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## THE CANADIAN

## Illustrated News.

HAMILTON, DECEMBER 5, 1863.

H. GREGORY &amp; Co. Proprietors.

## WHO INVENTED THE ELECTRO-MAGNETIC TELEGRAPH?

Electricity was known to the ancient Greeks, and was so named by them from *electron*, amber, which had the power, more than any other substance with which they were acquainted, of attracting light objects, such as hairs, feathers, &c. But it was not till a very recent date that it was used as a letter carrier. As this adaptation to the wants of man has been claimed by more than one person, let us look at a few facts which bear upon the case:

So long ago as the year 1729 Grey & Wheeler, in England, experimented with electricity, and succeeded in sending a shock through some hundred feet of wire. This is the earliest recorded feat of the kind.

In 1746, Winckler, at Leipsic, and Lemoumier, at Paris, experimented, much in the same manner, and sent an electric shock through two miles of wire.

In the following year Watson, Bishop of Llandaff, in Wales, achieved more important results. In repeated experiments he gained new and important information regarding this wonderful agent. He sent a current through two miles of wire and two of earth in his experiments at Shooter's Hill; and at other times carried his lines across the Thames and New River. He it was who first dreamed out and suggested to mankind the use of electricity in the manner in which it is now employed. Before his day scientific men were playing with a wonderful toy. His practical mind saw in the toy the servant of man, and thenceforward the grand aim of investigators was the taming of this invisible lightning, and its subjection to regulation and to usefulness.

In 1748 Franklin experimented with kites, and in other ways, and added much to the stock of knowledge, which was still crude and limited.

In 1749 De Luc sent a shock across Lake Geneva.

We have no record of any improvements taking place for some years from this date. The difficulties of the subject seemed too great to be overcome, and it was not till the year 1774 that any progress was made in the attainment of the great desideratum. In that year Le Sage, at Geneva, constructed a telegraph of twenty-four wires, one for each letter. Each wire, when touched, repelled a particular bit of a der pith at the other end of the line, thus indicating the letter intended.

With the exception of the experiments of Lomond, at Paris, nothing further of importance appears to have been

gained for twenty years. In 1794 Reusser, at Geneva, constructed a telegraph similar to that of Le Sage, except that the shock, when transmitted, indicated itself by a spark upon a piece of tin-foil attached to a plate of glass.

Professor Boeckman, about this time, proposed a telegraph having only two wires, the letters to be indicated by various combinations of sparks.

Humboldt describes a telegraph which he saw in 1798, constructed by M. D. F. Salva, between Madrid and Aranjuez, in Spain. To what extent it was successful, or what were its peculiarities, he does not tell us.

In 1816 Francis Ronalds constructed a telegraph at Hammersmith, England, having a single wire. A dial was made to revolve at each end of the line, these dials simultaneously showing the letters of the alphabet, one at a time. When the right letter was visible a shock was transmitted through the line.

Harrison Grey Dyer, in 1827, constructed a line two miles long, on Long Island, New York. This was inferior to the inventions of Soemmering, made previously, and showed want of knowledge of later discoveries.

Previous to this time the great difficulty in conducting experiments had been the want of a reliable battery. True, the discoveries of Galvani had long been made public; and in 1800 Volta published to the world the discovery of the battery which bears his name. But it was not till the year 1825 that the difficulty was really surmounted, when William Sturgeon, of London, constructed the electro-magnet, the soul of the telegraph. When this great discovery was made it may be said that the telegraph was invented. For a hundred years the most eminent scientific men of all countries had toiled only to be disappointed. Now, all that was required was a practical genius to put the already invented parts together and complete the great work. Before this was accomplished, however, Professor Grove, of London, completed his battery, which is substantially the one that is used at the present day throughout the world.

On the 12th day of June, in the year 1837, a patent was granted in England to Messrs. Cook and Wheatstone, for a Deflective Electro-Magnetic Telegraph; and this was, without doubt, the first practicable magnetic telegraph ever constructed. We do not learn that the patentees claimed anything as original in this telegraph, except the mechanical contrivances, and the receiving and relay magnets, which they the first to employ.

Three years afterward—June 20, 1840—Samuel F. B. Morse obtained a patent in the United States for an Electro-Magnetic Telegraph; and in 1844 his first line (from Washington to Baltimore) was built.

In the face of all these facts, Samuel F. B. Morse has the audacity to come before the world claiming to be the inventor of the telegraph!

We may take occasion at a future date to refer to this matter again, and show how a long-continued system of legal persecution drove the Cook & Wheatstone, and other British telegraphs, from the United States.

## FALSE PRETENCES.

We have often wondered why writers for the press in this country adopt the old custom of printing the skeletons of profane or indecent words in their papers. For instance, a writer wishes to say damn: he thinks he softens down the vulgarity by printing it d—n. We do not see that this result is accomplished. Either he wants his readers to read the bad word or he does not. If he does, why don't he say it like a man; if he does not, why don't he leave it out, and employ one less objectionable? It is just as wrong to print a profane word as it is to speak it; and the practice should never be indulged in; but if it is necessary to do so, let it be given in full.

Not many years ago, in England (and in this country too—to a less extent) the laws were very severe on publishers who printed anything to which the slightest exception could be taken. The names of speakers could not be given in reports of Parliamentary debates, and the cunning printer would indicate the speaker thus, L—d J—n it—ll, everybody of course knowing that Lord John Russell was meant, though it could not be proved in a court of law.

The cause has passed away; the press is entirely untrammelled by restrictive laws. Is it not well to let the practice go too. A safe rule would be this: Never use a word you are afraid or ashamed to print in full.

## Editorial Notes.

## GUN COTTON.

An exchange says: The Austrian Government has continued experimenting with gun cotton ever since the English rejected it as worthless. The result is that the new material is found to be highly effective, as it has more explosive power than gunpowder; can be wetted and dried again without injury, and does not foul the gun.

All this was known before. If the Austrian government can use gun cotton without bursting the guns, and manufacture it at a price nearly approaching that of gunpowder, they will probably use it. If not, they will probably adhere to charcoal and saltpetre.

## A SCOTCH POET.

Hugh McDonald is the name of a Scotch poet of humble birth and circumstances, recently deceased, whose works are about to be published for the benefit of his widow and children. The following specimen of his style is considered by the English press, equal to that of Burns:

"The weary sun has sunk to rest

Among the clouds ayont the billow;

The evening stars are peeping forth,

And rustic labor seeks her pillow.

The blackbird's closed his evening sang,

The woo bat hits on wing sae corie,

The trysting time is drawing near

'When I'm to meet my black-eyed doarie."

## THE PARABLE OF THE SHIPS.

"The white winged coursers of the sea" have in all times furnished happy illustrations to the poet. Alexander Smith says:

"We twain have met like ships upon the sea,  
Who hold an hour's converse—so short, so sweet—  
One little hour; and then away they speed  
On lonely paths, through mist, and cloud and foam,  
To meet no more."

Hervey pictures a man journeying through life like a ship gallantly ploughing the ocean, with

"Music around her and sunshine on high;"

Yet, if the truth were known,

"The withering thoughts, that the world cannot know,  
Like heart-broken exiles lie burning below,  
As onward we drift to that desolate shore  
Where the dreams of our childhood are vanished and o'er."

But we have seldom met with a more simple and at the same time truly poetic and touchingly suggestive illustration of the heart breakings of human life than the following parable of the ships of George Arnold. There is a whole life history of disappointment and sorrow, and of long-delayed and subdued triumph, in these three stanzas:

Gray distance hid each shining sail,  
By ruthless breezes borne from me,  
And, lessening, fading, faint and pale,  
My ships went out to sea.

Where misty breakers rose and fell  
I stood and sorrowed hopelessly,  
For every wave had tales to tell  
Of wrecks far out at sea.

To-day a song is on my lips:  
Earth seems a paradise to me;  
For God is good, and lo! my ships  
Are coming home from sea.

## GEN. GRANT.

General Grant is now on the high road to the Presidency. *Exchange.*

A later account says he is on the high road to Atlanta.

## THE GHOST.

Science has a habit of disposing of superstitious and illusions in the most matter-of-fact manner imaginable. We ceased to tremble at eclipses when we were told that they were nothing but the moon getting between us and the sun. We long ago got on speaking terms with the lightning; and in case it gets too familiar, we freely use the red to prevent mishaps. And so it is with many a venerable bugbear. The democratic hand of science quietly puts them aside till we really wonder how we could have been so easily frightened. At last we dispose of the ghost—or rather Professor Pepper does it for us. Ghosts were all an illusion, and the illusion at the theatre proves it. Henceforth the mysterious presence will no more cause our flesh to creep, our blood to chill,

"And each particular hair to stand on end  
Like quills upon the fretful porcupine."

Henceforth, on dark nights, as we hurry past the gloomy church-yard, and fancy conjures up the spectral terror which was wont to freeze our very life-blood, we will coolly utter—"It's only an optical illusion." Now we know that the terrible ghost is simply the refraction of light, instead of the refraction of superstitious darkness as heretofore. We can't say very much for the play in which the ghost sustains a character; but the novelty of the spectacle draws exceedingly good houses.

## COMPLIMENTARY.

The Mount Forest *Examiner* is "pleased to notice the steady progress of the *Canadian Illustrated News*."