reputation, in a work on an important subject, will be apt to be followed by a crowd of "ready imitators." The office of a medical teacher is one of very great responsibility, and every production of his pen exerts an influence more extended and permanent than he had either hoped or anticipated; to such a one *he* should be considered a friend "bonus et prudens." Who

"Versus-reprehendet inertes
Culpabit duros, inemptis allinet atrum
Transverso calamo signum; ambitiosa recidet
Ornamenta; parum claris lucein dare coget;
Arguet ambigue dictum; mutanda notabit."

D. F. C.

ART. XVII.—*Etherization; with Surgical Remarks.* By JOHN C. WARREN, M. D., Emeritus Professor of Anatomy and Surgery in the University of Cambridge; Surgeon at Massachusetts General Hospital; Honorary Member of the Medical and Chirurgical Society of London; Corresponding Member of the Royal Academy of Medicine at Paris, and of the Academies of Naples, Florence, etc. Boston: W. D. Tickner & Co., 1848: 12mo: pp. 100.

On the Inhalation of the Vapour of Ether in Surgical Operations: Containing a description of the various stages of Etherization, and a statement of the results of nearly eighty operations in which ether has been employed in St. George's and University College Hospitals. By JOHN SNOW, M. D., Univ. Lond. R. R. M. and C. S., &c. London: John Churchill, 1847: pp. 88. 8vo.

THE extraordinary excitement caused by the announcement of the discovery of a means by which patients could be rendered insensible to the agony inflicted by the surgeon's knife and to the pangs of labour, is beginning to subside, and the serious questions seem now to be attracting attention, whether such means can be resorted to in all cases with success and with safety,—whether there are not some conditions unfavourable to, or which forbid, its use,—what cautions are to be observed in its employment, and which is the best method of applying it? If the materials for the *conclusive* solution of all these questions have not yet been furnished, the facts for that purpose are daily accumulating, and as among the most interesting recent contributions for that purpose, we invite the attention of our readers to the publications, the titles of which we have just given.

Dr. John C. Warren, of Boston, is entitled to the distinction of having the first to perform a surgical operation on a patient rendered insensible to pain by the inhalation of the vapour of sulphuric ether; he has continued to use it in his extensive practice, up to the present time, and he furnishes in his small volume the fruits of his matured observations with the article, founded on an experience with it in at least two hundred cases. The elevated position in the profession which Dr. Warren has long sustained, and the perfect integrity of his character, give importance to his opinions, and must inspire entire confidence in the accuracy of any statements he may make.

Dr. Warren gives a brief sketch of the introduction of the inhalation of ether in surgical practice,—relates the effects which he has observed to be produced by this agent,—presents his views respecting its *modus operandi*,—considers the mischiefs which it may occasion,—gives an account of his experience with it in various kinds of surgical operations; and draws the following *general* conclusions:—

- 1st. Inhalation of ether produces insensibility to pain.
- 2d. Ethereal insensibility, judiciously effected, is not followed by any dangerous consequences.
- 3d. Its administration is easy, and usually requires but a few minutes.
- 4th. Individuals of all ages may be safely etherized.
- 5th. Individuals of the same age are susceptible of the influence of ether in variable degrees.

6th. Surgical operations may be done under the effect of ether, which could not be done without.

7th. Operations very short, and not very painful, especially those about the head and neck, are best done without ether.

8th. The shock of the nervous system is greatly diminished by etherization.

9th. The use of ether has increased the number of successful operations, by encouraging a resort to them at an earlier period of disease.

10th. The use of the sponge is more safe and easy than that of any special apparatus.

11th. A special apparatus is convenient for some peculiar cases.

12th. The existence of chronic pulmonary disease rarely forms an objection to etherization.

13th. Etherization may often be employed advantageously as a substitute for narcotics.

14th. The employment of ether does not retard the healing of wounds, nor give them an unfavourable character.

15th. The pains of death may often be relieved by etherization.

Dr. Warren prefers the sponge to any special apparatus for administering the vapour of ether, "because it requires less effort to inhale through it, and because the atmospheric air introduced with the ether removes the danger of asphyxia."

"The sponge," he says, "should be of an excavated form, in order to accommodate the projection of the nose. The winding indirect channel of the nostrils, the more natural passage for the aerial fluid, diminishes the impulse on the lungs, and the consequent propensity to a troublesome cough. The sponge previously moist, saturated with ether of the purest quality, should be closely applied to the nasal apertures with due caution to prevent the introduction of the fluid into the mouth and eyes; and its position should be occasionally changed, on account of the gravitation of the ether to its inferior part. Some patients prefer employing the sponge themselves, and this is true particularly in regard to parturient females. And so far as our experience has extended, it has given us reason to believe, that the practice of committing the sponge to the patient may be advantageously adopted in a great number of instances. When the lungs are irritated, and cough produced, the sponge may be momentarily removed."

We must content ourselves with referring our readers to the original for further details of the author's views on the subjects referred to, as well as to his opinions regarding the use of ether inhalation in affections of the lungs, in children and infants, in cerebral diseases, and in cutting operations on the mouth and throat, in all which he seems to regard less caution as necessary than, we must say, we conceive to be demanded, on theoretical grounds, as well as from the results of the experiments made by the committee of the Edinburgh Medico-Chirurgical Society, Mr. Wakley and others.

Dr. Snow's volume is highly interesting, as furnishing a better division than had previously been made of the different stages of etherization, and some important directions for the administration of the vapour of ether.

The point requiring most skill and care in the administration of the vapour of ether is, in Dr. Snow's opinion, to determine when it has been carried far enough. To clearly describe the effects of ether inhalation, Dr. Snow divides them into five stages or degrees, premising, however, that these divisions are arbitrary, the different stages running gradually into each other.

In the first degree of etherization, Dr. Snow includes the various changes of feeling that a person may experience, whilst he still retains a correct consciousness of where he is, and what is occurring around him, and a capacity to direct his voluntary movements. In the second degree, mental functions may be exercised, and voluntary actions performed, but in a disordered manner. In the third degree, there is no evidence of any mental function being exercised, and consequently no voluntary motions occur; but muscular contractions, in addition to those concerned in respiration, may sometimes take place as the effect of the ether, or of external impressions. In the fourth degree, no movements are seen except those of respiration, and they are incapable of being influenced by external impressions. In the fifth degree, (not witnessed in the human being,) the

respiratory movements are more or less paralyzed, and become difficult, feeble, or irregular.

Generally, according to Dr. Snow, all that the patient remembers of the effects of ether occurs whilst he is under its influence in the first degree only, and his feelings are usually agreeable—often highly so. Dr. S. considers that it is not practicable to perform operations, in the absence of pain, without conveying the effects of ether further than this degree. Whilst the effect of the ether, however, he adds, is going off,—after persons have been completely insensible,—they are not unfrequently free from the pain of an operation, which is still going on, at a time when the mental faculties have returned, together with the special senses of sight and hearing, and when they are consequently in the first degree.

If etherization is not carried further than this degree, it quickly subsides without bearing any appreciable effects; but if the inhalation is continued the second degree succeeds to this.

When the ether is properly administered the patient, according to Dr. Snow, usually passes quietly and quickly through the second degree of etherization without its being manifested in any way. As he is not questioned, the state of his mental faculties does not appear, and he passes rapidly into the next degree. Sometimes, however, when from the tendency of the vapour to produce coughing it is given in a more diluted form than usual, and occasionally, also, from peculiarity of constitution, this degree of the effect of ether is made apparent by gesticulation, words, or attempts to move; and in hysterical females, sometimes by sobbing, laughing, or screaming. The patient often tries, by lifting up his hands or moving his head, to remove the inhaler from his face whilst in this stage. He feels something there interfering with his ordinary respiration, and the purpose and nature of it have passed from his mind; his endeavours are voluntary, but guided by instinct rather than reason. He can often be quieted by language addressed to him, and will do as he is bid, although unconscious of where he is.—as his answers, if he makes any, show. At other times he is obstinate, or regardless of what is said. If the ether is discontinued at this stage of the inhalation, the patient goes back into the first degree, either immediately or in the course of a few minutes, according to the extent he has advanced, or the time he has been kept in this degree.

Dr. Snow thinks that a surgical operation would cause pain, if etherization were not carried further than this degree, although if the pain should not arouse the patient and bring him back in the first degree, he would not remember it. But it would be more difficult for the surgeon to operate with this amount of etherization than without ether.

When the inhalation is continued, the patient passes into the third degree. "If the patient moves or struggles," says Dr. Snow, "when under the influence of ether in the second degree, his movements are guided by volition, though not by knowledge or reason; but if he struggles in the third degree of etherization his movements are not voluntary, any more than the struggling in hysteria or epilepsy. Usually, however, there is no struggling. The patient may have moved his eyes about in the second degree, and even directed them to objects, but in this degree they are stationary, or if they do move, their motions have nothing of a voluntary character. They are sometimes turned upwards as in sleep, but I think not so frequently as in the next degree. The eyelids may be either open, or partly or tightly closed, but in either case, if lifted or moved by the finger, the orbicularis palpebrarum contracts. The breathing is usually regular and somewhat deep; the patient lying still, or, if sitting, having a tendency to slide out of the chair; but occasionally the limbs are rigidly contracted, and when this is the case the patient sometimes holds his breath for several seconds at a time. He may moan in this degree of etherization, but never gives utterance to articulate sounds, which are always an indication that he has not advanced further than the second degree, or has returned to it. Therefore the performance of a surgical operation in this stage would not cause a person to cry out in articulate sounds, unless it roused him, and caused him to return to the second degree; it might, however, cause him to groan and ilineh. If this degree is well established, and if the patient has been detained in it, at the same point, by inhaling at intervals, or by inhaling dilute vapour, an operation may usually be performed without producing any other

effect than a distortion of the features expressive of pain, and, perhaps, a slight moaning, and an increased frequency of respiration, and, in some instances, a general rigidity of the muscular system. If this degree of etherization is not well established when the operation begins, the first cut may cause a sudden contraction of the whole muscular system. Persons in a full state of health, and more particularly those in a state of plethora, are much more liable to struggling and rigidity in this degree, than those whose strength is reduced by illness; and if from any cause the supply of atmospheric air is limited, and something of asphyxia is combined with the etherization, I believe that the struggle is more liable to occur, and is more severe. There is never any recollection of operations in this degree, even when symptoms of pain have been exhibited, and there is scarcely ever, I believe, any sign of pain in this degree, when it succeeds to the fourth, as the influence of the ether is subsiding. If the exhibition of ether is discontinued in the third degree, the patient goes back into the second degree immediately, or in the course of two or three minutes.

"In the fourth degree all the muscles are relaxed, and the limbs hang down, or rest in any position in which they are supported. The eyelids fall down over the eyes, or remain as they are placed by the finger. The eyes are either turned up or remain central. The breathing is deep, regular, and automatic, and there is often snoring. The muscles of the face partaking in the general relaxation, the countenance is devoid of expression, having a placid appearance as in a sound sleep. Sometimes the lower jaw has a tendency to droop; the mouth is partly open, and the features are so relaxed, that the countenance is altered, and has the vacant appearance seen in paralysis, idiocy, or a helpless state of drunkenness; and if there is at the same time snoring and blowing of the lips in respiration, as now and then happens, an appearance is met with that would be truly alarming, if we did not know that it was only due to an agent which is flying away every moment in the breath, to leave the patient, in a few minutes, without any permanent trace of its having been there. In this degree of etherization the patient always remains perfectly passive under every kind of operation; and as the muscles are completely relaxed, this is the proper stage for the reduction of dislocations. The patient never begins to snore until he has reached the fourth degree, or is passing into it from the third, and from all that I have hitherto observed, I believe that when he snores from the effects of ether, he is always totally insensible to every thing which is done to him. This degree of etherization seldom continues more than two or three minutes after the process of inhalation is left off, and I have never kept the patient in this stage more than five or ten minutes; but in operations of long duration have allowed the effects of the vapour to diminish somewhat from time to time. The integrity of the functions of respiration and of circulation is not impaired in this degree. The breathing is generally deeper than usual, and although it has been somewhat stertorous in two or three instances, yet it continued with great regularity, and the stertor subsided in a minute or two. The pulse is distinct and of good volume, even in patients affected with hectic, in whom, just before the inhalation, it was small and hard. It is usually accelerated, as in all the other stages of etherization. The sensibility of the glottis and pharynx continues in this degree, for the blood which flows backwards in operations on the nose and mouth is all swallowed, none of it getting into the trachea.

"In the fifth degree, as met with in animals inferior to man, they remain motionless and flaccid as in the fourth degree, and respiration begins to be irregular, feeble, or laborious. The muscles of respiration begin to suffer the loss of power which already involved the merely voluntary muscles. The sensibility on which respiration depends, and which has outlasted the special senses and common sensibility, now begins to be abolished under the effects of an increased quantity of ether. This is the stage immediately preceding death when animals are killed by ether, and there can be no doubt that it would be met with in the human being, if the vapour were exhibited so as to increase its effects to a dangerous degree beyond what is ever required. However nearly dead animals may be from ether, if the breathing has not actually ceased when the vapour is discontinued, they always recover, as was stated by the author, at the College of Physicians, when he had the honour of performing some experiments at the conclusion of Dr. Wilson's Lumleian Lectures, on the subject of Pain, in March last. This

circumstance illustrates forcibly the great safety of the inhalation of ether, and how much it differs in this respect from asphyxia, and the exhibition of narcotics by the stomach.

"The fifth degree of etherization has only been mentioned as a state to be avoided, and we proceed now to the degree which follows the fourth, when the patient is no longer kept in it; and this is the third degree, as it appears a second time. It is usually less marked now than when it preceded the fourth degree, and struggles and rigidity are less frequent,—seldom, if ever, taking place except they have previously occurred in the same degree, and not by any means constantly, when such has been the case. If struggles do occur, and especially if they are accompanied by moaning, as sometimes happens, and if a surgical operation is going on, it may appear to an inattentive observer that the patient is feeling pain, when such is not the case; for a closer attention will show that the supposed signs of pain are not increased when cuts are made, or ligatures tied on the arteries; and if the ether is not re-administered, and the patient is allowed to recover still further during the operation, it will probably happen that in the second degree he will either lie perfectly calm, or talk in his dreams about subjects totally unconnected with pain, or the operation which is still going on. And it is not to be supposed that he is becoming less sensible as the effects of the narcotic are subsiding. I believe that pain is seldom felt in the stage of which we are treating—the third degree succeeding the fourth—and of course never remembered afterwards, as there is no knowledge or mental perception of it. This stage of etherization seldom lasts longer than from two to four minutes before it gives place to the second degree, if the inhalation is not resumed.

"The second degree is usually much better marked as the patient is recovering from the ether, than when he is getting under its influence; it also lasts much longer at this time, the reason of which is obvious; for when he is inhaling the vapour he is quickly removed from this into the third degree, but when the inhalation is discontinued the vapour is got rid of, in a ratio varying directly with the quantity in the blood, which is a constantly decreasing ratio. The blood, in passing through the capillaries of the lungs, shares its ether with the air taken into the air cells, and, consequently, the process of de-etherization becomes slower as it goes on. For this reason, also, this degree continues longer than the third, often lasting five minutes, and occasionally more than twice that period. The dreams which patients so often say that they have had during the operations, take place, I believe, only in the second degree of etherization; and generally in the recurrence of this degree, as the effects of the ether are subsiding, and more commonly after than during the operation. If the patient talks, it often happens that what he says is in accordance with what he afterwards remembers of his dreams, which often refer to early periods of his life; and a great number of patients dream that they are travelling. The impression of the length of the dreams can of course be no argument as to how long the person was dreaming, and that impression is often of a longer time than the whole period of insensibility; and I think that there is every reason to presume, that there can be no dreams or ideas of any kind in the third and fourth degrees of etherization, and that for a short time there is not only, as in a sound sleep, the absence of mental functions, but also the impossibility of their performance. Indeed, from a comparison of what patients sometimes express by words or gestures under the influence of ether, with what they say of their dreams, it would appear that the dreams which are remembered occur only when the patients are fast emerging from the second degree into a state of complete consciousness. Some of the mental states met with in this degree are highly interesting in a psychological view, but the description of them does not form a necessary part of this small treatise. The laughing and crying, which are now and then met with in this degree, are not always the result of joy or sorrow, or even connected with any state of mind corresponding to the expressions, but resemble the laughing and crying of hysteria. The patient is often incapable of pain in the stage which we are considering, but not always so; very commonly he is so in a part of this stage, but if the operation continues he begins to show signs of feeling it, and the inhalation has to be resumed before he passes into the first degree.

"After the patient has recovered his consciousness of surrounding circumstances,

there is usually a degree of exhilaration, or some other altered state of the feelings for a little time,—accompanied, sometimes, with a little confusion of the mind, and inability to walk steadily. This, which I have called the first degree of etherization, subsides more slowly than the other degrees, remaining, in some instances, half an hour in a marked degree, and to a slight extent for two or three hours."

Dr. Snow appears to place few restrictions to the use of ether inhalation. "I am not aware," he says, "that any state of the patient with respect to age, constitution, or disease, positively contraindicates the use of ether during a surgical operation. The patients to whom I have given it have been of all ages, from early childhood to nearly eighty years—six of them being upwards of seventy. They have been in the most different states of general health; two or three had symptoms of tubercles in the lungs; one, of whom I shall speak afterwards, had extensive disease of the heart; two or three had been subject to attacks of congestion of the head, and yet there have been no ill consequences from the ether in any case, and not even any unpleasant effects to counterbalance its advantages, except sickness and vomiting in a few instances. There are, however, certain states of the body in which ether sometimes acts less pleasantly and favourably than in others; but it fortunately happens that these are the states in which we seldom find patients who require surgical operations. Persons in robust health are sometimes less promptly and easily made insensible than others, and are more liable to excitement in the second degree of etherization, and in struggling in the third degree, and also to have a headache after the ether. Such persons, however, do not often require even a trifling operation, and if they do so, a little abstinence and purgation will place them in favourable circumstances for ether, if they wish to have it. And, if a person in robust health should require an operation on account of an accident, the temporary depression consequent on the injury, and usually, also, loss of blood, would serve as a preparation. On the other hand, insensibility is induced with great ease in persons debilitated by long illness, and in children under all circumstances. Children are, indeed, amongst the most favourable subjects for ether, recovering from its effects as promptly as they are brought under its influence, and it possesses more than the usual advantages in their cases, as, without it, their struggles would often interfere with the performance of the operation."

Dr. Snow considers that a knowledge of the strength of the vapour of ether, is essential to a correct determination of the state of the patient at all times; and he therefore prefers to administer it, with a suitable apparatus, as otherwise, the proportions of air and vapour cannot be determined. He has contrived a convenient instrument for the purpose, but a description of it would not be intelligible without the drawings.

The position of the patient during inhalation Dr. Snow conceives to be a matter worthy of consideration. "In nearly all capital operations," he says, "the position which the surgeon would select, independently of the ether—viz. on the back, with the head supported on a pillow—is a very favourable position for inhalation. For operations on the anus, the patient has to lie on the side, with the knees drawn up, as it would be impossible for him to stand, or even to kneel, and lean over a chair or table, when insensible; and the recumbent posture, I believe, is as convenient for the surgeon, and would be at least equally so for the patient, even if he had to suffer the pain. Sitting upright in a common chair is not a good position for inhalation, and should, therefore, if possible, be avoided. It has answered very well in a number of cases, but on two or three occasions caused some difficulty; either from the patient, when insensible, having a tendency to slide off the chair, or from his stretching his limbs out, in the second or third degree of etherization, when it became impossible to keep him seated. If the patient is obliged to be seated, a chair with a high back, to rest the head against, is the best seat. The dentist's chair answers very well for his operations, as the patient is partly reclining, and has the head supported.

"It is generally the best plan to place the patient, before inhaling, in just the position that will be suitable for the operation, that there may be no delay when insensibility is induced. Sometimes, however, the patient may be first rendered insensible, and then moved, especially when moving causes great pain, as in

some cases of diseased knee. The toorniquet, or the bandages for lithotomy, can be applied whilst the inhalation is going on, but the surgeon should have all his instruments in readiness before the inhalation."

Dr. Soow maintains, that the production of a state of excitement by the inhalation is not a sufficient reason for abandoning its use. "I understand," he says, "that the ether has been often left off, and given up as a failure, on account of the excitement produced by it, under an impression that it was producing an opposite effect to its usual one, and acting as a stimulant instead of a sedative. Guided by a few experiments on small animals, made in January, I acted on the principle that there is no person who cannot be rendered insensible by ether, and looked on the excitement as the occasional result of the cerebral functions being disturbed by a quantity of ether insufficient to suspend them altogether. If the patient goes on breathing the ether, we may rest assured that he will soon become quiet; especially, if he begins to breathe deeper, as often happens during the state of excitement, when a few inspirations make him quite passive. It can scarcely be required to interrupt the process, unless the patient should hold his breath, but if he do, the face-piece should be removed, or the valve opened for a moment, and the process then resumed again. It is consolatory, however, to know that if one is obliged to desist, insensibility will often be induced, on the process being resumed, without any excitement or struggling. It is advisable to begin again as soon as the patient is calm, and, if possible, before he has relapsed into the first degree, or he will perhaps want to make a long speech. I prefer always to go on without stopping, and let the ether subdue the excitement it has produced.

Dr. Snow is quite fearless in his use of ether. "If instead of a quiet passive state," he says, "there is struggling, or great rigidity of the limbs in the third degree, it is necessary to wait for the next degree—that of complete relaxation—before the operation is begun. The involuntary struggling is now and then considerable in the third degree,—in one case, to be subsequently mentioned, resembling an epileptic paroxysm, the patient, however, being subject to epilepsy. There is occasionally also a rigid state of the whole body, which, in one instance, took the form of opisthotonos, but the patient, a boy, was heated and out of breath, when he began to inhale, by exerting himself for some time previously, in opposition to the traction by pulleys which was used in attempting to reduce a dislocation of the hip. If the patient goes on breathing steadily, however, he very quickly becomes passive, and lies still. The only circumstance which can cause any difficulty is his holding his breath, which he sometimes does, not from the pungency of the vapour, as in the earlier stages, but, apparently, from spasmodic contraction of the muscles of respiration. In two or three cases the breathing was interrupted till the face became quite purple, but the patients soon went into the fourth degree, on its commencing again with deep and quick inspirations. If the skin becomes inclining to purple, the face-piece may be removed for half a minute, if it is thought proper, for the patient to breathe unetherized air until the skin resumes its usual colour; but there need be no alarm, as the breathing always becomes extremely regular when the next degree is attained, and the inhalation need never be given up at this stage, as there can be no danger from ether when the limbs are rigid; and it is better not to begin the operation till the respiration becomes equable and regular, but to wait for the fourth degree in all cases in which the third is at all unfavourable.

"There are never any strong demonstrations of pain in the third degree, and a number of surgical operations may be performed without carrying the etherization further,—generally, without any symptoms of pain,—but, in some cases, with the result of a little flinching or moaning, and perhaps a contraction of the features. These very slight tokens of obscure sensation, of which the patient knows nothing, and which do not at all interfere with the operation, may, however, be disregarded when they do occur.

"If the inhalation has been continued, and the operation deferred on account of movements or rigidity, the latter may be commenced as soon as the patient becomes still, and his muscles relaxed. If there is the least approach to snoring, whether there is complete relaxation of the muscles or not, the operation may

always be commenced, and judging by what I have seen, will never elicit any signs of sensation."

"Insensibility to pain may be kept up," according to Dr. Snow, "for a long time without risk, by allowing partial recovery from the effects of the ether occasionally. I lately kept on elderly gentleman quite oblivious for two hours and a half after Mr. Liston had applied a thick paste of chloride of zinc to a large ulcerating tumour on his face. Each time that he began to feel the smarting the ether was resumed,—at first, after intervals of ten minutes; then, of a quarter of an hour; and finally, of twenty minutes; the recoveries becoming each time more complete before the pain recurred. But the patient had no recollection of them, for each time that he recovered his consciousness, he asked if Mr. Liston had gone without applying the caustic. At the end of two hours and a half, having been allowed to recover more completely than before, he considered that the pain was not more than he could bear, and the inhalation was not resumed. Five fluid ounces of ether were used, and no effects of any kind followed it, unless that the pain, for some hours, was not so great as it probably would have been."

Dr. Snow states "that in all the cases I have witnessed, the patients have recovered their mental faculties very promptly and completely after the conclusion of the operation,—generally within a few minutes,—and in two or three cases only has the period of recovery been delayed for half an hour. I do not think that anything is ever required to promote the return to sensibility. When the patient is sufficiently etherized to feel nothing of a surgical operation, he is far beyond the reach of stimulation by ammonia, cold affusion, or anything else; and when he is so far recovered that these things would make an impression, there is not long to wait for his complete recovery. Elderly people are slower in recovering than young ones; as their respiration is less active, and the ether takes a longer time to evaporate in the breath. For the same reason, if sickness has been caused by the ether, the patient is longer in recovering, as it depresses the respiratory movements.

"Although many patients recover their consciousness at once, as out of a natural sleep, yet there is often a short period during which the mind wanders as it is reviving from its temporary suspension; and during this time it is advisable not to talk to the patient, or ask him any questions, but let him remain silent, if, as is generally the case, he will. If, however, he talks in an excited way, a word or two may be addressed to him to calm him; and this condition lasts but a very few minutes."

Except a headache on one or two occasions, the only unpleasant effect that Dr. Snow has seen from the inhalation of ether has been sickness and vomiting, which are only occasional results.

It must be admitted that Dr. Snow has been most fortunate in his use of ether, and while we have thought it important to lay before our readers the results of his experience we must not do so without referring to the later observations of others recorded in another part of this Number, (see *Anæsthetic Agents in Quarterly Summary*), where they will find facts recorded calculated to convince even the most enthusiastic advocate of the use of Anæsthetic agents, that caution is required in their use—much more, we conceive, than Dr. Snow seems to consider to be necessary.

ART. XVIII.—*Report of the Board of Trustees of the Massachusetts General Hospital, presented to the Corporation, at their Annual Meeting, Jan. 26th, 1848. Boston, 1848. 8vo. pp. 72.*

THE Massachusetts General Hospital, in the comforts of its accommodations, the convenience of its arrangements, and the ability of its professional staff, stands second to no institution of its kind in this country; and it is gratifying to receive the assurance furnished by this report, that its finances are in a flourishing condition. Within a short period the corporation has received some princely bequests, (one of \$100,000, and another of 50,000,) and many munificent donations, (six of \$2000; nineteen of \$1000; thirty-three of \$500, &c.,) which have