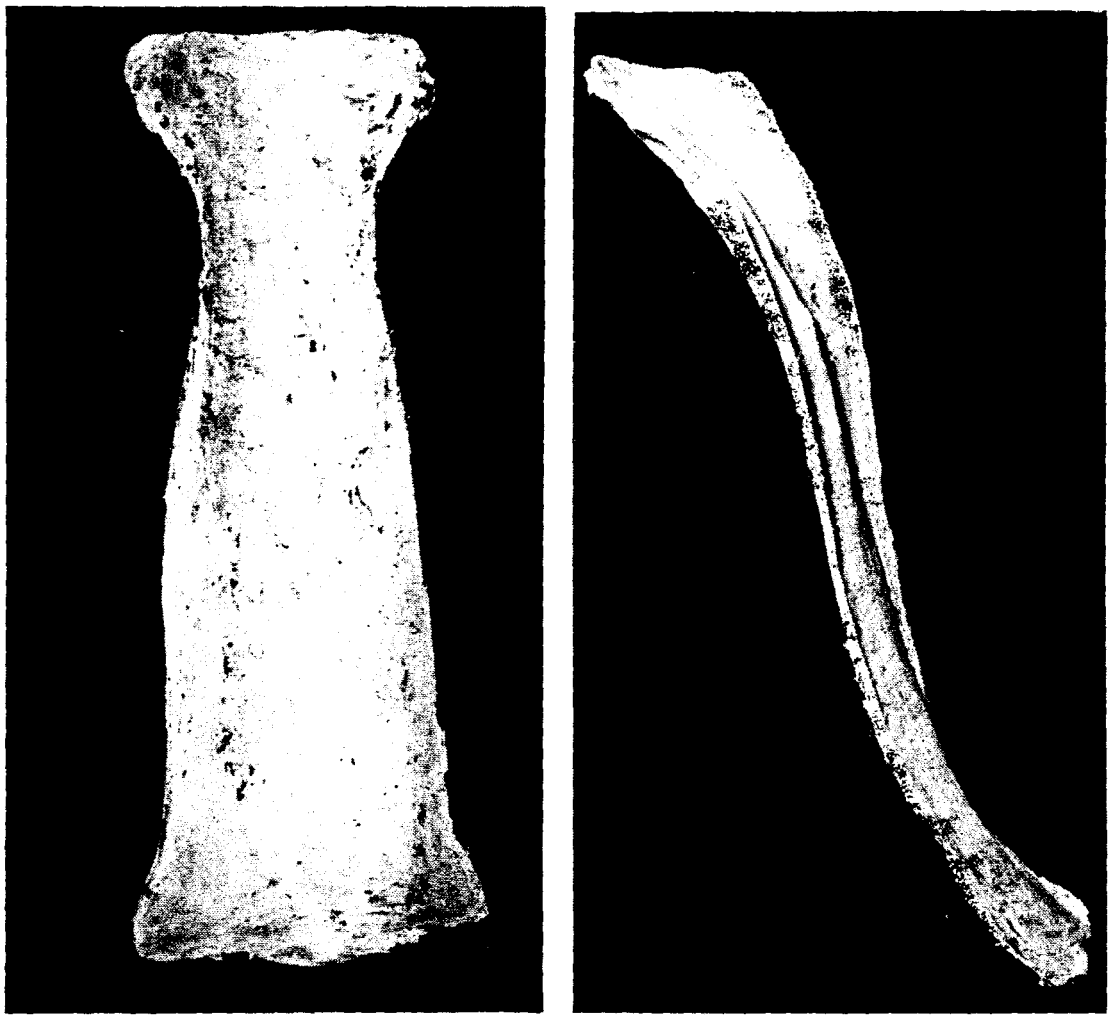

FIG. 1—THE PLASTER CAST

A SURGICAL REPAIR

BY

COMMANDER D. G. SPICKERNELL, R.N.

During recent exercises at sea the Author was approached by the Fleet Medical Officer with the news that a senior officer on the Commander-in-Chief's staff was suffering considerable pain from a prolapsed intervertebral disc. Slipped disc to the uninitiated ! There was no lack of sympathy on the Author's part, having already occupied a bed at Haslar for the same occupational disease. The eminent surgeon was therefore regaled with advice ranging from stretching on a rack to flying out a civilian osteopath, but strangely enough this was not received with the same grace as it was proferred. What was required was a spinal splint ; nothing else would do.

The doctor, therefore, made a plaster cast of the patient's back which is shown in FIG. 1, and the first idea was to try to shape duralumin to this pattern. However, the Senior Engineer held strong views on the plastic age we live in, and the coppersmith was keen to try something unusual, so it was decided to try to make the splint in perspex. Accordingly, the plaster cast was placed in a sand mould and a heavy whitemetal pattern made of it. This pattern was then

FIG. 2

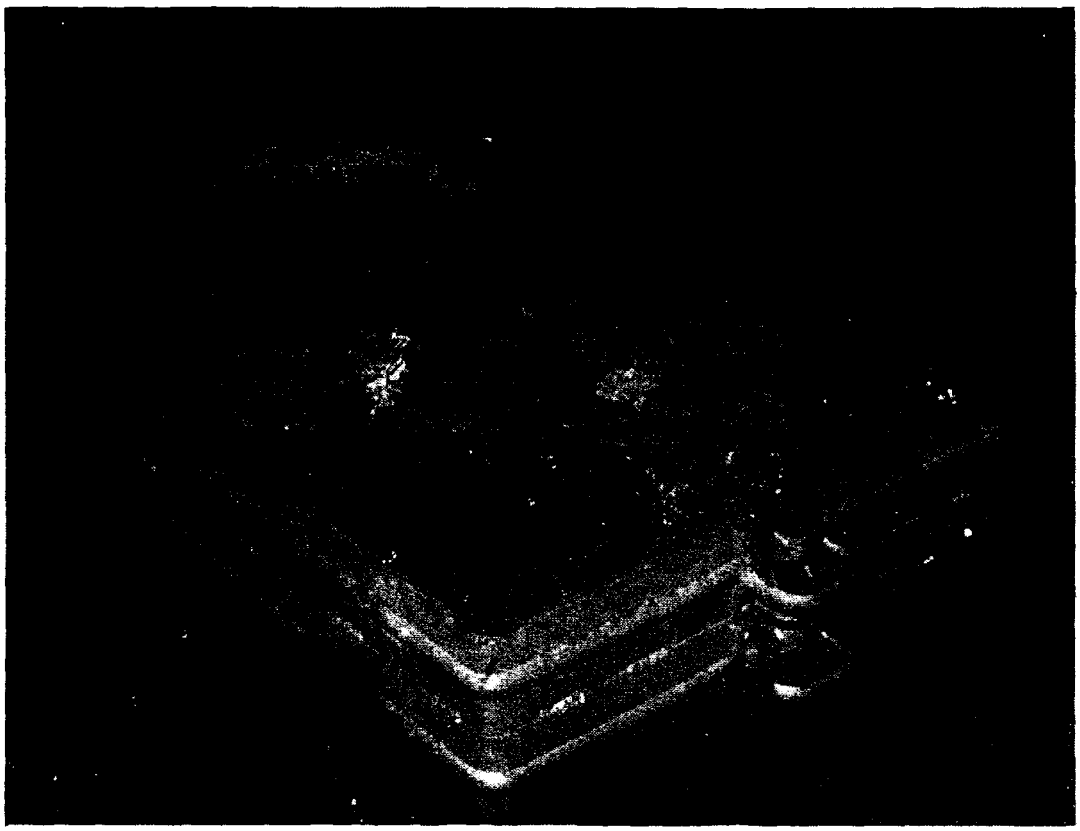

FIG. 3

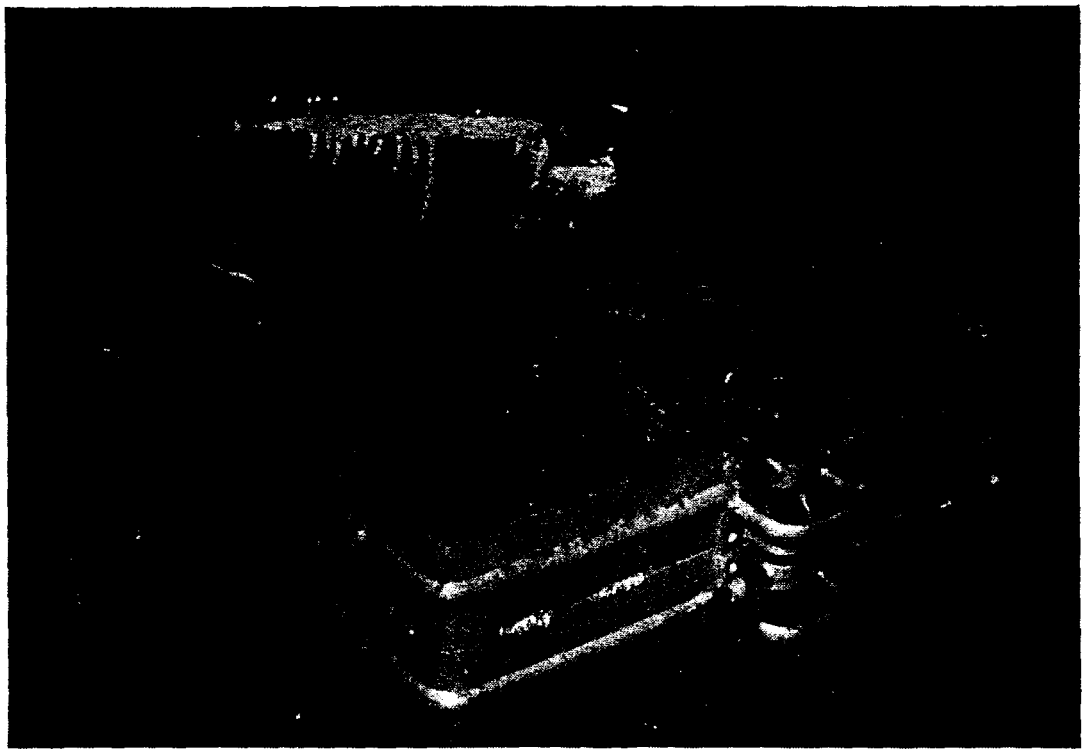

FIG. 4

withdrawn from the mould leaving the plaster cast in place. A rectangular sheet of perspex $\frac{1}{8}$ in. thick was laid flat across the top of the sand and gentle heat applied by an oxy-acetylene torch. As the perspex became mouldable it was gradually pressed down on to the plaster and finally the whitemetal former was placed on top of it and weighted. FIGS. 2, 3 and 4 illustrate these operations quite clearly.

After fifteen minutes the perspex was removed from the mould and trimmed to the size of the plaster cast. Holes were cut to take the straps and for ventilation. Straps were then cut out and buckles fitted. Front and back views of the patient wearing the finished article are shown in FIGS. 5 and 6. It gave relief from pain and was comfortable and extremely light to wear.

Having had to wear an extremely uncomfortable and heavy polythene jacket which encased both front and back of the body, should one of those irritating rubber cushions ever go ping again, the Author will personally plumb for a *Maidstone* model. However, even better results will probably be achieved by the use of $\frac{1}{4}$ in. perspex which has been heated in an oven instead of by torch.

This article has been written not only to provide a little light reading but also to show how easily perspex can be worked and to give food for thought to its many possible uses in ships and dockyards.

Note by Fleet Medical Officer

The surgical concept was a rigid close-fitting light-weight splint extending the length of the dorsal and lumbar regions, worn rucksack fashion at the upper end and braced in with a pelvic belt at its lower end. This was achieved.

From observation of the patient's movements when wearing the appliance, for example, attempting to stoop, it is clear that his spinal column is controlled

to a degree quite comparable to that achieved by plaster-jacket and he confirms this himself. He remains enthusiastic over its lightness and relative comfort.

At its least, this is an instance of good ' surgico-engineering ' co-operation. At most, it may prove to be a worthwhile substitute for the traditional plaster-jacket. Those who care to try it will perhaps pardon and humour our conceit in naming it ' The *Maidstone* Spinal Splint '.