Preparations and Appliances

SPLIT THOMAS'S SPLINT

Mr. R. KENNON, M.C., F.R.C.S., writes from the Royal Infirmary, Liverpool:

When Hugh Owen Thomas invented his splint for tuberculosis of the knee the splint ring was flat in front for the groin and well curved behind to accommodate the buttocks, thus rendering the lateral axial bars eccentric but giving the surgeon a well-fitting right or left splint as required. In the last European war a standard ring was devised to be worn equally well on either leg, but this splint was far from perfect. Pressure sores in the perineum and even over the anterior superior iliac spine were and are common, and the ill-fitting standard ring remains a danger to the patient and completely upsets the extension mechanism. Firmly convinced of the value of the Thomas's splint for fractures of the femur, I determined, seventeen years ago, to obtain for each case a selection of splints, to choose one of good fit, and so establish immediate extension from the ischial tuberosity and no other part of the pelvis—in short, to avoid pressure sores. A "nest" of split splints was made for me, and has been in use ever since. The idea is probably not original—Mr. Woolfenden certainly was considering the matter at that time. The Thomas's splint consists of a ring and a detachable iron extension piece. It is made from an ordinary Thomas's splint by dividing the inner bar four inches below the ring and the outer bar at a corresponding level. On to the cut ends a two-and-a-half-inch piece of tubing is brazed, allowing a tube hole two inches deep. Into these tube holes the remaining length of the extension iron can be slotted when in use. A locking mechanism could be devised, but it is unnecessary.

On admitting a case of fracture of the shaft of the femur the surgeon takes along half a dozen rings and a few extension irons and proceeds to apply the ring which fits, with an iron of suitable length for the patient. Thus treatment begins at once. The scheme is adaptable to civilian and military needs. A complete "nest" for military purposes consists of rings increasing by one inch from eighteen to thirty inches, duplicating the commonest sizes (eighteen to twenty-four inches) so that altogether there are twenty rings. All the rings show clearly the size in inches. The lateral irons range from thirty-four inches, increasing by two inches, to forty-two inches, so that with four of each size again the total is twenty. This is a complete set for adults.

For civilian or A.R.P. work a further range must be added to cater for children. This consists of a "nest" of rings from ten inches to seventeen inches—say ten splints—duplicating the sixteen- and seventeen-inch sizes. The lateral range from eighteen inches, increasing by two inches, to thirty-six inches, giving a total of ten. The advantages of the split Thomas's splint are: (1) cleanliness and ease of replacement; (2) compactness in storage and shipping; (3) accurate fitting from the outset and no delay in manufacture; (4) absence of pressure sores; and (5) the limb changes of size, increasing by inflammation or shrinkage due to disease, a second fitting can be done from the "nest" in a very short time.

Finally, when the patient reaches the "walking caliper" stage, again delay and misfits are avoided by selecting a suitable ring from the nest and brazing it on the lateral bars, so that a well-fitting caliper is forthcoming within a few hours, provided that someone has been thoughtful enough to prepare the boot.

PENTOTHAL SODIUM EMERGENCY CASE

Dr. RONALD JARMAN writes:

Anaesthesia in war time is still a matter of the utmost importance, and several leading anaesthetists and surgeons have expressed the opinion that the intravenous barbiturates, properly administered in small and convenient doses, would be both safe and convenient. Certainly the anaesthetist in war time must have a case which is portable, compact, complete in every detail, and containing equipment to give a number of analgesics and meet every possible contingency. Having in mind these basic facts, several additions and improvements have been made to the pentothal sodium emergency case which I recently described. The contents of the case are as follows: A—ten ampoules of pentothal sodium, 0.5 gramme; B—ten ampoules of chemically pure water, 10 c.c.m.; C—two ampoules of pentothal sodium, 1 gramme; D—twelve ampoules of chemically pure water, 20 c.c.m.; E—1 oz. tincture of metaphen; F—20 c.c.m. picrotoxin solution; G—two 10 c.c.m. Record-type syringes in spirit-proof cases, which also contain five No. 17 needles and one filling cannula; H—two gags; J—one airways; K—one tongue forceps; L—1 c.c.m. Record-type syringe in spirit-proof case; M—one "continuous-feed" cotton-wool pack.

Space is also provided for morphine and cocaine, and for files for opening ampoules. This case is 12 by 9 by 3 inches, and weighs 6 lb. 3 oz., complete with all fittings. The ampoule holders are hinged and stand in a vertical position when the case is opened. The case is made of heavy plywood with a washable cover of dark grey rexine. It has been designed to carry all the drugs and instruments necessary for the administration of a number of intravenous anaesthetics, and also supplies antidotes and materials for skin sterilization in compact and convenient containers. A card with complete instructions for use is attached, and it is believed that the anaesthetist will be quite able to administer anaesthetics safely and efficiently with this equipment. It is felt that this case, complete in every detail, will be useful in private practice as well as in war-time emergency work. The cost of the case covered with rexine is £7 10s. to £8, and the same case, covered with cow-hide and complete with all fittings, as described above, will cost £10. Since the case was designed it has been suggested that two small loops could be fitted on the front of it to take a Sparklet J carbon dioxide apparatus, as supplied by A. Charles King, Ltd., of 34, Devonshire Street, W.I. The case itself and all the contents may be obtained from Abbott Laboratories (England) Limited, Wadsworth Road, Perivale, Middlesex.