In deducing the effects of alcohol from this comparison, it is necessary to allow for the somewhat lessened exposure to weather, and also to accidental violence, involved in the alcoholic pursuits—exemptions which, so far as they go, would diminish the liability to tubal nephritis and to lardaceous change. This may help to explain the comparative rarity of these disorders with the alcoholic class. The increase in fibroid and chronic tubal changes must be referred to the liquor alone; but this increase is not great.

Taking all the facts together, I do not see how it can be doubted that the effects of alcohol in causing renal disease is less than used to be asserted: that to paraphrase Dr. Roberts, if he will allow me to do so, this agent does not rank higher, but lower, than other circumstances—to wit, external temperature and the absorption of lead—as a determining cause of Bright's disease. Although we can now and then trace the existence or aggravation of renal symptoms to intemperance, we do so with far less frequency than with disorders which have other sites. Pathological and clinical evidence combine to show that the evil influence tells more upon the nervous system, the liver, the blood-vessels, and probably in the production of tuberculosis, than upon the kidneys. The facts adduced are consistent with those formerly advanced, and with the quoted conclusions which have been the object of attack.

THE ADMINISTRATION OF ETHER, AND ITS SUPERIORITY TO CHLOROFORM AS AN ANÆSTHETIC AGENT.

By J. MORGAN, M.D., F.R.C.S.I.,
Surgeon to Mercer's Hospital, etc., Dublin.

As the question of the superiority of ether over chloroform is daily attracting attention, any contribution towards our more efficiently applying this anæsthetic, and proving by facts its advantages, must be interesting. In the last two issues of the JOURNAL I have seen some remarks on the subject, and some more particularly in the last number, which are apposite, as they bear on the inconveniences which are met with in the method which has been most generally used, of administering the ether to a patient by pouring it over a sponge or towel. Although, no doubt, etherisation can be successfully induced by this method, every one who tries it will, I am sure, agree with Dr. J. W. Haward in his observations on the inconveniences caused by the administration of ether in the rough and ready method referred to, and then by force applying it to the patient. Mr. Clover, also, in his observations intimates that a mixture of air, as with chloroform, is desirable. This may be doubted. Dr. Squibb and Dr. Lente of New York, in common with others, believe that the more freely ether is administered the better will be the result. In this opinion I concur, and have found by experience that it undoubtedly acts best when not diluted with air.

In the pages of the *Medical Press and Circular*, I have written a series of papers, explaining the advantage of the method of using ether which I had arranged, and with which I had operated for a considerable time before, and which, I must add, I find to be perfection as an anæsthetic apparatus. It consists of an inhaler, furnished with a flexible diaphragm, which corresponds with the inspirations and expirations of the patient when being applied. The ether vapour is diffused over the interior by a framework covered with thin flannel, and is conducted to the mouth by a flexible tube and well-fitting mouthpiece. The ether is poured in, and its vapour is breathed over and over by the patient, as the flexible diaphragm allows sufficient mobility, and the effect is made known by the production of stupor and insensibility in a few minutes, varying from three to five or seven. By confining the ethereal vapour in this way, the odour or stupefying effect is not extended to the bystanders as it is in the rougher method of pouring the ether on a sponge or towel, and with even the assistance of a cone of pasteboard. The surgeon has usually to change his dress to get rid of the odour. There is also no necessity for violently overwhelming the patient; on the contrary, the patient may with a certain amount of confidence apply the mouthpiece himself at the commencement—a proceeding which renders the administration much more agreeable.

There is no chafing or irritation of the skin of the face or neck, as happens from the application of ether by the sponge or towel. There is no waste of ether as with the inhaler: two, three, or four ounces will suffice, where ten or fifteen ounces would be used by the sponge. The etherisation can, with a little caution, be used by the inhaler with candle or artificial light, where the more wasteful and diffused application by the sponge would be inadmissible, from the danger of igni-

tion. By the more direct application of the ether-vapour by the inhaler, there is less excitement than when the sponge or any other method which allows air to be more or less freely used with the vapour. The excitement and tediousness as well of etherisation being, I find, proportioned to the amount of air which is admitted with the ether-vapour, or, in other words, to the perfection of its administration: in fact, there is hardly any excitement stage; in the majority of cases, none at all. Sickness of stomach follows much the same rule; but if the stomach be empty at the time of etherisation, there is no sickness usually. In excitable females or nervous persons it does occasionally happen—certainly not more so, if as much, as in chloroformisation under like circumstances.

A remarkable advantage of ether over chloroform is that of its allowing a speedy reaction. After etherisation, a patient is in a few minutes perfectly restored; and, if the operation of it be not too severe, he will even walk from the operation-table.

We have in ether an agent which is proved by statistics to be eight times more secure than chloroform, and to be the safest of all anæsthetics in use. It has held its own for a quarter of a century in America, and confidence in its powers is unbounded. Certain inconveniences are to be remedied, such as—its diffusion among the bystanders; the local irritation caused by contact with the fluid; the waste of fluid; the excitement of delay; the danger of its use with artificial light. These are avoided by the use of the inhaler. There is a precaution worth bearing in mind, that the patient's head should be always well raised, specially in elderly and apoplectic individuals. Congestion of the face is to be watched in such cases, and discretion used in pushing the influence of ether or of any other anæsthetic.

I have used ether in hundreds of cases, and I have seen no ill effects. The day I etherised six patients in periods varying from three to five minutes, the anæsthesia was in all cases perfect and most satisfactory; the patients sometimes becoming insensible while applying the mouthpiece themselves, while the inhaler gets rid of all the inconveniences that have been found in the rougher and more wasteful method of applying by the sponge or towel.

The appended woodcut illustrates the mode of administration and the position which suits best.

ON ANÆSTHETICS.

By THOMAS JONES, M.D.,
Assistant-Physician to Victoria Hospital for Sick Children; formerly (for eleven years) Resident Medical Officer and Administrator of Anæsthetics to St. George's Hospital.

FULLY impressed with the truth of the main points ably insisted upon in the leading articles in this JOURNAL of the 2nd and 16th instant, on the question of ether and chloroform as anæsthetics, I am induced to state, as briefly as I can, the views which I have formed after having had somewhat extensive practical experience on the subject. And as another reason for troubling the readers of this JOURNAL with these remarks, I might mention my anxiety to keep up the interest of the profession in the superior claims of ether as an anæsthetic (so thoroughly do I believe in this fact myself) until all surgeons, and all engaged in the administration of anæsthetics, are induced to try it, and persevere in its use until they become proficient in its administration. I am quite sure that, if thus fairly tried, ether will soon replace chloroform in this country as the anæsthetic in general use.

I. In both public and private practice, I have administered chloroform to more than six thousand cases. I have used in its administration Snow's and Ellis's inhalers, Clover's bags, Skinner's apparatus,