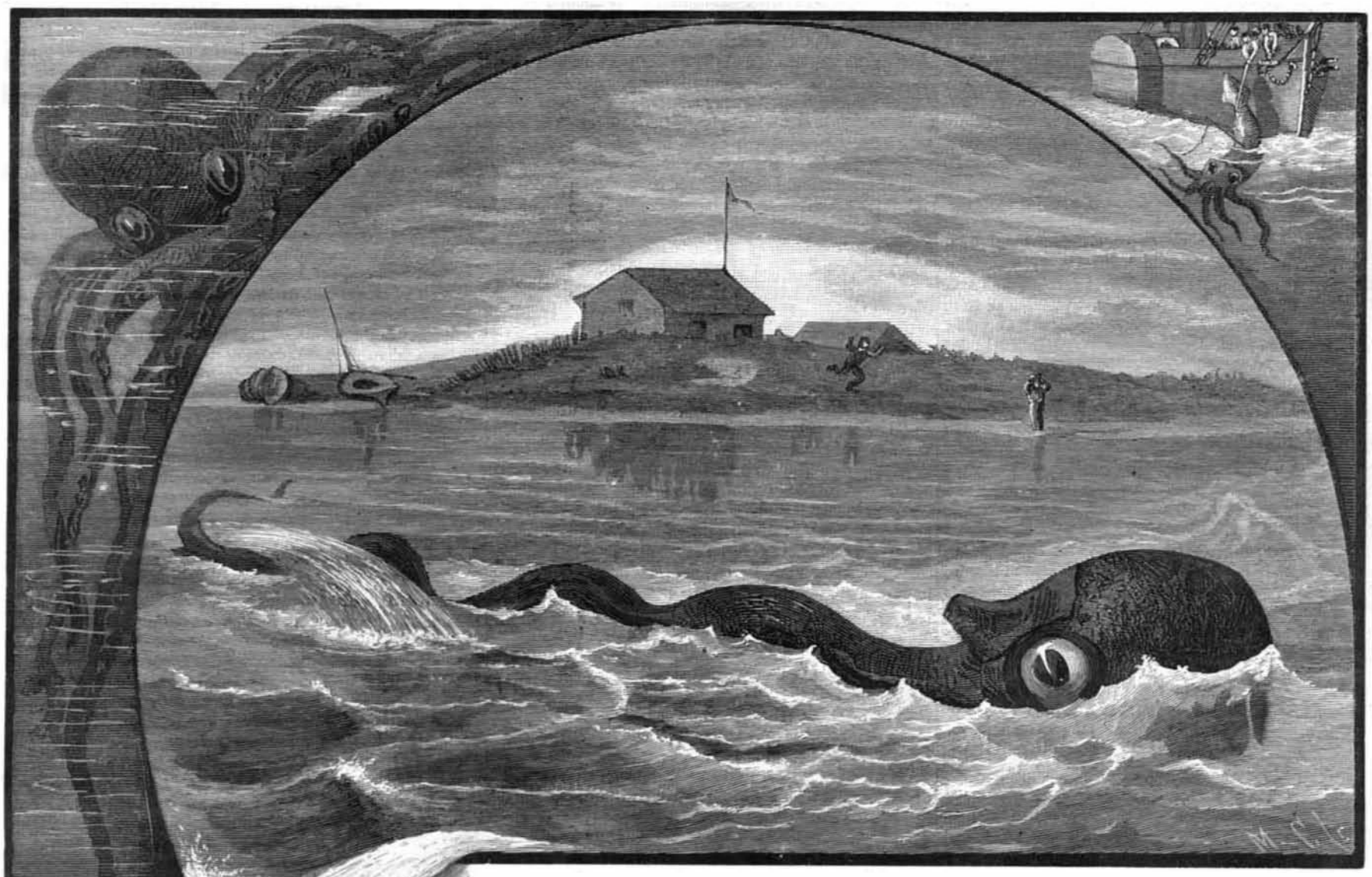
originated in Switzerland. It has also been proved by the successful manufacture in Russia of the English Cheddar and the Dutch Edam cheeses, and even the odorous Limburg confirms this assertion, for its manufacture has been so successfully domesticated in the United States by our German fellow-citizens that, as suggested by a member of the Paragraphers' Association, "the difference from the imported article cannot be told unless you are off to the windward three miles."

THE SEA SERPENT ACCOUNTED FOR.

BY DANIEL C. BEARD.

The New York Sunday *Sun* of November 30 gives the following description of the Sandy Hook monster, as related by eye witnesses, who are all members of a Sandy Hook life saving crew:

Samuel Kittell was the first to see it. He says: "I looked out and saw a large head and portions of the body of a most terrible looking monster. It was wriggling slowly along like a snake, the head and several portions of the body showing above the water. It was not a whale, as there was not more than twelve feet of water where it was, and a whale as large as that would necessarily have been in view all the time. But this thing would disappear altogether at intervals. No fin could be seen anywhere on the back. The body looked round and much larger than a pork barrel. It was of a blackish-brown color. I am sure it was not a whale, but cannot say what it was. It was a stranger to me."



THE SANDY HOOK SEA SERPENT.

George Lohsen makes the following statement: "I took the glasses and ran down to the water's edge and leveled the glasses at the monster's head. The front of the head was square, with a projection about two feet long extending from the top of the head. The eye was seven or eight inches in diameter, of a shiny black, and it appeared bulged out considerable. There looked to be a white rim around it. The animal's length was at least 300 feet from the head to the tail, as seen by us, not making allowances for the crooks in the body."

Harry Foster, another of the crew, says: "I got up and looked out, and saw the devilishest looking fish I ever put my eyes on. It was moving along about as fast as a man could walk. I took a pair of strong glasses and followed it along the beach. It was not more than 300 yards from the shore. With the glasses the head looked as large as a hogshead. The front of the head looked square, and was about three feet high, with a projection two feet long extending from the top of its head. The eye toward the shore was as large as the top of my hat, was shiny black, and had a white edge. It had a very fierce look. . . . From the head to the tail it was at the least calculation 300 feet long. It was moving along the water the same as an eel. The head and several parts of the body were constantly out of the water. It was some species of serpent. It was certainly not a whale. . . . This thing did not spout, and showed no fins on any part of its body excepting on the tail, which was formed like that of an eel."

Well authenticated facts now prove that nature produces monsters as wonderful and startling as the most vivid imaginations of the romancer can invent. Victor Hugo's devil fish has its counterpart in the great cephalopod which was for a long time on exhibition in the New York Aquarium.

There is no doubt, in my mind, that the monster lately seen off Sandy Hook by the crew of the life-saving station was no other than a large cephalopod. That these animals often attain enormous dimensions is a well established fact, but that this one was "three hundred feet long" is scarcely probable.

One seen in the neighborhood of Van Diemen's Land is described as resembling a cask, its long arms having the appearance of snakes wriggling upon the surface of the water. This creature, says Kent, was probably a large poulpe or octopus. In December, 1861, the crew of the French corvette Alecton, engaged in battle with a calamary, whose body alone was estimated to be twenty feet in length, and its weight 4,000 pounds! It escaped, leaving a portion of its flabby body in the possession of the brave sailors, who were only restrained from following it in small boats by the officer in command, Captain Boyer.

October 26th, 1863, two fishermen noticed off Great Bell Island, Conception Bay, what they supposed to be a large bale of goods from some wreck. It was not until they actually struck it with a boat hook that they saw the terrible staring eyes of an immense poulpe; two of its numerous arms were thrown across the boat; one of the men severed these with a hatchet, the creature then moved off backwards. The amputated arms left in the boat were brought to St. Johns. The Rev. Mr. Harvey, who was the first to examine and describe these limbs, found that one fragment measured nineteen feet, although a large portion of it had been destroyed before it was rescued from the fishermen, and there is no way of determining how much more remained attached to the body of the animal.

Many other well authenticated instances could be enumerated to prove the immense growth of this family of marine monsters, but those given are sufficient to establish the fact that these "monarchs of the ocean," as Kent calls them, do exist, and that their main characteristics are as follows:

1st. The body is large and round, and described as resembling sometimes a cask, and again a bale of goods.

2d. The eyes are large and staring.

3d. The arms or tentacles are of great length, and have a snake-like appearance and motion.

On comparing these peculiarities with the descriptions of the Sandy Hook leviathan, as obtained through the enterprise of the *Sun* from eye witnesses, the similarities, even to the expressions used, will be apparent.

The fin, or what was supposed to be the serpent's tail, can be readily accounted for by the fact that in some species of the cephalopod the longest tentacle widens and flattens at the end, and might easily be mistaken for a caudal fin. When moving through the water these animals bring their many arms together in a line, thus affording the least possible resistance, and propel themselves by ejecting water from their siphons.

Imagine one of these horrible creatures, with its sac-like body half submerged in the shallow water, its large protruding eyes above the waves, swimming with its long snake-like arms or tentacles trailing far behind, and you have a very fair picture of the wonderful gigantic hydrophidian or marine serpent of which we have had such thrilling accounts.

A Singular Specimen.

Mr. E. L. Wood, of Eastland City, Texas, sends us a drawing and description of a curious bone, through which passes an iron ring, now on exhibition in a drug store in that town. It appears to be a shank bone, the iron band being so interlocked with it that to separate them one or the other would have to be cut or broken.

Mr. Wood says: "The side of the bone encircled by the band has a smooth appearance, while its opposite side is rough and serrated. The band is about 12 inches in circumference, 2 inches wide, 3/8 of an inch thick, and is beveled from its upper edge downward. At the square opening near where the bone is supposed to have joined the hoof, and extending upward several inches, is a porous formation, of the appearance and consistency of bone. Did the iron band pass through the foot and ankle, and is this linking together the result of ossification?"

The Last Number.

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New Tanning Materials.

We translate the following paper from the *Chemiker Zeitung:*

The number of the tanniferous matters introduced into trade has been of late decidedly increased. This result is due in part to the penetration of travelers into uncultivated lands, and partly to the fact that the old traditional astringents have become scarcer and dearer. The oldest known and formerly almost exclusively used wares, such as oak bark and sumac, are now insufficient for the demand, so that many substitutes have been found necessary, both in dyeing and tanning. These have almost exclusively been derived from foreign lands. Many were to be found at the Paris Exhibition of 1878, and have excited the attention of practical men. Some of them have since taken a place in the market, and others deserve to be brought into use. This induces us to make a brief mention of some kinds.

Species of Acacia.—These trees, natives of Australia and Africa, are known for their tanniferous bark, their pods, and their gum. The tanning barks known in commerce are nearly all derived from Australia, and are known as mimosa bark. Their percentage of tannin ranges from 15 to 32, but the kinds generally imported average 28 per cent, or two and a half times as much as good oak bark. The Australian kinds are: *Acacia harpophylla,* a very rich sort, from Queensland; *A. cunninghami,* the black wattle, from Queensland; *A. mollissima,* likewise known as black wattle; *A. retinoides,* from Victoria; *A. pycnantha,* or gold wattle; *A. subporosa,* from Victoria and New South Wales, one of the poorest sorts; *A. penninevis,* the hickory acacia, with about 20 per cent of tannin; *A. decurrens,* also called wattle tree; *A. melanolylon,* the black wood of Tasmania and New South Wales; *A. dealbata,* the silver wattle of Tasmania; and *A. leiophylla.* All these species are in use in Australia, and are imported into Europe, and especially into England, under the name of mimosa bark. Those preferred on account of their large proportion of tannin are: *A. harpophylla, mollissima, pycnantha, leiophylla,* and *cyanophylla,* the four latter of which average from 24 to 32 per cent.

The writer remarks that as no German merchant obtains these barks except *via* London, it may be important for German merchants to know that there is a nearer and more convenient source of these valuable barks in Algeria. [Not surely nearer than London?] In this French colony the Australian acacias, and especially the four last mentioned, have been cultivated for some years. The seed pods of the acacias, with the exception of *A. leiophylla,* are very rich in tannin. The production in Algeria is very trifling in comparison to that of Australia, but the plantings are being extended, and the trees grow quickly.

Algeria is a land very suitable for tanning materials; *Pistacia lentiscus* grows there in quantity, especially in the department of Oran. The rind is poor in tannin, but the leaves contain 12 to 15 per cent. This tannin has little color, and might be used by dyers in place of sumac. The leaves are oval, pointed, and are easily ground and extracted.

The rind of the cork tree (*Quercus suber*) is a rich Algerian tanning ware containing from 12 to 16 per cent of tannin. It forms in Algeria extensive woods, but the true bark is never stripped till the trees are too old to yield cork, when they are cut down. This applies also to the cork trees of Sardinia and Spain. The bark is chiefly sent to France, Italy, and England.

The evergreen oak (*Quercus ilex*) is being rooted out wholesale in Algeria to make room for the cultivation of wheat. The kermes oak (*Quercus coccifera*) is being treated in the same way. The root bark is very rich in tannin, and is extensively used for tanning in the south of France.

A bark which at the Paris Exhibition excited some attention by its high percentage of tannin is the suobar. It contains 24 per cent, is obtained from *Pinus halepensis,* and grows in Tunis. It occurs in pieces, which in form and color (?) resemble potsherds. It dyes a brown-green with iron mordants.

Besides the quebracho wood, South America furnishes four other important tan wares. The algarobilla of Chili is the pod of *Balsamo carpum brevifolium,* a tree which grows wild in rocky districts of Chili. The natives gather the fruit before it is perfectly ripe. When they are fully ripe the epidermis breaks easily, and the tannin, which forms a yellow, crumbly layer under it, is lost. The pods are nearly cylindrical, and resemble those of the locust tree. They contain 40 to 60 per cent of tannin, and a small quantity of a yellow coloring matter. The tannin is readily soluble in cold water. The present price is about £28 per ton, but the production does not exceed 200 to 300 tons. The harvest takes place in February. Valparaiso is the center of the trade. It is used in Europe, especially in North Germany, for tanning, and is preferred for uppers and harness leather, as it imparts a peculiar softness. Its importation is at present suspended owing to the war between Chili and Peru.

Chili furnishes two other tanning materials, one of them very important and the other capable of becoming so. The bark of *Persea linguy,* a tree belonging to the family of the Laurineæ, serves in South America, and especially in the Chilian province Valdivia, for tanning the so-called Valdivia leather, which is now imported in quantities. Some years ago attempts were made to introduce this interesting and useful bark into Europe, but unsuccessfully. Now it is imported by way of Hamburg, and has given very good results everywhere. The bark is red-brown, soft, and very porous, and can, therefore, be easily extracted with water. It contains 20 to 24 per cent of tannin, as well as a considerable quantity of a slimy matter, which is very important in tanning operations, as it promotes the swelling of the hides. There is also a small quantity of soft fatty matter of a peculiar odor. In the south of Chili there are inexhaustible forests of the *Persea linguy,* so that we may hope there may soon be found more importers of this useful bark, which by its rapid action in tanning, and by the weight of the leather produced, may assist the European tanners to withstand Chilian competition. While this bark is used for sole leather, the rind of *Laurus peumo* is used in Chili for tanning uppers. This latter bark has not yet been imported into Europe on the large scale.

Another Chilian bark is that recently imported under the name of Churco bark, *Oxalis gigantea.* In the first place this bark is not derived from any species of *Oxalis,* and an *Oxalis gigantea* does not exist. It is now known that this bark is obtained from the roots of a large species of fuchsia (*Fuchsia macrostemma*). The percentage of tannin is on the average 24 per cent, and the color of the watery extract is a dark brownish yellow.

Several other South American barks were to be seen at the Paris Exhibition, which were really worth importation, though they are at present neglected. We mention in the first place the Nancite bark, from *Malpighia punicifolia.* This bark, known also as Manquitta bark, contains from 20 to 30 per cent of a very light colored tannin, and comes from Nicaragua. The same region exhibited the Nacascolo bark, obtained, according to some, from Pernambuco wood (*Cæsalpinia echinata*), and according to others from the divi-divi tree (*Cæsalpinia coriaria*). It contains only about 3 per cent of tannin.

In Venezuela there are also several barks rich in tannin. That of the "roble colorado" (*Tecoma pentaphylla*) contains 27 per cent of tannin, accompanied by a considerable quantity of an orange-red coloring matter, which is also soluble in water. It is met with in large, thick pieces. The mangel bark (*Rhizophora mangel*) comes likewise from Venezuela, and contains, if obtained from young stems, 24 to 30 per cent of tannin, and much red-brown coloring matter. The old, thick bark is poorer in tannin. The cuspa bark, also from Venezuela, is poor in tannin. Peru yields the pods of a shrub, locally known as pay-pay (*Inga fenillei*). They are large, thick, and deep reddish brown, and contain 24 per cent of a tannin, which is almost colorless, and admirably adapted for the uses of the dyer. It deserves to be imported. —*Chemical Review.*

Health at Home.

At the recent Sanitary Congress at Croydon, England, the president, Dr. B. W. Richardson, F.R.S., gave an address on "Health at Home." That there was no place like home was a saying peculiarly appropriate to his subject, for the river of national health must rise from the homes of the nation. He would lay down a few golden rules for securing health at home. First he would put sunlight. Whether your home be large or small, give it light. In a dark and gloomy house one could never see the dirt that polluted it; unwholesome things got stowed away and forgotten, the air became impure, and soon some shade of ill health was engendered in those persons living in the house. Not only was the mind saddened in a home that was not flushed with light, but sunlight was of itself directly useful to health. The practice of placing sick people in dark and closely-curtained rooms was alike pernicious to body and spirit; and, moreover, he had found by experiment that certain organic poisons analogous to the poisons which propagate epidemic and contagious diseases were rendered innocuous by exposure to light.

He would next refer to the allied topic of night and hours of sleep. If it were good to make all possible use of sunlight, it was good equally to make as little use as possible of artificial light. Artificial lights, so far, had been sources of waste, not only of the material out of which they were made, but of the air on which they burned. In the air of the closed room the present commonly-used lamps, candles, and gas-lights robbed the air of a part of its vital constituent, and supplied in return products really injurious to life. Gaslight was in this respect most hurtful, but the others were bad when long kept burning in one confined space. The fewer hours after dark that were spent in artificial light the better, and this suggested, of itself, that within reasonable limits the sooner we went to rest after dark the better It was of the greatest importance in a healthy home to let every person have a separate bed, and the clothes should be light and warm. As the bedroom was the room in which one-third at least of the whole life was passed, that ought to be the room on which most trouble after health should be bestowed. The rule followed was the reverse of this. The bedroom should be so planned that never less than 400 cubic feet of space should be given to each occupant, however good the ventilation might be. The walls should be colored with distemper or with paint, that, like the silicate paint, could be washed three or four times a year. The windows should have nothing more than a blind and a half muslin curtain. The floors should have carpets only round the beds, without valances from the beds. The furniture should be as simple and as scanty as was possible, the chairs free of all stuffings or covers that could hold dust. Of all things, again, the room should be kept clear of vestments not in use. From time to time a fire should be made in every bedroom, that a free current of atmospheric air might sweep through it from open doors and windows. Dry scrubbing was by far the best mode of cleansing the floor. An equal temperature of about 60° F. should be maintained, as far as possible, throughout the house, a free access of air, and, above all, dry.

His last rule he would take from the more strict of our Jewish fellow-subjects, that of a complete household-cleansing once a year; the cleansing of every article, great and small; of every wall and floor, door and lintel; and the removal and destruction of all organic refuse, however minute.

The Treatment of Diphtheria.

Dr. Thomas Gurney, senior physician to the City Dispensary, London, makes the following contribution to the *Lancet:*

"Since I have held the position of physician to the City Dispensary I have had considerably more than one thousand cases of disease of the throat under my care, many of which, both in public and private practice, have been cases of diphtheria. About this, by far the most serious disease of the throat, we have much to learn. The stiffness in the neck, the disturbance of the circulation, the rapid rise of temperature, before any affection of the throat is observed, all point to its being a blood poison calling for prompt and decisive treatment.

"The two questions that arise when called to a case of diphtheria, as, indeed, in all diseases, are: How does the disease tend to kill the patient? and, How does nature endeavor to rid herself of the disease?

"Diphtheria tends to kill by suffocation and by its poison exhausting the vital energy. Suffocation may be either accidental, or as a natural result of the throat affection—accidental if, when the membrane is thrown off, it becomes lodged in the larynx; natural if the swelling inside the throat shuts off the supply of air to the lungs. Nature will attain the mastery over her enemy if the strength be kept up and the deposits arrested. With these points to guide us we know that the arrest of the disease and nutritious support are our great aim. To succeed in this I have adopted a respirator made of the ordinary shape and size, the front being minutely perforated. Inside of the respirator I have two or three perforated plates inserted, between which I place common tow (not cotton wool); I then drop on each of the layers of tow ten to twenty drops of a solution of carbolic acid, creosote, and glycerine. Should the patient tire of these, I use turpentine or iodine. I place the respirator over the mouth, and keep it continually applied. My next idea is to provide the patient with warm moist air. To do this I have two kettles of water kept boiling on the fire; attached to the spouts of the kettles I have an elastic tube of an inch caliber, at the end of which is a spray-like nozzle, which I put immediately under the mouth of the patient. By this means I get my disinfectant remedies carried moist to the throat. As a sedative to the pain I know nothing so comfortable to the patient. Previous to this I take care to give an active purge, which usually removes offensive stools of effete, poisonous matter. Internally I give aconite in frequent small doses—two to four minims of the tincture; at the same time freely supporting the strength with milk, cream, and eggs, with or without brandy, and beef tea *ad libitum.* As a drink I recommend patients to take as much chlorate of potash in solution as they can without vomiting. I have found chlorate of potash highly beneficial in all cases of a low typhoid character. If this is objected to, I advise the juice of lemon to be taken—by many thought to be a specific for diphtheria. Should the system be very weak, I prescribe belladonna instead of aconite; but I find better results from the latter. As soon as the urgent symptoms have subsided I order strychnia, with or without nitro-hydrochloric acid—this not only being the best tonic, but also preventing the paralysis which so often follows diphtheria. I have found this treatment to be highly beneficial, but, knowing the tendency there is to rheumatism after this terrible disease, I never forget our friend the bicarbonate of potash."

Zymotic Contagion.

Professor Tyndall asserts that diseases are propagated not by effluvia or sewer gas, but by solid particles discharged into the atmosphere by currents of air or gas. This he proved by the following experiment: He cut up a piece of steak, steeped in water, heated it at a little above the temperature of the blood, then strained off the liquid; in a short time this fluid became turbid, and when examined through a microscope was found to be swarming with living organisms; by the application of heat these were killed, and when the solution was filtered he obtained a perfectly pure liquid, which, if kept free from particles of dust, would remain pure for an unlimited period; but if a fly were to dip its leg in fluid containing living organisms and then into the pure liquid, the whole would be swarming with animalcula in forty-eight hours.

Table Salt an Aperient.

Physicians have for a long time known that common table salt is an efficient aperient in ordinary cases of constipation. In a lecture on a case of nervous affection, Dr. Weir Mitchell, of Philadelphia, said that he had recommended the patient to take each morning on rising a tumblerful of water—cold, to prevent nauseating—in which was dissolved a teaspoonful of table salt.

'This simple aperient," the doctor adds, "I frequently employ in cases of constipation, and generally find it efficient. There is great advantage in starting the bowels and in keeping them in a soluble condition, particularly in cases of nervous disorder in women, as it sometimes clears up obscure points in the case, and at all events eliminates one source of error."

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