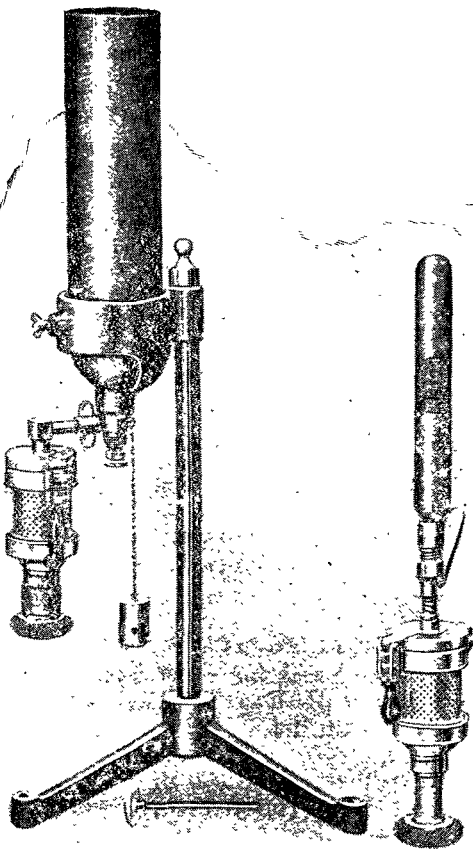


New Inventions.

THE "PRANA" CARBON DIOXIDE SNOW APPARATUS.

THIS apparatus is designed for producing the new freezing caustic CO_2 , in the treatment of nævi, lupus, lupus erythematosus, lupus vulgaris, warts, moles, and so on. The method of treatment was described in a paper by Dr. Reginald Morton read before the Electro-Therapeutical Section of the Royal Society of Medicine on Nov. 19th, 1909, which was published in THE LANCET of Dec. 4th, 1909 (p. 1658). A subsequent paper by the same author appeared in THE LANCET of May 7th, 1910 (p. 1268). The "Prana" apparatus produces a convenient and effective pencil of carbonic acid snow with a minimum of trouble. It consists of a steel cylinder containing liquid CO_2 to which is attached a specially constructed metal box in which the CO_2 as it escapes condenses to snow. The snow obtained is ultimately compressed in a kind of stamp-mill or mould from which it emerges as a firm stick or pencil. The process is very simple and expeditious. In the accompanying illustration the apparatus on the left is for hospital use, and that on

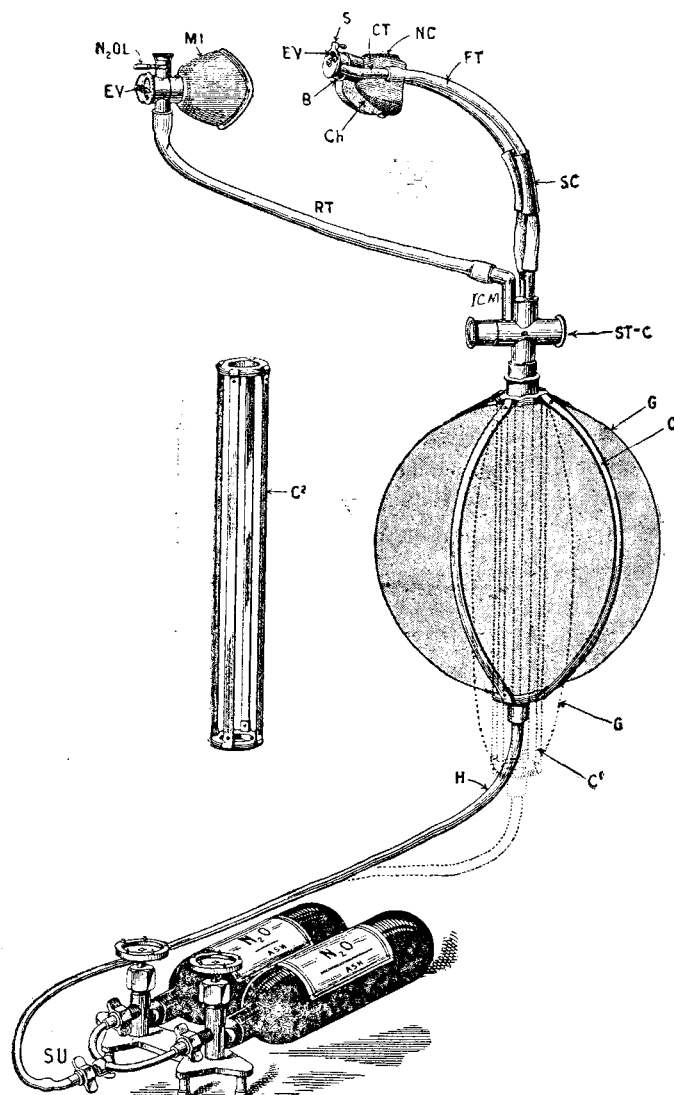


the right is portable and convenient for general practice. The temperature of the frozen gas is -79°C . A constantly cold solid of definite shape is obviously more convenient to use than a liquid refrigerant. The pencil of solid CO_2 enables, for example, as much pressure to be applied as is wanted, and thus freezes the tissues to any desired depth up to a reasonable limit. There is a gradual escape of gas from the pencil when it is applied, so that a fresh surface is constantly being presented. The action of the pencil is easily under control and can be readily localised, the extreme degree of the cold enabling its devitalising action to extend rapidly to the intended depth without risk of injuring deeper or adjacent parts. For shallow growths, it is said that an average period of 40 seconds suffices for the required depth of destruction, while deeper structures such as a thickly crusted wart require a longer

application. Beyond a tritting smarting during the application, and some pain as the parts recover their normal temperature, there is no serious inconvenience to the patient. The apparatus marks a valuable and important development in dermatological practice. We are indebted to Aerators, Limited, of Upper Edmonton, London, N., for an inspection of the types illustrated above.

A NASAL INHALER FOR THE CONTINUOUS ADMINISTRATION OF NITROUS OXIDE.

SINCE the introduction in 1898 of the nasal method for administering nitrous oxide several forms of inhalers have been introduced and as many methods evolved in their employment. This would seem to indicate that no one form of inhaler is capable of satisfying the demands of every anaesthetist. The apparatus figured below allows the induction of anaesthesia by the two chief methods at present employed, and by a simple mechanism of throwing out of action certain valves the conditions favoured by other administrators can be obtained. The self-retention of the nasal inhaler, the absence of rubber pads, and a regulating



Combined mouth cover and inhaler.—MI, Mouth cover. N_2OL , Nitrous oxide lever. EV, Expiratory valve. RT, Rubber tubing. ICM, Inhaler connexion mount. Nose-piece, &c.—EV, Expiratory valve. B, Body. ch, Channel. S, Shutter. CT, Conveying tubes. NC, Nose cap. FT, Flexible tubes. SC, Sliding clamp. ST-C, Stopcock. G, Gas-bag distended. G^1 , Gas-bag empty. C, Gas-bag compressor distended. C^1, C^2 , Gas-bag compressor at rest. H, Tubing to gas stand. SU, Single union connected to gas stand.

gas and air stopcock are, I think, features which will appeal to all. The accompanying illustration shows the apparatus as fitted up.

I have intrusted its manufacture to Messrs. C. Ash, Sons, and Co., to whom I am indebted for many useful suggestions.

Harley-street, W.

F. COLEMAN.