



NEW YORK, DECEMBER 30, 1848.

Advice to our Manufacturers.

The general complaint among our manufacturers in the East, North and Central States, is their "inability to compete with foreign manufacturers at present prices." The complaint we believe to be true in every respect. But out of this there arises a query, why are we not able to compete with foreign manufacturers in coarse goods now, when it has been so often stated that "we could manufacture and undersell them in their own markets?" These things we do not very well understand, and it is not in the range of our objects to discuss the subject—we allude to it as introductory and something on which some light is wanting, without any *pros* and *cons*, but plain facts, for statistical information respecting the progress of our manufactures.

It is well known that we have not as a nation commenced to manufacture fine cotton goods. The finest we believe that are made, are manufactured at York Mills and Ida Mills in this State, but where can we find numbers exceeding 50 in fineness. We know of none spun finer. In England numbers are spun as high as 300, and we are much mistaken if there is a single yard of fine *Mull* made in the Union. What is the reason of this? The cotton used for the fine 300 lace thread manufactured at Holdsworth's in Manchester, England, grows at the South, but has to be carried across the Atlantic to be spun, woven and come back to us in the shape of fine goods. In the bleaching, printing and finishing of fine goods too, we do nothing—all is done up to hand across the water. Have we not capital—have we not mechanical genius—have we not taste to execute such fabrics and finish such kind of goods? Surely we have. We have got excellent foreign artists and operatives among us, and yet we manufacture no goods that we could call "fine." This should not be, and certainly will not for any great length of time. In the manufacture of coarse goods our Eastern and Northern manufacturers have found competitors at home, and competitors that will of necessity drive them to fine manufacturing or shut up their factories, either the one or the other will be the end of the matter in a few years. In our Southern and Western States, there is much energy and enterprise displayed at present in respect to the cotton manufacture, and the maxim is deeply engraven upon the hearts of the planters, that "the factory should come to the cotton field." Who finds fault with this?—None. It is a commendable spirit, and they can manufacture cheaper than we can do in the East. Our Northern manufacturers therefore must soon take up another branch, and that the fine branch of cotton manufacture.

This will bring into requisition more skill—more patience and a finer taste. Well, we believe that there are abundant materials at command, and we hope to see them employed soon.

In saying a few words to our manufacturers we would just drop a hint to our calico printers. What in the name of common sense has become of taste and beauty in the catalogue of your patterns? Do you think that we are always going to be satisfied with a daub of royal blue here, and a dash of green there, as harmonious as crooked sticks moving in indescribable orbits? You have done, and can do, better. Let us have some real old fashioned rich madder colors, that grow brighter as they grow older, and not such colors as are now so common, that look well for a short time but soon acquire an appearance resembling the efforts of the combined skill of a company of tobacco masticators.

In conclusion, for your benefit we are going to commence, next week, the publication of a new process of steam colors for silk and wool, recently discovered in France, and which has been tested and tried, and has pro-

ven so valuable that in one instance, we have been credibly informed, \$2000 was paid for the Receipt.

Sound and Rapid Motion.

We have received a letter from Mr. E. B. Kenrick, Cambridgeport, Mass., informing us that the paper read before the late meeting of the British Association for the promotion of Science by Mr. Scott Russell and noticed in No. 12 this vol. *Scientific American*—explaining the phenomenon of sound and rapid motion—had been communicated to him about 10 years ago by Mr. Henry Munro, a distinguished scientific musician. Mr. Kenrick has requested Mr. Munro to furnish us with an account of his discovery, which we will be pleased to publish. "Honor to whom honor is due.

Patent Case.

On Wednesday the 20th inst. another patent case was decided before the U. S. Circuit Court, Philadelphia, Judge Kane on the bench. It was for an infringement of a patent right for making barrels—the complainant Mr. Peters, the defendant Mr. Trapp. The Jury returned a verdict for the defendant. Inventors have been particularly unfortunate before Judge Kane during this term.

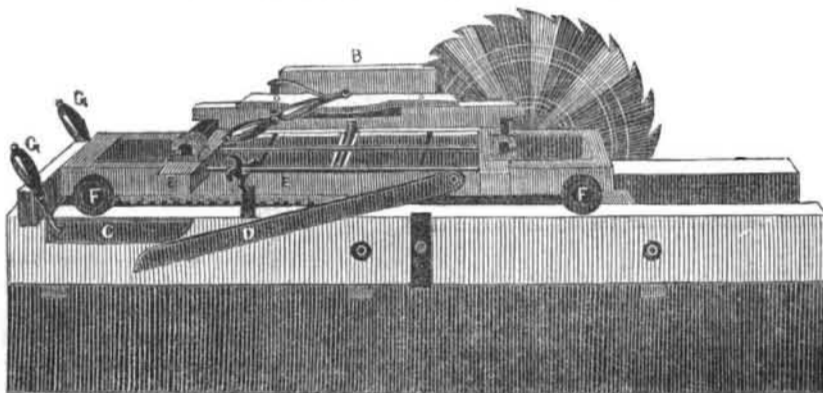
The Telegraph Controversy.

We have received a long communication from a distinguished correspondent, respecting the telegraph controversy between Prof. Morse and Mr. Bain and requesting us to give our reasons for the sentiments uttered by us in No. 13 *Scientific American*. We will publish the communication next week and give our reasons in full, and which will settle this controversy we believe in the eyes of the American people. We shall publish some facts respecting this invention never before brought into public notice.

Cheap Postage.

There is an association in this city composed of the most respectable and influential merchants, whose object is a cheap system of national postage. At a meeting held recently at the Merchants Exchange it was stated that during last year, 63,000,000 letters passed through the General Post Office, and the Association felt certain that the number would be so largely increased by a reduction of postage, that two cents postage for carrying a letter any distance, would be amply sufficient to defray expenses. So think we. Let us have cheap postage by all means, we have been long enough without it.

JOHNSON'S SHINGLE MACHINE.



This is a machine invented by Mr. J. G. Johnson, of Augusta, Maine, which has just been praised by all those who have seen it operate and every person who has used it.

DESCRIPTION.—The machinery is adjusted to a frame of 10 feet in length by 3 feet 10 inches in width. On this is placed a moveable carriage E E, which runs on trucks attached to the carriage F F. B, is the block or bolt of wood to be sawed, and is held in its place by dogs. C, is a piece of wood fastened to the end of the frame, the object of which is to cause the lever D to turn the set shaft one quarter round every time the carriage returns back; this lever is raised by a piece of wood

fastened to the main frame. To this lever is also fastened a hook, which hooks on to the set shaft. G G, are handles attached to a rod which has a cam on it. By turning the handles up the rack is raised out of gear and stops the carriage while the operator supplies another bolt or block of wood. The set shaft has a dog on each end placed at right angles so as not to set but one of the blocks at a time. Those dogs move two guages that are secured to the headstock which hold the block or bolt of wood. The carriage is fed by a decreased motion received from the saw shaft.

For more information see our advertising columns.

Paine's Electrical Light.

WORCESTER, Dec. 15, 1848.

GENTS.—You will perceive by a re-perusal of my Circular that I speak of *decomposing water* by electricity evolved by "mechanical action." The water and lime are secondary agents, and in a pecuniary view of no moment, and the consumption of these agents will involve but an infinite (?) portion of the cost of our cheapest "gas lights." Three years ago I exhibited this light in this city during a course of lectures on experimental philosophy.

I do not remember that I have ever "announced" any other discovery than the present one; and as regards my steamer "Excelsior." I do not consider myself responsible to any of the statements that have been made in the public journals, statements which in many instances were as much new to myself as they were to the public.

For your gratification, and in answer to the query in the last paragraph of your article commenting on my Circular, I would remark that the *Excelsior* was a small iron boat of fifty feet keel and ten feet beam, built as an experimental tug boat for canals and rivers, and that the experiments were successful beyond my expectations. This summer a boat of eighty feet keel and sixteen feet beam, with some modifications, was built at Thompsonville, Ct. and sailed in September for Norfolk, Va., where she is now running successfully on the Dismal Swamp Canal, seven dollars with her doing the work of seventy with horses.—She run through the various canals on the

passage at an average rate of eight miles per hour without *wash of any kind*. As regards my Ocean Steamer, I would refer you to the report of the committee of the Mechanic Fair held in this city in September last, and I will likewise add, that the reason why more has not been heard of the progress of my improvements in ocean navigation, is because that parties interested with me, are fearful of compromising their interests abroad by a publication, which would prevent the issue of letters patent. Applications have been made for Great Britain, France, Germany, and the Netherlands, and as soon as the patent is issued in England I shall be most happy to furnish your office with all the details. My new light will "announce" itself from the Cupola of our Exchange some dark nights next month, when there will be "no corn in Salem." Yours, HENRY M. PAINE.

We wish Mr. Paine success and if he can produce an apparatus for less than \$30, that will create a light equal to 4000 gas burners and giving out that amount of light for 5 hours every day for a year, then we say that no discovery in ancient or modern times can compare with it. Mr. Paine states in his Circular that he can "produce a light equal to 4000 gas burners at the expense of only 1 mill per hour," or 1 cent for ten hours. Now allowing the apparatus to be employed for 5 hours every day for 365 days, a very fair annual estimate, and we have it "producing a light equal to 4000 gas burners," for \$1,82½, a sum, which at the rate of 7 per cent would be interest for an apparatus which would cost

only \$26.07. Now let us make a comparison between it and the price of gas, its consumption and illuminating power, and we will then see if there is not some reason for our doubts respecting this new discovery. Gas costs in this city \$7 per thousand cubic feet, by one, and \$4 by another company. Now one large bat's wing burner consumes 2 cubic feet of the \$7 gas per hour. But we will make the calculation for the \$4 gas. One bat's wing therefore, will consume in 5 hours 10 cubic feet of gas and in 365 days 3650 cubic feet, at an expense of \$14.60 per annum; 4000 bat's wing burners will therefore consume \$58,400 worth of gas in one year, at \$4 per thousand cubic feet, and yet burning 5 hours per day. Mr. Paine by his circular can furnish an equal amount of light for \$1,82½. We would state that our calculation is not based on speculative reports, but the practical working of our gas burners day by day. We have given Mr. P. the benefit of our lowest calculation.

Mr. Paine is admitted on all hands to be an accomplished and exceedingly ingenious mechanic, perhaps he has no superior, but in this case, we think, and we have in a straight forward manner given our reasons why he has not submitted his electric light to the *experimentum crucis* of a correct calculation.

The Subterranean Lake on the Central Railroad, Michigan.

In reference to this lake, which we noticed some time ago in the *Scientific American*, the *Detroit Free Press* says: "The sudden disappearance of the embankment was accompanied by tremendous convulsions of the ground for some distance around where the casualty occurred, and cracks were caused by the upheaving of the ground, deep and large enough to bury a cart and horse in. From exploration and researches made, it appears that the piece of ground over which the grading was to be made had once been a lake, but was now covered by a soil of roots, muck, &c. to the thickness of from ten to twelve feet. The submerged lake is about two miles long, and is in parts half a mile wide. At the place where this railroad track crosses, it is the narrowest. At one end of the lake is what appears to have been an island, as there are trees of large growth standing, while on nearly the circuit of the lake the ground or surface of ten feet has become so hardened that the best of grass is grown, and the spot has been regularly mowed this several years. We believe, in some parts of it, good potatoes have been grown. The depth of the lake is ascertained to be about 80 feet in the deepest part, and the water as clear and pure as that in the river at this city.

After the sinking of the first grading the work was pushed ahead with increased strength and for eight months, 80 hands were employed continually, day and night, one set retiring as the other came on to the work—As the embankment gradually extended out over the part that sank into the sod and crust, again it would become so heavy that another sinking would take place, and in this manner the work has been going on. The excavation and embankment was after a while commenced on both sides of the lake, and last week the contractor says the filling in had met at the bottom, and the prospect was that no more trouble would be found in rapidly completing the work. The above number of workmen have been engaged at this point for fifteen months. Eight months of the time as before mentioned, day and night. It has cost an immense sum to accomplish the original plan adopted of crossing at this point, but like everything else undertaken by this Company, goes straight forward."

THE SCIENTIFIC AMERICAN.

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