Literature and Science.

THE NEW TIMON AND THE POETS.

ALFRED TENNYSON.

THE poem from which the following was taken was contributed to *Punch* in 1846. One seldom looks for sarcasm from the Poet-Laureate, and more rarely for humorous sarcasm: but these stanzas certainly contain this. Mr. Arthur H. Elliott, in his *The Witty and Humorous Side of English Poets* (chap. x., p. 268) says: "The witty and humorous side of Mr. Tennyson's genius is too often either forgotten or ignored. By some it is altogether denied. Nor is it necessary to go so far as to assert that Mr. Tennyson is a wit and a humorist. He is not so specially, but he certainly has wit, and he certainly has humor."

. . . . What, it's you,
The padded man, that wears the stays—

Who killed the girls and thrilled the boys
With dandy pathos when you wrote!
A lion, you, that made a noise,
And shook a mane *en papillottes!*

But men of long-enduring hopes,
And careless what this hour may bring,
Can pardon little would-be Popes,
And Brummels, when they try to sting.

What profits now to understand
The merits of a spotless shirt—
A dapper boot—a little hand—
If half the little soul is dirt?

You talk of stinsel! why, we see
The old mark of *rouge* upon your cheeks.
You prate of Nature! you are he
That spilt his life about the cliques.

A Timon, you! Nay, nay, for shame!
It looks too arrogant a jest—
The fierce old man—to take *his* name—
You bandbox! Off! and let him rest.

What gave rise to this outburst of witty satire was the late Lord Lytton's poem, *The New Timon*. In this he had made some very hard hits at Tennyson, calling him "School-Miss Alfred," and asserting that he had "out-babied Wordsworth, and out-glittered Keats." Lord Lytton, it must be remembered, was a great exquisite in his day.

THE TELEGRAPH, THE TELEPHONE, THE ELECTRIC LIGHT, AND THE ELECTRIC MOTOR.

THOMAS A. EDISON.

AMONG the many factors which have developed commerce and industry and stimuated all the forces of progress during the last half century, none has played a part so radical and essential as electricity. Hardly a single nerve or fibre of that complex body which we call society that has not thrilled and vibrated with its influence. It has strengthened the bonds of international amity; it has quickened all the methods of trade, and lent ten-fold precision and celerity to the innumerable agencies by which it works; it has breathed new vitality into the arts and sciences; it has even warmed and strengthened the social forces; and in a word one may justly claim for it such a universal stimulus as cannot be credited to any other purely physical agency in the world's history.

It is not yet fifty years since the invention of the electro-magnetic telegraph, made by Professor S. F. B. Morse, was first put into operation between Washington and Baltimore. To-day there is hardly a hamlet so small and remote that a telegraph station does not link its inhabitants with every point of the civilized world. The crude apparatus first used by Professor Morse has been again and again improved on by subsequent inventors in the same field.

Only a few years elapsed after the success of Professor Morse before the first submarine cable operated in America was laid between Cape Ray and the shores of New Brunswick. This achievement in 1852 suggested to Mr. Cyrus W. Field, we believe, the connection of the New World with the Old by means of a submarine cable. The history of the first Atlantic cable laid; the jubilee over its triumphant completion on August 6, 1857; its short life of less than a month; the pluck and energy displayed by capitalists in their endeavors to lay a second cable nine years later; the failure of this second effort; the ultimate success attained by the laying of the Anglo-American Telegraph Company's; and its final opening as a medium of public traffic on August 26, 1866—all these things are sufficiently well known to most of our readers.

Closely connected with the development of the telegraph came the invention of the speaking telephone, this being the logical consequence of the former. When it was once found possible to transmit signals over a length of wire by means of the electrical fluid, it was certain that sooner or later experiments would be made ultimately with a view of employing the same agent as a means of transmitting articulate speech to a long distance. These experiments reached a successful conclusion in 1876-77 by the invention of the magneto receiving telephone of Professor Alexander Graham Bell, and the carbon transmitting telephone of the writer of this article. Many others have laid claim to the invention of the telephone, or to so-called improvements on the original devices. But so far the only instruments commercially successful are the Bell receiver and the Edison carbon transmitter, now universally accepted throughout the world.

Coincident with the development of the speaking telephone, the electric light was first brought to a practical success by the illumination of the Avenue de l'Opéra in Paris by the Jablochoff candle in 1878. Prior to this but little had been done in the way of electric illumination on an extended scale. The exhibition made in Paris gave a great impetus to lighting as a business. From that time to the present the progress has been marvellous and rapid, only second to that of the telephone.

Many inventors, among them Staite, King Kossloff, Swan and Sawyer, had previously been experimenting with a view to making useful lamps giving light by means of incandescence. But these experiments had been based on fallacious theories and were foredoomed to failure. The writer was led to the invention of the filament lamp by keeping in mind the commercial necessities of the case as applied to a lamp forming but one unit of a complete system. His object, therefore, was not merely the device of an electric lamp; he aimed to invent a system of electrical illumination which could be operated on an extended scale in the same manner as is the business of gas illumination; to find some means by which electrical energy could be turned into light, and that light be used for household purposes and sold by meter-records—in short, a system, superior to that of gas and able to compete with it commercially. The final result of these experiments was the invention of a complete incandescent system, and the starting of a Central Station in New York at 3 p.m. on September 4, 1882. Then for the first time electricity for the production of light was supplied and sold on a meter. This station has been in operation since, night and day, and has been followed by the establishment of other stations both in this country and Europe.

In addition to the foregoing, electricity has been brought to the aid of metal-workers for the purposes of electro-plating and electro-typing; it has assumed a place in our houses for the operation of call-bells and annunciators; for protection against burglars; and for the correction of our clocks and other purposes.

Yet though so much has been already done in the last fifty years in the way of electrical development, the writer is confident that far greater progress will be made in the future. We stand to-day only on the threshold of its tremendous probabilities. The uses to which the electrical energy can be adapted are so numerous that the present generation hardly dreams of them. Nothing of any startling character can be expected of the electrical telegraph. The business has been so long established, the improvements are so numerous, that very little remains to be done. Some day there will be,