

INFORMATION ABOUT HYDROPHOBIA.

No person who has seen a case of hydrophobia can ever forget the painful scene. Of all the maladies to which human beings are exposed, this is perhaps the most mysterious, and it is surrounded with a dreadful interest. As there is a great deal of popular fallacy afloat respecting it, every item of reliable information and every gleam of light which can be thrown upon the subject deserve to be collected and placed before the public.

In the last number of *Blackwood*, there is a very profound essay on rabies, in which current ideas on this malady are shown to be not only inaccurate, but dangerously wrong. For example: it is commonly believed that rabies in dogs is peculiar to the warm months—the “dog days”—and in July and August great precautions are taken, which no person thinks of in November and December. “But,” says the writer, “the dog days have no more to do with rabies than the moon with lunacy.” In the veterinary schools of France, the records kept respecting the cause of hydrophobia show that a majority of cases have occurred not in the hottest, but *wettest* months. In April, November and December, double the number of cases occurred as compared with July and August. M. du Chaillu, the late African traveler, states that most of the West African villages are crowded with dogs, but hydrophobia is unknown to the natives. In Cyprus and Egypt, which are also very hot and dry countries, the disease is unknown, thus showing that it is not at all produced by heat or dryness of atmosphere.

It is also supposed that all mad dogs foam at the mouth, and that they run about snapping at man and beast, manifesting great ferocity. There is only one stage of rabies in dogs in which they foam at the mouth, while healthy dogs foam frequently. Gentle dogs, when affected with rabies, are generally gentle to their masters, but they will then snap at other dogs; it is only the ferocious dog that shows very great fierceness when rabid. It is also a popular belief that dogs attacked with rabies are afraid of water; hence, the name *hydrophobia* (horror of water) has been given to the malady. This is a misnomer, and the popular notion respecting it is a dangerous error. A burning thirst is one of the characteristic symptoms of rabies in its earlier stages, and when a dog laps water or plunges into it, it is no sign, as some suppose, that he has not the disease. In man, during the latter stages of the disease, there is an undecidable dread of water, and hydrophobia is not inappropriate when applied to him; but in dogs, a dread of water does not show itself in one out of fifty cases. An acquaintance of ours once pursued a mad dog which had bitten some of his hogs in the barnyard, when it plunged into a river of considerable breadth; it was then followed in a boat, and shot a short distance from the further shore. This was in the early part of December, and there was snow upon the ground at the time. The weather, as it regards heat, had nothing to do with this case, and no fears of water were shown by the animal, thus disproving two popular notions respecting the disease.

The writer in *Blackwood* states that it is as yet undecided whether rabies *now* occurs spontaneously, or is only the result of direct inoculation by biting, and it is not certain that every man and animal bitten by a mad dog will take the disease; but when it is once completely developed in a man, “the physician that cures is *Death*.” Man or beast, once infected with the poison, is doomed to a certain and horrible death.

Mr. Youatt, the greatest authority on rabies in dogs, thinks that it does not now occur spontaneously, and he believes it may be extirpated everywhere if a thorough quarantine could be established on dogs. It appears to us that at least eighty out of every hundred dogs in every community are of no use, and that it would be well to destroy just about this proportion of them.

The essayist says:—

All who are in charge of a dog may, by a little attention, discover the early symptoms of rabies, and prevent any mischief by sequestering the animal in time. Is he fidgety and sullen? Does he, when first ill, manifest impetuous affection? Is he affected with hallucination? Does he exhibit ardent thirst? Does he scratch his ear violently? and does he paw the corners of his mouth without keeping the mouth permanently open? Does he refuse his natural food, and exhibit a depraved appetite? Is he insensible to pain, and his voice strangely altered? Any one of these symptoms should awaken suspicion, and a close observation will soon discover the true state of

the case. We advise all our readers to commit this information respecting the symptoms to memory, as it may be of paramount importance at some future period.

The poison of rabies is not communicated by contagion, but inoculation with the saliva. One mysterious feature connected with this poison, is that after being bitten it may remain in the system for nearly a year before it develops itself. How it thus remains inert is unknown. When a person is bitten by a dog supposed to be mad, the only safe course to pursue is to cauterize the wound at once. It is a consoling fact that only one out of every three persons bitten by mad dogs have become affected with hydrophobia; still, the malady is so terrible and treacherous that every precaution should be used at all seasons of the year to prevent it.

OXYGEN DECOMPOSED.

When repeated charges of electricity are passed through a jar filled with atmospheric air or with pure oxygen gas, the oxygen acquires new properties. It emits a peculiar odor, it possesses extraordinary bleaching powers, and has its affinities, or power of combining with other substances, very largely increased. Schönbein, who first discovered this fact, supposed that he had found a new substance, and he gave it the name of ozone, from the Greek, *ozo*, odor; its most striking peculiarity being the odor which it emitted. It has since been ascertained that ozone may be produced by passing oxygen through moist phosphorus, and in other ways, and the various phenomena connected with it have led chemists generally to the opinion that ozone is oxygen electrified, or in some allotropic condition.

Natural electric discharges produce ozone in the atmosphere, and as oxygen in this condition is more energetic in its action on the blood, as well as in all its other actions, this may account for the peculiarly exhilarating properties of the air after a thunder storm. On the other hand, sulphuretted hydrogen and other gasses arising from cesspools absorb ozone, and this may be the cause of the bad effect on health produced by the vicinity of these pools. It may also be the true nature of malaria.

We find in *La Repertoire de Chimie* an account of some recent investigations which have revived the first idea of Schönbein, that ozone is not oxygen, but a separate element. Messrs. Andrews and Tait, after a long series of observations, regard the conclusion as probable that oxygen is a compound substance, and ozone is one of its elements.

COCOA LEAVES—THEIR PECULIAR PROPERTIES

The German chemist, Dr. Niemann, has recently been making experiments with cocoa leaves, and has obtained from them—by the following process—an alkaloid which he purposes to call *cocaina*. The leaves are first steeped in alcohol of 85 per cent strength, mixed with about two per cent of sulphuric acid. After the whole of their strength is extracted by this alcohol mixture, a little lime water is added. This neutralizes the acid, and a sirupy precipitate of a resinous character falls to the bottom of the vessel. The sulphate of lime is then removed by washing with water, and the resinous liquid is precipitated with carbonate of soda. The residue is the crude alkaloid *cocaina*, which consists of colorless crystals, mixed with a yellow substance of a disagreeable odor which has to be removed by washing with cold alcohol, or filtration through animal charcoal. Pure *cocaina* is colorless, the crystals are large prisms, inodorous, and soluble in water. It has an alkaline reaction, a bitter taste, and when placed upon the tongue it promotes the flow of saliva and induces a sensation of cold. In its chemical and physical properties it resembles atropia. It is composed of C₆₆.8, H₇.1, N₅.4, O₂₀.7=100

Besides the alkaloid *cocaina*, a vegetable wax was also obtained by Dr. Niemann from cocoa.

The leaves of the cocoa are employed in Peru as we employ tea, in order to prepare a soothing beverage. Several German chemists and physicians have recommended their introduction as a substitute for coffee in European armies, on account of the well known qualities of cocoa, to preserve life and strength for a considerable period of time without common food.

On the first of August, an aerolite weighing 83½ lbs. fell at Chorley rectory, near Lancaster, England.

COATING THE BOTTOMS OF IRON SHIPS.

A great evil connected with iron steamers is the liability of sea-weed and minute shells to adhere to the metal, by which they become foul like the bottoms of uncoppered wooden ships. As this impairs their sailing qualities by offering great resistance to their passage through the water, various compounds in the form of paints have been tried, which it was expected would answer a similar purpose to copper sheathing on timber vessels. We believe that a perfect coating for iron ships has not yet been obtained, therefore many persons are engaged in making experiments, hoping to make the important discovery and thereby acquire a fortune without a doubt. A new composition or paint for this purpose was lately patented by Mr. Geo. Hallett, of Lambeth, England, which consists of native oxyd antimony reduced to powder, dried, then ground up with boiled linseed oil similar to the mode by which thick white lead is originally mixed for painting purposes. Compositions of arsenic, copper and lead have been used for coating the bottoms of iron ships, but the oxyd of antimony may be a great improvement upon these.

American Trade with England.

The civil war in our country has had a most injurious effect upon the export trade of Great Britain with America. During the first six months of the present year British exports to the United States had fallen off about 40 per cent.

The statistics of the British export trade with this country present some very striking features. In 1845 it amounted in value to little more than \$31,500,000; in 1853 it reached \$110,000,000; in 1855 it fell to \$80,000,000; in 1856 it rose to \$105,000,000; in 1858 it fell to \$65,000,000, and in 1859 it rose to nearly \$110,000,000. It is expected that the exports will fall to \$60,000,000 for the current year.

The imports of Great Britain, on the other hand, have increased in an astonishing degree, and these are assumed to be signs of the growing prosperity of that country.

In the first six months of the present year 3,664,529 quarters of wheat, and 3,677,461 cwts. of flour were imported whereas in the first six months of 1860 the quantity purchased was only 1,394,432 quarters of wheat and 1,429,536 cwts. of flour. From New York there was exported, in the year ending June 30, domestic produce to the value of \$118,190,000, against produce of the value of \$70,215,000 exported in the year ending 30th June, 1860. The bulk of this increase went to England. In five months the computed value of all the principal articles imported into England has risen from \$225,000,000 in 1859, and \$285,000,000 in 1860, to 330,000,000 in the present year, or nearly 14 per cent as compared with 1860, and more than 30 per cent. as compared with 1859. The consequence of this increase of imports is continued cheapness in all the necessaries of life. Prices generally are low, and especially as regards articles consumed principally by the multitude. Notwithstanding the disturbance of trade arising from the events taking place here, the revenue of the British government has been better sustained in the first half of 1861 than was expected. This is fortunate for the laboring classes in England, among whom there is a vast amount of suffering, owing to strikes in the building and other trades, and short hours in the cotton factories. As regards the supply of cotton, it has as yet been but slightly affected, 5,874,435 cwts. having been received during the last six months from the United States. This quantity is less than that received during the same period in 1860, which amounted to 7,194,835 cwts; but is more than that received in 1859, which was 4,725,153 cwts.

A SUPPLY of water being needed for Fort McHenry, Baltimore, without depending upon any outside source, an artesian well was commenced, which went on very successfully until it reached a depth of 115 feet, when the auger was stopped by a bed of oyster shells. The fort has now to depend upon making a connection with one of the city mains, a rather precarious source of supply under the circumstances.

THE New Orleans *Crescent* states that an iron floating battery—a steamboat clad with thick iron plates—has been prepared and is nearly ready for attacking and destroying the blockading squadron at the mouth of the Mississippi.