Historical sketch of the electric telegraph including its rise and progress in the United States

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HISTORICAL SKETCH
OF THE
ELECTRIC TELEGRAPH:
INCLUDING ITS
RISE AND PROGRESS IN THE UNITED STATES.

BY
ALEXANDER JONES.

"I'll put a girdle round about the earth in forty minutes."—SHAKESPEARE.

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TO

THE MERCHANTS OF NEW-YORK,

IN HUMBLE ADMIRATION OF THEIR PATRIOTISM, INTELLIGENCE, AND ENTERPRISE;

THE NAME OF WHOSE DEEDS IS RECORDED ON

THE BY BARRIERS OF ARCTIC SEAS,

IN THE EARLIEST AND LATEST TRIUMPHS OF STEAM,

AND

IN THE UNEQUALLED SPEED OF THEIR SAILING VESSELS,

NO LESS THAN

IN THEIR LIBERAL ENCOURAGEMENT OF WORKS OF INTERNAL IMPROVEMENT,

AND TO WHOSE PATRONAGE,

WITH THAT OF THE PUBLIC PRESS,

THE ELECTRIC TELEGRAPHS ARE LARGELY INDENTED FOR THEIR SUPPORT AND SUCCESS;

THIS IMPERFECT WORK

IS

RESPECTFULLY INSCRIBED.
PREFACE.

Electricity is the poetry of science; no romance—no tales of fiction excel in wonder its history and achievements. Viewed in its terrible atmospheric manifestations, no element would seem less likely to be brought under the control of man, and, in feeble currents, made to do his bidding, than it: yet, such is the result.

We find it, in one instance, like a skilful chemist, elaborately analyzing bodies supposed to be simple alkalies, and showing them to be compounds of metals and oxygen. Again, we find it at work in attempts to manufacture diamonds. Anon, it turns physician, and endeavors not only to heal the sick, but to bring the dead to life. In another case, we find it employed in the plastic art, and, like an expert operator, making beautiful and delicate copies of works of sculpture, and engraving in masses of solid metal. Again, we find it working in the sun's rays, and on the surface of Daguerreo-type plates, delineating the human features. It is, again, engaged in dissolving gold and silver, and applying them to the gilding and plating of other metals.

We find it, at another time, employed in blasting rocks from the mountain side, or in removing them from the channels of rivers and harbors. Again, it stands ready to enlist its services beneath the banners of contending armies, to engage on either side, in fearful slaughter and destruction, and then
suddenly send to the ends of the earth, the news of its own defeat or victory.

Finally, it turns its electric attention to the movements of "Father Time," and undertakes to give him lessons in regularity and speed. In one instance, we find it conveying messages of intelligence in advance of time over a continent, measuring the degrees of longitude, and dropping copies of its news at each hamlet, village and town, in its flight over mountain peaks,

"Where Alpine solitudes extend;"

across valleys wide, and rivers deep and strong; and as quickly at its post again. Anon, we find it working a hall or city clock, making it accurately mark time in exact seconds, showing its slow but steady flight.

Again, we find it turned policeman; sounding its whistles and alarm bells, to arouse drowsy firemen or sleepy watchmen, calling them quickly to a raging fire, murderous assault, or marauding burglary.

Again, we find its magic power at work in securing the doors and vaults of our buildings, or it is found standing sentinel over our treasures, ready to sound the alarm on the first touch of the robber. It also is prepared to pursue the rogue, fly in advance of his steps, and drop pictures of his person and features at each station on its way. Not only so; but it stands ready to turn coast-guard, to sound whistles or bells over dangerous reefs or rocky shoals, and thus timely warn vessels of impending danger.

Where, in the most extravagant records of fancy—in the wildest dreams of the marvellous—can we find a hero, however lauded and deified, whose most astounding deeds ever compared, for one moment, with the exploits of electricity? Yet, its mighty triumphs are but half revealed, and the vast extent of its extraordinary power but half understood!
In the following pages, we have humbly endeavored to describe, chiefly, the workings of the electric fluid in reference to electric telegraphs.

Beginning with the earliest notices of electrical laws, exhibited in the practicability of conducting the fluid to a distant point from the place of its generation, whether developed by a frictional machine or a galvanic battery, we have briefly followed it up, through its different epochs, to the present time.

It was not necessary, in our plan, to give a complete history of electricity, nor to notice, in detail, the long array of the names of philosophers made brilliant and immortal by their labors and discoveries, and who contributed so largely to the development of the laws which govern electrical science: such prolixity would fill volumes.

Neither have we been able to bring before the reader the names of all who have, in some way or other, made suggestions, or contributed, in some form, to the establishment of electric telegraphs.

Atmospheric electricity has undoubtedly coexisted with other elements of creation. And some have supposed that it was the primary element, employed in the flat of creation, and yet remains that universal power of attraction and repulsion, by which worlds are sustained in their orbits; while, at the same time, it is the life generating and supporting principle in all existing forms of vitality.

Thales, the oldest of the seven wise men of Greece, taught that water was the primeval element of all other things appertaining to the earth, and this doctrine was current up to the period of Paracelsus, about the dawn of the sixteenth century, when the one element was extended to four—water, air, earth, and fire. These elements were soon after found, themselves, to be compound.

It seems to us, that it would have been more wise, had
electricity been fixed upon as the simple, all-powerful and pervading element, instead of water.

We derive the word electricity from the Greeks, who discovered that when amber (called by them *electron*) was rubbed, it exhibited properties of attraction which it did not otherwise possess.

This property in *amber*, it is said, was first observed by Thales, six hundred years before the birth of Christ. Several accounts of electrical phenomena were also recorded by Aristotle, Theophrastus, Pliny, Caesar, and Plutarch.

It was not until the seventeenth century, that the attention of philosophers was strongly attracted to the subject of electricity, and various new facts relating to it were first discovered. Early in the eighteenth century, it received increased attention, and many of the greatest minds were led to investigate its laws, and to ascertain the nature of its effects, which, on being published, surprised the world by their striking novelty.

In 1745, CUNENS, a philosopher of Leyden, discovered (what has since borne, not his name, but that of the town in which he lived) the *Leyden jar*, or *phial*. This gave a new impulse to electrical science, which was soon after followed by the discoveries of Dr. Franklin and others, some of which we have alluded to in our brief chronological statement. M. Monnier, the younger, discharged a Leyden jar through a wire of four thousand feet in length, but could not estimate the velocity of its speed.

Elliott, of Edinburgh, first constructed an electrometer for measuring the quantity or force of the fluid. Abbé Nollét, of France, also showed by experiment that the electric fluid could be conveyed to considerable distances.

* It is said that the Marquis of Worcester alludes to telegraphs in his famous *"Century of Inventions."* Robert Hooke,