New Inventions.

A NEW BED AND FOOT WARMER.

THE accompanying illustration shows an ingeniously designed bed and foot warmer which will probably be found useful in hospital and nursing-home work. It is made in two portions hinged together at the ends by a removeable pin, so that when opened it is four feet long—i.e., large enough to warm the whole length of a bed or the whole width of a double bed. When closed it measures two feet long and forms an excellent foot warmer. Each half can be

used separately for different beds if required. In the illustration the warmer is represented partly open and the method of filling it is shown. It is solidly and neatly made in block-tin and also in copper, the price being 7s. 6d. in the former material and £1 2s. 6d. in the latter. It holds six pints and weighs about eight pounds when filled. The patentee and maker is Mr. F. Coates, 14, Thavies Inn, Holborn-circus, London, E.C.

A STERILISABLE INHALER FOR ANÆSTHETIC MIXTURES.

THE accompanying figure represents an inhaler which has been made to my order by Messrs. Gardner and Son, Forrest-road, Edinburgh. I wish to draw attention to this apparatus because it is not an addition to the great number of inhalers already on the market but merely an improvement on one which was introduced several years ago by Mr. Clarence Blake of Boston and which deserved more favour than it

received. In its present form the inhaler consists of a truncated cone of nickel silver inside which a wire gauze cone is retained by a spring. The former has an opening at the top about one inch by two inches, the lower opening measuring five inches by three and a half inches. The whole inhaler, which weighs only six ounces, can be sterilised by

boiling and in using it a piece of one and a half or two inch domette bandage about one and a half yards long is wrapped about the inner cone before each administration, rather more being needed if ether alone be employed. In certain cases a piece of sponge with large pores is placed in the upper aperture when a full vapour of ether is desired. The inhaler is intended chiefly for the administration of A.C.E. or C.E. mixture but ether alone can be conveniently administered by means of it as stated, or even ethyl chloride, but for this last a bag inhaler is preferable. From its simplicity, adaptability, and portability the apparatus may prove to be particularly useful to medical men whose work is in the country, who only occasionally are called upon to administer an anæsthetic, and who require an inhaler which will not spoil in keeping or readily get out of order.

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Looking Back.

FROM
THE LANCET, SATURDAY, Feb. 3, 1827.

The following WORKS¹ have been received.

L'Agent immediat du Mouvement Vital, dévoilé dans sa nature, et dans son mode d'action chez les végétaux, et chez les animaux. Par M. H. DUTROCHET, Correspondant de l'Institut, dans l'Académie Royale des Sciences, &c.

The author of the above work endeavours to elucidate the vital movement in the animal and vegetable kingdoms, by an explanation of the course that the juice takes in plants, and the causes of its propagation. M. Dutrochet thinks that the progression of liquids in vegetables, and in living bodies generally, is the result of a particular form, capable of accumulating them in a much greater quantity than could be done by simple capillary action. He establishes his opinion upon a series of experiments, in which, having placed in water a sac formed of an organic membrane, filled with very thick animal paste, he saw, after half an hour's immersion, the solid paste in great part driven from the sac by the water, which traversing its parietes, introduced itself into the cavity of the sac. Different experiments led the author to recognise that every time an organic membrane is interposed between two liquids of an equal density, a movement of one of those liquids takes place across the membrane; the movement being in general effected from the liquid possessing the least towards that possessing the greatest density. The power by which the liquid is pushed into the interior cavities, M. Dutrochet calls *endosmose*, and the contrary action *exosmose*.

The experiments of the author also show that alkalies placed in the interior of a membranous sac, always produce endosmose; while the acid under the same circumstances, produce exosmose, whatever may be the density of the liquids. This last circumstance leads the author to believe that the cause of such a phenomenon is purely electrical, and that the membrane in which it operates, holds the place of a permeable Leyden jar. In modifying his experiments according to this idea, M. Dutrochet placed an organic membrane in the inferior part of the tube, between two heterogeneous liquids, the one within the tube, the other without; by these means he succeeded in making the lowermost liquid pass into the tube, and in elevating it so as to make it pour over the sides. This effect is always maintained, up to the putrefaction of the membrane; all animal membranes, all vegetable textures have afforded the same result. The author also remarked, that in making the two extremities of a galvanic pile communicate with each side of the membrane, the liquid is always carried from the positive pole, or the least dense, towards the negative pole, or the most dense. The elevation of the temperature sensibly favours the endosmose, on which account the author thinks that inflammation in animals may be considered as a perendosmose. Whether the theory be correct or not, it is not our intention at present to discuss; we have seldom perused a work possessing so much valuable physiological knowledge, and we strongly recommend it to the attention of our readers.

¹ The work reviewed above is the first of a list of seven received and summarised.