## Scientific American.



## THE ATLANTIC TELEGRAPH.

On the evening of the 16th, the people of the United States were startled by the intellige: ce that the Queen's message had been received. Crowds assembled round the bulletin boards, and the news spread like wildfire. The President immediately sent his reply.

Considerable disappointment was felt, however, in the first instance, caused by a portion only of the message of Queen Victoria being sent, but on the following day the succeeding paragraphs were received, and the annexed telegram from the electrician to one of the Honorary Directors of the Company affords a full explanation :-

TRINITY BAY, August 17, 1858. R. M. ARCHIBALD, New York-

The Queen's message was completed at five o'clock this morning. It was commenced yesterday, and during its reception Valentia desisted sending it, in order to make some slight repairs in the cable. Through a mistake, the part received was sent south as if it constituted the whole message.

DE SANTY.

THE ROYAL MESSAGE.

To the President of the United States, WASHINGTON: -

The Queen desires to congratulate the President upon the successful completion of this great international work, in which the Queen has taken the deepest interest.

The Queen is convinced that the President will join with her in fervently hoping that the electric cable which now connects Great Britain with the United States will prove an additional link between the nations, whose friendship is founded upon their common interest and reciprocal esteem.

The Queen has much pleasure in thus communicating with the President, and renewing to him her wishes for the prosperity of the United States.

THE PRESIDENT'S REPLY. Washington City, August 16, 1858. To HER MAJESTY VICTORIA,

THE QUEEN OF GREAT BRITAIN :-

The President cordially reciprocates the congratulations of her Majesty the Queen, on the success of the great international enterprise accomplished by the science, skill and indomitable energy of the two countries.

It is a triumph more glorious, because far more useful to mankind, than was ever won by conqueror on the field of battle.

May the Atlantic Telegraph, under the blessing of Heaven, prove to be a bond of perpetual peace and friendship between the kindred nations, and an instrument designed by Divine Providence to diffuse religion, civilization, liberty and law throughout the world.

In this view, will not all nations of Christendom spontaneously unite in the declaration that it shall be forever neutral, and that its communications shall be held sacred in passing to their places of destination, even in the midst of hostilities?

JAMES BUCHANAN.

Mr. De Santy, the electrician-in-chief at Trinity Bay, says that he is unable to give any information for publication as to the working of the cable, but that the time necessary for the transmission of the President's message depends on its length and the condition of the line and instruments at the timeperhaps, under favorable circumstances, an hour and a half. The reception of the Queen's message was commenced early one morning, and not finished until the next, but it was stopped for several hours to allow of repairs to the cable.

On the evening of the I7th, New York and many other cities were brilliantly illuminated, fireworks were let off, and the people generally had a good time of it throughout the country; and here, to celebrate the event properly, the cupola and upper story of our City Hall was burned, doing damage to the extent of \$50,000.

The United States steam frigate Niagara,

New York Bay, early on the morning of the 18th, and arrived off the Battery at half-past 4 P. M.

The Niagara, after having successfully laid her portion of the first Ocean Cable, arrived, as we already know, at St. John's, N. F., on the 9th, and sailed thence for this port on the evening of the 11th inst. Her long passage is to be attributed to an inadequate supply of coal, as well as to the inferior quality of the supply she had on board. She has arrived at this port with all her paying-out and other machinery on board. The several platforms and stagings on deck, the massive wheels over which the cable was reeled out, and the protecting guards around the stern are still there. The circles in which the sable was coiled remain the same. In two of the circles are coiled the surplus cable in its original flakes-in all, about one hundred

There are reports current that this surplus cable has been already sold for \$400 a mile.

The Niagara remained at anchor off the Battery for about an hour, waiting for the ebb tide in the East River, and arrived at the Navy Yard about seven o'clock.

The Gorgon, the Niagara's attendant in laying the cable, has not arrived. She was waiting at St. John's for orders from Eng-

Mr. Cyrus W. Field came to this city from the Niagara in the steamer Achilles, and proceeded immediately to his home. Captain Hudson went ashore at half-past 7 o'clock P. M., and proceeded to the Mansion House, Brooklyn, where he was publicly received.

Mr. Field describes the feeling which pervaded all on board the Niagara while the cable was being laid, as one of the most intense excitement: Every man exerted himself to the utmost to achieve success in the work. Throughout the six and a half days the most perfect silence and attention pervaded the men, lest a single moment of negligence should destroy the cable. On the first day after the paying-out began, it was found that the cable was being payed out at a rate which, in proportion to the distance run, would, if continued, have defeated the enterprise. This was owing to the fact that the cable on the Niagara had caused so much local attraction as to seriously derange the compasses, rendering it impossible to steer the ship. Next day, Commander Dayman, of the Gorgon, being apprised of the fact, ran ahead of the Niagara, steering in the most direct course for Trinity Bay. This he continued to do day and night until they arrived, never leaving the deck unless for a few moments, and verifying his position by repeated observations of the sun, moon and stars.

When his arduous task was accomplished, his eyes were swollen and suffused with blood, from long loss of sleep, and he was almost prostrated from the immense fatigue he had undergone. Without his assistance the cable would have been exhausted long before the Niagara reached land, and to his agency, therefore, the success of the achievement is largely indebted.

The scene at the landing of the cable must have been intensely exciting. When day broke, the boats were all lowered, and 1,300 fathoms of cable were carried ashore. First Lieut, James H. North handed the shore end to Capt. Hudson, who placed it on the beach. A procession was then formed, headed by Captain Hudson and Mr. North, followed by the officers of the Niagara, captains of the Gorgon and Porcupine, their officers, crews, and the crew of the Niagara. Each taking hold of the cable, they marched up from the beach to the telegraph station-house, a distance of half a mile, where they deposited the end of the cable. Captain Hudson then offered prayer and a few remarks appropriate to the occasion, when the ceremony of landing terminated. The officers and crews then returned to theirrespective boats, reaching their vessels at six o'clock in the morning. The Gorgon and Porcupine carried the American | flag at the fore, the Niagara the English flag | tact with the log and secured against it, by | an "air of distinction and supremacy."

Capt. Hudson, anchored outside the bar of at the fore, and the telegraph flag at the mizzen.

> The Agamemnon telegraphed at 1 P. M. on the same day (Thursday, August 5) that she had landed her end of the cable. On the announcement of this fact, the Gorgon fired a salute of twenty-one guns, and her crew, manning the rigging, gave three hearty cheers, which were as heartily returned from the Niagara.

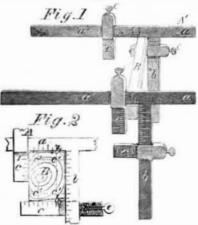
> During the whole voyage "there was but one man on board," says an officer, "who was sanguine, and even confident, of success; and he was Mr. Field. He seemed almost certain of success, when none others dared to hope lest they should be disappointed."

Of Mr. Everett, the same officer says: 'Even he had but little confidence of success. but to him is the triumph due. Without his skill the cable must have snapped."

From East and West and North and South. congratulations pour in upon the gentlemen who have so nobly brought this great enterprise to a successful issue; and we are glad that the first use to which the cable has been put, has been the transmission of words of peace, fellowship and good will, between the old and new worlds.

The English newspapers brought by the steamship Arabia, note the arrival of the Agamemnon at Valentia Bay, and are all exultant that the cable is laid.

Hoke's Improved Marking and Winding Square.



The object of this invention is to obviate the difficulty and trouble attending the squaring of timber by means of the usual straightedges, and not only ensure the accurate marking or lining off of the timber or logs, but also to expedite the work to a very considerable degree.

Our engraving shows the invention, Fig. 1 being a perspective view of the square applied to a stick, and Fig. 2 an end view of the

A A' represent two squares which may be constructed of steel or wood, and properly graduated on each arm, a' b, into inches and fractional parts. The arms, a', of the squares may extend a certain distance beyond b as seen at a, so that these portions may serve as counterpoises and retain the squares upon the stick or log before they are secured to it, as will be described. On the arms, a' b, of each square, a slide, c, is placed. These slides are merely straight bars, having a mortise or rectangular opening made through one end to allow the arms, a' b, to pass through, and a spring or any elastic substance, d, in the mortise, so that by a screw, e, they can retain c on a' and b, without abrading the edge or surface. The arms and slides are graduated to correspond with each other.

The device is used as follows :- Suppose a log of winding or irregular form, B, is to be marked that it may be hewed square, it is propped up or supported in any proper way, and a square, A, is placed on each end of the log as in Fig. 1. The operator then takes sight over the two squares, and if they are not in the same plane, one or both squares are wedged or raised at either side until they are both brought in the same plane. The wedges are shown at b'. The slides, c, are then moved on the arms, and brought in con-

means of the set screws. e. The two squares being adjusted or brought in the same plane by means of the wedges, holes are pricked in the log at each side at corresponding distances, which are ascertained in consequence of having the slides and arms of the squares graduated; for instance, if a prick is made in one side of the log at the inch mark on the slide, a prick is made in the opposite side of the log at a corresponding point designated by the inch mark of the arm, b, each end of the log is pricked in the same way, and the squares are then detached from the log, which can be readily lined from marks previously made. These pricks will be seen at c', Fig. 2. This device may be used not only for marking off square timber for all kinds of framings whatever, but also for marking off rough hewed logs for counter-sawing. It will be seen at once that there is a very appreciable advantage attending the use of this device over the common method by the straight-edge, for the work can be marked off at once expeditiously and accurately.

It is the invention of Joseph Hoke, of Grand de Tour, Ogle county, Ill., by whom it was patented Dec. 29, 1857, and from whom any further information can be obtained.

Trial of Breech-Loading Carbines.

The following is the result of the match, shot with breech-loading carbines of their own invention, between Lieut. Symmes, United States Ordnance Corps, and Mr. Gibbs, of

In May last a match was shot by the gentlemen above named, inventors of breecliloading carbines, to test the relative merits and accuracy of their respective weapons.

We perceive by Boston papers of last week, that the umpire has made his report, and awarded the disputed target, at 600 yards, and the stakes, \$200, to Lieut. Symmes; and as it was near sunset of the last day set apart for the trial, he withdrew from the contest at 300 and 100 vards, and conceded to Mr. Gibbs the amounts respectively staked for these dis-

The Lieutenant beat his opponent, in a string of 100 shots at 600 yards, over sixty

The same parties met again, says a Boston cotemporary, at West Point, at the recent trial of breech-loaders there, and Lieut. S. beat Mr. Gibbs even worse than at Watertown. In fact, it is stated that Lieut. Symmes made the best target, Poultney & Smith the second, Burnside third, and Maynard fourth.

The Commissioner of Patents.

The present incumbent of this responsible office, Mr. Holt, has "won golden opinions" from the inventors of our country during the brief term of his official career. The principle enunciated in behalf of the rights of inventors in his famous decision in the Goodyear india-rubber case has attracted much atten-

Samuel L. Denny, an enthusiastic inventor esiding in Pennsylvania, writes to us, proposing that all the inventors who receive Letters Patent during Mr. Holt's term of office. should each deposit the sum of one dollar in the hands of Munn & Company, to constitute a fund wherewith to purchase and present to him a superb testimonial upon his retiring from the office. We have no doubt should this proposition be fairly presented to such patentees that it would meet a most hearty esponse. Mr. Holt, however, we imagine, has no taste for any such demonstration, and in regard to ourselves, we should not desire to become responsible for any sums of money not intended for our legitimate business.

PREPARATION FOR THE HAIR.—The French are not only remarkable for their inventive genius, but also for the direction it sometimes takes. A manufacturer in the south of France advertises a preparation which he calls Eau de Noblesse, and declares that it makes the hair always preserve an "honorable" direction, and gives to the person who uses it