

of Christ." His mind was in a state to receive the truth; and he told me in Calcutta, that the religious impression made on his heart was made on that occasion, as he sat amidst the wilds of the Turcoman country.

Scientific.

"ETHER AND CHLOROFORM."

By J. F. B. FLAGG, M. D., published by Lindsay & Blackiston, is devoted to a scientific discussion of these anæsthetic agents, accompanied with a copious report of cases occurring in a wide range of medical practice. Dr. Flagg, after an extensive experience in the use of ether and chloroform, is a strenuous advocate of their utility, and calls in question the dangerous effects which have been supposed to attend their administration. His volume is both practical and instructive, and deserves a large circulation. With regard to the conflicting claims of the different alleged authors of the discovery, Dr. Flagg makes the following statement:

1. To Sir Humphrey Davy unquestionably belongs the credit of first suggesting the idea of inhaling into the lungs some agent which would deaden sensibility during the painful surgical operations.

2. To Mr. Horace Wells, of Hartford, (now deceased,) as unquestionably belongs the merit of having first demonstrated this happy idea, by using both nitrous oxide and sulphuric ether for this purpose.

3. To Dr. Charles T. Jackson, of Boston, the thanks of the world are due for lending that influence which his well earned reputation so admirably qualified him to do, in establishing confidence in the public mind in the use of sulphuric ether as a substitute for the nitrous oxide; and

4. To W. P. G. Morton, dentist, of Boston, we are under obligations, for his indefatigable exertions in securing the attention of leading medical men to this subject, and thus rapidly expediting the use of sulphuric ether in connection with the practice of surgery.

Some curious experiments are related by Dr. F. showing that the patient under the influence of chloroform often exhibits symptoms resembling those which take place in the "biological" or "psychological" condition, as it is called by some popular lecturers:

One of the most beautiful experiments I have ever witnessed, illustrative of the controllable effects of ether by the motive for its use, was at the residence of a friend in Spruce street, about two years since.

The ether was sent for, to be used by one of the ladies who was suffering from irritation of the throat, and attended with cough. In the course of the evening it was desired by one of the company that a certain gentleman present should inhale it for the amusement of all assembled. To this proposition the gentleman somewhat demurred, stating that he was not afraid to take it, but as nothing was the matter with him, there could be no object beyond idle curiosity, which he felt no inclination to indulge at that moment. I explained that a good motive could be found for taking it, if he felt willing to assist in a little experiment.

It had so frequently happened in my practice that my patients had expressed to me their utter impossibility of doing any way different from what I directed them to do, as, for example, if they attempted to get out of the chair, my saying "sit still" to them was a law too potent for them to think of breaking; or if they inclined to laugh, my suggestion of "perfect quiet and calmness" was instantly obeyed,—it occurred to me to propose the following experiment. One of the ladies was to administer the ether to this gentleman, with the express understanding that he was to obey any directions which she might give him while under its influence, if, by possibility, he could do so.

The ether was inhaled sufficiently to secure a painless operation, had it been necessary to extract a tooth; and the lady immediately asked him, "What o'clock is it?" His hand was carried to his vest pocket to remove his watch, he hesitated a moment, and then carried his hand to the same place. He soon changed his hands very rapidly in the vicinity of his watch, but did not take it out. While doing so, the lady requested him to sing. The gentleman was known to possess considerable musical powers, but the noise he made resembled more the howling of a wolf than anything else I could liken it to. He then whistled about as much of a tune as he sang; but soon stopped, and getting up, made castanets of his fingers, waltzed around his chair and resumed his seat. The ether passed off. The gentle-

man put his hand to his head and exclaimed, "O! heavenly!"

When entirely restored to himself he gave this explanation.—He knew everything that had transpired. When the lady asked him the "time," he was not prepared for the question, and felt somewhat confused, but recollected that he was to obey this lady. In feeling for his watch it occurred to him, as he could not see, it would be folly for him to take it out, and he moved his hands about to indicate that folly. When requested to sing he was equally taken by surprise, if not more so than at first; for he was not quite clear in his mind that he had complied with the lady's first requirement, or that she fully understood him. Still he felt a binding obligation to do his best. What to sing became now a serious question with him, and the noise he made was trying his voice. He was aware that there was no regularity or gradation of sounds, but he could not help it. In his anxiety to obey, and finding he could not sing, he attempted to whistle. Here he was as much at a loss for a tune as at first, when a lucky expedient presented itself,—"If I dance and keep time," he thought, "she must be satisfied that I have done all in the way of music it is possible for me to do;" and this gentleman attributes a large share of his happiness to being able to accomplish the dance. He likewise asserts that he knew of no one being present but the lady who administered the ether. He saw nothing in the room, and did not know where he was until the ether passed off.

One of the most frequent and uniform effects of the ether is a peculiar rattling noise in the ears, very much resembling that produced by a train of railroad cars when in rapid motion. So much so, indeed, we can often suggest a pleasure excursion by this means of travelling, and thus secure a pleasurable dream.

I have been led to observe that all who are subject to this noise when etherized, are also enabled to hear the beatings of the pulse whenever they lay their heads upon the pillow, lying upon the ear, and thus shutting off all external sounds from that ear. This condition pertains to about 50 per cent. of those of whom I have inquired among my patients, during my investigations upon this subject, and I have never known it to vary. All who do not hear those sounds, never hear their hearts beat under the above circumstances.

This hearing of the pulsation is dependent upon the anatomical construction of the internal ear. In some, the internal carotid artery is located so near to the tympanum, or drum of the ear, as to be reached and pressed upon by that membrane, whenever the air is confined within the more external chamber; in others the artery is too remote to be affected by this means. This fact led me to suppose at first, that the noise heard when etherized, was the pulse alone; but the rapidity of the beats, being so much greater than any healthy pulse, seems to forbid this conclusion, and connect with the idea of external noises possessing considerable influence in this phenomena. Let the causes be what they may, such are the facts.

Mr. E—, a dentist of good fame, now established in Paris, brought his wife to me on the eve of their leaving their native country, for the purpose of having me extract three teeth for her. The ether was inhaled to entire unconsciousness. I observed that I could send her to Europe in advance of the real voyage, and I wished her to tell us how she liked Paris. She began to hear this rattling noise; I likened it to a locomotive. She slept till I removed the teeth, and when she awoke she said she had travelled by railroad, not only to Paris, but over the whole world! she had seen nothing but cities, and heard nothing but the noise of the cars.

An Irish woman, who had never heard of the ether previous to calling upon me for the purpose of having a large molar tooth extracted, took it on being told that she would suffer no pain, and would, probably, have an interview with her friends in the old country.—Just as its influence commenced, I remarked to her that I should like her to observe what occupation her friends were engaged in, if she succeeded in finding them. I removed the tooth; she moved not a muscle of the face, but remained as in a quiet sleep, for about one minute. Upon opening her eyes she exclaimed: "I have seen all my friends; they were engaged in spinning; and don't I hear their wheels now, sure?" She said it appeared to her as though she had been absent many months. She recollected that she went home

in a steam-vessel, heard the noise of steam and machinery, declared herself unhurt by the operation, and wished me to see if there was not "another tooth what wanted to be drew." It appears in this case that the noise in the ears served a double purpose; 1st, a means to get her to Ireland, and 2d, to suggest to the mind the occupation of her friends. This noise continued for a moment after her return to consciousness, and so strong was the impression, she really thought she heard the noise of their spinning wheels across the Atlantic.

Bemedy for Sick Headache.

A friend informs us that, if persons who are subject to sick headache will look steadily for two or three minutes at a piece of green baize, green silk, or other green material, when they feel the spell coming on, they can throw it off entirely. He has tried it frequently and never knew it to fail.—Portland Advertiser.

The Farm.

SEVENTH AGRICULTURAL MEETING

AT THE STATE HOUSE, MASS., FEB. 25TH, 1851.

Dr. Charles T. Jackson in the Chair.—Subject, "Indian Corn and other Cereals Grains."

Dr. Jackson said he would call the attention of the meeting to the structure of a grain of Indian corn, *Zea mays*. This grain is a native of this country, and is cultivated very extensively. It belongs to the class of grasses. The silk of corn is the styles, each thread coming from each kernel of corn. The pollen or dust falls from the spindle and passes through the silk to the grain. If you cut off or tie up the silk or spindle, there will be no grain.

He had not time to enumerate the different varieties of corn, which were very numerous. An analysis of corn is not reliable for purposes of practicable utility, unless the variety is named, as there is a great difference in different kinds of corn.

Dr. Jackson then called the attention of the meeting to figures of various grains of corn, showing the proportion of gluten, starch, and the chit, which abounds in phosphates. The Tuscarora corn was nearly all starch. This is used mostly in its green state. The chit of this corn is larger than usual. He then directed attention to the White Flint Corn, considerably cultivated in Rhode Island. A large part of this, on the outside of the starch, consisted of gluten, which abounds in oil, hence it is excellent for fattening. This variety has a considerable portion of starch, and the chit is less than that of the Tuscarora. The Pop corn consisted almost wholly of gluten, hence its snapping properties. When it becomes heated the oil explodes and passes off in gas. One barrel before popped makes sixteen barrels. The Rice corn contains more gluten than any other variety, and it is used only for popping. Some kinds of it makes twenty-five barrels from one, by popping. Those kinds of corn that contain a large proportion of gluten keep much better than those that abound in starch. As the potato from which starch has been made, is failing, we must rely on corn to supply its place.

Corn abounding in gluten, or oily matter, is not good for horses, nor for man. In making bread of it, it becomes necessary to add rye meal, that there may be sufficient starch to induce fermentation. For extemporaneous cooking, such as Johnny cakes, flapjacks, &c. Tuscarora and other kinds composed mostly of starch are the best. In answer to a question, Dr. Jackson remarked that popped corn was nutritious and easily digested. It was a mistaken notion that it would swell in the stomach, as it was swelled to its fullest extent in popping. As corn grows most naturally, starch abounds more in corn as we proceed to the South, till we get into South America, where it is about all starch; and as we proceed North the gluten becomes more abundant. There is a large quantity in the Canada corn.

Indian meal exported to England becomes musty, and when the grain is kiln dried, it becomes bitter, and is not well-ground in England. A gentleman in this country sent to his friend in England, corn in ears, and it was ground in a suitable mill, and the bread and other dishes made from the meal were much admired. With proper management, we may export Indian corn, or meal, to a large extent. A great deal of alcohol is made from corn, but it is mostly used in the arts—in prepara-

tions of burning fluid, of vinegar, for the preparation of white lead, &c.

Dr. Jackson then proceeded to the consideration of the growing of Indian corn, what manures were required, and what the plant took from the soil that was not returned to it, when the crop was sold off. He showed by the analysis of this grain, that it contained large proportions of the phosphate of lime, magnesia, and potash. In all analyses there was a large portion of phosphoric acid. This shows what ingredients should abound in the manure which we are to apply to the soil.—Bones contain a large portion of phosphate of lime. It is better to dissolve them in sulphuric acid, and then make the manure into a powder by adding ashes.

Vegetables possess the exclusive power of drawing nutriment from the soil, and preparing or manufacturing it into food for animals and for the human race. They even convert stones into food. The phosphates are the most important ingredients in our manures. They abound in barnyard manure, and in Guano. The liquid manure from an animal is worth as much as the solid manure. The better way is to add substances to absorb the liquid manure, and apply it to the soil instead of the liquid form. By preparing one part of plaster to nineteen parts of peat, a large quantity of liquid manure may be absorbed and rendered a solid portable substance. He would use lime as a decomposer. When added to right soil, it rendered it inodorous, but it should be covered with peat to prevent escape of ammonical gases.

Hon. M. P. Wilder stated that in regard to the use of the phosphates, Prof. Mapes analyzed the soil of a piece of land that would not produce corn, and he found it deficient in phosphates, which he supplied in a cheap manner, and then he obtained a large crop of corn from that land. He thought that with skill in manuring, we might raise wheat in this State with profit. Col. Wilder then presented for distribution several small packages of the Troy winter wheat, which he had received from the Patent Office; he also read an account of it, showing that it was a hardy and productive variety.

Hon. Mr. Brooks, of Princeton, read a paper which he had prepared, showing the profit in raising corn in the Eastern, Middle and Western States, and also the profit when it was converted into pork, allowing four pounds of corn to make one pound of pork; and it appears that the greatest profit, per acre, whether the grain was sold or converted into pork, according to average prices, in different sections, was in the Eastern States. Mr. Brooks remarked that we could also raise wheat in New England with as much profit as in the West.

Rev. Mr. Sanger, of Dover, who was one of the committee on grain crops of Norfolk county, showed from his observation that good crops of corn and wheat were raised in that county.

The President announced that Hon. Amasa Walker, Secretary of State, would preside at the next meeting and open the discussion.—Subject,—“Profits of Farming.”

On motion of Rev. Mr. Sanger, voted that the thanks of the meeting be presented to Dr. Jackson for his very valuable and instructive lecture.

Voted that the meetings in future commence at half-past seven o'clock.

Mr. Whittaker announced that Dr. Brooks would deliver three lectures in that hall on the anatomy of the horse, commencing on Friday evening next week, and continuing the succeeding Friday evenings.—N. E. Farmer.

Manure and Manuring.

As soon as the ground, which is clay loam, is cleared in autumn, I spread over it barnyard manure, selecting that which is well rotted, and free as possible from seeds, which is incorporated with the earth by deep digging.—In spring, I break it up again, and apply a moderate coating of wood ashes, on which is immediately applied a coating of powdered charcoal, and with a strong rake thoroughly mix both with the soil. The barnyard manure is used to keep the land in substance, or heart; the ashes to supply potash, which enters largely into most garden products; the charcoal to furnish free carbon, which, in addition to the carbonate of potash furnished by ashes, is said to be freely taken up by the plants. I have observed this course of manuring to be attended with beneficial results.

Reverence the aged, and treat your juniors with kindness.