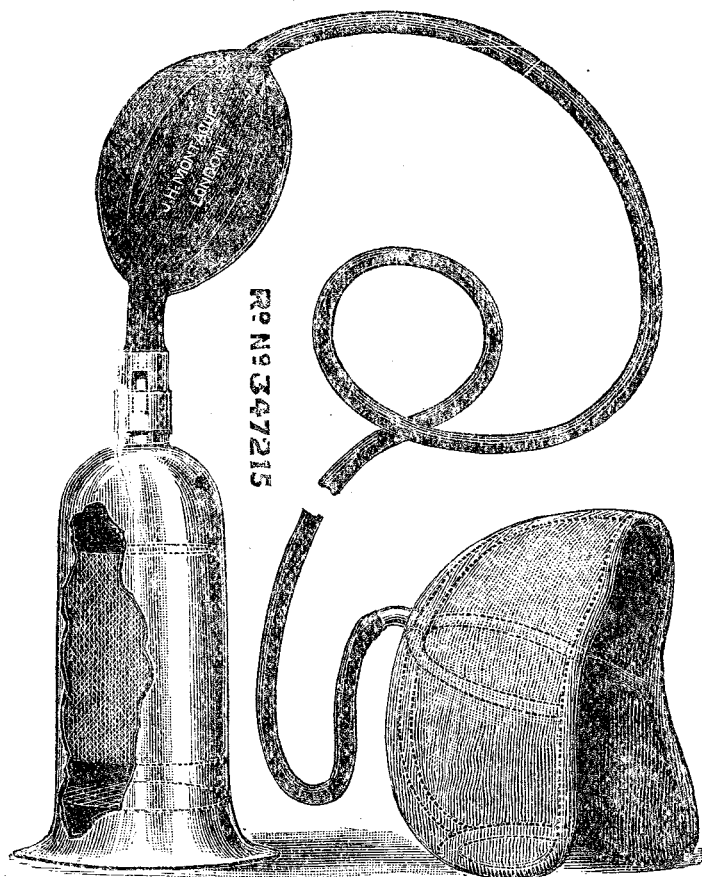


entailed a considerable amount of labour and the author is to be thanked for thus distinctly rendering easy the work of reference by others.

New Inventions.

A NEW CHLOROFORM INHALER.

IN order to avoid some of the commonest sources of danger in chloroform administration I have devised the instrument shown in the accompanying diagram. The apparatus consists of a light metal cylinder four inches long and one and a quarter inches in diameter filled with cotton wick; the lower end of the cylinder is open, the upper is attached by a short neck to the inlet of an indiarubber bellows. In the neck of the cylinder—that is, between the body of the cylinder and the bellows—two slots are cut; these slots can be covered or uncovered by sliding a moveable metal collar over them. The action of the bellows is to draw air in through the cylinder and to discharge it through a short length of tubing into the face-piece or other terminal. This air, when the wick has been previously moistened with liquid chloroform poured



upon it through the lower end of the cylinder, becomes saturated with chloroform vapour. If the slots in the neck of the cylinder are opened some normal air that has not passed through the cylinder will be drawn into the bellows; with the slots completely closed all the air entering the bellows is drawn through the cylinder and contains a definite percentage of chloroform vapour; if the slots are partly open the amount of air passing through the cylinder varies inversely with that entering by the slots and the percentage of chloroform vapour transmitted to the terminal is correspondingly diminished. Thus it will be seen that by opening or closing the slots and admitting or excluding air in addition to that drawn through the cylinder any desired dilution of the anæsthetising vapour can be accurately limited, and this limitation can be easily and evenly maintained.

The fundamental principle on which my apparatus depends is the fact that air can only take up chloroform vapour in definite proportions at any given temperature or pressure;

and since these do not vary appreciably during an administration it follows that the anæsthetist has practically an absolute control over the strength of the vapour he is employing, and that he can exhibit air only or a mixture of chloroform vapour and air of any intensity up to saturation point. The amount of the mixture administered to the patient depends upon the frequency and completeness with which the bulb is compressed. This amount, however, is limited by the fact that the bulb of the bellows can only be filled and emptied once during a second. Thus a patient respiring 15 times in a minute—that is, at the rate of one complete inspiration and expiration in four seconds—would not during the act of inspiration have sufficient time to receive two complete doses of the mixture from the apparatus.

One of the chief advantages of this instrument is that the intensity of the chloroform vapour cannot be accidentally increased by accumulation of unused vapour within the cylinder, owing to the fact that it is specifically heavier than atmospheric air, and hence will fall rather than rise into the apparatus, and that no admission to the bellows is possible except when they are being worked; in fact, the only source of chloroform vapour for the patient's inhalation is the direct working of the bellows. The amount of chloroform evaporated and lost through the open end of the cylinder when the bellows is not working is approximately one minim per minute. Another advantage of the open cylinder is that the liquid chloroform is absorbed entirely by the wick and hence cannot be dropped on the face, as happens so frequently in the open method, or be injected into the pharynx, as has occurred with fatal results from the use of Junker's inhaler when filled too full or if the tubes are wrongly attached. Should an excess of chloroform be poured into the cylinder the surcharge escapes as soon as the apparatus is in working position. The inhaler is light, portable, simple, and strong; it is very little liable to get out of order, and is incapable of having its parts transposed or deranged to the peril of the patient; it is exceedingly easy to manage, constant in action, and totally free from any automatic source of danger.

Although the apparatus was primarily constructed for administering chloroform vapour it is useful for the administration of the A.C.E. mixture and for the administration of many volatile vapours such as are frequently employed in throat and chest affections. I have repeatedly used this inhaler at King's College Hospital and at the Great Northern Central Hospital and in private practice for all sorts of operations with completely satisfactory results. As regards the effects upon the patients I have not observed any particular departure from those ordinarily observed when other methods have been employed. I am indebted to Mr. J. H. Montague of 101, New Bond-street, London, for the care and skill with which he has carried out my wishes in the construction of this instrument.

GEORGE FLUX, M.D. Brux., M.R.C.S. Eng.,
L.R.C.P. Lond., L.S.A.

Clinical Assistant to the Anæsthetist at King's College Hospital; Anæsthetist to the British Lying-in Hospital; Assistant Anæsthetist to the Dental Hospital of London.

Old Burlington-street, W.

HOME FOR INEBRIATES.—A sub-committee of the Cardiff Watch Committee has been considering what course should be taken in connexion with the Inebriates Act, and on Jan. 25th Dr. Braithwaite from the Home Office met the sub-committee when the question of erecting a home at Cardiff for 50 inmates (25 males and an equal number of females) was fully discussed. It is expected that such an institution will be sufficient to accommodate all those who come under the provisions of the Act in South Wales and Monmouthshire.

WESTERN DISPENSARY, BATH.—The annual meeting of this institution was held on Jan. 26th. The medical report showed that 932 cases had been treated during 1899. The financial statement showed a favourable balance of £102. On the proposition of the chairman, the Rev. J. Stedman, a resolution was unanimously passed expressing regret at the loss the dispensary had sustained by the death of Mr. H. O. Hopkins, who for 28 years had been one of the medical officers, and the committee added that the poor would long remember him as their friend and kind benefactor.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 3, 1900.

WE are writing under the shadow of a great national anxiety. Amid the gloom of the bitter disappointments which have so far attended the conduct of the campaign in South Africa there has, however, appeared one bright spot—and but for the splendid bravery of our troops we had almost said one bright spot only—namely, the noble way in which the Royal Army Medical Corps are bearing themselves. This is admitted on all hands. Never have medical officers shown greater courage and more self-sacrificing devotion to duty under trying circumstances in the battle-field than have the soldier surgeons of the QUEEN on the present occasion; and never has there been a greater exhibition of zeal, fortitude, administrative resource, and professional skill in the care and treatment of the sick and wounded in the hospitals at the theatre of war. The nation has, at any rate, the satisfaction of knowing that all which courage and personal exposure to danger can do to afford the promptest possible aid to the wounded soldier on the battle-field in rescuing him from the enemy's fire and relegating him to a place of safety where his wounds can be attended to and his sufferings alleviated is done by the officers and men of the Royal Army Medical Corps. We may go further and say that everything that professional foresight could suggest or skilful and humane treatment could practically provide has been done for the wounded officer or soldier in his course from front to base, from the receipt of his injury in action and during his transit along the lines of communication up to the time he reaches the general hospital in the rear or the hospital ship which is to convey him home. However others may fail to realise the fact we may be quite sure that to the wounded all this is an unspeakable blessing which can never be forgotten. The nation cannot lightly estimate the value of such services and we are convinced that the medical profession will not. They will justly feel proud of the valour and devotion so conspicuously displayed by their brothers in the public services during a war which has necessarily entailed a large amount of physical suffering, nobly borne, and has carried grief and anguish into many homes.

Those officers who have personally come under the care of their fellow officers of the Royal Army Medical Corps have had cause to bless them and must ere this have felt that it is an honour to any service club to number such men among its members. There should exist the strongest ties of comradeship and good feeling between officers of all branches of the service. The medical officer participates in all the dangers, hardships, and labours incidental to war in common with the strictly combatant branches of the service, and in addition he has to encounter others in which the latter have no share—the risks, anxieties, and responsibilities of his hospital duties. His work does

not end with the fight, but becomes even more arduous and responsible afterwards, under conditions attended with no glamour of fame or publicity. His reward must be derived from his own conscience in the assurance that he has done his utmost for the cause he serves—the saving of life and the relief of physical suffering. How often has it happened in the past that his labours in this respect have been unrequited or even unrecognised by those who were either incompetent judges of their value or regardless of the strain and difficulties under which they had to be fulfilled? And for this reason, although not, of course, for this reason only, the Director-General of the Army Medical Service, in our opinion, did an excellent piece of work for the Royal Army Medical Corps in recommending that a certain number of well-known hospital surgeons should be selected and sent to the front. Apart from the highly-skilled professional aid and advice which they can give they form a special jury of experts well acquainted with all the hospital requirements of wounded and sick men, and they can rightly estimate the way in which these requirements have been met under all the exigencies of war. The nation and the relatives and friends of those fighting rely on the judgment of such authorities and the medical officers have the assurance that their labours and efforts will be duly weighed and by those who are most competent to do so. What has been their verdict the world already knows. Sir WILLIAM MACCORMAC, Mr. TREVES, and others have spoken emphatically of the splendid work that has been, and is still being, done, as well as of its variety, and of the courage, self-sacrificing zeal, and ability with which the medical officers have laboured. Mr. TREVES, in a very interesting communication to the *British Medical Journal*, has not only fully endorsed the previously expressed opinion of Sir WILLIAM MACCORMAC in THE LANCET, but he has specially referred to the courage and daring of Major W. BARTIE, R.A.M.C., at the battle of Colenso as calling for some recognition from the medical profession if not from the military authorities. That such recognition will be accorded we have no doubt, whilst we are proud to think that this medical officer's conduct was only typical of the skill and valour of the whole service.

We have only to turn to the first batch of official despatches published in the *London Gazette* last week from the general officers commanding to read of the plucky and devoted services which have been rendered to the wounded in numerous hard-fought actions. It is particularly gratifying to us as medical journalists to place on record the good, and in many cases brilliant, work performed by the medical officers who are so nobly representing their profession at the front. The medical service may well be proud of its traditions in the past and of the way in which it is more than maintaining its reputation in the present.

FROM whatever aspect the war be viewed it affords much material for reflection to all of Her Majesty's subjects. The money cost of it is perhaps the least important of such aspects. It is possible that one of the explanations of our unpreparedness, with all its sad consequences, is our accumulated wealth. For 50 years we have not been in trouble