THE USE OF NITROUS OXIDE—LAUGHING GAS—CHLOROFORM, &c.

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[Communicated for the Boston Medical and Surgical Journal.]

THE recent deaths of Mr. Sears, of New York, from the effects of nitrous oxide, or, vulgarly, "laughing gas," administered for "painless tooth extraction," and that of a lady from the effects of chloroform self-administered, have attracted the attention of the public and elicited the remarks of the press, but not, however, the *proper* attention and remarks which these cases, from the fatality or injuries which their administration by ignorant or incompetent persons are likely to cause, demand. It is true that one or more of the press urges the necessity of enacting a law prohibiting druggists selling chloroform, &c., unless prescribed over a physician's signature. In this age of progressive science and "free trade," and every body's right to meddle with subjects they do not understand, scanning the columns of the press, one might almost infer that the only true physician's prescriptions for all the ills that flesh is heir to, are to be found there. Under such circumstances a law would only tend to puzzle the druggist to discriminate which prescriptions emanated from a lion and which from an ass. Would it not be far more sensible, and at once reach the point, to enact a law prohibiting any person or persons using, i. e. administering anæsthetic agents to patients for minor surgical operations unless they have passed a satisfactory examination before a proper medical college or county medical society, who, granting a special license to use these subtle agents, will offer sufficient evidence that the person holding such *license* at least possesses knowledge sufficient to enable him to make a correct diagnosis of constitutional temperaments, and of the presence of organic or functional disorders with which applicants for tooth extraction may or may not be affected?

In the year 1800, Sir Humphrey Davy wrote: "As nitrous oxide, in its extensive operation, appears capable of destroying pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place."

Professor Flagg, M.D., Thomas W. Kennedy, M.D., P. B. Mignault, M.D., make oath before Hon. Josiah Quincy, Mayor of Boston, in 1844, and Dr. C. A. Taft and Dr. John C. Warren, also Daniel T. Curtis, Esq., testify that Dr. Wells first used nitrous oxide as an anæsthetic. He afterwards abandoned this gas for ether anæsthesia. S. M. Fuller, M.D., of Hartford, Dr. P. W. Ellsworth and E. C. Marcy, M.D., of Hartford, now of New York, Dr. G. B. Hawley, and John M. Riggs, Esq., Dentist, of Hartford, certify before the Mayor of that city, in 1844, that Dr. Wells first employed nitrous oxide. Numerous other gentlemen testify to this use of nitrous oxide by Dr. Wells. This statement is due to truth, because a travelling exhibitor, the head of an association, publishes and advertises his claims

that "he first introduced and demonstrated—May, 1863—the value of this new and wonderful agent, and since May last has daily administered it for the extraction of teeth; although he has administered it to persons suffering from all sorts of diseases—lung complaints, heart disease, &c."

"Laughing gas" was introduced, in the character of an anæsthetic agent, in dental extraction, in the month of April (April 1st?), 1863, by an itinerant mountebank, who for years past has travelled over the country exhibiting fools super-excited into hysterical demonstrations, showing the worst characteristics of poor human nature, "accompanied with song and grotesque amusements," with the assurance that "persons visiting these exhibitions shall be safe from the violence of those inhaling this gas," and exhibiting themselves, and those who misrepresented abused nature by acting under its assumed inhalation.

Anæsthesia for tooth extraction, like many other boons to the human family, has had its periodic and sporadic attacks, which have run their course of charlatanisms. Some twenty-five years since, Mesmerism had its brief but profitable hour. In practice it was a contemptible failure; but an "enlightened public" ran mad after this wonderful phenomenon practically (!) applied. Eight or ten years after this, Boston gave to suffering humanity ETHER, which was at once adopted by the whole medical world—by the scientific and by the learned. Soon after chloroform followed, with what advantages needs no comment here. Sufficient is it, that one or the other of these anæsthetics possesses the confidence of all surgeons and a very large majority of physicians, in cases where their exhibition may be of advantage. Some six years later, congelation or freezing the gums was almost universally recommended and adopted, in England and in the United States, as being the desideratum for painless tooth extracting. This method paid the dentist very well for a time, until the unfortunate patient discovered the remedy to be far worse than the disease—weeks of neuralgic or rheumatic pains frequently following the "breaking up" of the frost in the jaws. This freezing process, then, being thawed out, was followed by a more scientific application, viz., the electro-galvanic battery. The poles were attached to the forceps, &c., and the tooth was to be extracted simultaneously with the electric shock. Here *was* science! certified by many as the *ne plus ultra* of perfection. This scientific method was soon given up, as too many of the patients merely had their nerves tickled with electric reminders, while the operator, chemistry and electro-philosophy all acted independently of each other, and the innocent but offending tooth persistently refused to quit the jaws of the triple-afflicted patient. "The last stage of this eventful history" is the attraction of a travelling charlatan, whose "sans teeth" is produced by the exhibition of "laughing gas."

It would be trifling with the erudition of the readers of this JOURNAL. Vol. Lxx.—No. 5*

NAL to attempt to prove to them that nitrous oxide has been known from the days of Priestley and Sir Humphrey Davy. What may be its chemical and physiological influence upon the animal economy; or what its therapeutical character, influence and results when applied in organic diseases of the lungs, bronchia, larynx, heart; or mere functional derangements of these organs, it is not necessary to dwell upon in this paper.

Most medical men are aware of the preparations of nitrous oxygen; that imperfectly prepared nitrous oxide is a deadly poison to those inhaling it. The nitrous oxide, prepared by the scientific chemists from properly prepared chemical agents, will produce this gas chemically pure, so that it may be inhaled without producing immediate death (perchance without any injury), whatever may be its beneficial effects following its therapeutic use, or the injury following its abuse. It is right that the medical profession should be made acquainted with the fact, that whatever merits or demerits, as an anæsthetic or therapeutic agent, nitrous oxide may possess, either as an exhilarant, stimulant, phlogistic, congestive or irritant, or chemically or physiologically when drawn into the human lungs, not a single chemist, druggist or pharmacien prepares a particle or atom of nitrous oxide for private anæsthetic use, or to supply dentists. It is almost entirely manufactured by persons totally ignorant of chemistry, and who could not even give a proper definition of the word or meaning of chemistry. It is manufactured from the "directions" accompanying the cask apparatus sold for preparing nitrous oxide in large quantity.

Of the filthy and disgusting mode of administering laughing gas, and the dangerous results likely to attend its introduction into the ramifying passages of the lungs, let the following statement serve as an illustration.

Presuming the nitrous oxide chemically pure, it is contained, for dentists' purposes, in a gum-elastic sack holding from four to eight gallons of this gas. Into this gum-elastic bag, through its narrow neck, is permanently fixed a breathing tube about one inch in diameter and from six to eight inches long. Into this breathing tube a "mouth-piece" is fitted, which is made to enter the mouth about one and a half inches, locked air-tight over and against the lip aperture by a flange about an inch wide, similar to the mouth-piece of a wind instrument. The operator compresses the nostrils close with his fingers. The patient now inspires the gas from the sack into his lungs, and expires the breath back into the sack. The patient again, again and again respires and re-respires the whole quantity of gas contained in the sack, including the poisonous carbonic acid gas expired after each respiration. This process is continued until the patient is rendered insensible or asphyxiated. If the operator be an expert, two, perhaps three teeth may be extracted while the patient remains in a somewhat spasmodic anæsthetic state. The patient then be-

comes restless and violent, with hysterical laughter, shouts, or spasmodic screams and yellings. If more teeth are to be extracted, more gas is administered, so that a person may be required to inhale from four to sixteen gallons of nitrous oxide, poisoned with the carbonic acid gas eliminated from the lungs.

Three cases, already, have come under my notice, of persons injured by this gas. First. A young lady, some six weeks since, had four teeth extracted. She inhaled gas four times, since which she has been affected with periodic vertigo, headache, dimness of vision and ringing noises in the ears, indicating cerebral depression or congestion. Second. A young lady three weeks since had three teeth extracted. She inhaled gas twice, and has had oppressed breathing since, stricture across the breast, and occasionally expectorates bronchial mucus tinged with blood. Third. A young man inhaled gas for a long time, four weeks since, and was only reduced to the hysterical condition. He has not been well since. His symptoms are general debility, with melancholy. These persons, previous to inhaling the gas, enjoyed good health.

These affections, though trifling thus far in themselves, may, as no doubt in numerous cases they will, lead to serious complications, when we reflect that the mouth-piece, the breathing tube, and the interior walls of the sack are constantly covered and saturated with the watery exhalation from the lungs, the putrescent emanations of decayed teeth and suppurating gums—the vitiated secretions and all the various morbid conditions to which the different parts of the respiratory apparatus are liable. In the case of Mr. Sears, for instance, the lungs were very extensively destroyed.

Chloroform and ether under all the circumstances, then, pre-eminently surpass in cleanliness and purity the nitrous oxide as at present administered; with the additional vital recommendation that neither of these agents passing from the lungs is respired back into the lungs, carrying with the inspired vapors the filth of other mouths. These agents, also, certainly are more safe in their action on the lungs, than the nitrous oxide poisoned with carbonic acid gas and carrying with it possibly an impregnation of tuberculous poison to inoculate the lungs with tuberculous disease. "*I do not want all the milk,*" exclaimed a dentist, sputtering the liquid filth from his mouth which he had just drawn into it from the mouth-piece and tube while exhibiting before the Society of Dental Surgeons of the City of New York.

The most remarkable feature in the administration of this gas, contrary to the usual fastidious taste of ladies generally who criticize the hands, the dress, the napkins, and the *ensemble* of the dentist and his office accessories—who expect the dentist to perfume his person with the essences of ten thousand flowers, and to rinse his hands in otto of rose or cologne water each time he approaches them—is, that without hesitation—nay, with eagerness, they thoughtlessly de-

mand the employment of this filthy process. It may be answered that the apparatus is always washed after having been used. This is not always the case. After office hours the mouth-piece is washed clean, but the rest of the apparatus is merely rinsed out. Every housewife is aware of the state of uncleanness of any culinary utensil that is not properly scrubbed out after each using. What will they say of a soft, fibrous, enclosed sack daily, weekly, and by the month after month, used by scores of persons of all habits, which is merely rinsed out with water? Few physicians of any standing in medical practice could be found in the United States, or in any other part of the world, so lost to all medical principles, to the faithful discharge of their divine calling, or the moral obligations due to their confiding patients, as to permit them to subject their patients to this horrid, outrageous and offensive absorption of inoculating and deadly poisons.

It is due to the Society of Dental Surgeons of the City of New York to state that it has not endorsed the use of nitrous oxide *as now administered*; and it is also due to the dentists of respectability of the city of New York and Brooklyn to state that few, if any, use nitrous oxide in their practice.

New York, Feb. 11th, 1864.

ON THE ANTIPHLOGISTIC METHOD OF TREATMENT.

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WHAT are we to understand by the term antiphlogistic treatment?

Etymologically, it signifies that which is opposed to inflammation; but, as a technical phrase, it usually implies the employment of means for reducing the quantity and quality of the blood.

Formerly very little doubt was entertained as to the efficacy of such means, but in recent times the propriety of depletion in the treatment of acute inflammations has been denied by a large and constantly increasing number both of physiologists and physicians. It is strange, indeed, that there should be a difference of opinion as to a matter in which the correct observation and interpretation of facts are all that is necessary for the discovery of the truth. The minds of men and their powers of observation are, however, so liable to be warped by the influence of preconceived opinions, that one ought always, before venturing to express a condemnation of their conclusions, to consider the various media, moral and mental, as well as physical, through which the facts themselves may have been regarded.

Thus, if we trace the history of medicine no farther back than the last hundred years, we shall find that the theories which, until recently, have most prevailed concerning the nature of inflammation,