

## Miscellaneous.

## Foreign Correspondence.

LONDON, 28th March, 1851.

Some suspicions have existed respecting the water-tight qualities of the roof of the Crystal Palace. It always leaked a little from the first, and it is no easy matter to keep out the water in this dripping climate. Last week there were very heavy rains and the water has penetrated in so many places that serious fears are entertained by some as to the practicability of securing that exemption from drip or damp which is indispensable in such a building. The desired object, it is said, can still be accomplished by administering a thick coat of paint to the sash bars on the outside; but this constitutes a formidable addition to the work which the contractors have now scarcely six weeks to finish. Messrs. Fox and Henderson have done wonders, but their reputation is indissolubly bound up with the satisfactory manner in which the Crystal Palace fulfils the objects for which it has been created. If its gigantic roof cannot be made water-tight, Mr. Paxton's design, and their execution, will be equally condemned as failures.—Fancy the exhibitor of costly brocaded silks from Lyons, or of rich velvets, from Genoa, watching the effects of a summer storm of rain oozing through the great window frames above his head, and drop after drop irretrievably tarnishing the rarest products of his taste and skill. The contractors and the Executive Committee are both fully alive to the necessity of curing this defect, and accordingly, during the past few days, the glass roof of the building has been in possession of gangs of painters and glaziers, who carrying their scaffolding about with them, and apparently like flies, without specific gravity, crawl about in every direction, stopping up chinks and crevices with putty and paint, and repairing fractured panes of glass. Every effort is making to remedy all defects so as to have the building ready on the day appointed.

Two days ago, the American contributors to the Industrial Exhibition, agents, and those interested met at the Chapter Coffee House, Paternoster Row, where a number of resolutions were passed condemnatory of the management of the exhibition. The resolutions have not been made public, but the price of three guineas for a season ticket was condemned, so was the government for not passing laws to protect the unpatented articles sent, likewise the fittings which foreign exhibitors are compelled to put up at their own expense, also the appointment of so many English jurors to decide on the prizes. The latter complaint is a just one, but the others are no more unjust to the foreign than the English exhibitors. There will be much dissatisfaction among the exhibitors of every nation—this is to be expected. I wish that our countrymen had passed open resolutions and discussed them quietly. This is the best way to do, so as to direct attention to the removal of evils. The complaint is then looked upon as just, whereas, when private meetings are held, the many are always sure to take an unfavorable view of such proceedings, however reasonable the causes may have been to invite private concert of action.

I have been informed that the commissioners of the exhibition have nearly settled all disputes. A very large French organ is to be placed in the nave, and will send its thrilling notes throughout the wide expanse, delighting the people of every nation, kindred, and tongue. The Chinaman, the Greek, the Roman, the Hindoo, the Persian, the Turk, the Arabian, and the Young American, will hear together under one canopy with the products of peace and industry, the sublime strains of Handel, Mozart and Haydn. Many of the American packages from the St. Lawrence have arrived; an air tight metal-coffin from New York City, with a bunch of fresh flowers in it, has been greatly admired, as it somewhat resembles an Egyptian sarcophagus. McCormick's Grain Reaper, from Chicago, has been particularly remarked.

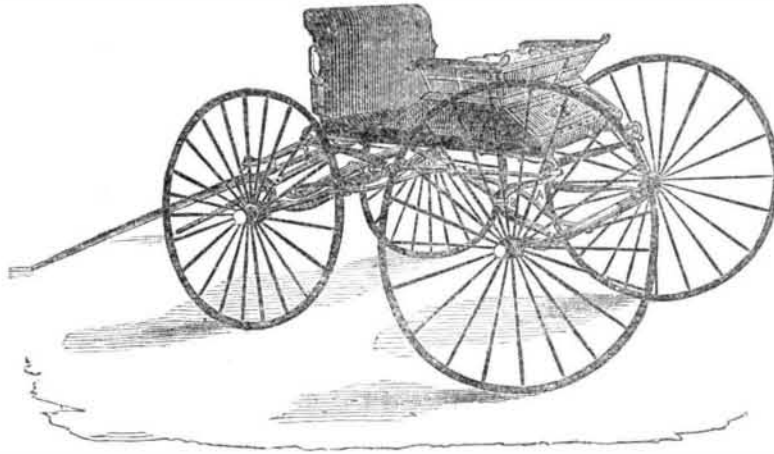
The space devoted to the exhibition of Bri-

tish articles is in a very forward state of arrangement. The Irish poplin goods now arranged make a beautiful show, so do the plaids of Scotland, and the silks of Spitalfields in England, are very excellent. No less than 103,744 square feet are devoted to the exhibition of British textile fabrics,—these manufactures no doubt are the most important to England.

Great preparations are made by the Londoners for the reception of visitors. Portable metal bedsteads are now very plenty, and there can be no doubt but many of our countrymen, shrewd as they are, and keen as they are in making bargains, will pay dearly for the whistle. No one should come here unless he has plenty of money to spend and spare.

EXCELSIOR.

## SPROUT'S PATENT CARRIAGE SPRING.—Figure 1.

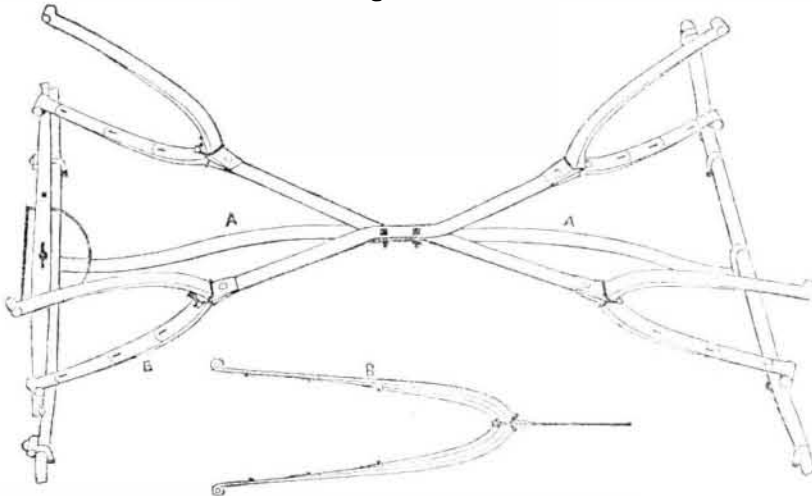


This carriage spring is the invention of Mr. E. T. Sprout, of Hughesville, Lycoming Co., Pa., who has a patent for the same, and who has been awarded some prizes as a token of its superior character.

Figure 1 is a perspective view of a carriage, and figure 2, with a view of the spring, is a plan view, showing the spring as combined and arranged with the axles and frame part below the body of the carriage. A A is the perch plate, and B B represent four springs connected by cross plates, and to the perch plate. These are all made of steel, and for a two seat buggy they weigh only from thirty to forty pounds, (springs, braces, and perch). Section B is a side view of one spring. It will be observed, from the peculiar manner in

which all these parts are connected at the middle of the braces, that the springs support the body of the carriage at the front and rear, by merely resting on the axles. The axles and wheels are thus relieved from dead weight, as it is technically termed, and the ends of the springs vibrate freely on the axles, obviating all unpleasant jarring and jolting when the carriage is running over a rough road. The whole arrangement is very simple; bolsters and pillow blocks are not required, while the carriage is braced most effectually in every part. The perch being a spring, also assists, by its gentle elasticity, to render the motion of the carriage, to those who ride in it, pleasant and easy. These springs are manufactured by Mr. Wm. Wright, Newark, N. J.,

Figure 2.



also by Messrs. Sprout, Burrows & Co., proprietors, Hughesville, Pa., from whom more information about prices, &c., may be obtained by letter.

MESSRS. EDITORS—You were in error in stating, in No. 28 of your paper, that, in my application to the Legislature to make the use of the lancet, in diseases, penal, I said that "I had practiced medicine more than fifty years, and that the result of my experience with the lancet convinces me that the habit of bleeding is destructive of health and life." As I am not yet fifty years old, the first part of this quotation is manifestly impossible. And in reference to the second part, what a pretty figure I should cut in asking the Legislature to protect the public against my own experience! What I said was, that "I commenced the study of medicine nearly a third of a century ago, and that the result of my study and my observation of the experience of others was, that the lancet is destructive," &c. &c.

WM. TURNER, M. D.

New York, April 4, 1851.

[No one could certainly mistake our paragraph in reference to the use of the "lancet in diseases." The caption of the article, and the "habit of bleeding" mentioned in it, surely could not fail to point to the particular use ex-

clusively of the lancet, as embraced in the petition. The other part of the article required the explanation.

## How we Pay for Tea.

The imports into the United States from China, in 1844, amounted to \$6,686,171, while our exports to that country were only \$1,320,170—balance against us \$5,366,001. In 1849 our imports were \$11,904,754, exports \$1,490,945—balance against us \$10,413,809. In five years our imports increased fully sixty per cent., and our exports did not increase over twelve per cent. It appears that during the same period, that is, in 1844, the exports from Great Britain to China amounted to \$35,929,132, while her imports were only \$17,925,350 leaving a balance of trade against China of \$18,003,782. The principal articles of export from Great Britain to create this large balance against China consisted of raw cotton and cotton fabrics; the raw cotton from British India, and the cotton fabrics from her home factories; both of which, and of a better quality, can be more cheaply supplied from this country.

But the next question that arises is, is China always going to supply us with tea? We know not. It would appear that Junius Smith, M. D., of South Carolina, is in a fair way to make that state a tea growing one, and then what will become of the China tea trade? It will no doubt still be a great one, for the States that are yet to arise on the American side of the Pacific, will consume as much tea as all the nations of Europe now do.

## Metallic Life Boats.

An item in the cargo of the United States frigate St. Lawrence excited some attention in the Southampton Docks yesterday. It is one of Francis's metallic life boats, and has been brought over by Captain Sands, consigned to Mr. Macgregor Laird, the iron shipbuilder of Birkenhead, who is instructed by the inventor to present it to the Shipwrecked and Humane Society in London, previous to which however, Mr. Laird has directions to have the boat drawn through the streets of London, by four horses, the bottom to be entirely unprotected, so that the strength of the boat may be severely tested. After this it is to be run against the London Docks stem on, with all the power of six oarsmen, and finally tried in the surf among the rocks of the most dangerous coast in England. This boat is built of galvanized corrugated iron, has air-tight tanks forward and aft, and cannot possibly turn over or sink. Its buoyancy is so great that it will sustain in the water as many human beings as can cling to it. The boat also cannot fill with water, because there are 10 or twelve plugs which, when opened, will let out all the water that may have got in heavy weather into the boat, and that may, in consequence, remain above the line of immersion.—[London Standard.

The above boat is well known to all our readers in New York. It is one of Francis's Life Boats which proved of such valuable service to the U. S. Expedition that made the descent of the Jordan and navigated the Dead Sea.

## For the Scientific American.

## Reflection of Light and Sound.

The laws which govern the reflection of rays of light and vibrations of sound, are, in some respects the same. If the rays of light, proceeding from any object, meet with a polished surface, they are reflected in the opposite direction, making the same angle with the reflecting surface as when proceeding from the object, and to the eye of an observer, the reflected image of any object appears as far behind the reflecting surface as the real object is distant before it.

This law also holds good in regard to sounds—the reflected sound, which we call echo, seeming to the ear to be as far behind the reflecting surface as the real sound is in the contrary direction. Sounds, however, differ from light in that they may be reflected from any tolerably firm surface.

We will try to illustrate and explain the law mentioned above. Were an object to be placed in front of a mirror, at a distance of ten feet, and the eye of the observer at twenty feet, the image in the mirror would appear ten feet behind it, and thirty feet from the eye. It is plain that were the eye placed at the mirror, the appearance of the object would be modified by a distance of ten feet; consequently if the eye be placed in a contrary direction, at a distance of twenty feet, the rays from the image in the mirror—which is already ten feet distant in appearance—coming to the eye from that direction, make the object appear ten feet behind the mirror, and thirty feet from the eye.

In relation to sound, the fact is the same: if a person stand at some rods distant from a high wall, and speak aloud, he will hear the echo at the same distance behind the wall; the vibrations of air caused by his voice having passed from him to the wall and returned.

H. W. H.

Claremont, N. H.

The total number of deaths last week was 357. This shows the health of our city to be good. Consumption carries off the greatest number of victims, viz. 49; the next is convulsions 24.