

of nature, he hath read of the glorious Creator. And if, at such an hour, one mournful thought was there, to dim the brightness of that perfect form, which fancy had conjured up, 'twas that a being so near akin to creatures of a heavenly mould: so marked and so singled out from all his fellow men, as inspired with poesy's holy breathings, should e'er in slightest thought or action, cast but the shadow of a stain on that pure gift of heaven, men have called *Poetry*.

## SCIENCE.

### ELECTRIC TELEGRAPHS A HUNDRED YEARS AGO.

The following statements and quotations are derived from an article in the first number of the *National Magazine*, edited by Redwood Fisher. Professor Steinheil, of the University of Munich, who claims the invention for Germany, says:—

"As long ago as 1807, Sommering erected in the apartments of the Academy of Sciences, at Munich, a galvanic telegraph, of which, in 1809, an account was published. It was by the employment of the voltaic pile to bring about the decomposition of water, by means of thirty-five gold pins immersed in an oblong glass trough; each of these pins being marked with a letter or number, and admitting of collection with the pile by an isolated wire. The ascension of the air bubbles of the water decomposed, was to serve as the telegraphic signal." So early as in 1819 and '20, Gersted, and Fechner, and Amperes, gave out schemes for the construction of electric telegraphs. And as heretofore hinted, our own land shadowed forth prophetically, by John Redmond Coxe, of Philadelphia, the following distinctive idea on the subject, which was published as early as in February, 1816, in Thompson's *Philosophical Transactions*, vol. 7, p 161, 1st series:

"I have," says he, speaking of the galvanic current, "contemplated this important agent, as a probable means of establishing telegraphic communications, with as much rapidity, and, perhaps, *less expense*, than any hitherto employed. I do not know how far experiment has determined galvanic action to be communicated by means of wires; but there is no reason to suppose it confined, as to limits, certainly not as to time. Now by means of apparatus, fixed at certain distances, as telegraphic stations, by tubes for the decomposition of water and of metallic salts, &c., regularly ranged, such a key might be adopted as would be requisite to communicate words, sentences, or figures from one station to another, and on to the end of the line. I will take another opportunity to enlarge upon this as I think it might serve many useful purposes; but like all others it requires time to mature. As it takes but little room, and may be fixed in private, it might, in many cases of besieged towns, &c., convey ample intelligence, with scarcely a chance of detection by the enemy. However fanciful in speculation, I have no doubt that, sooner or later, it will be rendered useful in practice."

It does seem to us that Mr. Coxe had the true idea of the magnetic telegraph in 1816, and that he fully comprehended all its consequences. But after all, it is the *practical instrument* by which the result is accomplished, which the world values. Men of business look to practical results.

Professor Steinheil claims the first *actual construction* of a magnetic telegraph as belonging to Gauss and Weber, of Germany. He says this took place in 1833, and a publication of it was made in 1834. Weber, he says, laid over the steeples and houses of Göttingen a copper wire 7,468 feet long, and discovered that it required "no special insulation."

This established the principle of bringing the magnetic telegraph into the most convenient form. Gauss, he says, first employed the incitement of induction, and demonstrated that it required only a limited number of signs for the transmission of communications.

In 1833, Steinheil says, they first actually constructed a simplified galvanic magnetic telegraph.

But singular as it may seem the *idea* of magnetic telegraphs, and actual experiments upon them, have been traced back one hundred years! Gauss says there was a communication from Humboldt, according to which, "Bentoncourt, in 1798, established a communication between Madrid and Azangices—a distance of 26 miles—by means of a wire, through which a Leyden jar was discharged, and which was used as a telegraphic signal."

In Professor Steinheil's above cited article, he remarks as follows:—

"The velocity with which frictional electricity is transmitted along metallic conductors called forth, as long ago as in the last century, the idea of employing it for telegraphic communications. Winklen, as Leipsic, in 1746, discharged several Leyden jars through a wire of considerable length, and on that occasion the river Pleiss formed a part of his circuit. La Monsier, in Paris, produced shocks through a length of wire amounting to 12,789 feet. Watson extended the experiment over a space of four miles near Shooter's Hill, composing his circuit of two miles of wire and an equal distance of dry ground.—(This was in 1746. See *Philos. Trans.*, vol. 55, 1748.) Loudon transmitted telegraphic signals to a neighbouring room by means of a pith ball electrometer, acted upon by frictional electricity."—*Young's Travels in France*, 1784.

Here, then, is proved the curious fact, that the idea

of electro-magnetic telegraphs has exercised the minds of many scientific men for one hundred years; that in several different forms it has been actually put in execution; and that the very form of electricity conveyed on wires has been used! It is now proposed to convey this intelligence over water; but it is seen in the above paragraph that Winklen used a river as part of his circuit in 1746—ninety-nine years ago!

But the important thing in business—that which was to give a realizing value and celebrity to this idea—was yet to come in the form of a practical machine, which men could use in every-day life. So far as we in America are concerned, the first realizing, practical knowledge of this invention was communicated to the public by Professor Morse, in his magnetic communication between Washington and Baltimore.

This plan was carried into effect in 1838. Professor Morse shows that it was in 1832 the idea was first suggested to him by considering some of the experiments of Franklin.

This proves that the first idea with Morse and the actual making of the telegraph by the Germans was nearly contemporaneous. Nevertheless, there can be no doubt Mr. Morse's plans are original with himself. But how happens it that the positive success of the telegraph in 1797 was not known and improved upon?

### News by the last English Mail.

From Wilmer and Smith's European Times.

#### TREATY BETWEEN HOLLAND AND ENGLAND.

We understand that the violations of the treaty of March 1824 between Holland and England, have caused serious remonstrances from the manufacturers at Manchester, who complain that their interests have been seriously injured thereby. By the treaty signed between Holland and Belgium, in August 1846, certain concessions were made to Belgium directly at variance with the stipulations of the treaty of 1824, which placed the trade of England upon the footing of the most favoured nations. In spite of this treaty, the Dutch Government, while it imposes an export duty of 6 per cent. on sugars the produce of Java, in British vessels, allowed the export of sugar in Belgium ships direct to Belgium, free of duty! The Dutch also allow other material reductions in the export duties on produce, to the advantage of Belgium, to the extent of 8000 tons annually. It is very properly urged by the Manchester manufacturers, that these concessions made to Belgium by Holland, are as ill-timed as they are unjust; inasmuch as the British Government last session reduced the import duty on Java sugar considerably. We feel sure that Lord Palmerston, who is perfectly familiar with the subject, as it involves a clear violation of subsisting treaties, will not fail to remonstrate with the Dutch Government, and secure to British interests at least the same privileges which have been unjustly conceded to Belgium. We had written thus far, when we find that this subject was brought before the House of Commons last night by Lord George Bentinck; and, as we anticipated, Lord Palmerston said that—

"The subject had been for a considerable time under consideration of the Government, and was at the present moment the subject of negotiation. It was quite true that under the treaty there should be an equalization of duty on goods imported and exported in the ships of either nation, and the British Government were contending for the observance of that equalization. From the negotiations he hoped a satisfactory conclusion would be come to between her Majesty's Government and the Government of the Netherlands on the subject."

**BRITISH EXPEDITION TO CANTON.**—An official letter from Lord Palmerston to Governor Sir John Davis has been published, approving of the late operations in Canton river, "as justified by the procrastinating and evasive conduct of the Chinese, and as one but calculated to prevent more serious difficulties at a future period."

**THE ISLAND OF BOURBON.**—A Paris paper publishes the following letter, dated from the island of Bourbon, April 10:—"We are dying of hunger in this island. We have sufficient oxen for only 20 days' consumption. The troops of the garrison and the crews of our ships are fed on salt meat of very inferior quality. We pay 47 sots (near 2s) for a pound of fish. If our relations with Madagascar are not shortly re-established the garrison will find difficulty in procuring provisions."

**MR. SHERIDAN KNOWLES.**—We understand that Lord John Russell, in consequence of the strong memorials recently forwarded to him from Liverpool, Glasgow, and Belfast, calling on him to confer a pension out of the civil list on this distinguished dramatist, in consideration of his eminent literary merits, has within the last few days proposed to recommend a grant of £100 per annum, which offer, however, Mr. Knowles respectfully, but firmly declined, as placing his claims in an inferior position to those of other literary men in similar circumstances.

**THE DUKE AND MISS BURDETT COURTS.**—The *Atlas*, of Saturday, says, "There is no longer any doubt of the preliminary arrangements for the approaching marriage of an illustrious duke with a lady distinguished no less for her charitable munificence than her wealth, are nearly completed. By this union the great banking firm will once more be in the hands of a duchess, while, on the other side, the fortunes of the house of 'the hero of a hundred battles' will be placed upon a basis of

power which alone was wanted to consolidate its glory." [If there is the smallest truth in this, the youthful lover courts as coolly as he fights, since the moment Parliament breaks up, he intends retiring to Walmer Castle for the season.]

It is calculated that the Liberal party will obtain an accession of no less than 80 seats in the coming elections; an increase that will give to the government of Lord John Russell a good working majority in the new Parliament.

The *Moniteur* publishes a return of the grain imported into France since the 1st of July, 1846. The total amount is 8,833,284 hectolitres, the whole of which was imported during the first five months of the present year, with the exception of 2,542,229 hectolitres imported between the 1st of July, and the end of December, 1846.

#### COMMERCIAL.

Although the markets for Foreign and Colonial Produce do not exhibit any great degree of activity, there is, nevertheless, a considerable improvement in commercial circles since the 1st inst. Money is still far from abundant, however, there is every reason to suppose that the slight convenience which exists will be but temporary. In the manufacturing districts there is an improved feeling, and if prices of the raw material can be but reduced, we trust that, with an abundant harvest, general prosperity will be restored.

During the past ten days the weather has been almost uninterruptedly fine, and each succeeding day strengthens the expectations generally entertained of an abundant harvest of grain throughout the British Islands, and indeed throughout all Europe. The heavy decline, however, in Corn, which took place at the beginning of the month, has not only been checked, as reported in our last number, but an advance of three or four shillings upon the lowest quotations in the London and Liverpool markets was paid on the 12th. Since that date the market has again given way. The prospects of receiving still large supplies from the United States, and by way of the Mediterranean, added to the fine weather which prevails in all quarters, depressed the market, which present every aspect of a downward movement. The appearance of the Potato crop, which at one moment was reported to be in jeopardy, was represented to be free from danger, and this fortunate event contributed not a little to effect prices.

During the last week, however, the market has been much firmer; the prices of the 12th instant became current, and were maintained throughout the week, and yesterday in Mark-lane a further advance of 1s. took place. The trade in Indian Corn was, however, quite paralysed, and Flour in barrels was quite neglected. From the very large supplies of grain which are on their way to Europe, we may expect considerable fluctuations in our markets during the next three months, after which period the results of the harvest will be ascertained, and prices will find their natural level, provided, the harvest should be a favourable one, of which there can be now but little doubt. We may here state, that having ourselves just returned from an extensive journey through the midland and southern counties in England, of at least 100 miles, and taken great pains to examine the potato plants in every place, we can state, from our own personal observation, that we have not met with one single instance of disease throughout the journey. At the close of the year, whatever range of prices we may pass through, it is probable that grain will be at a rate far more than would be remunerative to the grower in ordinary seasons; and we trust that the general abundance will give an unprecedented impulse to trade and navigation.

The Cotton market has been steady since the 10th. The sales are pretty large, and a considerable portion has been taken on speculation, and for export. There is a better demand from the trade, as the orders from foreign countries are on the increase, which will therefore augment the consumption of the raw material. There has been an advance of 1d. in prices since the 10th, and yesterday the market closed steadily at the quotations. The sales of the week ending July 16 amount to 40,160 bales.

#### IRELAND.

At a meeting of the Repeal Association on the 12th inst., the chair was occupied by Mr. M. O'Connell, M. P., and the meeting was addressed by Mr. J. O'Connell, M. P., Mr. Somers, M. P., Mr. M'Avish, candidate for Dundalk, &c. The rent for the week was announced to be £87 4s 10d.

The will of Mr. O'Connell has just been proved in the Prerogative Court. The personal property is sworn to be under £25,000, and he has, among other bequests, left £1000 to Mr. Ray, the secretary to the Repeal Association.

The Cork Constitution says, "The damaged Indian corn, which has been introduced into Ireland to meet the wants of the people, is likely to cause far more serious and lasting injury to the country than the mere bringing into consumption an article of food deleterious to the public health. In many instances the Indian corn, which has heated or become injured, teems with swarms of little reptiles or insects of different varieties, some shaped like ants, others like diminutive beetles, which make their way into all the houses in the neighbourhood of corn stores, and have proved an excessive annoyance from their numbers as well as the venom with which