

A NEW STRETCHER FOR THE ACCIDENT SERVICES

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Introduction

THE aim of this article is to bring to more general notice a new type of stretcher, designed primarily for emergency use in the United States of America, and which has been introduced into the London Ambulance Service. This is the Ferno-Washington Orthopaedic Stretcher which is also known as the 'Scoop'* by virtue of its method of use. This article will describe its design, method of use and discuss some of its possible applications. The stretcher is not in use in the Army Medical Services although its application might be considered.

Technical description

The Ferno-Washington 'Scoop' stretcher is available in two versions, a rigid one and a folding one for ease of stowage in ambulances (Fig. 1). Both types have a maximum length of 79½ inches and a minimum length of 65½ inches. The telescopic nature of the stretcher also allows it to be set in two intermediate positions depending on the height of the patient. Due to its light-weight construction in aluminium the folding version weighs only 17 lb and the rigid model 18 lb. These weights should be contrasted with other types of stretcher in use in the Emergency Services as shown in Table I. The

Table I
Weights of some stretchers in present use

| Type | Weight in pounds | Remarks |
|--------------------------|------------------|---|
| Ambulance trolley | 45 | There are several models available with weights up to 45 lb depending on the manufacturer. |
| Parrott stretcher | 45 | |
| Furley stretcher | 28 | |
| Neil-Robertson stretcher | 15-17 | The weight depends on whether the slats are made of ash or bamboo. |
| Poles and canvas | 7-12 | Varies depending on whether the poles are of aluminium or wood and whether or not spreaders are used. |
| Ferno-Washington 'Scoop' | 18 17 | Rigid version. Folding version. |

'Scoop' stretcher separates into two halves (Fig 3a) by means of an 'automatic end latch' at each end. Each latch is button operated and the button is recessed to prevent accidental opening. Once the catches are snapped shut the stretcher becomes completely rigid. The rigid version has metal head scoops similar to the body scoops but the folding version has a padded head section with 'velcro' closure (Fig. 1).

* Patents pending. Manufactured by Ferno-Washington Inc., Ohio, U.S.A. Marketed in the United Kingdom by F. W. Equipment Ltd., Whitehall Properties, Town Gate, Wyke, Bradford, Yorkshire.

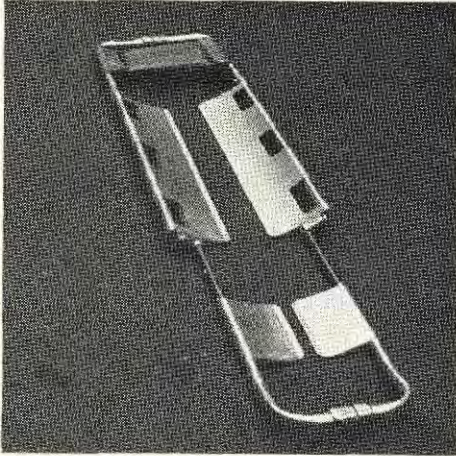


Fig. 1. The folding version of the Ferno-Washington 'Scoop' stretcher prepared for use. This photograph does not show the webbing straps for securing the patient.

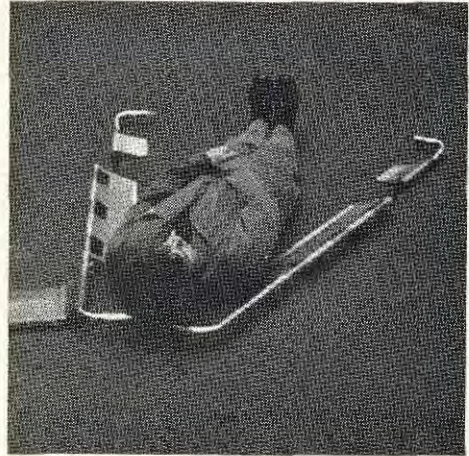


Fig. 2. Method of introducing the stretcher under the patient with one end unlocked.

Method of use

The stretcher is very simple to use and its method of use can be easily taught. The aim is to lift the casualty in the position in which he is lying, and the way in which this is done is to introduce the stretcher under him. Initial training is carried out as shown in Figures 2 and 3 with the patient in the supine position for convenience, but it must be stressed that one of the advantages of the stretcher is that it can be used to pick up a patient lying in almost any position.

The first method (Fig. 2) involves the opening of one end of the stretcher and its

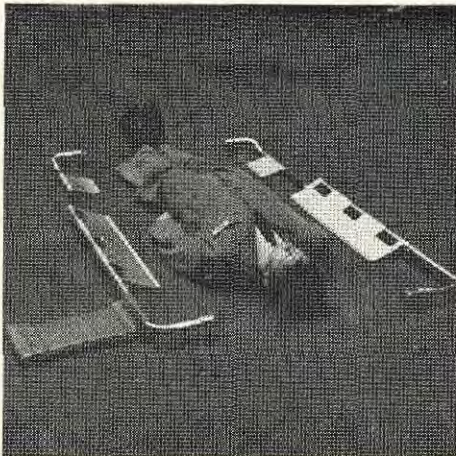


Fig. 3a. Second method of use. The stretcher is adjusted to the patient's height and separated into two halves.

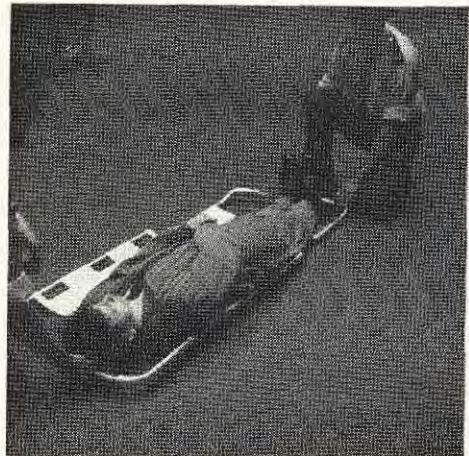


Fig. 3b. Second method of use. Each half is slid under the patient and the two halves are locked together.

introduction from one end of the patient. This method ensures alignment of the other end when the stretcher is closed under the patient. A second method (Fig. 3) involves the separation of the stretcher into two halves and each is introduced separately under the patient. The halves are then locked together, the head rest adjusted and the stretcher lifted in the normal way and placed on a conventional stretcher, poles and canvas, or a trolley.

Discussion

Little has been written about the design and use of stretchers although the condition in which an accident victim arrives at hospital is largely dependent on the type of equipment used during transport and on the skill with which any necessary first aid was given. There are some fifty different types of stretcher at present in use in the ambulance services of the United Kingdom and this leads to problems of interchange of equipment and transfer of patients at the receiving hospital (Ministry of Health 1967).

No matter which of the many types of stretcher is used the problem of how to get the patient onto the stretcher without worsening his condition, is always present. One of the basic rules of first aid is that a casualty should as far as possible be lifted and transported in the position in which he was found following the accident, with due regard for the maintenance of the airway. First Aid manuals describe several standard methods of achieving this, depending on the numbers of helpers available, but the success with which it is carried out depends largely on the skill of those helpers. The undoubted advantage of the Ferno-Washington Stretcher is that instead of lifting the patient on to the stretcher, the stretcher is placed under him so that he is lifted and transported in exactly the position he was found following the accident.

The lightness and compactness of this stretcher allows it to be used in comparatively small spaces although rough ground and very heavy patients pose some problems. In lifting a loaded 'Scoop' stretcher there is a tendency for it to tip over, especially with heavy patients. This is because it is narrower than a conventional stretcher, 16½ inches compared with 22½ inches. As can be seen from figure 1 it is narrower still at the foot so that when lifting it the attendant's hands are very close together. This leads to instability, although it can be minimised by practice at lifting this type of stretcher when loaded, and the use of the patient securing straps.

Although the most obvious use for this stretcher is with the ambulance services to pick up severely injured casualties quickly, efficiently and safely at the scene of an accident, there is also a role for this stretcher within the hospital itself. There is much lifting of patients between ambulance stretchers and hospital trolleys and also from trolleys to X-ray tables when an accident department is not equipped with trolleys that are fitted to take X-ray cassettes. One of these 'Scoop' stretchers in the Accident or Radiology Department would greatly reduce the discomfort for the patient and he would reach the X-ray table in a more co-operative state than if he had been moved by poles and canvas or hand lifts.

Within the Armed Forces the stretcher would have useful application in garrison areas where Army Medical Services Ambulances attend road traffic accidents and other emergencies. The hospital application detailed above can also be applied to Military Hospitals. However, its use in the field is limited particularly on very wet or uneven

ground. The stretcher has been used successfully amongst rubble on building sites so a series of trials would be needed to decide its exact limitations in the field.

The stretcher is not yet as widely known or used as it could be. Once its advantages are appreciated it is hoped that it will not be long before this stretcher becomes a standard piece of equipment on all emergency ambulances thus improving the handling of severely injured patients at the scene of an accident.

Acknowledgements

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REFERENCE

Ministry of Health, Scottish Home and Health Department (1967) *Ambulance Training and Equipment Parts 1 and 2*. H.M.S.O. London.

Association of Anaesthetists

Major-General K. F. Stephens, C.B., O.B.E., M.C., F.F.A.R.C.S., has been awarded Honorary Membership of Anaesthetists of Great Britain and Ireland, in recognition of "Outstanding Services to anaesthetics, particularly in the Services".

Honorary Consultants

Professor Edward McCombie McGirr, B.Sc., M.D., F.R.C.P., F.A.C.P., F.F.C.M., F.R.S.E., has been appointed Honorary Consultant Physician to the Army in Scotland. He succeeds Sir John Halliday Croom, who has retired.

Professor David Todd, M.D., F.R.C.P.E., F.R.A.C.P., M.R.C.P., has been appointed Honorary Consultant in Medicine to the Army in Hong Kong, with effect from 26 September 1975.

Doctor George Wing Sien Choa, M.B., B.S., F.R.C.S.E., F.I.C.S., D.L.O., R.C.S., F.A.C.S., has been appointed Honorary Consultant in Oto-Rhino-Laryngology to the Army in Hong Kong, with effect from 6 October 1975.

Mr. H. H. Nixon, M.B., F.R.C.S., has been appointed Honorary Consultant in Paediatric Surgery to the Army, with effect from 17 October 1975. He succeeds Mr. David J. Waterston, who has retired.