

The Electric Telegraph.

No. 6.

In our last number we published an account of the first Alphabet Telegraph, published in 1841 and invented in 1839. The American Printing Telegraph is the invention of Mr. Royal House, patented in 1846, but invented some years before. The invention of Mr. House although complicated, is a very perfect machine, and here we would remark that "it is not always the simplicity of a machine that constitutes its chief merit." If simplicity alone was the basis of merit, then would the engine of Hero entitle him to rank superior as an inventor, to James Watt, a thing which no mechanic will allow. Mr. House's Telegraph prints messages in Roman characters, thus giving it the advantage of sending messages either in English, French or Italian, without the necessity of employing a person to translate, and beside it is not conventional in regard to the language of the message, which is not the case with an alphabet known only to the operators. When this invention was first brought before the public it met with much opposition, and the well known Mr. Smith made a very foolish public bet, that it would not operate. It has, however, been long in successful operation between this city and Philadelphia, and it transmits messages with wonderful rapidity—a rapidity which surprises every person who is not acquainted with its mode of operation. The type which prints the messages is placed upon a small wheel which moves horizontally like the type wheel described in our last number, but this wheel is moved—kept continually in motion by mechanical power—not electro magnetic, and the letters on it are detained to print by a key board like that of a piano, hence the type wheel may speed round with the greatest velocity and the letters can be printed just as quick as the key board can be operated to break and close the circuit—but mark this—it prints a letter respectively when the circuit is closed and when it is broken, presenting a new feature in combination with the electro magnet in telegraphing, viz. that the electro magnet is not "employed as a motive power to record marks." This is done by a combination of a peculiar escapement in combination with the type wheel and magnets. Prof. Henry we understand has pronounced it to be essentially different from the Electro Magnetic Telegraph of Morse and to be very ingenious. At some future period we hope to be able to publish a full description with illustrative engravings of this invention. We have said enough at present to distinguish its principle from the electro defective and electro magnet telegraph, neither of which could be applied in any shape or manner to accomplish the same results, and this is a very good way to distinguish the difference between inventions, as it shows that there is no new modification in the difference, but an essential principle. A somewhat animated war of published letters took place last year in London, respecting Mr. House's Telegraph, between Mr. Jacob Brett and a correspondent under an assumed name in the London Mechanics Magazine, and the Patent Journal. At present the company to whom this telegraph belongs between this city and Philadelphia are doing a good business and it is fast increasing, so much so that a double line of wires is now being erected and in the course of next summer, there will be a new line to Boston and one to Buffalo.

The Telegraph Controversy.

There has been a bitter controversy going on lately in our newspapers about Telegraphs. The Tribune in this city, and the Louisville, (Ky.) Journal, have been perhaps the most distinguished for publishing various communications from different persons. We paid particular attention to all the articles as they appeared, and we are convinced that the parties who wrote the articles were self-interested, and in that case they unconscious to themselves exhibited a biased judgment. The controversy between O'Reilly and the Western Agents of Mr. Morse, we believe is settled definitely by law in favor of Mr. Morse—the case we believe was a fair infringement of Morse's Patent, but there is another telegraph controversy and a very different one at present and one

which we believe the public does not understand from such articles as have lately appeared in too many papers throughout our country. The controversy relates to the Electro Chemical Telegraph.

Our readers will remember that when Mr. Bain the inventor of the Electric Clock, which has attracted so much attention in this and other countries, arrived here in the month of May last with his electro chemical telegraph, we with others were invited to examine and see its operations. As nothing of the kind had ever been exhibited here before, we desiring always to present something new to our readers, got up an engraving of it, which will be found on Pages 273 and 276 Vol. 3, Scientific American.

A short time after Mr. Bain arrived here—how long we cannot tell,—he made application for a Patent to the Commissioner at Washington. Mr. Bain's 2d English Patent for improvements on the electro chemical telegraph is dated Dec. the 12th, 1846, and an abstract of his specification is to be found in the London Patent Journal. It seems that Prof. Morse lodged a caveat for an improvement on the electro chemical telegraph in January 1847, and he had applied for a Patent a few days before Mr. Bain. Owing to this being the case, Mr. Bain has been prevented from securing a patent before this time, and a controversy has grown out of the matter at issue, which matter at issue has been kept from the public and wrong views presented. We have actually been surprised at the great number of *ex parte* paragraphs that have appeared in various papers lately, calculated to mislead the public mind. The question at issue is this. When Mr. Bain's application for a patent was examined, he was told, after it has passed through the hands of Mr. Page the Examiner, that it conflicted with the application for a patent for an electro chemical telegraph, by Prof. Morse, who had filed a caveat for it on the 20th January 1847, and applied for a patent not until 1848, what month we are not positive, January we believe. Mr. Bain got an English Patent thirty-nine days before Mr. Morse had his caveat filed. Mr. Bain's specification was not enrolled until June 1847, and Mr. Morse's not until January 1848. The conflicting point in the two applications, was for operating the electro chemical telegraph by the single circuit alone. The commissioner decided against Mr. Bain, grounding his decision upon the consideration that the time of Mr. Bain's enrolment was the true date of his invention and the time of Mr. Morse filing his caveat, the true date of his invention. This decision is a question of privilege, and we do not wish to say a single word against it, but we regret it, and could give good and just reasons for our regret.

The adverse decision was heralded very extensively throughout the country, and a correspondent in the Hamilton Gazette in Canada West, who neither understood the merits of the case, nor the principle of the invention in a long article denounced both it and Mr. House's telegraph as *too complicated to be useful*.

On Wednesday the 22d, Mr. Bain published a card in the National Intelligencer which was copied in the N. Y. Tribune on the 24th ult. stating that Mr. Bain had made application for a patent for his electro chemical telegraph of 1843, and that the commissioner had ordered it to be issued. But lo and behold right below Mr. Bain's card, was published the adverse decision of the commissioner regarding his application, but no date to it. This appeared to us somewhat singular and we could not understand it. But on Monday last Mr. Bain published a card in the Tribune of this City stating that the decision referred to was made more than a month ago. How it came to be placed below the inventor's card, does not look well for the paper that first published it. But the whole disputed point seems to be covered by the first patent of Mr. Bain, as in his last card he says it *transmits intelligence with great rapidity by a single circuit*. As the principle of the electro telegraph is exciting much attention at present we will end this article by stating that Mr. Bain is not the first inventor of the electro chemical telegraph nor does he claim to be. Neither is Prof. Morse. More about this in our next.

Indian Arrow-Poison.

Snake-like in form, the Urari, or Indian arrow-poison, winds itself around and among the huge trees, fantastically shaped, that spring from the deep fissures in the mountain rock, and often reaches to a height of forty feet before it divides into branches, which are densely covered with a rust-colored hair. The poisonous principle resides chiefly in the bark of the plant, which is stripped off, steeped in water for a certain time, simmered, and evaporated to the thickness of a syrup. It is then fit for use. "As much as I had heard of the fatal poison," says Professor Schomburch, "I nevertheless cannot abstain from noting the astonishment by which I was seized on seeing it used for the first time. While travelling, a deer was discovered browsing in the grass before us. One of the Indians took a poisoned spike, and fixed it to his arrow. Cautiously he stole upon the unsuspecting deer, and shot the arrow into its neck; it made a jump in the air, fled with the speed of the wind before us, but had scarcely run forty yards, when it fell to the ground and expired." It will kill the strongest bull in four or five minutes; and lizards and rats wounded with it died immediately. It may appear strange that this poison may be taken into the stomach with impunity. The writer relates that, when suffering from ague, and happening to be without quinine he took frequently the urari in doses of "about as much as I could get on the point of a knife." The stomach, in fact, digests the poison, and thereby alters its properties before it reaches the blood. It is also well known that the flesh of animals killed with the urari is quite innocent for the same reason.

The Pulque of Mexico.

The maguay, American aloe—Agave Americana—is cultivated over an extent of country embracing 50,000 square miles. In the city of Mexico alone, the consumption of pulque amounts to the enormous quantity of eleven millions of gallons per annum, and a considerable revenue from its sale is derived by government. The plant attains maturity in a period varying from eight to fourteen years, when it flowers; and it is during the stage of inflorescence only that the saccharine juice is extracted. The central stem which encloses the incipient flower is then cut off near the bottom, and a cavity or basin is discovered, over which the surrounding leaves are drawn close and tied. Into this reservoir the juice distils, which otherwise would have risen to nourish and support the flower. It is removed three or four times during the twenty-four hours, yielding a quantity of liquor varying from a quart to a gallon and a half. The juice is extracted by means of a syphon, made of a species of gourd called acojote, one end of which is placed in the liquor, the other in the mouth of the person, who by suction draws up the fluid into the pipe, and deposits it in the bowls he has with him for the purpose. It is then placed in earthen jars, and a little old pulque—madre de pulque—is added, when it soon ferments, and is immediately ready for use. The fermentation occupies two or three days, and when it ceases, the pulque is in fine order. Old pulque has a slightly unpleasant odor; but when fresh, is brisk and sparkling, and the most cooling, refreshing, and delicious drink that ever was invented for thirsty mortals.

The Burning Well.

A correspondent of the Presbyterian, Louisville (Ky.) gives the following brief account of a subterranean fire in Eastern Texas.

"There is a very singular circumstance in Shelby county, Texas, of a well that has been burning about twelve months, at the former residence of Judge Lusk. When he moved from the place he laid some logs over the well, from which he had used water for several years. Some time after the woods caught fire and the timber burning fell in, and ignited some substance, supposed to be stone coal. The rainy season has not extinguished it, but it has burnt incessantly. It does not give out a very agreeable feeling to the visitor; for it is neither sublime nor beautiful; but from the deep grumbling noise that is heard—the sulphurous smell, and the dark cloud of smoke, that is continually rising, a

beholder is forcibly convinced that there is actually fire and brimstone in the subterranean regions. Various results are conjectured; perhaps some geologist can give comfort to the anxious minds of the surrounding inhabitants by showing what will be the final termination of the Burning Well."

Ornament in Dress Sometimes Good.

The following is a passage in a letter from Mr. Franklin to Mr. Benjamin Vaughan, dated at Passy, July 26th, 1784. The Doctor is writing upon the benefits and evils of luxury—and says:

"The skipper of a shallop, employed between Cape May and Philadelphia, had done us some service, for which he refused to be paid. My wife, understanding that he had a daughter, sent her a present of a new fashionable cap. Three years after, this skipper being at my house with an old farmer of Cape May, his passenger, he mentioned the cap and how much his daughter had been pleased with it. 'But,' said he, 'it proved a dear cap to our congregation.' 'How so?' 'When my daughter appeared with it at meeting, it was so much admired, that all the girls resolved to get such caps from Philadelphia; and my wife and I computed that the whole would not have cost less than one hundred pounds.' 'True,' said the farmer, 'but you do not tell all the story.' I think the cap was nevertheless an advantage to us, for it was the first thing that put our girls upon knitting worsted mittens for sale at Philadelphia, that they might have wherewithal to buy caps and ribbons there; and you know that industry has continued, and is likely to continue and increase to a much greater value, and answer better purposes.' Upon the whole, I was more reconciled to this little piece of luxury, since not only the girls were made happier by having fine caps, but Philadelphia by the supply of warm mittens."

Geological Changes.—Past and Present.

All the researches of modern geology seem to prove that nothing is changed in the order of nature and that the same causes which operated in the first ages of the world, are still influencing the occurrences which take place under our own eyes. Certain facts, however, have hitherto appeared not to be referable to this common origin; and the petrification of organic remains, in the midst of geological formations, is daily adduced as one of the most weighty arguments against the general law.

Few persons, indeed, will be ready to admit, what however, is an indisputable fact, that there are now forming, in the bosom of seas, petrifications which in the double respect of chemical composition and mode of petrifications, are altogether analogous to those which are formed in the ancient sea bed. To demonstrate this general fact, and to study the phenomena by means of which it is brought about, M. Marcel Sederres and M. L. Figuera have contributed valuable memoirs to the *Annales des Sciences Naturelles*.

An Ancient Dahlia.

In the travels of Lord Lindsay, the noble author states, that, in the course of his wandering amid the pyramids of that patriarchal and interesting land, (Egypt,) he stumbled on a mummy proved by its hieroglyphics to be at least two thousand years of age. In examining the mummy after it was unwrapped, he found in one of the closed hands a tuberous or bulbous root. He was interested in the question how long vegetable life could last and he therefore took the tuberous root from the mummy's hand, planted it in a sunny soil, allowed the rains and dews of heaven to descend upon it, and in the course of a few weeks, to his astonishment and joy, the root burst forth and bloomed in a beautiful dahlia.

Curious Icelandic Plants.

Many of the plants of Iceland grow to an unnatural size, close to the hot springs.—Thyme grows in the cracks of the basin of the Great Geyser, where every other plant is petrified; and a species of chara flourishes and bears seed in a spring hot enough to boil an egg!

The number of staves made in Cincinnati during the last year amounts to 86,000—of which 53,000 were exported.