July 10, 1951 E. BERGSLAND 2,560,406

CARRYING FRAME FOR RUCKSACKS

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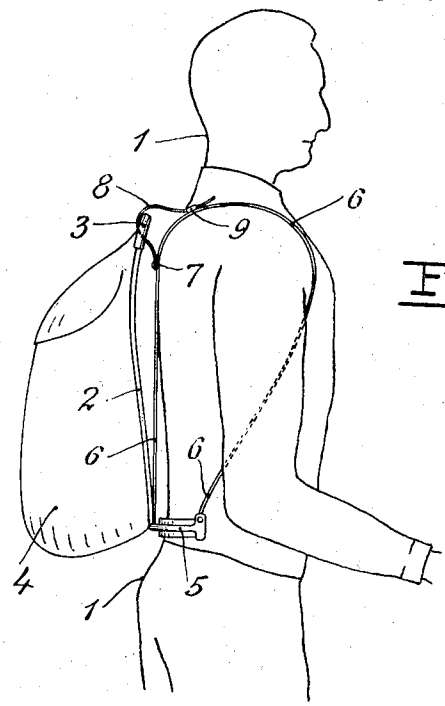
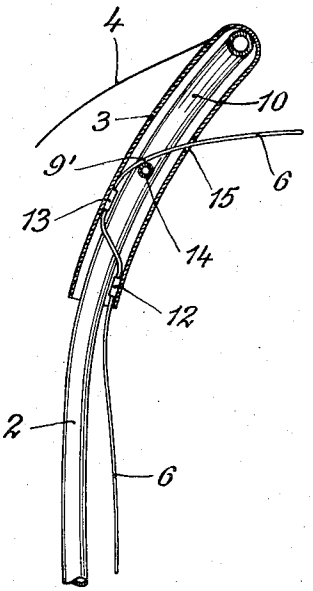


Fig. 1.

Fig. 3.



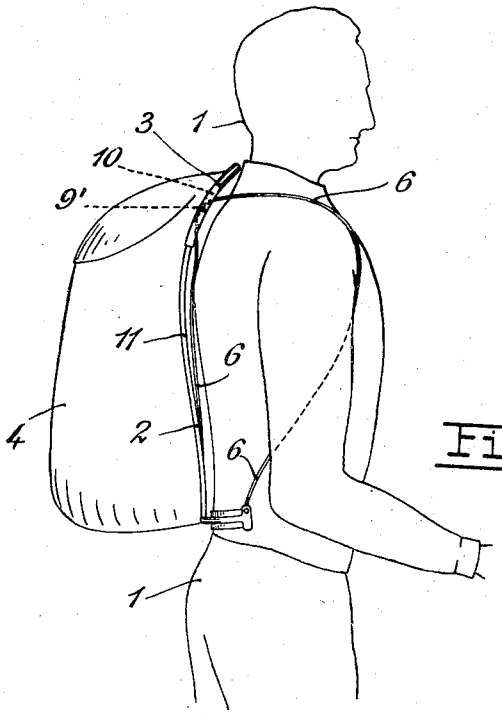


Fig. 2.

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CARRYING FRAME FOR RUCKSACKS

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3 Claims. (Cl. 224—25)

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The carrying frame for rucksacks hitherto known, have had, as their main object, the avoidance of contact with the back. Only at the lower portion the carrying frame has had a back bow, the outermost points of which have been connected with a so-called girdle strap, which has lain evenly and pliably against the back. The carrying straps are fastened to the back bow below, whilst above they are connected to the carrying frame and to the sack by two smaller auxiliary straps or by some other arrangement.

This carrying system has, however, the fault, that the top of the sack is pulled away from the uppermost part of the back, which makes the sack unnecessarily heavy to carry, especially the strain on the weakest part of the back, the lumbar region is unnecessarily great.

The invention has for its purpose to combine the action of "heaving up on to the back of the neck," as practised by dock labourers, with separating the sack from the back, further down, at a distance especially advantageous to the shoulder blades. The carrying frame must therefore be shaped in another way. It is assumed that the frame, as previously known, is in contact with the lumbar region of the back, at hip level, with the aid of the mentioned girdle strap, and further up the back, the frame is as previously held at a favourable distance from the back, and from the place, or slightly under, where the carrying straps, or their auxiliary straps above lead out from the frame (or from a leather cap at the top of the frame), the frame has an extension which is bent upwards and inwards, towards the back portion of the bearer's neck.

It is usual to equip the frame, at a point slightly below its topmost portion, with a transverse piece between the two symmetrical halves of the frame. In accordance with the invention the carrying straps passed up from the lower portion of the frame, are passed up on the outside (considered in relation to the side of the frame turned inwards to the bearer's back) of the above-mentioned upper transverse piece and then over same and inwards to the shoulder, so that the upper portion of the frame which is bent inwards to the neck is pulled in towards the bearer's neck by the force in the carrying straps. Each of the carrying straps is then passed through a hole in the inner portion of the customary leather cap, to which the sack is fastened, and then forwards over the shoulders, the leather piece being preferably provided with loops on the inside of the inner portion at the bottom, and on the inside of the outer portion higher up, through which the

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carrying straps are pulled. The upper loops lie almost in level with, or a little lower than, the afore-mentioned transverse piece on the frame proper.

The invention is described more detailed with reference to the drawing. Fig. 1 shows diagrammatically the ordinary carrying frame, Fig. 2 the new frame and Fig. 3 its upper section drawn to a larger scale.

In Figs. 1 and 2, 1 is the bearer's back and neckline. In Fig. 1, 2 is the frame with upper leather cap 3, attached sack 4 and lower back bow 5 forming part of the bottom portion of the frame. From each end of the bow 5 a carrying strap 6 is directed upwards on the frame inside (the side facing against the wearer) and forwards over the bearer's shoulders, but uppermost on the leather cap 3, is fastened for each carrying strap 6 a little auxiliary strap 8 which is connected adjustably with the carrying strap 6, at 9.

Consequently, the parts 2, 3, 5, 6 and 8 belong to the frame proper, and the carrying straps thus leads out from the frame at 9. It will be seen that the frame proper 2, 3 ends uppermost in level with or somewhat below this place 9.

However as Fig. 2 shows, the extension 10 of the frame from point 9', from where the carrying straps lead out, is bent in towards the back of the neck portion, and follows its line 1, as well as possible. The bending inwards may here begin a little lower down, as at 11, and the cap 3 then extends further down than usual. Each carrying strap 6 is then passed up on the inside of the cap interior (lying nearest the back or the neck), through a slide slot 12 (Fig. 3), here placed lower down from there further up and through a slide slot 13, on the inside of the exterior portion of the cap then up over the transverse piece 14 of the cap and through a hole 15 forwards over the shoulder.

With such a frame and cap, the sack will not only hang well out from the back, but will also follow well along the line of the neck. Simultaneously, the top of the sack is held closely in to the back and neck. The centre of gravity in the sack is displaced upwards and inwards towards the neck.

I claim:

1. A rigid carrying frame for use with a rucksack and comprising symmetrical side members; a top member and a bottom member connecting the ends of the side members; a transverse member spaced below the top member and also connecting the side members; and carrying straps connected to the outlying ends of the bottom

member and each comprising, a rear stand passing upwardly from the said outlying ends on the wearer's side of the frame, rearwardly below the transverse member and forwardly between the transverse member and the top member to pass over the wearer's shoulders, and a front strand passing downwardly from the shoulders to the sides and rearwardly back to the outlying ends; the extreme top portion of the frame above the transverse member being curved forwardly to a point closely adjacent the wearer's neck.

2. A carrying frame as in claim 1 further comprising: a cap element covering the said top portion to a point below the transverse member and having a front portion near the wearer's back and a rear portion remote therefrom, and lower and upper slide loops below the transverse member on the inside of the cap element, the lower loops being attached to the said front portion and the upper loops to the said rear portion, the said front portion being provided with apertures above the transverse member, and the rear strands of the carrying straps passing upwardly through said lower loops, rearwardly toward and through said upper loops, thence forwardly above the transverse member and through the apertures toward the shoulders.

3. A carrying frame as in claim 1 further comprising: a cap element covering the said top portion to a point below the transverse member and having a front portion near the wearer's back and a rear portion remote therefrom, the said front portion being provided with apertures above the transverse member, and the rear strands of the carrying straps passing upwardly from the transverse member and through the apertures toward the shoulders.

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