

'delicious, evidently just boiled,' by those who partook of the same. The eggs which had not been treated with the bisulphite, &c., all, more or less, decomposed under the influence of the heat, while the others remained 'new laid' throughout. In a word, these experiments, intended to test, in the most severe manner, animal food treated with bisulphite of lime, at a tropical temperature, simply afforded still further evidence of its practical use.

"At the time at which we write, some three months since the trials we have just recorded, all the meats, fowls, &c., remaining uneaten are perfectly good and sweet, although exposed to the ordinary changes of temperature, &c., in a rather warm room."—*London Gas Journal*.

Disinfectants.

The *British Journal of Gas Lighting* says:—"Dr. Voelcker has reprinted from the *West of England Agricultural Journal* his treatise on disinfectants, which contains within a short compass, in very plain language, a mass of information of a very useful nature on a very disagreeable subject. It tells us how to extinguish not only stinks, but the poison of which stinks give notice. Dr. Voelcker gives the preference to carbolic acid as a real disinfectant." He says:—"My experiments have shown me that meat just covered with an aqueous solution of carbolic acid, containing only one per cent. of acid may be kept for many months—for all I know for years—without giving off the slightest disagreeable smell. A weaker solution does not prevent decomposition. The doctor does not agree with those who recommend the addition of any disinfectant to stable manure, with the view of improving its manurial powers, although it checks foul smells. Charcoal absorbs sulphuretted hydrogen, ammonia, and other strong-smelling gases produced during the decomposition of meat, and also hasten the destruction of animal matter. As an illustration of this power, the doctor mentions that a fox was sent to him to dissect. He placed the hind quarters in a wooden box, and covered them with charcoal rather less than an inch in thickness, and left the box on his work-table in the laboratory. During four months no disagreeable smell was noticed, and when the remains were examined at the end of that time, he found, to his surprise, that the flesh had disappeared to a greater extent than it would have done had the fox been buried in the ordinary way. The remaining flesh, after the removal of the charcoal, on being cut, gave out a horrid stench, showing that putrefaction was actively at work. As to dry earth, Dr. Voelcker says, if a sufficient quantity of earth is employed to absorb the mixture of urine and fæces, the contents of privies can be removed periodically—say once a month—in the dry-time, with little or no inconvenience. They should be removed at once under a roofed shed, and spread out as much as space admits, and left exposed to the drying influence of air. When dry it may be used again in the privy like fresh soil, and the same process may be repeated three or four times. During the drying in the shed no appreciable amount of fertilizing matter is lost; and as the earth after each removal from the privies becomes charged with an additional quantity of manuring matter, a very

useful manure is finally produced, with little trouble, and at a mere trifling expense (*in rural districts*). Carbolic acid destroys all stench and bad odours generated by the decay of animal refuse, and kills vitality of living cells, and its value as a disinfectant is unquestionable. *Direction for use*. Mix one pound of carbolic acid with five gallons of warm, soft water, and stir well together. This may be used with advantage for disinfecting sewers, drains, the contents of liquid manure tanks, water-closets, stables, and cow-houses. To impregnate the atmosphere of stables and cow-sheds with carbolic acid vapours, mix equal parts of water and carbolic acid together, and soak up the liquid completely with dry sawdust; or pour two gallons of the mixture over a sack of sawdust. This may be handled with perfect safety, and when spread about will charge the air with the volatile vapours of the most powerful known antiseptic. This, if it does nothing else, will keep down the taint of putrid urine and decomposing dung. In the course of experiments a quarter of a pound of fresh beef was immersed in a solution of *one part of carbolic acid in one hundred of water*, on the 27th of December. The beef remained for two months perfectly free from any disagreeable smell; the liquid turned slightly acid, and its colour became slightly un-sightly, but no gas bubbles or trace of fungoid growth could be detected. By degrees the liquid evaporated, and after having been kept ten months, without giving off the faintest putrid odour, the meat, dried into a tough, leathery mass, still faintly smelling of carbolic acid. For water-closets, a solution of sulphate of iron or Condy's disinfectant are the best."

Oxygen.

Another oxygen process is reported in the *Chemical News*. On heating a concentrated solution of chloride of lime, with only a trace of freshly prepared moist peroxide of cobalt, the hypochlorite of lime was entirely decomposed into chloride of calcium and oxygen and no chloric acid was formed. The evolution of oxygen commences about 70° or 80° and continues in a regular stream, with a slight frothing of the liquid. The peroxide made use of in one experiment may be employed again to decompose a fresh quantity of hypochlorite of lime.

Artificial Agate.

Agate when polished is sometimes seen to bear markings which have a curious resemblance to a variety of natural objects, such as trees, bushes, and occasionally animals. These natural appearances, it seems, may be easily imitated artificially in various shades of color on common chalcodony. It is only necessary to draw the design on the polished stone, using a common goose quill, with a tolerably strong solution of nitrate of silver, and then drying it in direct sunlight. The drawing will at first be of a brownish color, but if it be dried and touched over two or three times it will be reddish. The same solution of nitrate of silver mixed with 12½ per cent. of soot and 12½ per cent. of bitartrate of potash will give a greyish-brown color. A violet color may be obtained by mixing one part of alum with three parts of the silver solution. Gold dis-