

Chapter 8

LIFE JACKETS, Mk. 4 AND 4A

(Ref. No. 22C/1480 and 1877)

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Introduction

1. The Mk. 4 life jacket is basically of the same design as the Mk. 3 but includes provision for the stowage of S.A.R.A.H. and the latest type of sea activated lamp and cell. The Mk. 4A is a still later development having an improved means of securing the S.A.R.A.H. beacon flap and speech unit pocket and other improvements described in later paragraphs.

Mk. 4 LIFE JACKET

(Ref. No. 22C/1480)

Description

2. The fully equipped life jacket includes the following:—

<i>Ref. No.</i>	<i>Nomenclature</i>
22C/1479	Waistcoat, Mk. 4
22C/1182	Stole
6D/1624	Operating head, Type M
6D/9432080	Cylinder CO ₂ , 34 gr. Mk. 4
5A/4216	Lamp, Type B
5J/3411	Battery, sea activated
27C/2366	Ground air emergency code card
22C/1185	Fluorescine sea marker
22C/1186	Whistle
22C/1739	Life line, 250 lb.
27H/2107	Heliograph

In addition the life jacket carries the S.A.R.A.H. battery, beacon and speech units and the leads, all of which are described in A.P.2554C.

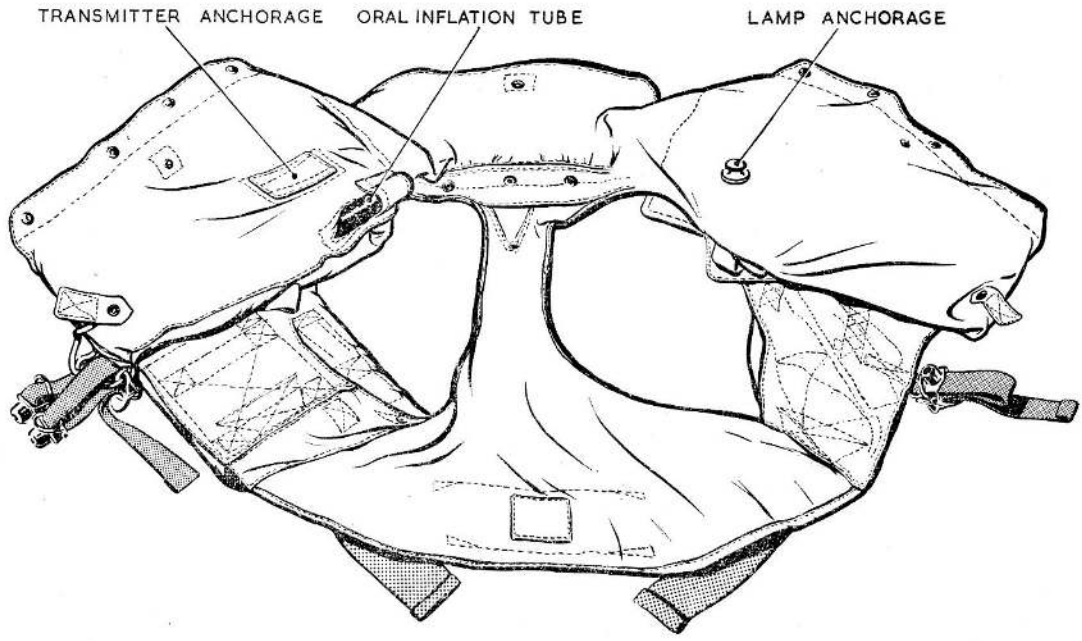
3. Descriptions of the stole, operating head and fluorescine sea marker are in Chap. 3 and 11, the general principles of sea activated cells in A.P.4343 and the description of the sea cell and lamp are in A.P.4343A.

4. The general construction of the life jacket follows that of the Mk. 3 jacket described in Chap. 3 but there are additional pockets for the accommodation of the S.A.R.A.H. apparatus and the sea activated cell and lamp. The inclusion of these necessitates changes in the locations of the stowages for the other items.

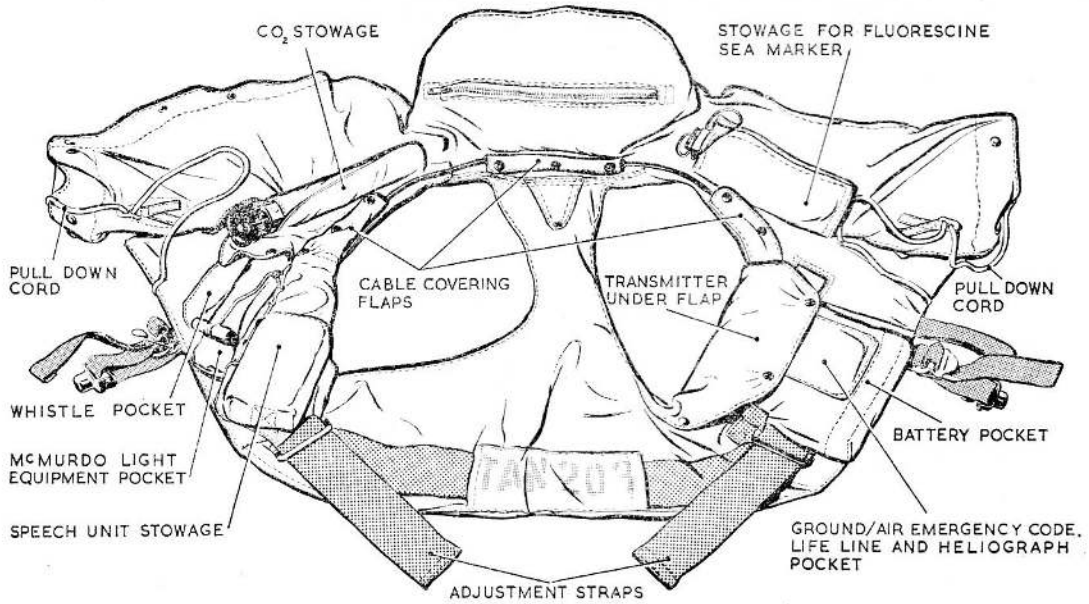
Stowages

5. A large pocket on the right-hand side of the life jacket at waist level is for the stowage of the S.A.R.A.H. battery. Above it are two flaps with eyeleted edges. These form the stowage for the transmitter. On the front of the battery pocket is a small pocket which provides accommodation for the heliograph, life line and ground/air emergency code. These three stowages are covered ▶

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Rear View



Front View

Fig. 1. Life jacket Mk. 4

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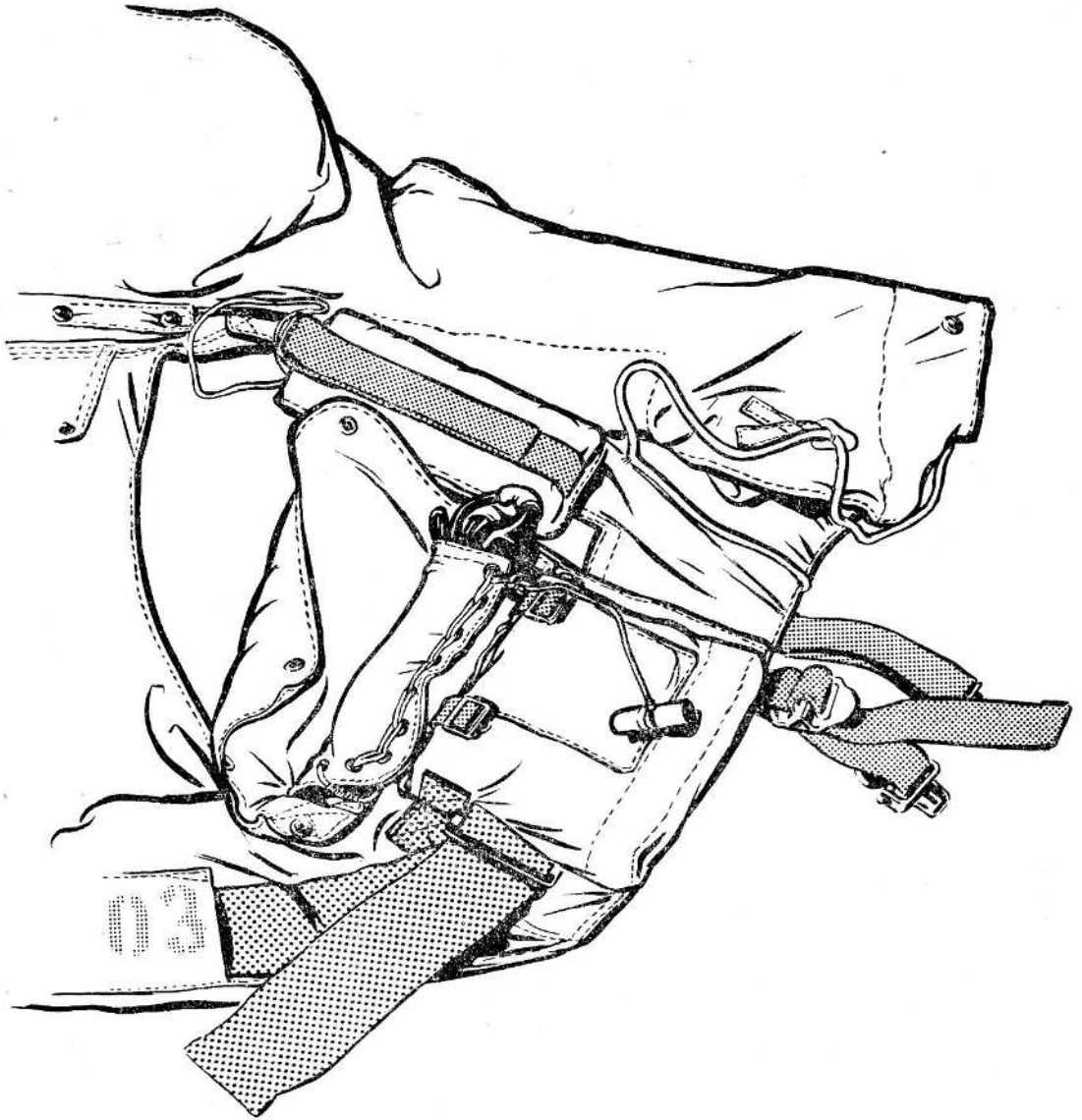


Fig. 2. Transmitter stowed

by a single flap fitted with press studs along its loose edge so that it can be fastened down after the contents of the pockets are stowed.

6. The speech unit of the S.A.R.A.H. apparatus is stowed in a pocket situated on the left-hand fore part of the jacket. The edges of the pocket are eyeletted so that they can be laced together after the speech unit is inserted. Adjacent to this pocket is a divided pocket which accommodates the McMurdo apparatus in the larger compartment and the whistle in the smaller.

7. Provision is made for the stowage of the cable leading from the battery of the S.A.R.A.H. apparatus to the speech unit in a tunnel formed by flaps sewn to the front edges of the arm holes and the rear edge of the neck opening below the stole cover. These are fitted with press studs by which they are fastened down after the cable has been stowed.

Other features

8. On the right-hand stole cover a piece of webbing, stiffened and formed into a tunnel (*fig. 1*) is provided as an anchorage for

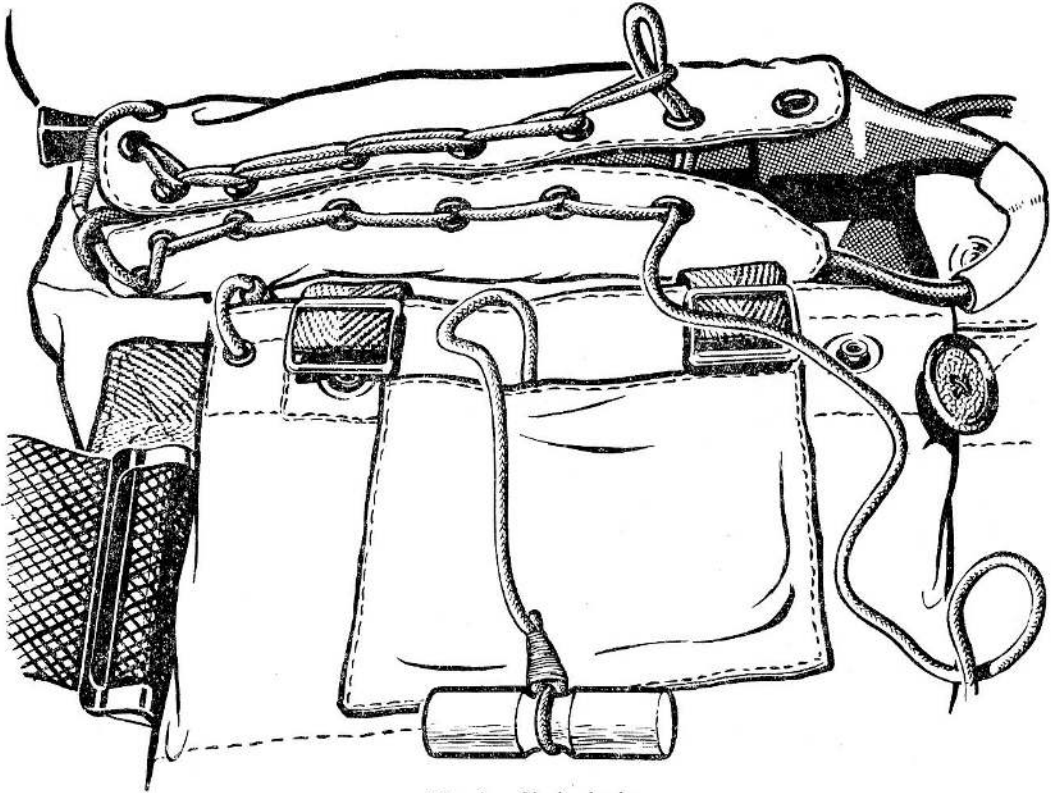
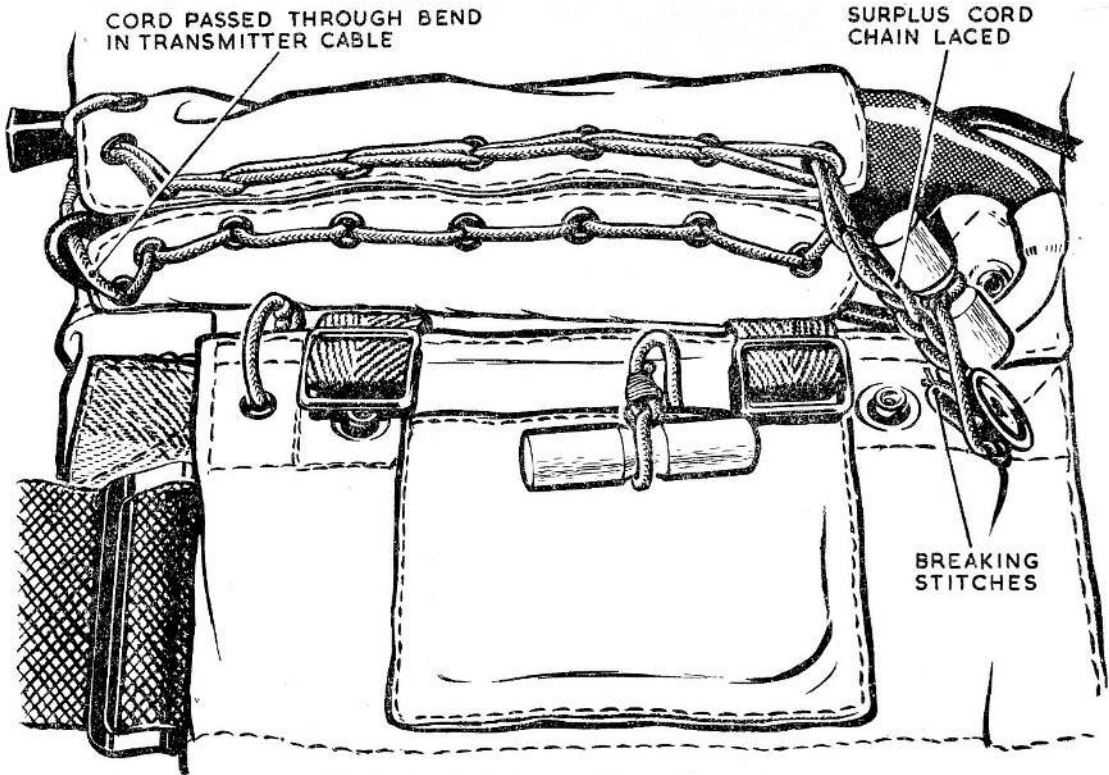


Fig. 3. Chain lacing



CORD PASSED THROUGH BEND
IN TRANSMITTER CABLE

SURPLUS CORD
CHAIN LACED

BREAKING
STITCHES

Fig. 4. Chain lacing on Transmitter stowage

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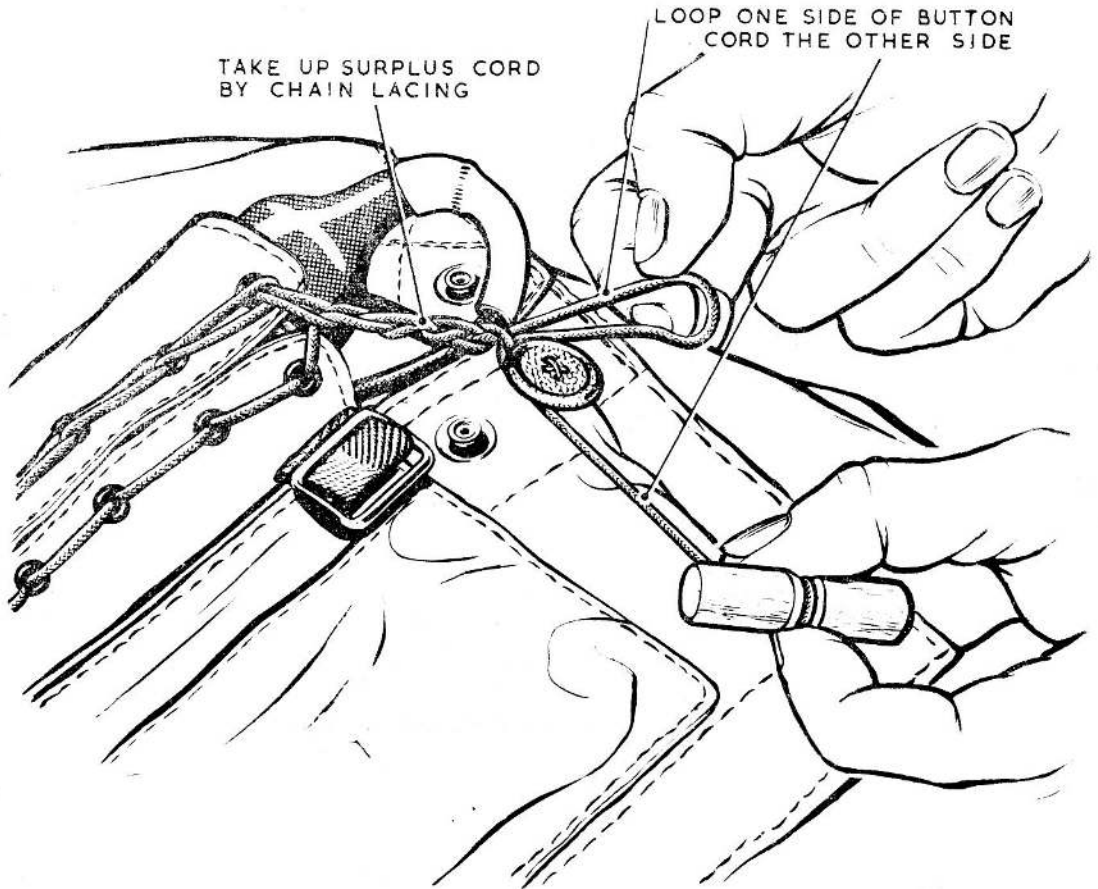


Fig. 5. Method of passing lacing cord round button

the transmitter of the S.A.R.A.H. apparatus which is clipped to it by the clip on the outer case when the wearer has inflated the stole after abandoning his aircraft or dinghy. On the left-hand stole cover is a rubber button (*fig. 1*) to which the lamp of the McMurdo equipment is attached in similar circumstances.

Assembling

9. The general method of assembling the components of the life jacket is as given in Chap. 3 but the following additions and changes are applicable:—

(1) *Stowing the battery.* The battery is stowed in the large pocket on the right-hand side of the jacket, with the cables running vertically upwards from the socket which must be towards the front of the jacket. A length of cord is fastened at

one end to the eyeletted lug at the top of the rear end of the battery by three half-hitches; the end of the cord is whipped to the main length and holding stitches of No. 40 linen thread (*Ref. No. 32B/654*) or similar thread are passed through each half-hitch to prevent it from slipping. The other end of the cord is secured in the same manner to the eyelet at the rear end of the top edge of the pocket. The cord is then hanked and stowed neatly beside the battery. Two webbing straps sewn under the covering flap are then passed through the quick release buckles and pulled tight.

(2) *Stowing the transmitter.* The transmitter is stowed between the eyeletted flaps situated above the battery pocket under the cover flap (*fig. 2*). It must be placed as far to the rear of the stowage as the clip on the case will permit with the

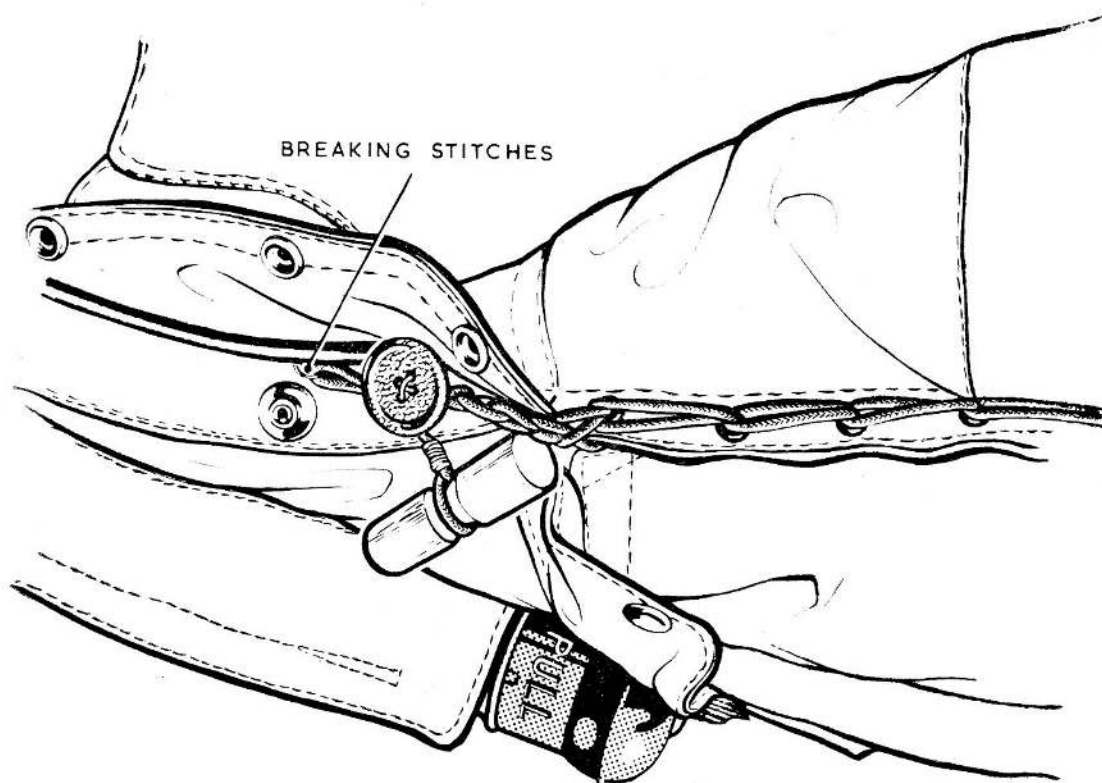


Fig. 6. Lacing of speech unit stowage complete

cable entry outside the socket of the battery. The cable is coiled in a single turn round the transmitter, care being taken to avoid twisting it. After the transmitter is stowed the flaps are laced together by chain lacing (fig. 3), the cord passing through the bend in the cable to prevent it from slipping out of the stowage. *No other method of lacing must be used.* To prevent inadvertent withdrawal of the lacing cord it is passed round a button in the manner shown in fig. 4 and 5. *The cord must be passed round the button in the correct manner, as other methods are liable to prevent it from being pulled free when required, with the result that it will not be possible to extract the transmitter from its stowage.* The last loop of the chain lacing is secured to the lower flap with three stitches of scarlet locking thread (Ref. No. 15A/181) to prevent the cord from becoming unlaced.

(3) *Stowing the speech unit and cable.* The cable leading to the speech unit is laid in the tunnels formed by the flaps at the front of the arm holes and the back of the neck, care being taken that it is not

twisted, then the flaps are fastened over it by the press studs (fig. 6 and 7). The speech unit is stowed in its pocket with the microphone inwards so that it will lie next to the wearer's body; the spare cable is laid beside it. The eyeletted edges of the stowage are then laced together by the method shown in fig. 3, 4 and 5. *The correct method of lacing must be followed.* The last loop should also be stitched down in the same manner as that of the transmitter stowage lacing.

◀(4) *Stowing the sea-activated battery and light.*

(a) Before putting the battery in its pocket (shown in fig. 1), ensure that there is a length of cord between the studs on the battery case and the eyelet in the corner of the pocket. This cord should be 3½ in. long, which is sufficient to permit the battery to be removed from the pocket before the studs are torn out to permit water to enter the battery. A second length of cord should be knotted to the same eyelet in the pocket and through the hole in the battery case to act as a retaining lan-

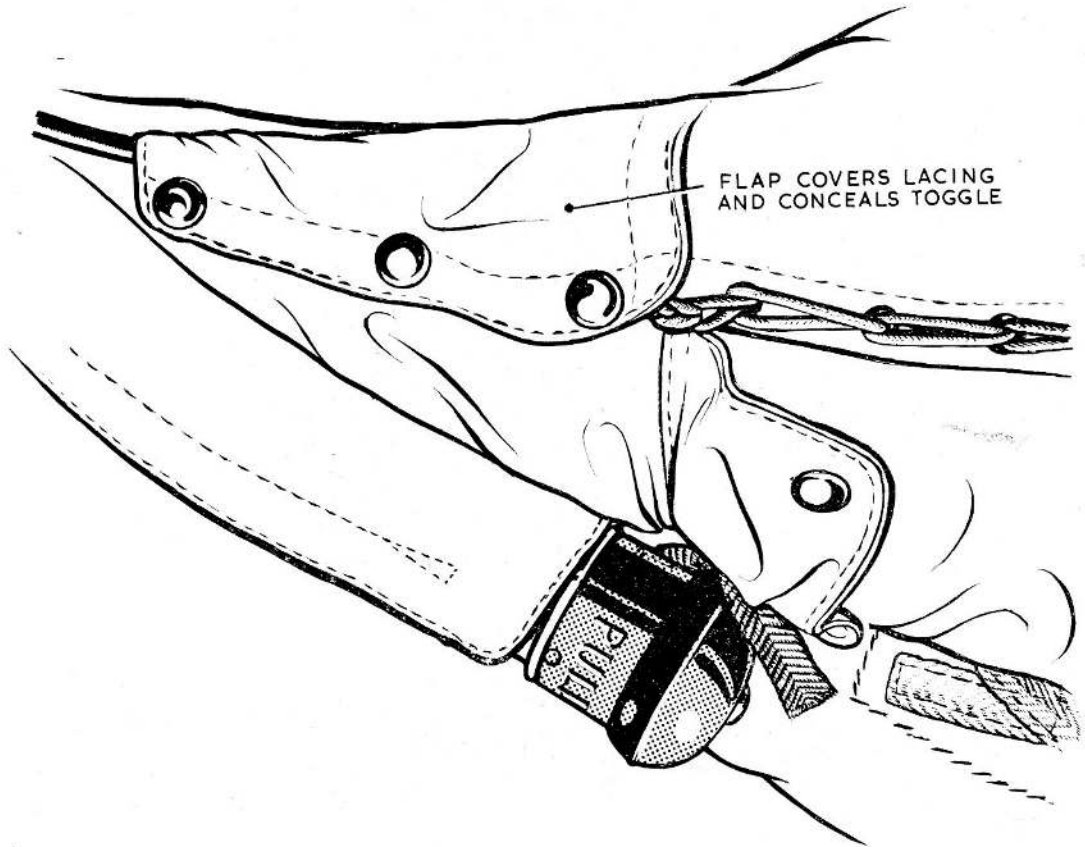


Fig. 7. Cable flap fastened over end of lacing on speech unit stowage

yard. This cord should be 33 in. long.

(b) Stow the battery in the pocket, studded side forward, with the longer cord looped across the bottom of the case so that it will not snag up when it is withdrawn.

◀ (c) The method of packing the lamp and battery originally adopted resulted in the cable taking up a permanent set at the point where it emerged from the plug, especially when the equipment had a long shelf life before being issued. As a result, when the equipment has been brought into use or the cable disturbed for examination there has been a tendency for the insulation to split and open out at the point of set. This tendency has been aggravated by repeated tight wrappings during periodic servicing. At the intervals given in Vol. 4, special attention is to be given to the examination of the cable

to ascertain whether there is splitting of the insulation. Lamps with exposed conductors are to be rejected but those with marked or kinked cable may remain in use if the insulation is not split. When re-stowing the equipment the cable is to be led away from the plug in a bend of approximately 1 in. across wrapped round 4 fingers and the coil so formed secured to the plug side of the battery with a rubber band. The lamp is to be located in a position suitable for stowing in the pocket. When stowing the equipment ensure that the loop leading away from the plug is not flattened. ▶

(d) To use the lamp:—

- (i) Open the pocket.
- (ii) Withdraw the lamp housing and its cable.
- (iii) Remove the battery by pushing it up from the bottom.

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Fig. 8. Mk. 4A life jacket

(iv) Holding the battery in the left hand and the lamp in the right, tug the battery away from the suit, so tearing away the studs from the battery.

(v) Drop the battery in the water.

(vi) Attach the lamp to the stud on the stole.

(e) To conserve the battery remove the plug by pulling on the lamp cable, which is strong enough to take the pull without parting from the plug. The

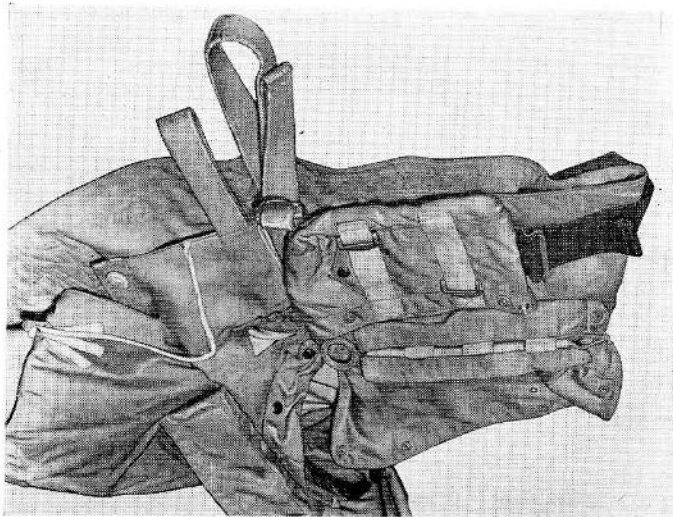


Fig. 9. Mk. 4A life jacket showing one draw rod and lengthened buckle chapes

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battery may be left in the water, as nothing is gained by removing it.

(5) The whistle and lanyard are stowed in the small compartment of the divided pocket on the left fore part of the jacket (*fig. 1*). The end of the lanyard should be secured to the corner of the pocket and the remainder hanked and stowed with the whistle.

(6) The remaining items, life line, ground/air emergency code and heliograph are placed in the small pocket on the outside of the pocket containing the battery of the S.A.R.A.H. apparatus. The end of the life line is passed through the eyelet in the centre of the top edge of the battery pocket, tied with three half-hitches, whipped to the main length of cord and secured by stitches passed through each half-hitch using No. 40 linen thread (*Ref. No. 32B/654*) or a similar material. The other end of the cord is stitched to the outside of the pocket with three stitches of Scarlet Locking Thread (*Ref. No. 15A/181*) as close to the toggle as possible. When positioning this and other toggles care should be taken that they will be covered by the flaps of the respective pockets. After the life line has been secured the main length is hanked and stowed neatly beside the other items in the pocket and finally the flap of the battery pocket is fastened in position with the press studs.

Servicing

10. Servicing of the life jacket and the limitations to be observed are to be in accordance with the instructions given in Chap. 3 but the S.A.R.A.H. apparatus is to be removed fortnightly and returned to the Signals Servicing Section.

11. The sea activated cell and lamp are to be removed from the life jacket and passed to the electrical bay to be serviced.

Mk. 4A LIFE JACKET

(*Ref. No. 22C/1877*)

Description

12. All the components of the fully equipped life jacket are the same as those of the Mk. 4 jacket except the waistcoat which is the Mk. 4A provisioned under Ref. No. 22C/1876.

13. The Mk. 4A waistcoat differs from the Mk. 4 in the following respects:—

(1) The beacon flap and speech unit are secured in the closed position by nylon draw rods which are passed through beackets fitted to the flap and pocket. The draw rods are fitted with finger rings to facilitate withdrawal. At the bottom of the speech unit pocket is a press stud provided to retain the finger ring in position.

(2) Longer buckle chapes are fitted on the battery pocket so that the wearer can more easily release the webbing straps by sliding the buckles down the front of the pocket to disengage the straps.

(3) A larger flap has been fitted for housing the battery/beacon cable.

Assembling

14. Assembly of the ancillary items is identical to that of the Mk. 4 jacket with slight differences consequent upon altered lay-out and methods of fastening the stowages.

Servicing

15. Servicing is identical to that for the Mk. 4 and is fully detailed in Vol. 4.

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