MISCELLANEOUS.

Hydrogen Gas.

If a horizontal current of hydrogen gas, emanating from a capillary orifice, be directed towards a sheet of paper, held vertically at the distance of a few millimeters from the orifice, in such a manner that the current may be perpendicular to the paper, the paper is traversed by the gas. But the gas does not, so to say, sift itself through the paper, as might be expected; it resumes its form of a column, and may be inflamed behind the paper with just as great readiness as if the paper were not interposed between the current of gas and the ignited body. Again, if a ball of spongy platina be placed behind the paper, and in the direction of the current of hydrogen, the metal becomes red hot; if the sheet of paper be an inch or so from the orifice, provided that the platina be placed close to the paper—or but a short distance from it. It is well to remark that the pressure under which this phenomena is effected does not exceed that of four or five inches of water.

If a ball of spongy platina be enveloped in several folds of gold or silver leaf, and a current of hydrogen gas be directed against it, it soon becomes red hot, and the gold or silver will adhere to its surface. A ball of spongy platina placed behind a leaf of tin foil, against which a current of hydrogen gas was directed, became highly heated, but without being red hot. But as the foil is pierced with a multitude of fine holes, which may be perceived by placing a leaf between the eye and the light, the phenomena is not very remarkable. If, however, the tin foil be doubled, the platina still becomes strongly heated.

Hydrogen gas passes in the same manner through a fine membrane of gutta percha, such as is obtained by evaporating a thin layer of a solution of gutta percha in chloroform. But hydrogen gas will not traverse small pellicles of glass, however thin they may be obtained.

Lieut. Porter, U. S. Navy, has published an article in the "National Intelligencer," about hydrogen being the principle cause of steamboat explosions. His remedy is to silver-plate iron steam boilers, and to have a pipe rising from the steam jacket to the fire or engine rooms, to show the engineer when the steam is of blue color, which he states is a sign of hydrogen gas being formed in the boiler. The pipe spoken of, if well attended, and the boilers silver-plated, he thinks steam boiler explosions would be few and far between. We never expect to see our steam boilers plated with silver, although we do not doubt but the suggestion is correct, in order to prevent the oxygen of the water uniting with the iron, and thus setting the hydrogen free. Hydrogen, however, is not an explosive gas, a compound of it, with oxygen, becomes explosive, but will not explode unless ignited by a spark or flame. The steam which escapes from the safety-valve of a locomotive, is of a blueish color close to the valve, but that is no sign of its being dangerous, for hydrogen gas is colorless and transparent.

A New Cure for Bronchial and Consumptive Complaints.

Dr. Cartwright, of New Orleans, communicates to the Boston Medical and Surgical Journal, an article entitled—"The Sugar-House Cure for Bronchial, Dyspeptic, and Consumptive Complaints." It is stated that a residence in a sugar-house, during the rolling season, far surpasses any other known means of restoring flesh, strength, and health, lost by chronic ailments of the chest, throat, or stomach. The rolling season is the harvest, when the canes are cut, the juice expressed and converted into sugar. In Louisiana it commences about the middle of October, and ends at Christmas, but it is sometimes protracted into January. Dr. C. says the vapor is most agreeable and soothing to the lungs, and in his own case entirely removed a distressing cough. He stood for hours in the sugar-house inhaling the vapor, and drinking occasionally a glass of the hot cane-juice.

Lake Fisheries.

The Chicago Tribune gives some interesting facts respecting the fisheries on lakes Michigan and Huron. This business has gradually increased until, instead of being carried on by a few Indians and Half-Breeds, as it was a few years since, ten thousand persons are now more or less directly dependent on the fisheries of lake Michigan.

From a single district in the south end of this lake, embracing the islands, bays and main land, extending north and south about seventy miles, east and west about one hundred and twenty miles, it is said there will be shipped this year not less than 50,000 barrels of fish, which will command in market about $250,000. And this too, though the business is carried on under great disadvantages, the men engaged in it generally having no capital enough to carry it on to advantage.

A Fast Propeller.

The steamship "Glasgow" arrived at this port on Friday, last week, at 11 A. M., making the passage across the Atlantic from the Clyde, in Scotland, in 12 days 17 hours. This is the quickest passage ever made, we believe, across the Atlantic to the West, by a screw steamer; the last voyage of the Great Britain having occupied 13 days and 8 hours. It is not a little singular, that the only successful European steamers paddle-wheel and screw, running to America, have all been built on the Clyde, and the only successful Atlantic screw steamers have been built by the same company. The "City of Manchester," and the "City of the Glasgow," which run between Liverpool and Philadelphia, were built by Todd & McGregor, of Glasgow, the builders and owners of the Glasgow. None of our American propellers, have yet been successful as Atlantic steamers; what is the reason?

The "Glasgow" is an iron ship of 1800 tons burden; she is very long in proportion to her breadth of beam, and is of exquisite model. She has two peculiarly constructed overhead beam engines, of 450 horse-power each which are geared to a shaft having a large wheel meshing into a pinion on the propeller shaft. The propeller is the common Woodcroft Screw having three flukes.

The Cause of the Cholera at Rochester.

During the present season there has been a great number of cholera cases in the city of Rochester, N. Y., by which a great many of the citizens have been suddenly cut off. This disease is certainly very peculiar in its developements; sometimes it proceeds along from place to place, being carried by its infectious nature; at other times it is developed as a local disease, confined to a single place, and proceeds no further. The cause of the disease, as developed locally, can sometimes be accounted for, and the "Rochester American" believes that the present foul and stagnant condition of the Genesee River, consequent upon low water, may be one cause of the contined sickness in that city. It is said that the Genesee has never been at a lower ebb than during the past season. Some have asserted that the cholera is exclusively a geological disease; that is, it is never manifested in districts of primitive formations, such as the granite districts of New England. This theory is founded upon a very strong facts.

Protection from the Fumes of Charcoal.

Jewellers, gilders, refiners of metals, and others, who are exposed to the fumes of burning charcoal, should place a large shallow vessel, filled with lime water, (which is common water with slacked lime in it, in the proportion of about four or eight ounces of the latter to a gallon of the former) near the stove in which the charcoal is burning.

The lime strongly attracts the mephitic gas evolved by ignited charcoal, and thus has a tendency of preserving the purity of the air. When the surface of the water becomes covered with a pellicle or scum, it should be changed for a fresh supply.

A Novelty.

A raft 560 feet long and 60 wide, containing 60,156 feet of timber, valued at $17,000, recently came through the Dismal Swamp Canal, on its way to New York by the inland route. It was taken in tow by the steamer Jewess in the evening and towed up as far as the Chesapeake and Delaware Canal.—The raft was constructed in Pamlico Sound, in North Carolina, and the timber cut from the bordering yellow pine forests. One of the pieces was 83 feet long by 32 inches square, and contained 591 cubic feet. Its tollage through the Dismal Swamp Canal, we learn amounted to $450.

Large Deposit of Graphite.

At St. John, N. B., near the new suspension bridge over the St. John's river, a very extensive deposit of graphite has been opened and explored to a considerable extent. The vein, or bed as it might more properly be called, is nearly vertical, and inclosed between beds of highly metamorphic schists. It is entered near the water on the face of a precipitate cliff about seventy feet high, the walls of the lode being in the main parallel to the graphite deposit. This bed has been explored by a gallery or adit level over a hundred feet, and by cross cuts at right angles to this some twenty or more feet. All these are in the graphite mass, and of course the floor and roof of the levels are of the same mineral. The quartzose walls have occasionally approached, and in some cases masses of quartz, or schist, have been included in the graphite. The course of this deposit is about northeast and southwest, or nearly in the direction of the strike of the strata of schist. The graphite is not of a very superior quality as a mass, though portions of it are quite pure. As yet no solid and perfectly homogenous masses have been taken out. It has a foliated structure more or less highly marked. Iron pyrites is too abundantly diffused in it to admit of its use for crucibles. The chief economical use made of it has been in facing the sand moulds for iron castings, for which purpose it is ground to a fine powder. Some of the finer parts are also used to manufacture pencils. Many hundred tons of graphite from this deposit have already been taken out since the mine was opened two years ago, and the supply may be esteemed inexhaustible. The vein or bed re-appears on the opposite side of the St. John's river, and on the side now opened it has been traced over a mile. The position of the deposit in conformable metamorphic schists, suggests the conjecture that this deposit of graphite may represent a former coal bed.

Post Office Envelopes.

The post-route bill passed by Congress contains a provision authorizing the post office department to cause envelopes to be made, with suitable water marks on the paper, identifying them as official, and with a printed stamp, for single or double postage with a suitable device. These envelopes are to be sold at all the post offices, at the price of the stamps now sold—with the very small addition of the actual cost of the envelopes. This will enable persons to deposit their letters, pre-paid, in the post offices, at all hours, without trouble or inconvenience, and without the risk of having double postage charged on a letter, by reason of the stamp slipping off, by the time the letter gets into the office, if not before, as is too often the case now. It will also admit of the safe transmission of letters by private hand, when preferred, without a violation of the post office laws, which, after the 1st of October, will be very stringent on the subject.

Mines of New York.

St. Lawrence County is the greatest mineral region in New York State, and about Rossic is the peculiarly favored locality. There are two valuable lead mines there, the metal being found in veins, and not in deposits, makes the working of them a certainty, if not quite so profitable as some deposits in Illinois and Wisconsin.

The disease in the grape vine is still progressing in many parts of Europe, and on the shores of the Rhine, as well as in Piedmont. The old plants of the vine are all covered with oidium tuckerie. A remark which has been made, and is worthy of being mentioned, is, that all the young vines are not subject to the disease. According to the remark, the old vines must be replaced by young ones.

There are two saw mills at Chitantami, on the Saguenay river, Canada, which run 182 upright saws and 16 circular saws. From the St. Lawrence to those saw-mills the distance is 90 miles up the Saguenay. Square rigged vessels of large tonnage go up to the mills to take in their loads of lumber, and sail direct for Europe.

What is Said of the Scientific American.

"The Scientific American newspaper is a publication honorable to our country. To mechanics, manufacturers, and inventors, it is of great value, and to the general reader affords intelligence of the most useful and interesting character."—[Boston Post.

We fully endorse the above, and would recommend the Scientific American to all who have a taste for the mechanical arts, or who take an interest in the discoveries of the age and the advancement of science, as a faithful account is given in its pages of every discovery or improvement which this prolific age brings to light. Parties in this city wishing to subscribe, can see the Scientific American at this office.—[New Brunswicker.

We are somewhat negligent in the matter of puffing periodicals, magazines, &c., unless we are really convinced that they are deserving it. Among the meritorious publications of the day, none stand higher in the scale of utility than the Scientific American. It is emphatically and truly, a scientific paper—aiming at an honorable independence in discussion, upon all subjects pertaining to discoveries in the arts and sciences. It has ever been its aim to establish sound views respecting the several miscalled discoveries, that have from time to time been presented to the public. Its pages are well stored with practical knowledge, in every branch of the arts and sciences.

We should like to see a goodly number of the papers taken among our citizens in lieu of the light and trashy reading styled fashionable literature, which comes through our post office.—[Ledger (Fairfield) Iowa.

[We have hundreds of such notices, but for want of space copy only the above.

Joseph Thomas, of Owenboro', Ky., in sending a club of subscribers, says:—

"I would also return my thanks for the pleasure and information you have afforded me during the past year, and assure you that you shall continue my name as a constant subscriber, as I know that your publication is calculated and does advance the interests of the community. I cannot forbear saying to you that, by the publication of one of your receipts, I saved more than twice the price of the paper. I needed some spelter solder in my mill, and could not get any in town, and was about to start for Evansville, forty miles distant, but fortunately thought of the Scientific American, and made as good as ever we used, this is a small matter to write you about, but I could not resist, and it is not the only time I have been benefitted."

Mr. Clark, of Ridgeway, N. C., says:—

"I have received your paper from the first number to the present time, and have been both pleased and profitted by the perusal of its contents, and am confident it will well repay, more than many times four-fold, for all the money, time, and labor spent upon it, any person who will carefully peruse its columns."

Geo. Walker, of Monroeton, Pa., says "it is emphatically a progressive paper, each succeeding volume being superior to all preceding ones. I have been a regular subscriber for four years, and have derived both pleasure and profit from its pages; I would not do without it."

Almost every subscriber has a good word for the Scientific American when renewing their subscriptions.

A natural phenomenon, which may be called one of the seven plagues of Egypt, took place on the middle of last month, at Legano, in several places of Germany, and at Friebourg, and consisted of the appearance, in those places, of clouds made of flying ants, as big as wasps. These insects covered the ground, eat all the crops, and afterwards disappeared.

Natural Curiosity.

A chestnut tree, in Centre st, Pottsville, Pa. is covered with fresh blossoms, and, at the same time, hanging full with seasonable burs. The frosts of a few nights past have somewhat shorn it of its bloom, but enough may yet be seen to mark the singular anomaly.

Sir Charles Lyell, the geologist, is on his way to the Western States to make another visit.