



NEW YORK, NOVEMBER 11, 1848.

Railroad in Broadway.

We perceive that this subject is again brought before the public—and perhaps in a more tangible form than any heretofore contemplated. It is proposed to lay a double track of cast iron six feet in width, rails and track together, and to run a train up and down every ten minutes. The cars are to be very narrow, and the track is promised not to impede the transit of other vehicles.

We do not see the necessity of having the whole breadth—made of cast iron Broad rails would answer just as well, and could certainly be laid down at far less expence. It seems to us that there is a necessity for some plan of general conveyances to supersede the continual increase of omnibusses which have now become almost a city nuisance. The elevated Railways of Randall and De Witt are objectionable but only on the ground of unnecessary expence and inconvenience in comparison with *terra firma* locomotion. "What is the use" it has been said "of building a road above plain level ground—as reasonable would it be to build a bridge over a level and a dry plain—why not build the railway on the ground?" There is some force in these objections to the elevated railroad, and we cannot perceive any just objections to the laying of two tracks in the centre of Broadway. Carriages and carts would pass up and down on each side of the tracks—those going up on one side, and those coming down on the other. A few years would suffice, in the saving of street repairs alone, to pay for the laying of the tracks.

By such a Railroad the public would be better accommodated and there would not be the jamming and cramming scenes of omnibusses, carts, cabs, and carriages which now so frequently happen in the imperial thoroughfare.

The great difficulty will be in establishing branches. The cost of building a railway in Broadway would be small indeed in comparison with one extending from the Park up Chatham-st. and through the Bowery. The only way to remove this difficulty, would be to have a scale of prices. The main Broadway Road should charge no more than three cents from terminus to terminus, and the branch roads no more either. But we believe it would be about a fair price for the Broadway Line to charge only two cents from Whitehall slip to Canal st. and then the Eastern Lines might charge four cents.

We see no great difficulty in the way of establishing various branch lines of city Railroads connected with some Omnibus branch lines, that would entirely reform (for the benefit of all classes) the whole travelling system of our city. It is certainly no great credit to our city to exhibit the dirtiest streets and heaviest taxation of any other city in the Union. Its expenses for last year were \$2,709,452, which allowing our city to contain 400,000 inhabitants amounts to the extraordinary tax of nearly seven dollars per head for every man, woman, and child in Gotham. It is no doubt easy to find fault,—but a different thing to apply a proper remedy, nevertheless it would be saying but little for our city's genius or the spirit of modern improvement, if we conclude to stick in the mud or trudge along to the mill with the corn in one end of the bag and a stone at the other on the balance insurance system. But to our tale—let us have a Railroad in Broadway.

The Planet Neptune.

Two years ago it was announced to the unlettered world that Le Verrier a French astronomer had by the dint of sagacity and calculation alone, discovered a new Planet which was named Neptune. A new planet was discovered, but American astronomers declared that it was not that pointed out by Le Verrier. There has been a controversy on this subject among the astronomers of the two worlds, and

various reports have gone abroad which have shorn the French astronomer of no small amount of his sudden and high honors. But we perceive by a discussion that took place at the Paris Academy of Science on the 14th of Sept., that Le Verrier ably confounded Mr. Babinet, another astronomer, who held views opposite to the discoverer of Neptune

The controversy however, is not likely thus to end, but whatever may be the ultimate result, these gentlemen will find that all the rolling spheres are but harmonious instruments that move to praise the Great Architect.

Astronomy is a soul elevating Science. We learn that an effort is making to erect an observatory at Princeton, N. J.; this is a commendable enterprise, and it ought to shame our citizens to adopt some measures to erect one here. The city of Cincinnati is far in advance of New York in this respect—for our own credit this should not be

Prizes at Fairs.—Scientific American.
CAMBRIDGE, Ohio, Oct. 31st, 1848.

MESSRS. MUNN & Co.—Among the premiums awarded by the *Guernsey County Agricultural Society* at its last Annual Fair, were four copies of your valuable paper, the *Scientific American*. You will address them to W. Maynard, James Davis, John Mehaffy and Cyrus Cook, Cambridge, Guernsey Co. Ohio. Enclosed you have \$8. Please send from the beginning of vol. 4.

Yours respectfully, C. J. ALBRIGHT.

We publish the above letter for the purpose of making a few remarks on the benefit of awarding such kind of prizes.

A gold medal, a silver medal, a cup, a diploma, may be all very well as prizes in agricultural or mechanical exhibitions, but we confess that in many cases there is no appropriateness in such awards. It is true that they are lasting testimonials of merit, but in fitness they are often of no value. A good book, a periodical of practical and sound knowledge, as awarded in the cases mentioned in the above letter, is of far more real value to many than a medal possibly could be. We do not speak against the awards of medals and cups, by no means, but as our people are a reading people we think that our Agricultural and Mechanical Institutions should at least drop the *diploma*, and award a good book or standard periodical. Although the *Scientific American* costs only two dollars per annum, yet it is impossible to suppose that among the variety of useful matter contained in our columns, every person who receives a copy will not find something of such personal interest, as will be of more value ten times than the price of the work itself—and beside it is of equal value, yea more, the older it becomes, and we have no doubt but the gentlemen to whom the *Guernsey County Agricultural Society* awarded copies of our paper, will agree with us in all that we have said.

Mile a Minute Locomotive.

In relation to the splendid Locomotive, the "Camilla," recently built by Messrs. Hinkley Drury & others, Boston, Mass., and which runs 60 miles per hour with ease, we have learned since the notice we published, that the driving wheels are only 6 feet 2 inches in diameter. There is only one pair of them. The Camilla is the first of a new pattern for Locomotives, and it is said will perform still better after having been used for a while.—Weight with water 20 tons. The establishment of Messrs. Hinkley, Drury & others is one of the largest in the United States, and the work they produce challenges comparison with any in the world.

16 Horse Power Engine and Boiler.

Those of our readers who are in want of a first rate Engine and Boiler of the above power, will do well to read the remarks we made in reference to them under the engraving last week.

Barber's Grist Mill.

In the article which accompanied the cut of this excellent mill illustrated in our last number, we forgot to mention that the mills are made also by the Empire Co. of Troy, and that Messrs. Mathews & Felton of that place, are the sole agents for all territory except the New England States.

For the Scientific American.

Crape Shawls.

The silks, satins and crapes of China are most beautiful; but they are too costly, and too much prized in China, to form articles of any considerable trade with other countries. It is curious, that though the silks and satins surpass the looms of Great Britain and France both for beauty of color and durability of texture, yet the silk velvets are far inferior to those produced in England. The Chinese silk velvets, although possessing much substance, have the peculiarly dead hue of an English cotton velvet, and are totally void of the silky lustre of those manufactured at Genoa and Lyons.

The Canton Crape Shawls are very beautiful, but the real Chinese are not so plenty in our markets as some suppose. Plenty of shawls sold for real Canton crape, are made in Paisley, Scotland, and they successfully rival the best productions of the Oriental loom. There are many who may not know how the Canton crape is made, and a short sketch will not be out of place.

When the crape shawl comes from the weaver's loom, it is perfectly smooth and resembles gum silk cloth. But the threads of which this cloth is formed are made with one thread harder than the other, and for deeper craping the warp is harder twisted than the weft.—The difference of twist in the warp and weft as the crapes are twilled, forms all the crimping of the crape, but not until it undergoes the process of boiling. This is done by boiling the shawls in fine white soap for a considerable time, which removes the gum from the silk and by the warp swelling more than the weft, the shawls come out of the boiler with that fine crisp so much admired. All this crisp can be taken out again by stretching the shawls on stenters—hence in the dressing operation care must be exercised not to stretch them too much.

The embroidery of these shawls is performed after the gum is removed. For this purpose the pattern is printed on the shawls with fugitive blue and the flowers are then wrought with the needle. After this the shawls are sent to the dyer's to be dyed and dressed.—Sometimes they are embroidered before the gum is boiled off, but this is not a good method, as silk is deteriorated in lustre by boiling in soap any longer than merely to remove the gum, and to embroider with spun silk on the gummed fabric, would require the embroidery silk to receive too much boiling, and thus dim its lustre. Dr. Ure in his excellent work, says the shawls are dyed in the *gummy* or *raw state*. This is a mistake—except for a very few colors, it is impossible to dye gummed silk, and besides, the natural lustre of the silk is not exhibited till the gum is removed. More than this, suppose the color to be dyed on the silk in the raw state, the boiling to raise the crisp or crape would destroy all the color on the silk. The whole article in Dr. Ure's Dictionary relating to the dyeing and dressing of Crape, is entirely erroneous.

The use of soap to remove the gum of raw silk cannot be recommended, but it is the best and the cheapest with which we are acquainted. Many of our fair ones will no doubt be surprised to be told, that their crape shawls have been boiled for two or three hours in soap. Many suppose that boiling in soap would utterly destroy any silk fabric. This in a measure is true—the operation is a nice one—but there is not a silk dress worn in our city, that has not in the yarn been boiled in soap.

The reason why the Chinese finished silks have a finer lustre than the English and French, is owing to the gum being removed by a tedious and expensive process of steeping the silks in a cold spirituous liquor. In the raw state, before the gum is removed, the crape is of a dirty yellow color, but the boiling in soap removes the yellow gum and the whitish silk appears. But still it is not yet white. It has to be dyed for this purpose.—Some may think this strange, but it is a practical fact. It takes red, blue and yellow rays of light to form a white ray—a tri-unity, like the great Author who created what Milton terms—

—"Holy light,
Offspring of Heaven's first dawn."

The dyer to make his crape shawls white uses in clean soap for that purpose a little ar-

chil and fine indigo strained through a cloth. These colors mingling with the yellow of the shawl, forms a white, which is further cleared up by the shawl's being washed out of the soap in cold water, and afterwards submitted to the fumes of sulphur in a close room.

Crape veils are very expensive, and containing as they do, so little silk—this seems unreasonable—but the fine crape manufacture is in the hands of a few foreign houses, and the art of dressing the crape is both a tedious and a troublesome process.

In the last volume of the *Scientific American*, a patent process for dressing fine crape shawls was described. It was to use a small quantity of dissolved gum copal and borax along with liquid glue to stiffen the crape.—This composition, if rightly made and applied, we have reason to know, is good, and is worthy the attention of those in this and other cities of our country whose business is to redress damaged crape.

American Steamers for Liverpool.

There are building in this city at present five steamers of great size to ply between this port and Liverpool. They will all be about as large as the Great Britain and will measure about 3000 tons. It is calculated that two will be ready to commence their trips about the beginning of next summer. The engine for one of the ships now building, is to be made at the Novelty Works, and those for the others at the Allaire Works, and will each cost about \$250,000. The cylinders will be 95 inches diameter and have a stroke of 9 feet. The cost of these steamships will exceed \$500,000 each. Five steamers of similar dimensions to the above will ultimately complete the line, one being a reserve boat. The keels of the third and fourth will be laid upon the launching of the two now on the stocks.

The whole line will belong to E. K. Collins, Esq. and they are to carry the U. S. Mail.

The Old Cunard Line of Steamers.

It is reported that negotiations are pending for the sale of the four old steamships of the Cunard line to the Austrian Government, and that if the sale be effected these noble ships, which a few years ago opened so important an era in the navigation of the Atlantic and have been so eminently successful in the transmission of the mails as well as thousands of passengers and millions of money between the two continents will be delivered, so soon as four new steamships can be built to supply their places.

Machinery for Mexico.

The entire machinery for two extensive paper mills, one to be located at the city of Mexico and the other at Gaudalaxara, is about to be shipped from Norwich, Ct. A lot of cotton machinery intended for the Gaudalaxara Spinning and Weaving Company is to be sent at the same time.

Back Volumes of Scientific American.

We are constantly receiving orders for the First and Second volumes of the *Scientific American*, and as we have no complete sets of either on hand we feel it our duty to make a statement to the public, informing them what orders we can fill, and what we cannot, thereby saving them the trouble of ordering what we cannot furnish.

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