

CIVIL DEFENCE ORGANISATION

SOUTH AUSTRALIA

THE LADDER HINGE

INTRODUCTION

This is a comparatively simple and quick method of getting a casualty down from an upper floor, when it is desirable to keep the stretcher horizontal, or the building is so unstable that it cannot be used to assist in the operation.

METHOD

(a) The casualty should be blanketed and secured to the stretcher in the normal way. The head of the stretcher should be supported by any available furniture, thus leaving the two men, 4 and 5, free to carry out the lashing operation at the foot of the stretcher.

(b) The ladder is placed vertically against the face of the wall or building, from which it is intended to lower the casualty. At a height of about ten (10) inches above the window opening, the foot of the stretcher is secured to the ladder by means of a 15 ft. sash cord lashing.

The lashing is begun by passing the sash cord through the left hand 'D' of the stretcher and secured with a bowline. A half hitch is then taken around the left hand ladder string, and, on top of a rung, sufficiently high up to allow about 10 inches clearance between the bottom of the stretcher and the window opening.

Eight (8) or ten (10) round turns are then taken across the rung and a similar half hitch on the right hand ladder string.

A round turn is then passed through the right hand 'D' of the stretcher and, at this stage, the stretcher can be adjusted for equilibrium, before this round turn is made off with two half hitches.

Enough slack should be left in the lashing to permit hinging throughout the operation.

Finally two 40 ft. lashings are attached to the 'D's at the head of the stretcher, by means of bowlines.

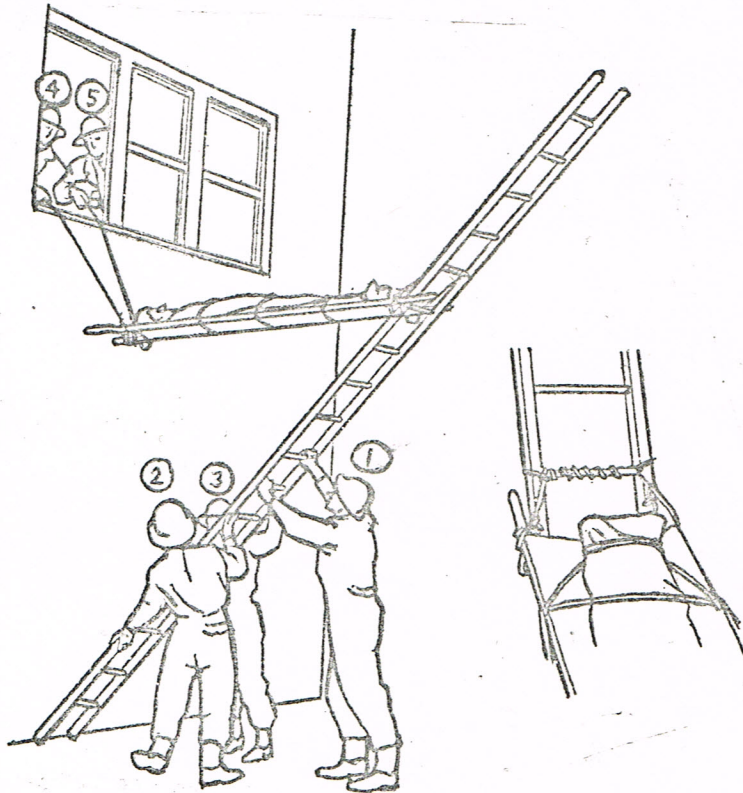
(c) When all is secure, the word is passed to the Leader and he gives the word "lower away gently" and the stretcher is passed out of the window by Nos. 4 and 5, who eventually support the head of the stretcher by the guide lines.

Nos. 4 and 5, at the rear of the stretcher, will pass the casualty out of the window, feet first, but, before passing the end of the stretcher beyond the wall, will take the weight onto the two lowering, or guide, lines and allow the stretcher to ride out clear of the window opening.

(d) No. 1 should stand with arms extended and help support the ladder as it comes over the vertical. Walking backwards, with hands moving from rung to rung, he can greatly assist Nos. 4 and 5 lowering from the upper floor. Nos. 2 and 3, normally on the ground, remain at the foot of the ladder with their hands on the ladder strings so as to prevent any possible side-sway which may occur during the lowering operation.

It is pointed out that if this method is used for heights above the first floor of a building, guide lines should be attached to the top of the ladder and manned by an additional two (2) men on the ground. This being also, an additional precaution against side-sway

Lowering of the ladder is continued evenly, making sure, at all times, that the stretcher is kept horizontal, until the ladder lies on the ground with the stretcher on top of it.



Ladder Hinge - using 5 men

It is NOT suggested that this, or any other, rescue should be treated as a drill movement.

To possibly facilitate teaching of this method, a rescue from heights, the Ladder Hinge has been outlined on the next page, as a drill only so that a full Rescue Party of eight (8) men can be exercised.

Remember, the drill as outlined is for a full party of 8, whereas in an actual emergency the full Party may not be available.

LADDER HINGE DRILL - 8 MENRESCUE PARTY COMMAND:

No. 1 Party Leader
 No. 2 Deputy Party Leader
 No. 3 Driver - Storeman
 Nos. 4-8 Rescue Party Men

DRILL DUTIES FOR LADDER HINGE:

Nos. 6, 7 & 8 (Ladder crew) - provide and position ladder, (Nos. 6, 7 & 8 take positions of ladder crew Nos. 1, 2 & 3 respectively).

No. 1 Ascends, makes recce, descends, instructs Party.

No. 2 Ascends with two (2) blankets, (slung over shoulder), sash cord, - prepares and blankets stretcher.

No. 4 Ascends with three (3) 40 ft. lashings (hung over arms or shoulder), hauls up stretcher and any other gear that may be required.

No. 5 Attaches Stretcher and any other gear to line for No. 4 (clove hitch and half-hitch or timber hitch to be used) stands by to assist.

No. 3 Hands out gear from Rescue Vehicle - remains within hailing distance of vehicle.

Nos. 2 & 4 Load casualty onto stretcher, lash and attach lowering lines.

Nos. 2 & 4 Lash stretcher to the ladder, (See para b on page 1 of this precis)

Nos. 6, 7 & 8 Lower ladder, Nos. 6 and 8 supporting the strings. No. 7 under-runs, or foots, the ladder as necessary.

Nos. 2 & 4 Pay out lowering lines.

Nos. 5 & 7 Release stretcher, remove sash cord - transport casualty - hand over to First Aid Party of Detachment and return to the Rescue Party.

Nos. 6 & 8 Re-position ladder.

Nos. 2 & 4 Descend.

Nos. 6, 7 & 8 Make-up ladder.

No. 3 Makes up equipment, ropes, etc., - check area for gear, - check gear onto vehicle.

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IMPROVISED LADDER HINGE

INTRODUCTION

If a ladder is not immediately available, the principles of the ladder hinge can be applied by utilising materials that would normally be available at the damaged site. Two of the most simple methods are as follows:-

METHOD 1:

- (a) Obtain a length of sound timber, at least 4"x2" in section, long enough to reach the required height.
- (b) At approximately 12" above the window sill, lash a crosshead approximately 3' along and 3"x2" in section, at right angles, by means of a square lashing.
- (c) The stretcher should be fastened by taking the centre of a 40' lashing, making a clove hitch on either side of the crosshead, then taking each end of the rope to the stretcher, fastening off by means of a clove hitch on the "Ds".
(See fig. (a).)

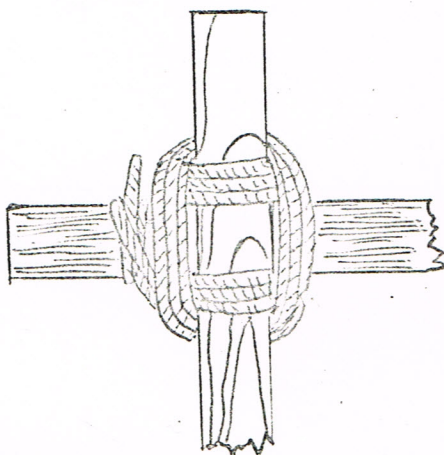


Figure (a).

METHOD 2:

- (a) Obtain two lengths of timber at least 4"x2" in section, long enough to reach the required height.
- (b) Lay them in the position shown in figure (b), and fasten the top by means of a round lashing. A heavy sash cord can be used for this.
- (c) At approximately 12" above the window sill opening, a crosshead should be fastened by means of a series of clove hitches.
- (d) The crosshead should be a piece of timber 3' long and 3"x2" in section.

- (e) Taking the centre of a 40' lashing, make a clove hitch on each upright; then another clove hitch diagonally up and outwards, taking in both the upright and the crosshead.
- (f) A further clove hitch is then made around the upright above the crosshead on each side.
- (g) The ends are then taken to the stretcher and made fast to the "Ds" by means of clove hitches.

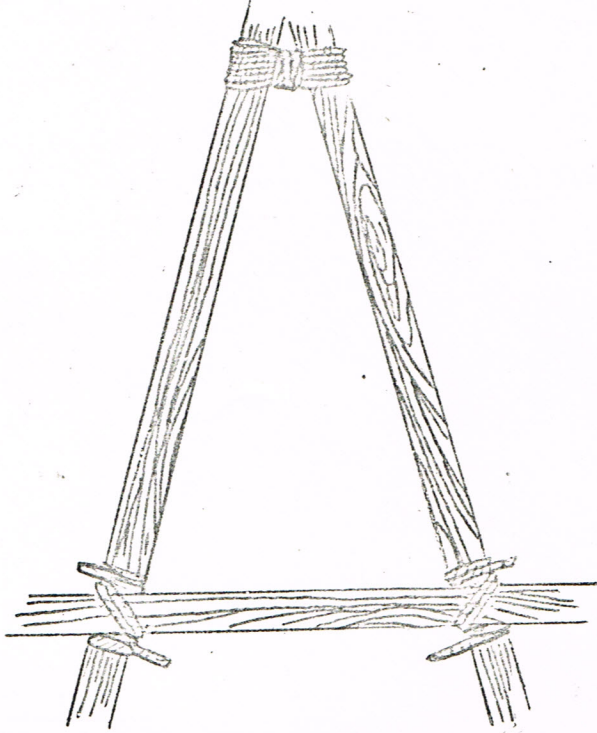


Figure (B).

The materials available on the site may suggest other variations of these methods, and these may be employed provided the overall principles of the ladder hinge method are observed.

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