

LIQUID CARBURETING OF COAL GAS.

When coal gas or air is passed through a volatile liquid hydro-carbon, such as naphtha or benzole, it absorbs some of the liquid which passes off as vapor, and it then burns with a more brilliant flame. What was called Paine's water gas consisted in passing the hydrogen of decomposed water through naphtha, a mixture of alcohol and turpentine, or benzole. Mace's benzole light consisted of air passed through benzole. That coal gas or air would take up a portion of naphtha, when passed through it, was well known thirty years ago, as at that period Charles Mansfield, of Manchester, England,—the discoverer and first patentee of various coal-tar oils—proposed to naphthalize common air and employ it for illumination. Since then it has been proposed several times by persons in various parts of the world, and within the past year the subject of naphthalizing the coal gas used in London has been revived, and an apparatus for carrying out the system has been applied to several of the street lamps. A large number of patents have also been taken out in England lately for modifications of the apparatus in applying the naphtha to coal gas. One granted to R. A. Brooman, of London, is described as follows:—"This apparatus for carbureting gas consists of a vessel for containing the carbureting liquid, and of a carburator fitted to the first-named vessel. The reservoir is placed above the carburator, and is independent of it, so that it can be removed for the supply of fresh liquid. It consists of a vessel with an aperture at the top for the introduction of the liquid, and which aperture is hermetically sealed by a stopper. The reservoir communicates at bottom with the carburator by means of a tube, the mouth of which is covered with metallic cloth to filter the liquid as it flows out. The carburator, which is supplied from the reservoir, is divided into three compartments, each of which forms a small vessel. These vessels are fitted with cotton wicks extending vertically the whole depth, or nearly so, of the apparatus. The gas, after having passed through a tap of peculiar construction, reaches the carburator through a pipe, and descends by another pipe to the lower part, where, after having traversed the three compartments fitted with wicks, it becomes enriched, and issues from the apparatus by another pipe to the burner." In this case cold naphtha is distributed over an extensive surface, and the gas thus vaporizes it more freely. Another patent granted recently to W. R. Bowdich, of Wakefield, Yorkshire, England, embraces the feature of heating the naphtha to vaporize it, after which it passes through a pipe in the apparatus and mixes with the coal gas. The nature of the invention is described in the patent to consist "in applying heat to vaporize and keep vaporous the hydro-carbons employed for carbureting or naphthalizing gas for illumination, and in passing gas, before it is burned, through or over the heated hydro-carbons; also in heating the hydro-carbons, and keeping the volatile products hot by the gas flame itself, and in improved apparatus."

All these attempts to improve the system of gas-lighting appear to be unscientific and objectionable. In every case where heat is applied to vaporize the naphtha for mixing with the gas, the vaporizing vessel must be placed near the burner, as heavy hydro-carbons condense easily and will obstruct the flow of gas; in such an instance it is essentially the combination of a small retort with every gas-burner. And in the case of using the naphtha cold to enrich the gas, this is essentially the combination of a liquid naphtha lamp with a gas-burner. Such devices and apparatus are complicated, troublesome, and expensive; the employment of refined petroleum alone in street lamps would be less objectionable. The cleanliness and convenience of coal gas constitute its leading merits, and it appears to be absurd to seek to improve its illuminating qualities by liquid hydro-carbons, through the agencies of lamp arrangements. Common coal gas may be enriched by employing superior material for the manufacture. The agent in the gas which produces illuminating results is olefiant gas, which abounds in greater abundance in oil, resin, and some cannel coals than in common Liverpool coal. The gas made from the Scotch Torbane-hill coal, for example, possesses double the illuminating powers of that

made from English coal; and there is about as great a difference in the quality of some American gas coals. The best and most simple method of enriching coal gas is to employ that material for manufacturing it which yields the greatest amount of olefiant gas.

Curious Customs of some Barbarians respecting Diet.

If we turn to the natives of Greenland, we shall find their carnivorous habits tending almost exclusively to animal substances. Their dishes are, however, generally such as are not likely to be excessively provocative to any but Northern palates; their greatest delicacy being, in many cases, part of a whale's tail, rendered soft and easy of digestion by being half putrid, or perhaps a seal's carcass in the same delicious state. Among other delectable dainties, they sometimes present the flesh of bears, sharks, gulls, &c. The poorer class subsist on even a coarser bill of fare, they being compelled to satisfy the cravings of their omnivorous stomachs with whatever kind of food they can find; even from the flesh of their foes down to those delicate zoological specimens which they may discover on each other's heads. In times of scarcity they wander to the coast and avail themselves of sea-weed, which, of course, they find sufficiently saline without the addition of salt. The Laplanders live upon the reindeer and bear, their ordinary libation being whale-oil, or water in which juniper berries have been infused. It is a well-known peculiarity of countries which lie within or near the Arctic circle, that the inhabitants require four or five times as much food as those of temperate climates. At Nova Zembla, from the greater activity and vigor of the digestive organs, Europeans are obliged to follow the example of the natives by drinking the blood of the reindeer and eating raw flesh: the intense cold removing that disgust which such doses among other people would naturally inspire among other people. To inhabitants of warm countries, temperance, or even occasional abstinence, is therefore no very difficult virtue; Northern nations, on the contrary, being voracious from instinct and necessity, to keep the requisite quantum of caloric. The wandering Calmuc Tartars also eat the flesh of horses, wild asses, and other animals, often in a raw state. The Chinese, on the other hand, are famous for the richness and variety of their entertainments, although some of their viands are somewhat novel and curious. An account of one of these is thus given by Captain Laplace, who attended one of their feasts:—"The first course was laid out in a great number of saucers, and consisted of various relishes in a cold state, among which were salted earthworms, prepared and dried, but so cut up that I fortunately did not know what they were until I had swallowed them; smoked fish and ham, both of them cut up into extremely small slices; besides which, there was what they call Japan leather, a sort of darkish skin, hard and tough, with a strong and far from agreeable taste, and which seemed to have been macerated for some time in water. All these dishes, without exception, swam in soup. On one side figured pigeons' eggs cooked in gravy, together with duck and fowl cut very small, and immersed in a dark-colored sauce; on the other, little balls made of sharks' fins, pounded shrimps, and maggots of an immense size." Among the subordinate classes of the Celestials the feeding is almost as indiscriminate as among Northern savages; cats, dogs, and such like delicacies being regarded as first-rate; a drowned rat is also deemed a dainty dish. The Siamese are still less scrupulous in their tastes; they devour, without distinction, rats, mice, serpents, putrid fish, and all sorts of garbage. It is said those refined gourmants, the Parisians, also indulge strange fancies for dog's meat, delicately fricasseed; and, according to a celebrated satirist, we are informed that "when cats is in," the street pie-man drives a great trade. The most disgusting of all recitals yet remains; it is too horrible, however, to dilate upon in this place—we refer to the practice of cannibalism. In the island of Sumatra, for instance, as well as among other savages, the prisoner of war is doomed to become the living repast of his wretched captors, and is literally eaten piecemeal. As an extreme contrast to the carnivorous tribes, we may mention the Brahmins of India, who religiously abstain from every kind of animal food, and even think it a crime

to destroy gnats or other vermin by which they are annoyed. In Persia very little animal food is eaten, vegetable diet being almost universally preferred. The inhabitant of Australia, again, is characterized by his carnivorous propensity for kangaroos, opossums, various sorts of insects, eggs of a large species of snake, and wild honey. The Caffres, in common with those savages already referred to, are in the habit of devouring various kinds of reptiles, such as large caterpillars, from which butterflies and moths are produced, also white ants, grasshoppers, snakes, and spiders; they also indulge in more substantial meals of buffalo beef, and the flesh of even the lion. Our neighbors of Mexico are said to be, like the French, very partial to frogs; the banana, however, forms a principal article of food with them, also the cassava, which is extremely nutritive; but the flesh of monkeys is with the Mexicans, as well as the inhabitants of some of the West India islands, very generally used, since they have a good supply of that genus in their forests. This *penchant* seems but one remove from absolute cannibalism, since, when this animal is divested of his skin, it precisely resembles a human being. There are some of the tribes of our Indians who are fond of rattlesnakes, which they boil or stew. The anaconda and other boas afford a wholesome diet to the natives of the countries they inhabit. Crocodiles and lizards are eaten in South America and the Bahama isles. The sloth is also a common article of diet there, which is said to resemble in flavor that of boiled mutton. The tapir and the armadillo are eaten by the Brazilians and West Indians. Even in some parts of civilized Europe the inhabitants use as food many substances, the very mention of which would cause disgust and abhorrence to our more refined palates. In Denmark and Sweden horse-flesh is publicly exposed for sale in the markets. In early times there seems to have been less scrupulous nicety in the choice of dishes in France, Italy and Rome, when the inhabitants had stomachs so brave as to digest even vipers, snails, toads, frogs; the latter, indeed, are not even excluded from the culinary preparations of the modern Parisians. We have not yet finished our catalogue of the rarer delicacies of mankind. There are the geophagists, or earth-eaters, and such as subsist on the bark of trees. Incredible as it may seem, the digestive functions of man, in his rudest state, are even capable of deriving nutriment from the mineral kingdom. In New Guinea, and elsewhere, these abominable earth-eaters are to be found. We learn from Humboldt that the Ottomaques, on the banks of the Meta and the Orinoco, feed on a fat, unctuous earth, or a species of pipeclay, tinged with a little oxide of iron. They collect this clay very carefully, distinguishing it by the taste; they knead it into balls of four or five inches in diameter, which they bake slightly before a slow fire. Whole stacks of such provisions are seen piled up in their huts. These balls are soaked in water when about to be used, and each individual eats about a pound of the material every day. The only addition which they make to this unnatural fare consists of small fish, lizards, and fern roots. In Java, Russia, and Germany, this product of "mountain meal" is also resorted to as an element of food.

To prevent "Pitting" in Small-pox.

The application consists of a solution of india-rubber in chloroform, which is painted over the face and neck when the eruption has become fully developed. When the chloroform has evaporated, which it very readily does, there is left a thin elastic film of india-rubber over the face. This the patient feels to be rather comfortable than otherwise, inasmuch as the disagreeable itchiness, so generally complained of, is almost entirely removed, and, what is more important, "pitting," once so common, and even now far from rare, is thoroughly prevented wherever the solution has been applied. It may be as well to state that india-rubber is far from being very soluble in chloroform; so that, in making the solution, the india-rubber must be cut into small pieces, and chloroform added till it is dissolved.

[The above is from the Edinburgh *Scotsman*, and the efficacy of the application is said to be of no doubtful character.—Eds.]

It is said that our postal currency is circulating freely as change in the rebel capital.