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Use and Abuse.

There is always more sickness during this, than any other season of the year. Disease too is more rapid in its work, and hence we have more deaths. Many causes contribute to produce these results. The extreme heat of the weather is no doubt the principal one. Putrid gases, the product of animal and vegetable decomposition, are injurious to the human system, and these are evolved with astonishing rapidity in an atmosphere above fermenting heat. In summer the atmosphere is continually above this heat, hence malaria poisons pollute the atmosphere we breathe. The delicate framework of the lungs is easily attacked with some gases, but our knowledge of the nature of malaria is very limited, yet when we know what fearful results may be produced in mixing our atmosphere with another gas, or changing its component parts, we may well say of man, in the language of Job, "he is crushed before the moth."

In large cities the atmosphere is contaminated at every season of the year, but more especially in warm weather. Then we have exhalations from sinks and drains, and every stagnant pool sends forth its malarian products and clouds of poisonous insects, which many suppose are inhaled while we breathe, and are the real causes of disease.

It is a well known fact that mountainous regions are always more healthy than others. Cities that are built on hills produce the cleanest bills of health. One cause no doubt is the difference of temperature, but the principal causes are good drainage and ventilation. The absence of stagnant pools, and the better circulation of pure air around dwellings that are built on uneven ground, are the prime causes of better health in high than in low situations. To make our cities healthy, we should be guided by sound sense in having a good system of drainage, a plentiful supply of water, and room to breathe. On level ground, it is difficult to have an effectual drainage. In this case art should step in and apply the effluvia trap to keep the drain openings always shut, excepting to receive the drainings from above. Spirited cities will always provide plenty of water, and surely houses can be built with room enough between each for a good circulation of air, and surely we might expect, that when common sense and the dictates of humanity point to this as one grand means of health, it would not be abused by selfishness. But the houses in our city at least, are stuck together, almost like prisoners in the black hole of Calcutta, and at the present moment, were it not for the abundant supply of water which we have, our city would be one vast charnel house. As it is, we cannot attribute its present healthy state, to any thing else than a good supply of water. The highest number of deaths from cholera in one day, was 55. This number out of a population of half a million, is only 1 in 9,000. This is the time when vegetables in great quantities are brought to market, and as the stomach is more weak in warm than in cold weather, many seek to gratify epicurean desires, by stuffing the body with salad and other indigestible vegetables. The result is a disordered system, affording an easy entrance to the shaft of the destroyer. Many people become so alarmed during special visitations of disease, that they adopt a new regimen to prevent it, and thus change the system, making it an easy prey to disease. We have known a few cases of this kind. It is not in the using of common food that the evil lies, it is in the abuse of it, and this at any time is a sin. It is good to be prudent to avert disease, but who can by any specific defy disease. We believe that many good people use too much preventative drops of brandy, which may create in them a disease more direful than the cholera. In its own place, brandy

may be good to cure disease, but we are afraid that few discriminate between use and abuse.

Flax Cultivation and Manufacture.

Flax and hemp are now grown to a considerable extent in some of the Western States. In 1847, there were imported into New Orleans from the interior States, 2645 tierces of flaxseed, and 1090 barrels of linseed oil. At Cincinnati there arrived by the Miami canal, in the same year, above 43,000 bushels of seed and 1400 barrels of oil. At Portsmouth there arrived 4600 bushels of seed, and at many other cities in the central and western States, the arrival of flaxseed or oil was proportionately great. The American produce of flax fibre varies from 300 to 1000 lbs. per acre; the Irish produce in scutched flax varies from 500 to 900 lbs. the acre. Perhaps the great benefit of flax growing to any country is, that it is a profitable crop agriculturally, and a great source of manufacturing industry. In this point of view, it is a crop far superior to any food crop which could be raised. Flax crop is a source of industry, of skillful labor, of manufacture.

American farmers generally sow their flax too thin. They have a strong stalk and a coarse one, therefore, the flax produced is not so fine.

It has been found that 1680 pounds of dressed flax, when converted into cambric pocket handkerchiefs, spun by hand, employ constantly for twelve months 158 women in spinning, 18 weavers, during the same period, in weaving it, 40 women in hemstitching or veining the handkerchiefs. Thus giving in all, employment to 210 persons the year round, arising out of the growth of 3 acres of one plant useful in manufactures. This does not include the hands that are supported in raising the raw article. What a field for employment in a home market. At present, we could in no shape compete in price with the linen made in Ireland. French embroidered linen collars and linen cambric handkerchiefs are the beau ideal of grandeur to our fair and gay ones, but the most of these articles come from the North of Ireland, which sell under a French name, and by giving "honor to whom honor is due," we say that they surpass the French goods. Much as has been said of Irish linen, and the fame it has conferred upon Ireland, it was the banished Huguenots of France that first introduced the manufacture into that country. This is one good that religious persecution in another country, did to Ireland.

A very valuable improvement has recently been invented in this State in the preparation and manufacture of flax. The flax is prepared, drawn in a certain state upon the common drawing frame, and it is spun like cotton and on the same machinery. In short, the flax is so prepared as to be drawn and finished on cotton machinery; producing yarn far surpassing in beauty any ever produced in the common way, and at a great deal less cost, as it dispenses with the use of the Hetchell Gill Frame, except merely for spreading the flax into strakes. The linen trade will yet be prosecuted vigorously in the Northern States, for it is not likely that in the cotton manufacture, the North will be able to compete with the South, in thirty years hence.

Flying Steamers Again.—Pennington & Company.

The Flying Machine of Professor Andrews, which was exhibited at the Inventors Institute, Perth Amboy, N. J. on the 4th inst. was the means of producing a profit out of pocket of more than \$200. While we are sorry that any person should lose money by being humbugged, we have no sympathy whatever with those who lose money by trying to gull the people—their intentions are good enough to make all they can out of those who might be credulous enough "to swallow a mountain." We have recently received two handbills giving a description of another Flying Steamer, in embryo at Cincinnati, and since "opposition is the life of business," as one donkey brayed to another, we must exhibit the opposing claims of the new Air Navigators. This is their advertisement.

"Pennington & Company propose to build an Aerial Ship at a cost of ten thousand dol-

lars. It is well as at this time to treat of other expenses, viz. a Depot of Ground lying level or slightly inclined. The ultimate success of aerial navigation would suggest the necessity of a Ship House, placed in the centre of a lot of ground from seven to ten acres in the area. We could no more operate in the air without a regularly arranged Depot, than they can in Rail Roding. It is proposed to build the ship in the city of New York, and her engine in the city of Boston; those are the selections by the inventor. The public are respectfully informed that the present engraving was copyrighted under the appellation or title of Pennington's Aerial Steamship or Composite Balloon, in the United States District Court of the State of Louisiana, March, 1847. N. B. The construction of the steam balloon may not require more than 3 months, provided that such a material can be obtained for the Balloon Cloth.

JOHN H. PENNINGTON.

There is one thing new in the above advertisement, viz. that without Railroad Companies having regularly arranged depots, they could not navigate the Air. The concluding sentence in the above too, is a beautiful piece of intelligence. "The construction of the steam balloon may not require more than 3 months, provided that such a material can be obtained for the balloon cloth." Here we are informed that the material required is three months. They will surely get that, and enough of it. This steamer is to be 230 feet in length by a proportionate breadth of a water craft. The engraving of it represents a huge dragon fly slashing through the regions above with two of the Egyptian Pyramids, base to base, slung over its shoulders. It raises a little house in its claws, all fenced round to prevent passengers throwing somersets overboard. They look like a cargo wheeled along in an omnibus belonging to the Prince of the Power of the Air.

If any person or persons think, that we doubt the practicability of such a project, we assure him or them, that we have no more doubt of it, than that our old great grandmother sometimes took a trip across Penobscot Bay on a broomstick, in the good old days of witches and warlocks. The improvement over the broomstick mode of navigation, consists in adopting the proper apparatus to suit the fashions of the times. Rocking chairs, rose water, fans, segars, the latest novels, and papers containing the account of the latest elopement, will no doubt be found on the table of the new Flying Ship. Make room, therefore, we say for Pennington & Co. Go away Porter, Robjohn and Andrews. Your ideas are not quite large enough, and we must tell our citizens of Gotham, get ready your lot of 7 acres for the depot as soon as possible. What think you of purchasing the lot on the top of Trinity church spire. That would be a fine airy location, well suited for a point of departure.

Lightning Rods.

Messrs. MUNN & Co.

Although I think your piece on this subject in last week's Scientific contains much truth, and good advice, yet as it suggests considerable difficulty in procuring suitable rods and nicety in putting them up, I imagine the article will have a tendency more to prevent than encourage their use.

Aside from the great indifference manifested, it is surprising to perceive how many bugbear suggestions people make about them, as to how they should be made, &c.

Partly in opposition to many of the recommendations about lightning conductors, I offer my own experience and that of Mr. Merriam, as detailed in my communication sent you last week, showing that small 1-4 and 5-16 inch rods, and the various imperfectly erected rods have for over 30 years, protected life and in most cases property.

I have known buildings injured, and at least one cotton factory destroyed by lightning, it having imperfect rods. I have known some few injured with apparently good conductors. But very little mischief has been done to buildings with imperfect rods compared with the amount supposed to have been saved.

Why discourage people by saying, "nine tenths of those having them are not much better off,"—that it is so important they should

be "capped with platina, gold or silver," except merely to show that thus "the highest possible degree" of perfection may be attained.

Now most people know that electricity is sent the whole length of our country on still smaller iron wires, hundreds of miles at a leap, I deem it unwise to attach much consequence to the use of gold or silver, or even copper, for tipping rods. It is rather late to suppose lightning won't light on raw iron, though the mere suggestion will do much to mystify the subject.

Such rods as are used on board war vessels can be had by the quantity, either tinned or untinned, and 100 feet long if desired, for from one to two cents per foot.

Since the facts published by Mr. Merriam, that small rods have afforded the desired protection, I have renewed my diligence to get people to provide great protection at a trifling cost, rather than discourage the many by proposing "the highest possible" security. To protect one end of a building is better than to protect no part of it.

The rule I laid down in the communication I sent you a few days ago, will answer the purpose, though no doubt a more perfect one may be framed.

I perceive that the Smithsonian Institute have ordered that this subject shall be specially reported upon. I hope it will disseminate much "useful knowledge among men," on this important subject. CLARK RICH. Shortham June 29, 1849.

[Experience is the best guide in respect to the size of the Conductor, whether it be a wire or a rod, or a strand of wires. No sophistry can resist facts—we bow to them.—The wire now coming into use for telegraphs, is iron wire covered with zinc. It answers an excellent purpose. It was first used in 1846.—Ed.]

Soap Stone.

This is a mineral of the Magnesian family. It is of a grayish color. It has a dull fatty lustre, feels greasy, easily cuts with a knife, and is somewhat tough. It is infusible before the blowpipe. It consists of silica 44, magnesia 44, alumina 2, iron 7.3, manganese 1 5, chrome 2, and a trace of lime. It is found in various parts of Europe and America, and is sometimes used in the manufacture of porcelain. It is used for polishing marble, alabaster, and mirrors. It is used to make the feet slide easily into tight boots, to remove grease spots in silks by strewing the dust on the spot of grease, covering it with a piece of paper, and placing a warm iron on the top. The soap dust attracts the grease and takes it out of the silk.

There are various kinds of soap stone, differing somewhat from the component parts above, and some of it is very beautiful. It is called steatite in Geology, and there is a spotted kind found in small veins, which when it is cut into cameos and burned in a crucible, assumes a beautiful aspect. It has been known among us, as a most capital substitute for fire brick, and it is more abundant in this country than in any other. It is very valuable, because pliable in the hands of the operative, to be cut or sawn into any form. At Mariettville, Md., are great quarries of it, and they are now making it into various useful articles. Bathing tubs, made of slabs, that are sawn out, grooved, tenoned, dovetailed together and cemented, are useful and durable articles. It is made into rollers for factories, used for moulders' dust, in antifriction grease, for water pipes, filters, and a great many other useful applications. In short, it is one of the most useful, and therefore the most valuable of minerals of our country.

A Cotton Mill, the first established in northern Ohio, has recently been put in operation at Sandusky, and is now producing heavy sheetings which are pronounced "equal to the very best manufactured in New England."

The St. Andrews Standard, of New Brunswick, says that a mine of yellow ochre, of excellent quality, has been found while making the new road from St. Stephens to Moors' Mills, about two miles from the former place.

A California adventurer, writing to his friends, says that when he first went to the diggings he hadn't a rag on his back, but now he is covered with them.