May 15, 1956 R. A. COTÉ 2,745,114

FOLDING STRETCHER

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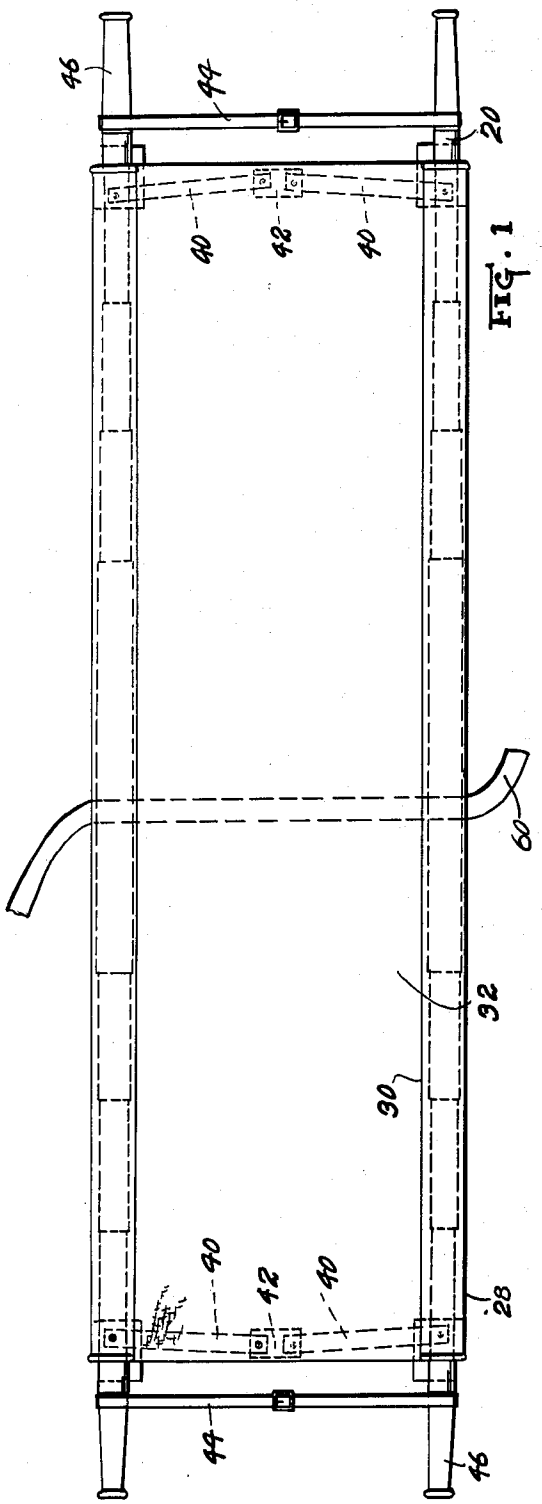


FIG. 1

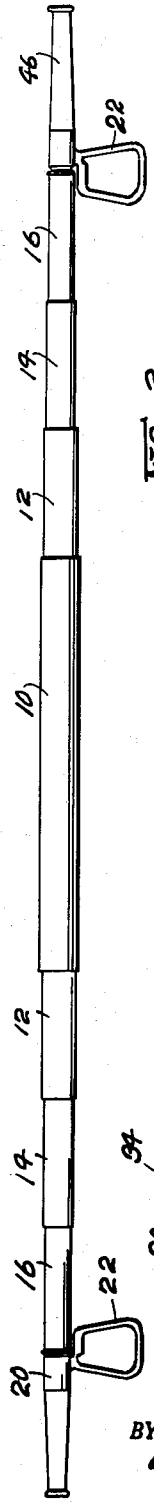


FIG. 2

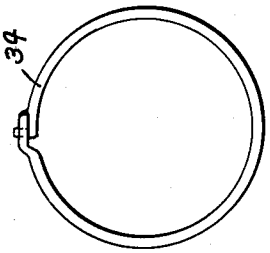


FIG. 5

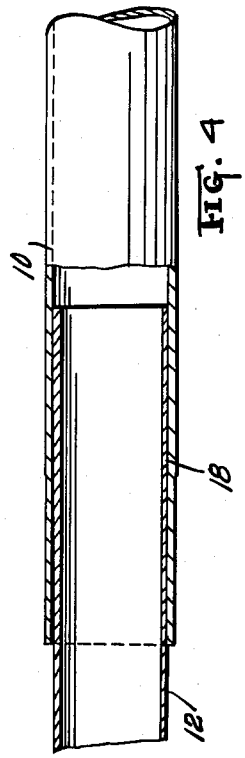


FIG. 4

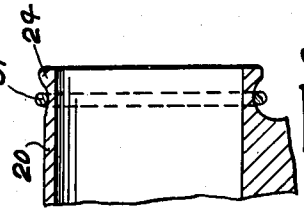


FIG. 3

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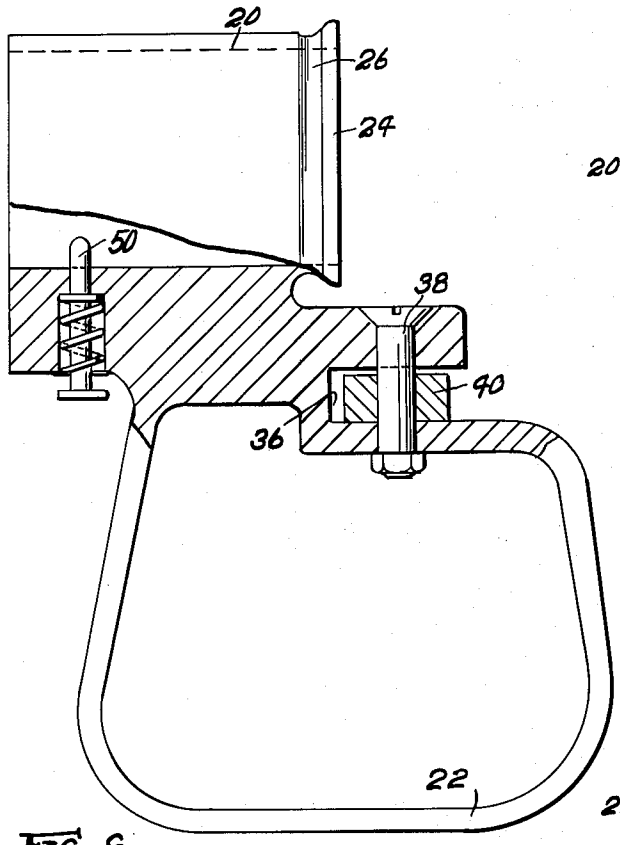


FIG. 6

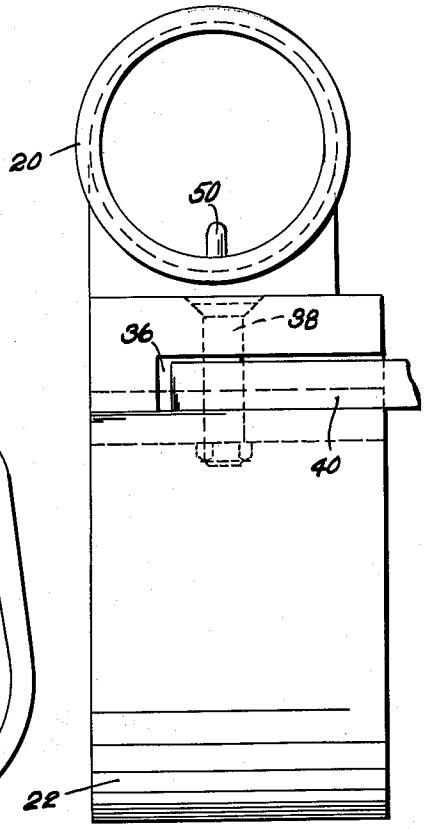


FIG. 7

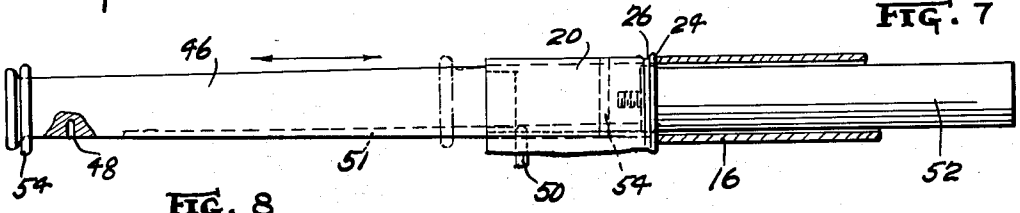


FIG. 8

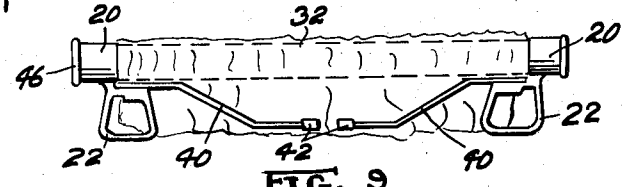


FIG. 9

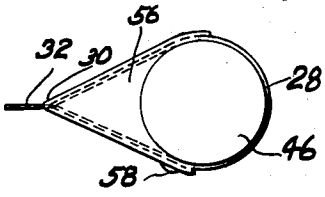


FIG. 10

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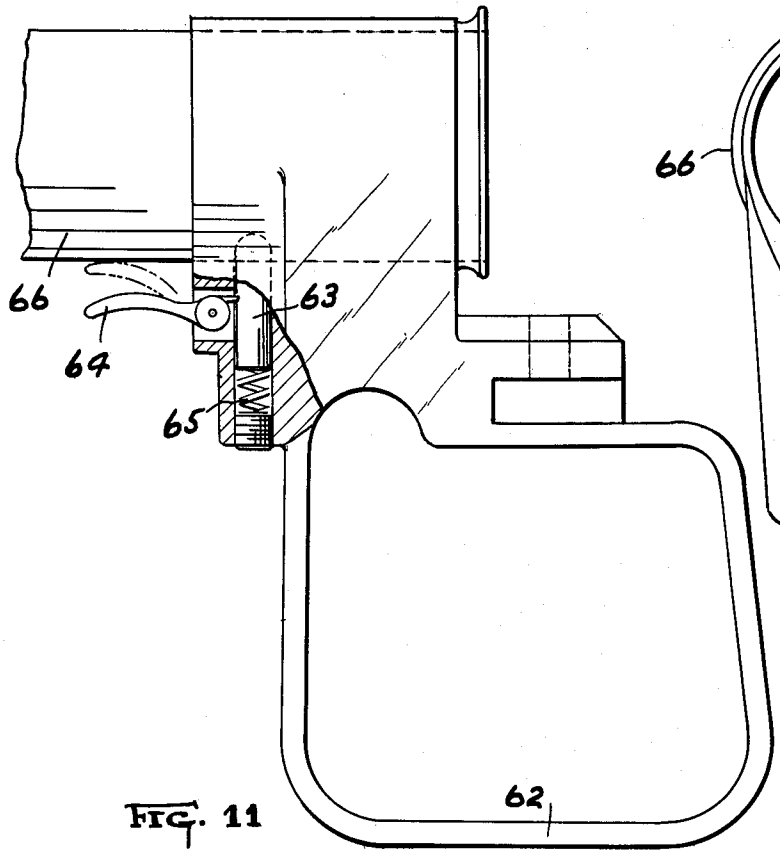


FIG. 11

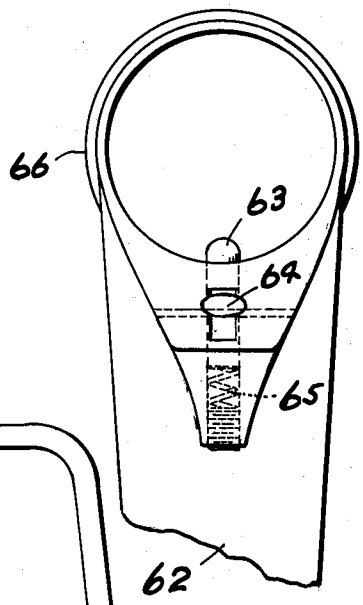


FIG. 12

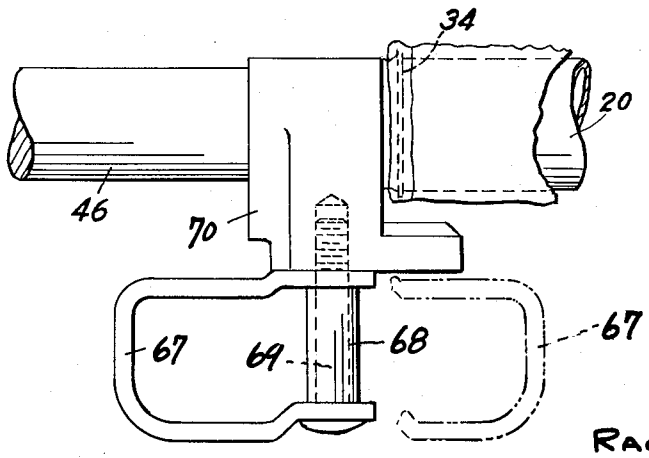


FIG. 13

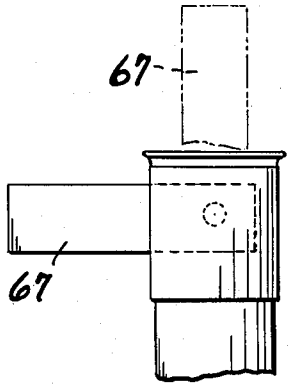


FIG. 14

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United States Patent Office 2,745,114 Patented May 15, 1956

2,745,114

FOLDING STRETCHER

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Application June 26, 1952, Serial No. 295,739

3 Claims. (Cl. 5—82)

This invention relates to a new and improved folding lightweight stretcher, cot, etc., the construction of which provides an extremely lightweight but strong, rugged device of the class described which is quickly and easily collapsed to occupy a very small space, or extended for use.

The principal object of the invention resides in the provision of a stretcher which is telescopic as to the side members thereof and having a special construction to avoid the possibility of the entrance of dirt, sand, etc. into the telescoping members.

Another object of the invention resides in the provision of a pair of longitudinal stretcher side bars that are telescopic to be extended for use or telescoped for being carried or stored as for instance in an airplane, automobile, etc. and having a flexible body carrying member extending between the stretcher bars and covering the same to exclude the entrance of dirt, said body supporting member having special means at the ends thereof for excluding sand and dirt at the ends; the provision of a new and improved leg and toggle construction, and the provision of new and improved telescoping handles at the ends of the telescoping side bars, said handles providing against the entrance of dirt at the ends of the telescoping members, and including a new and improved first-aid kit secured thereto, etc.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a plan view of the stretcher in extended condition;

Fig. 2 is a side view with the body carrying member omitted;

Fig. 3 is an enlarged section through the end of a leg bracket;

Fig. 4 is a detail, partly in section, illustrating the telescope construction of the side bars;

Fig. 5 is a detail view of a fabric retaining ring;

Fig. 6 is a view in side elevation, partly in section, of a leg bracket;

Fig. 7 is a front view thereof;

Fig. 8 is a view in elevation of the handle construction but being in section;

Fig. 9 is a view in side elevation of the device completely collapsed;

Fig. 10 is a detail of the end construction of the body supporting member;

Fig. 11 is a view in elevation of a modification of one of the stretcher legs, parts being in section;

Fig. 12 is a front view thereof;

Fig. 13 is a view in elevation showing a further modification; and

Fig. 14 is a top plan view thereof.

The present invention comprises a pair of similar side bars generally indicated at **10**, each of which comprises a central cylindrical member included therein, there being a pair of telescoping tubes **12**, the latter repeating the

construction as by further telescoping tubes **14** and **16**. Each of these tubes **12** is made so that it allows the extraction therefrom of the next smaller tube to a degree providing for a five or six inch overlap as indicated at **18** in Fig. 4. By this means, the tubes **12**, **14** and **16** are all wholly collapsible within the center tube but when the members are extracted, they have a sufficient overlap so that the stretcher may support a heavy man standing on the side bars without deflection thereof sufficient to destroy the usefulness of the device, and so that the tubes may again be telescoped back into the center tubes.

The end tubes **16** are adapted to be received and secured to cylindrical portions **20** of leg brackets **22** which are provided with rims **24** in which are formed circular grooves **26** which receive the ends of a fabric tube **28** formed by seams **30** in a stretcher body supporting member **32**. At the end of each fabric tube **28**, there is another seam receiving a split ring **34** which is tightly received in a groove **26**, thus holding the fabric supporting member **32** to the leg bracket portions **20** so that when the stretcher is either folded or extended, it will always fold or extend the fabric **32** with it.

Each leg member **22**, as shown, is in the form of a continuous loop having a flat bottom for supporting on the ground. The bracket **22** is provided with a slot **36** at the inside aspect thereof, this slot having a pivot-pin **38** therethrough pivotally mounting a toggle leg **40**. These toggle legs extend toward each other (see Fig. 1) and are connected by a toggle plate **42** such that when the legs **40** are extended past dead center, they will hold the telescoping side bars in separated condition of the stretcher. In this event, the fabric itself will provide counter-tension to hold the toggles in the Fig. 1 position, but if the fabric should through any condition of use become stretched, belts **44** may be provided for this tension.

The toggle arms **40** are shown folded in Fig. 9 and in this case they extend toward each other longitudinally of the stretcher. It is to be noted that Figs. 1 and 9 are on the same scale and illustrate the relative extensibility of the stretcher.

The cylindrical members **20** slidably receive handles **46**, each of which is provided with a plurality of longitudinally spaced holes **48** receiving snap pin **50** in the leg member **22** (see Figs. 6 and 8) to hold the handles either extended, partly extended, or in telescoped condition within the tubes and the members **20**. A slot **51** may be used to insure correct rotative alignment of the handles with the pins. A pair of these handles may be provided at their inner ends with a screw-thread for receiving a first-aid kit **52** having a screw at one end, so that if the handle be fully extracted, the first-aid kit will be immediately available. If the kit were located loosely in the telescoping side bars, it would rattle and the stretcher would have to be up-ended in order to extract the same. There are provided a pair of gaskets **54** to seal member **20** against the entrance of dirt when the handle is extended or when it is housed as in the Fig. 9 showing.

The seam at **30** forms a triangular shaped opening (see Fig. 10) and in order to close this against entrance of dirt or sand, there is provided a flap **56** which may be of some resilient material that may be stretched over around the tube and snap fastened as at **58** so as to completely close the open ends of the fabric tubes **28** which are occasioned by the gradually decreasing tubes **12**, **14** and **16**, Fig. 1.

Flaps **56** are secured to the fabric as by stitching or any other means at one side of such end openings, and are stretched down and around the cylindrical portions **20**, and secured at the other side of the openings by snaps **58** as stated.

There may also be provided as many straps **60** as may

be necessary to strap the body in the stretcher and other variations within the scope of the invention may be made without departing therefrom.

In Fig. 11 there is shown a carrying handle and leg combination **62** having a pin **63** depressed by upward movement of a manual lever **64**, said pin having a spring **65** maintaining it in uppermost position in latching arrangement with the side telescopic tube **66**. This construction forms a very convenient manner of latching the parts in telescoping position.

If desired, the latching construction shown in Fig. 11 may be used with a rotatable combined leg and carrying handle **67** mounted by means of a sleeve **68** on a pin **69** fastened to a bracket **70** which corresponds of course to the bracket shown in Fig. 6. In this case, the leg **67** may be positioned where desired. For instance, it may be extended, as in broken lines in Fig. 14 or it may be turned to the side as shown in solid lines in Fig. 14; or it may be reversed 180 degrees from the broken line shown in Fig. 13, depending upon which situation is most convenient as for carrying, storage, or in actual use in confined quarters.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A device of the class described comprising a pair of multiple hollow telescoping side bars each side bar including a largest central member and telescoping members of decreasing diameter extending from each end thereof, folding end members pivoted thereto to hold the same in spaced relation, and a flexible body-supporting member connected to said side bars, said member having seam-formed longitudinal tubular pockets to receive and cover the side bars, said pockets having openings at the ends larger than the ends of the side bars, and end flaps on the body supporting member to close the seam-formed pockets at the ends of the side bars.

2. A device of the class described comprising telescoping side bars, a flexible body supporting member secured to the side bars, a bracket at each end of each side bar, a hollow handle-receiving portion on each bracket, a slidable handle in said portion, means to latch the handle in housed or extended condition with respect thereto, a leg on each bracket, a slot in each bracket, and a pivotal toggle member in each slot, the toggle members being interpivoted in pairs, each said hollow handle receiving portion being cylindrical and means to detachably secure the body supporting member thereto, so that the latter extends and folds as the side bars are extended or telescoped, said body supporting member having a tubular seam at each edge, the ends of the tubular seams extending over the edges of the cylindrical handle receiving portions of the brackets.

3. The device of claim 2 including a flexible flap at each end of each tubular seam and means to secure the flap in position to cover any gap between the outside of the end part of the side bar and the inside of the seam.

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