

used by the profession. We submit, however that it would be well if it were used in all public institutions where chloroform is frequently administered. Other inhalers are in use, such as that invented by Dr. Snow, and more recently that invented by Dr. Sanson; they are more portable, but it is not claimed for them that they attain anything of the perfection of the apparatus of Mr. Glover.

Notwithstanding the very great advantages of mechanical means for the definite dilution of chloroform-vapour, and the number of fatal cases that are constantly occurring from the administration of chloroform by the "ready method," it is probable that the great majority of practitioners will still use the towel or the handkerchief. The next question that arises is this; admitting that the great objection to the "ready method" is its irregularity and uncertainty, is it not possible so to conduct the administration with a towel or handkerchief that we may form at least an approximate idea of the strength of the vapour that is being inhaled at a given time? I believe that this question can be answered in the affirmative. And, in proposing a new method of administering chloroform-vapour, I trust that it will be the means of still further extending the great boon of Professor Simpson's invaluable discovery, inasmuch as, the administration of chloroform for the relief of human suffering "by the immense preponderance of its influence for good, has been a direct conservator of human life."

For the last seven years I have been in the habit of administering chloroform *guttatim*, in a manner similar to that known as "Professor Simpson's method;" and, during the last six or eight months, I have been endeavoring to reduce this seemingly inexact method to a system approaching very nearly the exactness that is attained by the most admirable, though complicated and cumbrous, apparatus of Mr. Glover;—I have been conducting a series of experiments with the object of determining the minimum quantity of chloroform necessary for inducing narcotism at different ages, and for different purposes; and to administer the chloroform in such a manner as to enable me to form a pretty correct estimate of

the degree of dilution of the vapour that is being administered at a given time. In this I believe I have not been unsuccessful.

My method of administering chloroform is as follows:—The patient is placed on his back, either on a couch or table; and an open linen napkin is placed over the face, so that one thickness only covers it. A two-drachm vial is filled with chloroform; an assistant observes the pulse, and holds the watch in such a position that the administrator may see the second hand. The administrator assumes a convenient position at the head of the patient, and, everything being ready, with the left hand he raises the napkin (so that it does not touch the nose) about one-and-a-half inches from the mouth. The chloroform is now carefully dropped upon the napkin, over the mouth, a definite number of drops being allowed to fall per minute, commencing with a minimum quantity and gradually increasing until, in the third minute, the maximum quantity is reached. One-third the maximum dose is given during the first minute, and two-thirds during the second. The maximum dose should be continued from two to six minutes, according to the effect of the anæsthetic upon the patient, and the degree of narcotism desired. Where it is necessary to keep up the narcotism for a length of time, the maximum quantity of chloroform may be repeated occasionally (as often as the condition of the patient may seem to require) or about one-half the maximum quantity may be administered continuously.*

To adults, I have never given more than 35

* In the *Edinburgh Medical Journal*, for December, 1861, a short paragraph appears, in which Prof. Simpson gives Dr. Moir credit for first administering chloroform *guttatim*. Administering chloroform in this manner is now known as "Professor Simpson's Method." I make this acknowledgment with great pleasure, and wish to disavow any intention of claiming originality in giving chloroform drop-by-drop. So far as I can learn, however, no attempt has heretofore been made to reduce this method of administering chloroform to anything of a system. No attempt has hitherto been made to conduct the *guttatim* method so that—1st. The administration shall commence with an almost imperceptible quantity of chloroform-vapour, and the strength be gradually increased as the system will tolerate it. 2. After tolerance is established, the administration shall continue with a certain definite quantity per minute until narcotism is established. 3. The administrator shall be able to ascertain the per centage of chloroform-vapour that is being administered at a given time. In this I claim originality.