

a pistol grip control adapted from an ordinary BEN blow-gun. The needle is attached to the record mounting but if it is of a type that does not fit firmly under pressure it may be retained by a 'locking-cap.' The soft-metal hub of the Arnold type of stainless-steel needle however fits firmly enough when placed on the record mount by a twisting movement. The record nozzle is protected when not in use by a cylindrical cap, but if the needle is left in position it may be protected by a specially long cylindrical cap. When an aspiration test has to be done—in splanchnic block, for example—a small injector operated by the pressure of the analgesic solution is attached to the pistol grip by means of a wing-nut after the record mount has been removed. The apparatus is sterilised in hospital by tapping any pipe-line in the sterilising room of the operating theatre and blowing steam through the whole circuit from the air-filter to the orifice of the record nozzle. . . . The apparatus has a hinged lifting-bar so that it can be carried by two people easily, or for short distances by one person."

J. C. M. C.

NEUMANN, C.; SELLERS, E. A.; ROVENSTINE, E. A.; COHN, A. E., AND RULE, C.: *Influence of Spinal and Regional Anesthesia upon Vasoconstriction and Vasodilatation of Small Peripheral Blood Vessels*. Proc. Soc. Exper. Biol. & Med. 53: 159-160 (June) 1943.

"In the current studies of the development of shock during surgical procedures, alterations in the rhythmic variations in the caliber of the small peripheral blood vessels of the fingers and toes have been noticed after spinal anesthesia and anesthetization of the stellate ganglion. It is well known that spinal anesthesia may occasion a fall in blood pressure espe-

cially in the presence of moderate hemorrhage or trauma. It is also known that peripheral blood vessels dilate when denervated of their sympathetic supply. These two phenomena, fall in pressure and dilatation of the vessels, are related. What is still unknown is how those other small peripheral blood vessels with their sympathetic supply still intact participate in this result. If the blood pressure and the pulse rate were to remain constant, then, on the assumption that the cardiac output also remains constant, it may be assumed that, as one large set of vessels dilates, another contracts. The pneumoplethysmograph of Turner, as modified by Neumann, was used to record the variations in volume of fingers and toes simultaneously. Normally, waves are inscribed representing constantly occurring changes in volume. These include the pulse waves, synchronous with the cardiac beat, and alpha waves which occur 5 to 7 times per minute and vary in size up to 10 times that of the pulse waves. Twelve patients free from hypertension and from peripheral vascular diseases, ranging in age from 24 to 54 years, were studied. . . . Before anesthesia, the needles being in place, the tracings were normal, the pulse waves being 6 to 7 cu. mm. and the alpha waves up to 60 cu. mm. Two minutes afterward, in the case of spinal anesthesia, the pulse waves in the toe became progressively larger (up to 15 cu. mm.) while the alpha became smaller and almost disappeared. Concurrently, in the fingers, the size of the pulse waves progressively decreased to one-half or even one-quarter their former size, while the size of the alpha waves decreased, as in the toes. Similar effects were noticed on injection of one stellate ganglion. . . . There were no marked alterations in blood pressure or pulse rate during the period of spinal or regional anes-

thetia. . . . These observations indicate that when marked dilatation occurs in one peripheral vascular bed, owing to paralysis of the sympathetic supply, concomitant vasoconstriction occurs in certain other remote peripheral beds. The mechanism involved seems to be one of adjustment, possibly compensation, through efferent pathways of the sympathetic system. . . . The method may be useful . . . for clinical studies of the effects of numerous physiological stresses, such as those preceding shock, upon such pathways and upon small peripheral blood vessels." 8 references.

J. C. M. C.

RANKOW, R. M.: *The Pterygopalatine Injection for Block Anesthesia of the Maxilla*. Mil. Surgeon 93: 164-167 (Aug.) 1943.

"During the past two years, I have closely followed the technique described by West (who credits Silverman), and more recently by Peckham, for blocking the maxilla by injecting the anesthetic into the pterygopalatine fossa through the greater palatine foramen. The administration of over two hundred such injections with gratifying, uncomplicated success leads me to proffer its use for military dentistry. . . . An anatomical approach enhances the success of block anesthesia for the maxilla. The application of these principles to the pterygopalatine injection simplifies complete maxillary block for certain indicated maxillofacial procedures." 3 references.

J. C. M. C.

MOORE, A. E., AND GUTHRIE, D. W.: *Amputation Under Ice Anaesthesia*. New Zealand M. J. 42: 97-101 (June) 1943.

"In using refrigeration anaesthesia the limb, of course, is not actually frozen. The technique depends upon

merely chilling the limb to about 2° Centigrade, and at this temperature metabolism practically ceases, but although there is complete anaesthesia of protoplasm, there is no actual coagulation such as there is in a frostbite, where the temperature of the part reaches freezing point. . . . This method has now been used in five cases at the Auckland Hospital. . . . Since submitting this article for publication this method of anaesthesia has been employed in five other cases in Auckland Hospital. There has been no death in this series of ten cases." 5 references.

J. C. M. C.

MONTGOMERY, T. L.: *The Present Status of Analgesia and Anesthesia from the Obstetrician's Viewpoint*. Pennsylvania M. J. 46: 1048-1050 (July) 1943.

"Despite all . . . [the] adjustments in practice and . . . corrections which have served to reduce the mortality of mother and child, I believe that all obstetricians, enthusiasts or otherwise, are ready to agree that we have not yet found the ideal analgesic agent. When we do find such an agent, it will be one which is local in its effect and not systemic. . . . The method of continuous spinal anesthesia, as introduced by Dr. William T. Lemmon, has been employed in a sufficient number of cesarean sections now to indicate that it is an acceptable and useful anesthetic method. I think that continuous spinal anesthesia should be employed particularly where one is undertaking an extraperitoneal cesarean section. . . . The method of continuous caudal anesthesia . . . has been employed not only in perineal operations of one type or another but has been introduced in obstetric practice for continued application during the first and second stages of labor. . . . This new procedure possibly will find a great field of application in ob-