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HIGHLAND MESSENGER.

ASHEVILLE:

Friday, February 17, 1843.

☞ A Western paper nominates JOHN McLEAN, of Ohio, and WM. GASTON, of North Carolina, as candidates for the Presidency and Vice Presidency. He is a sensible man. That would be a strong ticket. There are scarce two abler men in the Union than Judges McLEAN and GASTON, and if HENRY CLAY were to die before 1844, Judge McLEAN is the man to whom we would give our feeble support for President.

More Democracy.....Gov. PORTER, of Pennsylvania has vetoed the bill passed at the last session of the Legislature of that State, districting the State for members of Congress. The bill, he says, was handed to him on the 25th of July last, and the very next day the Legislature adjourned, and the members set off for their homes.

RATHER UNPLEASANT.

It will be recollected that in a late number of the North Carolina Standard, the editor asserted that the committee appointed to investigate the affairs of the Literary Board had ascertained that in all there had been fifty-one borrowers—forty-five of whom were Whigs, and six Democrats—that the Whigs had borrowed *ninety-seven thousand four hundred and sixty-nine dollars*, and the Democrats *eleven thousand four hundred and eighty-six*; and then asks "was there ever such favoritism known?"! When this publication was made, Mr. BARRINGER, a member of the House of Commons, and a member of the investigating committee, arose in his place on the floor and pronounced the whole to be palpably false—exhibited a *true* view of the matter, and challenged any man to deny it. Subsequently the Standard published a list of borrowers, in which he ranked as Whigs some of the most violent Democrats of the State—several ladies—and included in his list several persons who had never borrowed one single cent from the Literary Fund. The Register now very justly calls upon the editor of the Standard to retract what he has said on this subject, and unless it is done, the Standard will stand convicted of deliberate and wanton falsehood. We suspect that the whole has been another Chunn's Cove affair.

☞ From the tone of some of the Democratic papers from Georgia we learn that the late election by the Legislature of the Hon. W. T. COLQUITT as United States Senator, was very far from being agreeable to the party generally. In truth, we suspect that the late elections in that State have caused that party to feel somewhat like their brethren of this State, that they have killed themselves. This we believe to be about the truth, whether they feel it or not.

AUGUSTA MARKET.

As a great portion of our readers in the western portion of this State, in South Carolina, and in Tennessee, doubtless feel interested to know the state of the m in Augusta—we intend hereafter to them advised on that subject. We quote from the Augusta papers, and if our readers should at any time be misled by what we may say, it will be in consequence of incorrectness in the Augusta papers; of this, however, there will be but little danger. We shall give the prices of those articles most commonly bought or sold by the people of the up-country, and will faithfully report these so long as they are reported by the city papers; and these papers will doubtless at once see the propriety of such a course, as well as the advantage it will be to their market.

This course will create a new inducement for the Farmers especially to subscribe for our paper, in order that they may know the price of produce before they carry it down and the price of groceries before they go after them. We are determined that henceforward the Messenger shall be just such a paper that though a farmer or mechanic may make out after a sort of fashion without it, he can always get along much better with it.

ADVICE.

One of the old Greek Philosophers was once asked "What is the easiest thing done?" "To give advice," he immediately replied. "What is the hardest thing to do?" was then asked. "To take advice," was the prompt answer of this sage.

In this, there is much more truth than poetry. Every one you meet, is ready and willing to *give* advice, but very few are disposed to *take* it. We scarce ever saw an individual in our lives but who seemed to think themselves capable of giving advice on some subject—young or old, male or female—white, black, red or brown—rich or poor—bond or free—high or low—every one thinks himself or herself wiser about some things than you are; hence, their readiness to advise. And their opinions on the same subject are as diversified as the configuration of their faces or the phrenological developments of their craniums.—Let a stranger, for instance, ride up to a company of men and civilly ask the way to any given point—one steps forward as the spokesman of the whole, and enters into a description of the roads, houses, fields, mills, creeks, rocks and trees; but ere he is done—or, like the servants of afflicted Job—while he is yet speaking, another comes up and announces a more excellent way, and forthwith he enters upon a long history of the difficulties attending the way, and it is well for the confused traveller if he gets off with hearing less than a half a dozen different ways portrayed; the directions in each case are to him confusion worse confounded—notwithstanding each one is apt to close his instructions by assuring him he can't miss the way. One tells him to go by Peter Jones', and take a right hand, and then take Peter's field on his left hand, and the *barn on his back*, and keep straight on. Another says: Better go by Uncle Jake's, cross the creek, leave uncle Jake's house on his right, turn to the left, then to the right, then to the left again—cross over the mountain by aunt Sally's, and he *can't miss the way*. Thus go on some eight or ten, all insisting that the way they recommend is the best—the bewildered traveller all the while knowing no more of Peter Jones, uncle Jake or aunt Sally, than he does of the man in the moon, and finally sets off to find his way the best he can.

Reader, this is but a specimen of what is going on in the world every day, in reference to almost every thing. There are few things about which men agree any better than they do about the best road literally to a given point. Start them to make money—gain honors—acquire ease—secure happiness—and it's the same way; each one takes his own road—feels quite sure that it's the best that ever was—plods along a while—gets lost—turns back—tries another with no better success; and this makes pretty much the history of this world, and in reference to the next world, it's but little if any better. If a company of men and women become alarmed about their future welfare, and begin to amend, they set off in as many directions as a covey of partridges when a hawk unexpectedly pounces among them—and how they will all come out at last, this deponent saith not.

☞ ROBERT WOODS, Esq., of the firm of Yeatman & Woods, lately died in Nashville, Ten., aged about 56. The banking house with which he was connected was long and favorably known.

WM. M. LOWRY, Esq., has been appointed Postmaster at Greeneville, Ten., in place of WM. DICKSON, dec'd. We never inquired after Mr. LOWRY's politics, but we know him to be a very worthy man and a perfect gentleman, and believe he will make a good master.

☞ A good story is told by the Fayetteville Observer of a member of the late Legislature on his return home being met by one of his party—a prominent man—when he remarked that they (the Democrats) would never get his vote again—"*that they were a pack of fools who had done the State no service, but had disgraced themselves!*" This was said by a Democrat to a Democrat, publicly, in a public place—and it's the truth.

MARSHALL AND THE BARREL.—The western papers tell the following anecdote:—"An opponent of this gentleman, some few years since, exhibited his political gagging by informing the crowd, which he was addressing, that his father was a cooper, and had made many a barrel for them.—Tom, in reply, indulged in the following strains: "Fellow-citizens, I have no doubt that Mr. P.'s (his opponent's) father was a cooper, a first rate cooper—a perfect smasher of a cooper, and made you many a good barrel; but fellow-citizens, he made one barrel (pointing to P.) in which he forgot to put a good head."

Letter of Professor Morse,

To Hon. C. G. FERRIS, *on the system of Electro-Magnetic Telegraphs, as invented by himself.*

NEW-YORK, DEC. 6, 1842.

Dear sir,—In compliance with your request, I give you a slight history of my electro-magnetic telegraph, since it was presented for the consideration of Congress, in the year 1838.

During the session of the 25th Congress, a report was made by the Committee on Commerce of the House, which concluded by unanimously submitting a bill appropriating $30,000 for the purpose of testing my system of electro-magnetic telegraphs. The pressure of business at the close of that session prevented any action being taken upon it.

Before the session closed, I visited England and France, for the double purpose of submitting my invention to the test of European criticism, and to secure to myself some remuneration for my large expenditures of time and money in elaborating my invention. In France, after a patent had been secured in that country, my telegraph first attracted the attention of the Academy of Sciences, and its operation was shown, and its principles were explained, by the celebrated philosopher, Arago, in the session of that distinguished body of learned men on September 10, 1838. Its reception was of the most enthusiastic character.—Several other societies, among which were the Academy of Industry and the Philotechnic Society, appointed committees to examine and report upon the invention, from all which I received votes of thanks, and from the former the large medal of honor. The French Government at this time had its attention drawn to the subject of electric telegraphs, several systems having been presented for its consideration, from England, Germany, and France.—Through the kind offices of our minister at the French Court, General Cass, my telegraph was also submitted; and the Minister of the Interior (M. Montalivet) appointed a commission, at the head of which was placed M. Alphonse Foy, the administrator-in-chief of the telegraphs of France, with directions to examine and report upon all the various systems which had been presented. The result of this examination (in which the ingenious systems of Professor Wheatstone, of London, of Professor Masson, of Caen, and Professor Steinheil, of Munich, passed in review) was a report to the Minister in favor of mine. In a note addressed to me by M. Foy, who had expressed his warmest admiration of my telegraph in my presence, he thus writes:

"I take a true pleasure in confirming to you in writing that which I have already had the honor to say to you viva voce, that I have prominently presented (signale) to Monsieur the Minister of the Interior your electro-magnetic telegraph, as being the system which presents the best chance of practical application; and I have stated to him that if some trials are to be made with electric telegraphs, I hesitate not to recommend that they should be made with your apparatus."

In England, my application for a patent for my invention was opposed before the Attorney General by Professor Wheatstone and Mr. Davy, each of whom had systems already patented, essentially like each other, but very different from mine. A patent was denied by the Attorney General, Sir John Campbell, on a plea which I am confident will not bear a legal examination. But there being no appeal from the Attorney General's decision, nor remedy, except at enormous expense, I am deprived of all benefit from my invention in England.—Other causes than impartial justice evidently operated against me. An interest for my invention, however, sprung up voluntarily, and quite unexpectedly, among the English nobility and gentry in Paris, and, had I possessed the requisite funds to prosecute my rights before the British Parliament, I could scarcely have failed to secure them, so powerfully was I supported by this interest in my favor: and I should be ungrateful did I not take every opportunity to acknowledge the kindness of the several noblemen and gentlemen who volunteered to aid me in obtaining my rights in England, among the foremost of whom were the Earl of Lincoln, the late celebrated Earl of Elgin, and the Hon. Henry Drummond.

I returned to the United States in the spring of 1839, under an engagement entered into in Paris with the Russian Counsellor of State, the Baron Alexandre de Meyendorff, to visit St. Petersburg with a distinguished French savan, M. Amyot, for the purpose of establishing my telegraphic system in that country. The contract, formally entered into, was transmitted to St. Petersburg, for the signature of the Emperor, which I was led to believe would be given without a doubt; and, that no time should be lost in my preparations, the contract, duly signed, was to be transmitted to me in New York, through the Russian ambassador in the United States, in four or five weeks, at farthest, after my arrival home.

After waiting, in anxious suspense, for as many months, without any intelligence, I learned *indirectly* that the Emperor, from causes not satisfactorily explained, refused to sign the contract.

These disappointments (not at all affecting the scientific or practical character of my invention) combined with the financial depression of the country, compelled me to rest awhile from the further prosecuting my enterprise. For the last two years, however, under many discouraging circumstances, from want of the requisite funds for more thoroughly investigating some of the principles involved in the invention, I have, nevertheless, been able to resolve all the doubts that lingered in my own mind, in regard to the perfect practicability of establishing my telegraphic system to any extent on the globe. I say, "doubts that lingered in my own mind;" the principal, and, indeed, only one of a scientific character, which at all troubled me, I will state, and the manner in which it has been resolved:

At an early stage of my experiments, I found that the magnetic power produced in an electro-magnet, by a single galvanic pair, diminished rapidly as the length of the conductors increased. Ordinary reasoning on this fact would lead to a conclusion fatal to the whole invention, since at a great distance I could not operate at all, or, in order to operate, I should be compelled to make use of a battery of such a size as would render the whole plan in effect impracticable. I was, indeed, aware that by multiplying the pairs in the battery—that is, increasing the intensity of its propulsive powers—certain effects could be produced at great distances, such as the decomposition of water, a visible spark, and the deflection of the magnetic needle. But as magnetic effects, except in the latter case, had not to my knowledge been made the subject of careful experiment, and as these various effects of electrical action seemed, in some respects, to be obedient to different laws, I did not feel entirely assured that magnetism could be produced by a multiplication of pairs sufficiently powerful at a great distance to effect my purpose. From a series of experiments which I made, in conjunction with Professor Fisher, during the last summer, upon thirty-three miles of wire, the interesting fact, so favorable to my telegraphic system, was fully verified, that *while the distance increased in an arithmetical ratio, an addition to the series of galvanic pairs of plates increased the magnetic power in a geometric ratio.* Fifty pairs of plates were used as a constant power. Two miles of conductors at a time, from two to thirty-three, were successively added to the distance. The weight upheld by the magnet from the magnetism produced by fifty pairs gradually diminished up to the distance of ten miles; after which, *the addition of miles of wire up to thirty-three miles* (the extent to which we were able to try it) *caused no further visible diminution of power.* The weight then sustained was a constant quantity. The practical deduction from these experiments is the fact that with a very small battery all the effects I desire, and at any distance, can be produced. In the experiments alluded to, the fifty pairs did not occupy a space of more than eight cubic inches, and they comprised but fifty square inches of active surface.

The practicability of establishing my telegraphic system is thus relieved from all scientific objections.

Let me now turn your attention, sir, one moment to a consideration of the telegraph as a source of revenue. The imperfections of the common systems, particularly their uselessness, on account of the weather, three-quarters of the time, have concealed from view so natural a fruit of a perfected telegraphic system. So uncertain are the common telegraphs as to time, and so meager in the quantity of intelligence they can transmit under the most favorable circumstances, that the idea of making them a source of revenue would not be likely to occur. So far, indeed, from being a source of revenue, the systems in common use in Europe are sustained at great expense; an expense which, imperfect as they are, is justified, in the view of the Government, by the great political advantages which they produce. Telegraphs with them are a Government monopoly, and used only for Government purposes. They are in harmony with the genius of those Governments. The people have no advantage from them, except indirectly as the Government is benefited. Were our mails used solely for the purposes of the Government, and private individuals forbidden to correspond by them, they would furnish a good illustration of the operation of the common European telegraphic system.

The electro-magnetic telegraph, I would fain think, is more in consonance with the political institutions under which we live, and is fitted, like the mail system, to diffuse its benefits alike to the Government and to the people at large.

As a source of *revenue*, then, to the Government, few, I believe, have seriously computed the great profits to be derived from such a system of telegraphs as I propose; and yet there are sure data already obtained by which they can be demonstrated.

The first fact is, that every minute of the 24 hours is available to send intelligence.

The second fact is, that twelve signs, at least, can be sent in a minue, instantaneously, as any one may have proof by actual demonstration of the fact on the instrument now operating in the Capitol.

There can be no doubt that the cases, where such speedy transmission of intelligence from one distant city to another is desirable, are so numerous, that when once the line is made for such transmission, it will be in constant use, and a demand made for a greater number of lines.

The paramount convenience, to commercial agents and others, of thus corresponding at a distance, will authorize *a rate of postage proportionate to the distance*, on the principle of rating postage by the mails.

To illustrate the operation of the telegraph in increasing the revenue, let us suppose that but 18 hours of the 24 are efficiently used for the actual purposes of revenue; that 6 hours are allowed for repetitions and other purposes, which is a large allowance. This would give, upon a single circuit, 12,960 signs per day, upon which a rate of postage is to be charged. Intelligence of great extent may be comprised in a few signs. Suppose the following commercial communication is to be transmitted from New York to New Orleans:

Yrs., Dec. 21, rec. Buy 25 bales c., at 9, and 300 pork, at 8.

Here are 36 signs, which take three minutes in the transmission from New York to New Orleans, and which informs the New York merchant's correspondent at New Orleans of the receipt of a certain document, and gives him orders to purchase 25 bales of cotton at 9 cents per pound, and 300 barrels of pork at 8 cents per pound. Thus may be completed, in three minutes, a transaction in business which now would take at least four or five weeks to accomplish.

Suppose that one cent per sign be charged for the first 100 miles, increasing the charge at the rate of half a cent each additional 100 miles, the postage of the above communication would be $2 88 for a distance of 1,500. It would be sent 100 miles for 36 cents. Would any merchant grudge so small a sum for sending such an amount of information in so short a time to such a distance? If time is money, and to save time is to save money, surely such an immense saving of time is the saving of an immense sum of money. A telegraphic line of a single circuit only, from New York to New Orleans, would realize, then, to the Government, *daily*, in the correspondence between those cities alone, over *one thousand dollars* gross receipts, or over $300,000 per annum.

But it is a well-established fact, that, as facilities of intercourse increase between different parts of the country, the greater is that intercourse. Thousands travel, in this day of railroads and steamboats, who never thought of leaving their homes before. Establish, then, the means of instantaneous communication between the most distant places, the telegraphic line of a single circuit will very soon be insufficient to supply the demands of the public—they will require more.

Two circuits will of course *double the facilities, and double the revenue*; but it is an important fact, that the expense of afterwards establishing a second, or any number of circuits, does not proceed on the *doubling* principle. If a channel for conveying a single circuit be made in the first instance of sufficient capacity to contain many more circuits, which can easily be done, additional circuits can be laid as fast as they are called for, at but little more than the cost of the prepared wire. The recent discovery of Professor Fisher and myself shows that a single wire may be made the common conductor for at least six circuits. How many more we have not yet ascertained. So that, to add another circuit is but to add another wire. Fifty dollars per mile, under these circumstances, would therefore add the means of doubling the facilities and the revenue.

Between New York and Philadelphia, for example, the whole cost of laying such an additional circuit would be but $5,000, which would be more than defrayed by *two months'* receipts only from the telegraphs between those two cities.

There are two modes of establishing the line of conductors.

The first and cheapest is doubtless that of erecting spars about 30 feet in height and 350 feet apart, extending the conductors along the tops of the spars. This method has some obvious disadvantages. The expense would be from $350 to $400 per mile.

The second method is that of enclosing the conductors in leaden tubes, and laying them in the earth. I have made the following estimate of the cost of this method:

Wire, prepared, per mile	$150 00
Lead pipe, with solderings	250 00
Delivery of the pipe and wire	25 00
Excavations and filling in about 1,000 yards per mile, or 4 feet deep, at 15 cts. per sqr. yd.	150 00
Laying down the pipe	3 00
	$583 00
One register, with its machinery, comprising a galvanic battery of 4 pairs of my double-cup bat'ry	100 00
One battery of 200 pairs	100 00
Expense for thirty-nine miles	22,737 00
Two registers	200 00
Two batteries	200 00
Services of chief superintendent of construction, per annum	2000 00
Services of three assistants, at $1,500 each per annum	4500 00
	$29,737 00

As experience can determine the best mode of securing the conductors, I should wish the means and opportunity of trying various modes, to such an extent as will demonstrate the best.

Before closing my letter, sir, I ought to give you the proofs I possess that the American telegraph has the *priority in the time of its invention.*

The two European telegraphs in practical operations are Professor Steiheil's, of Munich, and Professor Wheatstone's, of London. The former is adopted by the Bavarian Government; the latter is established about 200 miles in England, under the direction of a company in London. In a highly interesting paper on the subject of telegraphs, translated and inserted in the London Annals of Electricity, March and April, 1839, Professor Steinheil gives a brief sketch of all the various projects of electric telegraphs, from the time of Franklin's electrical experiments to the present day. Until the birth of the science of electro-magnetism, generated by the important discovery of Oersted, in 1820, of the action of electric currents upon the magnetic needle, the electric telegraph was but a philosophic toy, complicated and practically useless. Let it be here noticed, that, after this discovery of Oersted, the *deflection of the needle* became the principle upon which the savans of Europe based all their attempts to construct an electric telegraph. The celebrated Ampere, in the same year of Oersted's discovery, suggested a plan of telegraphs, to consist of a magnetic needle, and a circuit for each letter of the alphabet and the numerals—making it necessary to have some 60 or 70 wires between the two termini of the telegraphic line.

This suggestion of Ampere is doubtless the parent of all the attempts in Europe, both abortive and successful, for constructing an electric telegraph.

Under this head may be arranged the Baron Schilling's, at St. Petersburg, consisting of 36 magnetic needles, and upwards of 60 metalic conductors, and invented, it seems, the same date with my electro-magnetic telegraph, in the autumn of 1832. Under the same head comes that of Professors Gauss and Weber, of Gottingen, in 1833, who simplified the plan by using but a single needle and single circuit. Professor Wheatstone's, of London, invented in 1837, comes under the same category; he employs five needles and six conductors. Professor Steinheil's, also invented in 1837, employs two needles and two conductors.

But there was another discovery, in the infancy of the science of electro-magnetism by Ampere and Arago, immediately consequent on that of Oersted, namely: the *electro magnet*, which none of the savans of Europe who have planned electric telegraphs ever thought of applying, until within two years past, for the purpose of signals. My telegraph is essentially based on this latter discovery.

Supposing my telegraph to be based on the same principle with the European electric telegraphs, which it is not, mine, having been invented in 1832, would still have the precedence, by some months at least of Gauss and Weber's, to whom Steinheil gives the credit of being the first to simplify and make practicable the electric telegraph. But when it is considered that all the European telegraphs make use of the deflection of the needles to accomplish their results, and that none use *the attractive power of the electro magnet to write in legible characters*, I think I can claim, without injustice to others, to be the first inventor of the *electro-magnetic telegraph.*

In 1839, I visited London, on my return from France, and, through the polite solicitations of the Earl of Lincoln, showed and explained its operation at his house, on the 19th of March, 1839, to a large company, which he had expressly invited for the purpose, composed of Lords of the Admiralty, members of the Royal Society, and members of both Houses of Parliament.

Professor Wheatstone has announced that he has recently, (in 1840) also invented and patented an *electro-magnetic telegraph*, differing altogether from his invention of 1837, which he calls his *magnetic-needle telegraph.* His is, therefore, the first European electro-magnetic telegraph, and was invented, as is perceived, eight years subsequent to mine, and one year after my telegraph was exhibited in the public manner described at the Earl of Lincoln's residence in London.

I am the more minute in adducing this evidence of priority of invention to you, sir, since I have frequently been charged by Europeans in my own country with merely imitating long-known European inventions. It is therefore due to my own country, as well as to myself, that in this matter the facts should be known.

Professor Steinheil's telegraph that professes to *write* the intelligence. He records however, by the delicate touch of the needle in its deflections, with what practical effect I am unable to say; but I should think that it was too delicate and uncertain, especially as compared with the strong and efficient power which may be produced in any degree by the electro-magnet.

I have devoted many years of my life to this invention, sustained in many disappointments by the belief that it is destined eventually to confer immense benefits upon my country and the world.

I am persuaded that whatever facilitates intercourse between the different portions of the human family will have the effects, under the guidance of sound moral principles to promote the best interests of man. I ask of Congress the means of demonstrating its efficiency.

I remain, sir, with great respect, your most obedient servant,

SAM. F. B. MORSE.

Hon. CHARLES G. FERRIS.

Remember the poor, for the wheel of fortune may, in its unceasing whirl, place you among them in future years.

Remember the poor, for they are our equals, and many of them infinitely our superiors, in all but clothing and food.