

# THE NAVY'S NEW OPTIC NERVE

HOW THE MAN IN THE FIGHTING TOP FLASHES PRINTED OBSERVATIONS TO THE MAN BEHIND THE GUN



THE NEBRASKA— FIRST DREADNOUGHT TO USE TYPEWRITING TELEGRAPH

## Uncle Sam's Dreadnoughts to Use Invention of Brooklyn Engineer.

### Battleship Nebraska Ordered Equipped.

### Will Supersede Telephone.

BY ENRIQUE LOPEZ.

The Naval Battle of the future between the giant Dreadnoughts of the deep will be decided by the deadly work of the big guns long before the fighting monsters steam within range of the smaller batteries. In such a fight information relative to the distance and speed of the foeman's ships will be of vital importance to the grim fighters upon whose manipulation of the great steel cannon in the turrets depends the outcome of the conflict. The fighting top of the new battleship, high above the deck, becomes the eye of the fighting monster, and upon the preservation of communication between this precarious perch upon the great skeleton mast and the "brains" of the ship below the conning tower depends the efficiency of the giant fighting machine. To-day the loud-speaking telephone is largely depended upon for the transmission of intelligence from lookout to the fighting arms of the ship. In the din of battle it is quite evident that such method of communication would become at least decidedly unreliable, if not inoperative. A system which would cause printed observations to appear beside each great gun would prove of inestimable value for the handling of the battleship of the Dreadnought type.

It is just such a system that Uncle Sam has ordered installed in his up-to-date navy and work upon the monster Nebraska's new optic nerve will commence at once. The new wonder is a typewriting telegraph device. The look-out in the fighting-top takes his observations and then writes out his message upon the keyboard of what looks like an everyday typewriter. Instantly the clicking keys cause varying electrical impulses to operate the proper mechanisms in the hold of the ship and the chief officer's typewriter and those in the turrets automatically write the message upon a sheet of white paper.

### A Ghost Machine.

It looks like a ghost machine as the keys move up and down and the letters appear upon the paper with no one at work upon the machine. But stay; an invisible magician greater than any conjurer of the fairy tales of yore is pressing each key in its proper turn and causing the message to appear. Electricity is the producer of greater marvels than even the Genii of Aladdin's Lamp.

The magic carpet that transfers the being upon it to any place upon the mere expression of a wish is no more wonderful than the telephone which enables you to be in two places at once or this strange typewriter whose keyboard is a thousand miles from the paper upon which it is writing its message. Think of it! Your friend may even now be reading the letter you are writing him over there on that somber machine with the glistening steel keys!

This magic telegraph system is the invention of an engineer who stands preeminent to-day as an expert in telegraphy and electrical science. Dr. Cardwell was the engineering advisor of the late Jay Gould. His many successful inventions are said to have netted him not far from three-quarters of a million dollars. One alone, the automatic telephone switch, was sold for $300,000.

### Dots and Dashes Doomed.

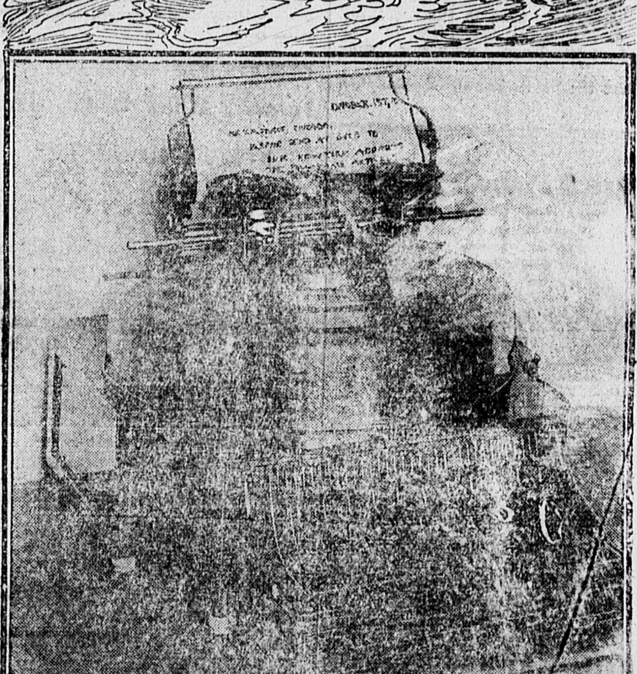
What the invention means to the field of telegraphy can be readily imagined. It is even predicted that the business man will soon be able to send instantly his own telegrams without leaving his office and do it in a fraction of the time now taken by the most expert professional telegrapher, and the antiquated Morse code which for over seventy years has been the only method practicable for commercial telegraphy will be a forgotten relic of the past, keeping company with the smoke and blanket signals of the North American Indian and the gigantic slow working semaphore of the French Revolution.

Telegraphy of one sort or another has been practiced since the most remote annals of history were engraved in the archives of time. The ancient Egyptians, the Chinese, the Persians, the Greeks, the Romans, all had a certain skill in sending messages by fire signals. Old Roman signal towers are found to-day in Spain and Italy from which at one time flashed the news that Caesar was victorious in Spain or that the Goths had crossed the Alps on their way into the sunny valleys of old Italy. The news of the great victory of the Greeks at Marathon was flashed by flame from headland to headland. The Incas of Peru telegraphed the coming of the conquering sword of cruel Spain along the great roads of the Golden Empire. Montezuma knew of the landing of Cortez in old Mexico days before the brazen helmets of the "soldados" gleamed before the towers of the Aztec metropolis.

### Like a Romance of Old.

And so on down through the pages of history we can trace the evolution of the telegraph from the breaking of Gideon's pitcher to the electric marvel conceived and produced by Morse in 1837. The whole story is one of Romance, but no greater magic was ever wrought than the accomplishment of the latest marvel, the telegraph typewriter of Dr. Cardwell. The Romance lies not in the prosaic levers and wheels of shining steel but in the hopes and disappointments, the toil and perseverance that brought about at last so great a result.

During the past half century the very ablest electrical experimenters have been at work in every corner of the world upon the great problem of how to make telegraphy quicker, surer and cheaper, and yet since Professor Morse's first, successful demonstration of his electric telegraph no radical improvement has been made generally useful and the original scheme of communication by dot and dash signals conceived by our pioneer inventor is still used by the telegraph companies, for want of a better way, although slow, cumbersome, expensive and requiring the attention of skilled operators who cannot prevent the occurance of frequent mistakes, often very costly, in translating the unrecorded sounds of the code system into written messages.



A NEW TELEGRAPH INVENTION THAT LOOKS LIKE AN ORDINARY STANDARD TYPEWRITER.

### Early Attempt Failed.

As early as 1847 the House printing telegraph was tried out by its inventor, but it was so slow, uncertain and complicated that it could not demonstrate any practical utility. Another device of the same sort, the Hughes printer, also registered a dismal failure. Just imagine a telegraph with a regular piano keyboard over two feet long! Such was one of the devices with which sane engineers experimented. A score of famous names have been connected with the apparently hopeless quest for the ideal telegraph, among them those of Wheatstone and Edison.

Millions of dollars had been spent in experimental research, all to no apparent purpose when Dr. Cardwell and the eminent engineers who were collaborating with him finally demonstrated the success of the first practical printing telegraph. The highest authorities consider Dr. Cardwell our ablest telegraph and telephone expert and this reputation has been won by close application and hard work and the perfection of many inventions of vital importance to the science of communication.

### Used by Long Island Railroad.

During the year in which the new invention has been in daily use by the Long Island Railroad it has demonstrated its usefulness and the possibilities it possesses for rapid and accurate recording of messages. It is in successful communication between the offices of the Interurban Telegraph News Company in Philadelphia and the American Telegraph Typewriter Company in New York and instruments have been ordered by several railroads, most notably the New York Central, Lackawanna, Pennsylvania, and Hudson Tubes. Orders have also been received from New York City News Association.

The machines should prove useful to fire and police departments, business houses, banks, and strange to say telegraph companies. The invention is in no way a competitor for the business of the latter, but on the contrary, a valuable adjunct. The investment required for equipment, maintenance and salaries is staggering. One of the officers of a large telegraph company is quoted as saying that Dr. Cardwell's telegraph invention will enable the companies to give better service and at the same time reduce expenses by millions of dollars annually.

### How It Works.

The machine uses very little electric current, working perfectly on a telephone wire at the same time as the telephone without interfering with conversation. The principle of operation is selective, that is, the pressing of any particular key sends a combination of electrical impulses differing from those of any other key, while the receiving device is so adjusted that only a certain part of the printer will respond to each combination of impulses.

The factor of speed in communication is of vital importance. Under the method now in vogue every message must be translated from plain English into Morse signals before sending, and at the other end of the line must be retranslated and written down by the operator. The two operators thus needed, for every message are a tremendous drawback to fast accurate work. The speed with which messages can be sent is determined by the ability of the slowest man and is still further subject to "breaking" and the repetition of words which the receiving operator fails to get correctly. Only one person is required to send a telegraph typewriter message as the words are recorded automatically by the receiving machine just as fast as anybody can write on the typewriter and there is no need for repeating or interruption as the message is correctly printed at both ends of the line.

With the advent of Dr. Cardwell's invention the art of communication enters an era of enlarged usefulness in the interests of advancing civilization and even the most vivid imagination is to-day unable to grasp the wonderful lines it will write upon the pages of the future.

## AN ADVANCE IN AERONAUTICS

The opening of the International aeronautical exhibition at the Grand Palais this year, although lacking the usual eclat associated with the presence of the president of the republic, was well supported by the state, no less than five ministers and one under secretary being present.

The governmental party took immense interest in the various exhibits and especially in the aeroplane models, asking many questions of the exhibitors or their representatives.

General Brun, the minister of war, who has already had such strong proof of the utility of the aeroplane in the war department, appeared highly satisfied with the attention that was generally excited by the "New Arm," the models for which were well to the fore among the various exhibits.

No one following the march of aviation can fail to remark the marvellous advance made since last year's exhibition. One can call to mind no parallel case in industry or invention of such remarkable development and progress being made in a single year. In fact the changes in aerial machines have been so great and the wonderful feats accomplished by them have followed one another so rapidly that it is hard to remember exactly where we were with regard to this invention 12 months ago.

It would appear, generally speaking, that the new models exhibited show little marked change in design from those that the public have of late become well acquainted with, and consequently the uninitiated visitor might easily come to the conclusion that the exhibition, having regard to the admitted phenomenal progress, inasmuch as it apparently lacks the expected novelties.

By the airmen, however, and by those intimately acquainted with aerial navigation the importance and value of this year's show is readily appreciated, the exhibition being rich in evidence of perfected technique which stands for increased speed, reliability and safety.

In number the exhibits are not great, for aeroplanes take up a great amount of space when within doors and consequently ordinary balloons as well as many of the auxiliary appliances of aerial navigation have been crowded out to make room for the flying machines pure and simple.

All the well known types are represented. At a stand, occupying perhaps the most central position, are the exhibits of M. Louis Bleriot, showing no less than four machines of the latest type, including that on which M. LeBlanc had his great success in the circuit de l'Est contest, and which is one of the exhibits attracting the most admiration. Another of these models, that nearest to the entrance, is the latest design for military use.

A specially interesting exhibit is that of M. Henry Farman, who shows a light racing biplane similar to the one used by M. Weymann on his his recent flights in Italy. M. Farman's model, the only machine, it is claimed, capable of carrying two passengers for 200 miles without having to alight for fuel, is still the favorite with military men and it is to this branch of the business that M. Farman is specially devoting his attention.

Nearby is the stand of M. Maurice Farman who has placed a machine at the disposal of would-be purchasers who would like to make a trip at the Buc Aerodrome as passengers.

In other important positions are the exhibits of the Antoinette, C. G. U. A. (Wright), Clement and such well known names as R. E. P., Hanriot, Paulhan, Breguet, Sommer, Goupy and others.

M. Paulhan is one of the most popular of the exhibitors, and the winner of the $50,000 Daily Mail prize is making every effort to improve his old model and in anticipation of the almost necessary use of more powerful engines he is now trying to build a machine that will be stronger than his present model.

His new machine is a double frame idea, which means the conversion of the present flimsy frames into those of double wooden slats strengthened by short diagonal cross pieces and bound together with steel cables. It is an ingenious idea but up to the present lacks the essential test of actual working. This exhibit is attracting a wonderful amount of interest.

Among the engines there is nothing yet that approaches the success of the Gnome and their recently conceived 100 horse power engine attracts undiminished attention.

For novelties one cannot pass the Clerget exhibit, a tandem monoplane, a machine to carry an airman at one end and a passenger at the other, fixed up with a 200 horse power engine, the most powerful ever yet applied to an aeroplane.

This firm also exhibits one of its celebrated motors, not much larger than a typewriting machine, and which produces 50 horse power. The whole machine, however, does not exceed [illegible] kilos in weight.

Among the novelties also may be mentioned M. Pischoff's "Aeroplane" which is really a cross between a motor car and a flying machine.

A Fabre machine is another novelty, being a kind of double monoplane of floats. It is specially adapted for naval purposes and it claims to be the only flying machine that can rise from the surface of the water by its own power. The Fabres also show some wonderfully original designs, among others a large sort of Pullman car running on rails, towed by a dirigible balloon.

The "Cie de Navigation Aerienne" also has a stand. This new company affords opportunities for testing and working new inventions and also for obtaining legal advice on patents and other questions relating to aeroplanes and aerial navigation. Mention must also be made of the exhibits of advertising and manlifting kites, especially those of M. Gomes.

## COAL FUEL OF UNITED STATES.

Coal has been acknowledged by the department of agriculture and the geological survey as chief fuel of the United States and firewood has been placed in the background. According to a bulletin issued by Henry S. Graves, chief forester, the census of 1880 estimated that at that time nearly 146,000,000 cords of wood was used for fuel annually. The estimated value of this wood was approximately $322,000,000. The population of the United States was at that time 50,000,000. Since then, however,, the population of the United States has reached 90,000,000, but the use of wood as fuel has decreased. Coal is used much more extensive.

The geological survey announced that in 1880 the total production of coal was 71,481,570 short tons, while in 1908 it amounted to 415,842,698 short tons or nearly six times the amount of 1880.

The quantity of firewood used on farms varies greatly between different parts of the country on account of climate, the distance from coalfields, the development of transportation facilities and the progressiveness of the consumers. Except in the Pacific coast states and in Arkansas, Louisiana and Missouri, the consumption of wood on the farm, west of the Mississippi river is comparatively small. The states north of the Ohio river use less firewood per farm than those south of it.

In the North stoves burning coal are commonly used, while in the South, open wood fireplaces are more general. Not only is relatively little coal used in the South, but fireplaces require large quantities of wood for the amount of heat produced.

In the New England states and in the south Atlantic states rather more wood is used than in the middle Atlantic states, which, with a short distance of coal fields and which have good transportation facilities.

Twenty-six states reported an annual consumption of more tnan 1,000,000 cords each, while six of these states reported more than 4,000,000 cords each. The total quantity of wood used for fuel in Michigan, Texas, New York, Wisconsin, Indiana, Missouri, and Minnesota, the leading states in point of value, exceed $85,000,000. This is more than one third of the value of all firewood used in the United States.

The highest average value in any state was in North Dakota, which was closely followed by Nevada while the lowest values were found in Georgia and Alabama.

## A BOY WILL FIRST ACCLAIM THE KING.

When King George V. of England is crowned next June at Westminster Abbey the honor of being the first to acclaim the new monarch will be the prerogative, not of the highest of his subjects, but the captain of the Westminster School, who will thus exercise a privilege, the origin of which is lost in remote antiquity.

The school existed even before the foundation of the venerable abbey and for centuries its captain has enjoyed the unique distinction of being the first to cry "God Save the King!" after the coronation and ceremony. As the King and Queen proceed up the nave of the abbey to the altar the 308 Westminster boys' led by their captain will shout: "Vivat Georgius Rex! Vivat Maria Regina!"

After the Archbishop of Canterbury has placed the crown on the monarch's head the captain again rises and exclaims, "God save the King!" This cry is repeated by the peers and peeresses present, and then the entire congregation. When the thousands of magnificent wreaths were sent to Windsor at the funeral of the late King Edward VII., a special place of honor was given to one whose inscription ran as follows: "The last tribute to a great King from the boys who first hailed him as such."

The boy who will next year enjoy the honor is K. D. Murray, who won the King's scholarship in 1905. He is a son of Mr. Robert Cunningham Murray, of Norbury.