

Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME 5.]

NEW YORK OCTOBER 13, 1849.

[NUMBER 4.

THE
Scientific American,

THE
BEST MECHANICAL PAPER IN THE WORLD.
CIRCULATION 12,000.

PUBLISHED WEEKLY.
At 128 Fulton Street, New York, (Sun Building,) and
13 Court Street, Boston, Mass.

BY MUNN & COMPANY.

The Principal Office being at New York.
Barlow & Payne, Agents, 89 Chancery Lane, London.

TERMS—\$2 a year—\$1 in advance, and
the remainder in 6 months.

Rail Road News

Honor and English Railroads.

The scoundrelism and swindling that has been carried on by large stockholders in the British railways, surpass in villany the acts of the Buccaneers. Hudson should be sent to Pandemonium as soon as possible, and so should all those who were leagued with him in his disreputable speculations. It is well known that hundreds of the best class of the British working people, servants and mechanics, who, by economy and dint of industry had laid up a few pounds against sickness and old age, were induced three years ago, by the alluring prospect of adding to their small gains, to invest their little fortune in railway stocks. At the right moment—known well to Hudson and his base companions, the price of shares fell, and thousands upon tens of thousands of the invested earnings of these honest simple working people, were swept into the coffers of the most profligate of all classes, viz., the monied speculators. At the present moment we see that a determination exists among the British people, to probe all the affairs of the different railway companies to the very bottom. We hope that the awards of punishment will be ample. The best way to do justice to Hudson, would be to condemn him to be rode up on a rail for 21 years, the punishment to be inflicted on a chesnut one full of slivers, and managed by a committee of his victims.

The Hudson River Railroad.

The arrangements made by the Hudson River Railroad Co., for the accommodation of their cars at Thirty-first street, are very complete and extensive. In the first place they have erected a long brick building of sufficient width to admit three cars at once; then, a short distance off, on the west side of the road near the curve, where the track enters Tenth avenue, is a large round constellated looking engine house, containing the appropriate apparatus for turning the locomotives, &c. Most of the cars themselves are elegant looking articles, furnished and finished, inside and out, in the latest and most improved style. Even in the second class cars, more attention than usual is bestowed upon the 'Emigrants.' This company are laying down rails to come into the heart of our city.

The travel on our Western Railroads is very great at present. The receipts on the New York and Erie Road for last month, were \$77,000. The Railroad connecting the beautiful village of Elmira, with the Genesee Lake will be finished this month.

The Hudson River Railroad is now carrying about nine hundred passengers per day.

Though years bring with them wisdom, yet there is one lesson the aged seldom learn, viz the management of youthful feelings. Age is all head, youth all heart; age acts under the influence of disappointment, youth under the dominion of hope.

DAY'S SUB-MARINE TELESCOPIC EXAMINER.

Figure 1.

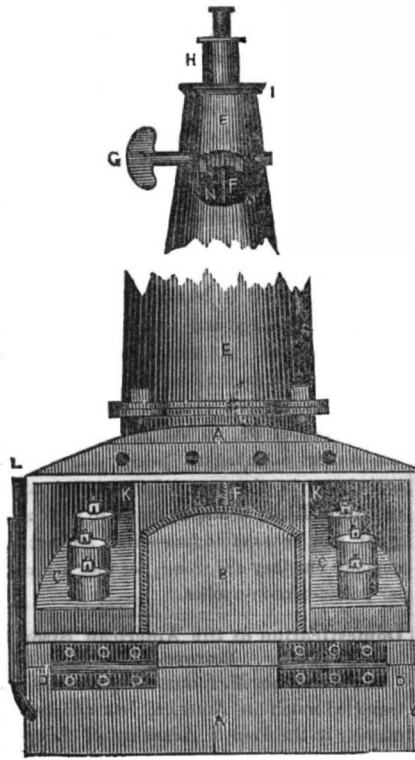
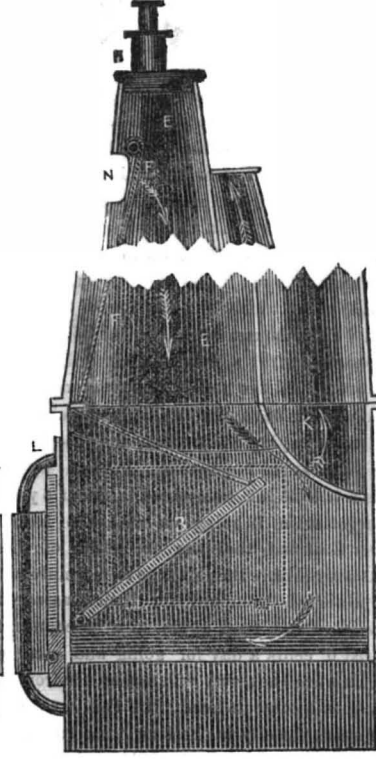


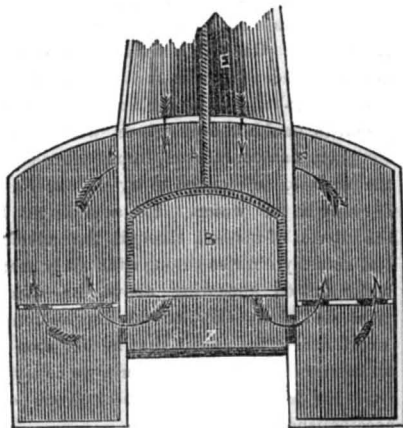
Figure 2.



This is an instrument for examining the hulls of vessels that may spring a leak at sea, and for examining the bottom of rivers and seas.

Fig. 1 is a front elevation, showing the tube in sections as it may be made of any length. Fig. 2 is a transverse vertical section of fig. 1, and fig. 3, is an interior section, showing the way the lamps are supplied with air and how the smoke escapes. The same letters refer to like parts, on all the figures. A A is a metal box containing the lamps and the mirror; E E is the main tube, which may be made of any length by sections, coupled firmly together. The box, A, is made perfectly tight, with a glass door in front to keep out the water, and it contains a mirror to receive the impression

FIG. 3.



of objects in the water. It also contains lamps to throw a brilliant light around the apparatus in any depth of water, and it therefore can be used in the darkest night as well as in the clearest daylight. B is the mirror; it is fixed on a joint at its lower end in front, and to a cord, F, at the top. This cord passes up through the main tube around a screw key or pin, G, above, so that the mirror can be raised

to a vertical position, or be retained at any angle in 90 degrees, as represented in fig. 2. K K are the lamp chambers, and C the lamps. The lamp chambers are divided completely from the mirror chamber by partitions, but the air to the lamp passes down the main tube behind the mirror, by a small passage, as indicated by the arrows, then down under the mirror chamber and through side rectangular slits below the lamps, as seen in fig. 3. The smoke escapes up through a small tube soldered to the main tube, as indicated by the arrows. There is a glass light, Z, on the floor of the mirror chamber, so that objects may be seen on the bottom, when the mirror is vertical. The sides, front plate, and back, make a recess below this light, so that when the instrument is pushed down into the water, a portion of air is confined between the water and glass, and this keeps it (the glass) always clean. L L are side flanges, to receive a slide to protect the glass door in front of the mirror and lamps, when the instrument is not used. H, at the top, is a spy glass, that may be used sometimes in combination with the main tube. When it is used, the opening through which the screw key is seen, supplies the lamps with air. The lamps throw light freely out through the glass door in front, and objects in the water are reflecting on the mirror, B, which represents those objects to the examiner, who is looking through the tube. This instrument may be hung over a ship's bulwarks, and her whole bottom examined from deck. (We know of the difficulties in the rigging, &c., to do this.) An instrument of fifty feet in length will not weigh more than 50 lbs.

Mr. Willard Day, of Brooklyn, is the inventor, and a patent for it will soon be issued. It is now being exhibited by Mr. Day, at the Fair of the American Institute, and it attracts a great deal of attention.

Campbell's Monument in Westminster Abbey

The admirers of Campbell, the author of the Pennsylvania Cottage, have raised a little upwards of £400 to erect a monument to his memory in Westminster Abbey, but the plan has been seriously embarrassed by the extortionate demands of the Dean and Chapter, a company of elergyemen who have sinecure sta-

tions connected with this cathedral church.—These greeds demand a fee of £210 for permission to occupy 12 square feet of wall with a statue of the author of "The Pleasures of Hope;" and what remains is not sufficient to procure the work. The same unconscionable hierarchy demand £150 for permission to place a bas-relief medallion of Cowper.

Useful Receipts.

Preparations of the Purple Powder of Cassius.

Dissolve 300 grains of gold in five times their weight of aqua regia, prepared from four parts of hydrochloric acid, and one part of nitric acid; evaporate the solution almost to dryness; this evaporation is requisite to get rid of the acid. The chloride of gold being re-dissolved in water, and filtered, the solution is to be diluted till it measures 26 ounces. Fragments of granulated tin are then to be put into it, which becomes turbid and brown in a few minutes; its tint gradually becomes deeper, and, at the end of a quarter of an hour, it assumes a fine purple colour; the precipitate is deposited, and it remains only to collect it on a filter.

It sometimes happens, and especially when large quantities are operated on, that the precipitate does not separate, but remains in the liquid, to which it gives a deep purple colour; in this case, it is merely requisite to heat the liquid slightly, and to add a little common salt, the product then immediately separates.

When the liquid holding the purple powder in suspension is decanted, to separate the excess of metallic tin which remains at the bottom of the metallic vessel, in the state of a black powder, are poured off with it; it is proper to allow the liquor to settle for some time, and afterwards to decant it. This operation should be repeated three or four times.

To Take a Speck from the Eye.

We lately learned a very clever and safe mode of extracting any little speck of dirt or dust from the eyes, when it cannot be easily removed by the hand. It consists in licking it out with the tongue. The person affected lays his head down with his face uppermost, and the operator, desiring that the eye shall be kept open, comes across it gently with his tongue so as effectually to wipe it clear of the extraneous body. This we find, has been a common practice among some classes of stone-cutters, on getting what is called a fire in the eye and we doubt if the whole of the resources of the medical art could afford a better remedy.

[The above is from one of our contemporaries, it reminds us that we have had the operation a number of times performed upon ourselves and we must commend it, but there are few who like to perform it.]

Freaks of a French Chemist.

M. Boutigny, the author of the experiment of making ice in a red-hot crucible, divides or cuts with his hand a jet of melted metal, or plunges his hand into a pot filled with incandescent metal. No precautions are necessary to preserve it from the disorganizing action of the incandescent; only have no fear, especially if the skin be humid, and pass the hand rapidly, but not too rapidly, through the metal in full fusion. There is no contact between the hand and the metal; the hand becomes insulated; the humidity which covers it passes into the spheroidal state, reflects the radiating caloric, and does not become heated enough to boil. M. Boutigny has often repeated the apparently dangerous experiment in lead, bronze, etc., and always with success.

The most inquisitive are generally the most loquacious; and where an individual takes great pains to make himself acquainted with our circumstances, we should suspect his motive, especially if he is lavish in his promises of secrecy.

The flavor of tea can only be preserved, by keeping it secluded from the air.