Aug. 23, 1955 D. SACKS 2,715,737

STRETCHER

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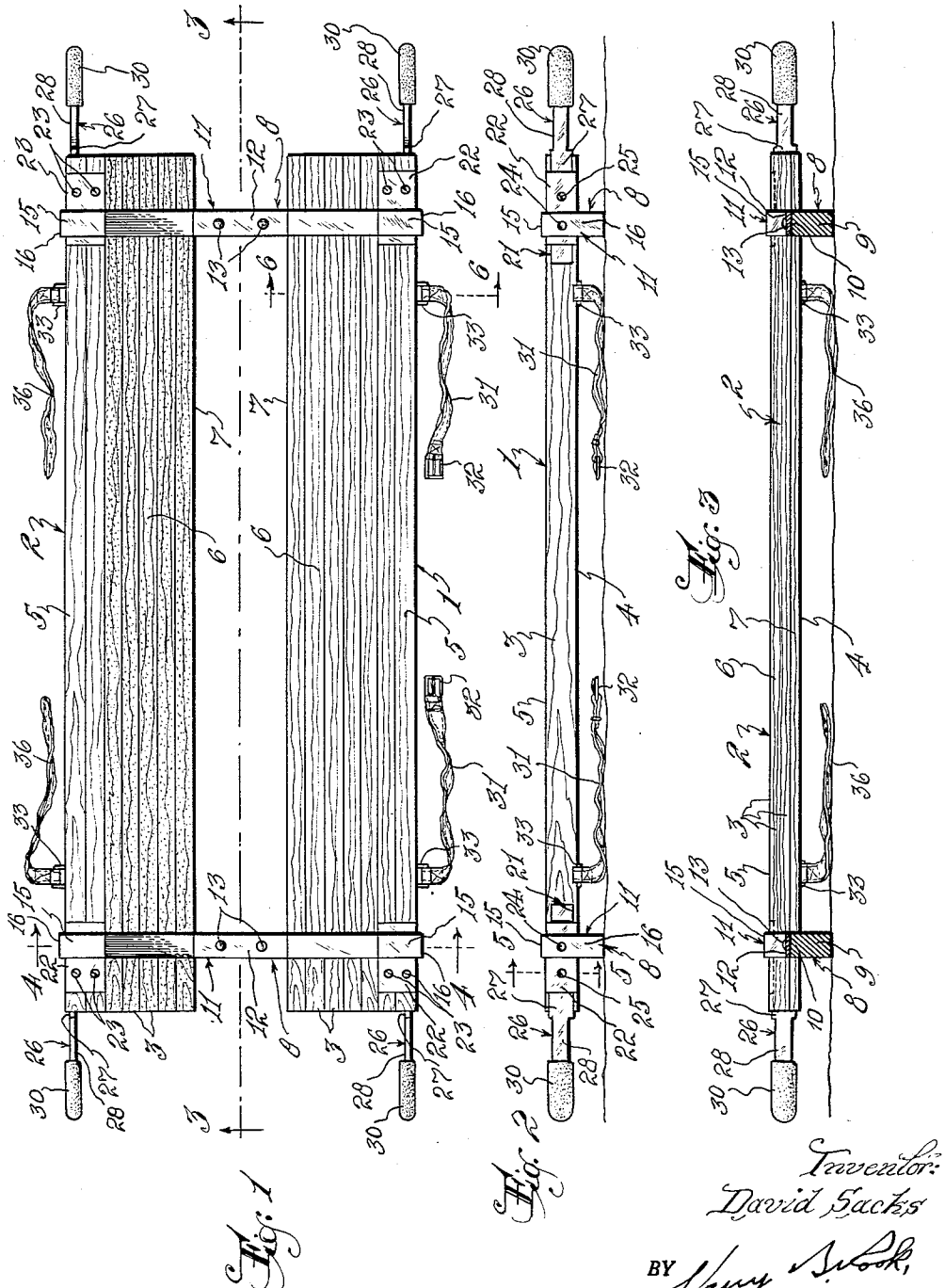


Fig. 1

Fig. 2

Fig. 3

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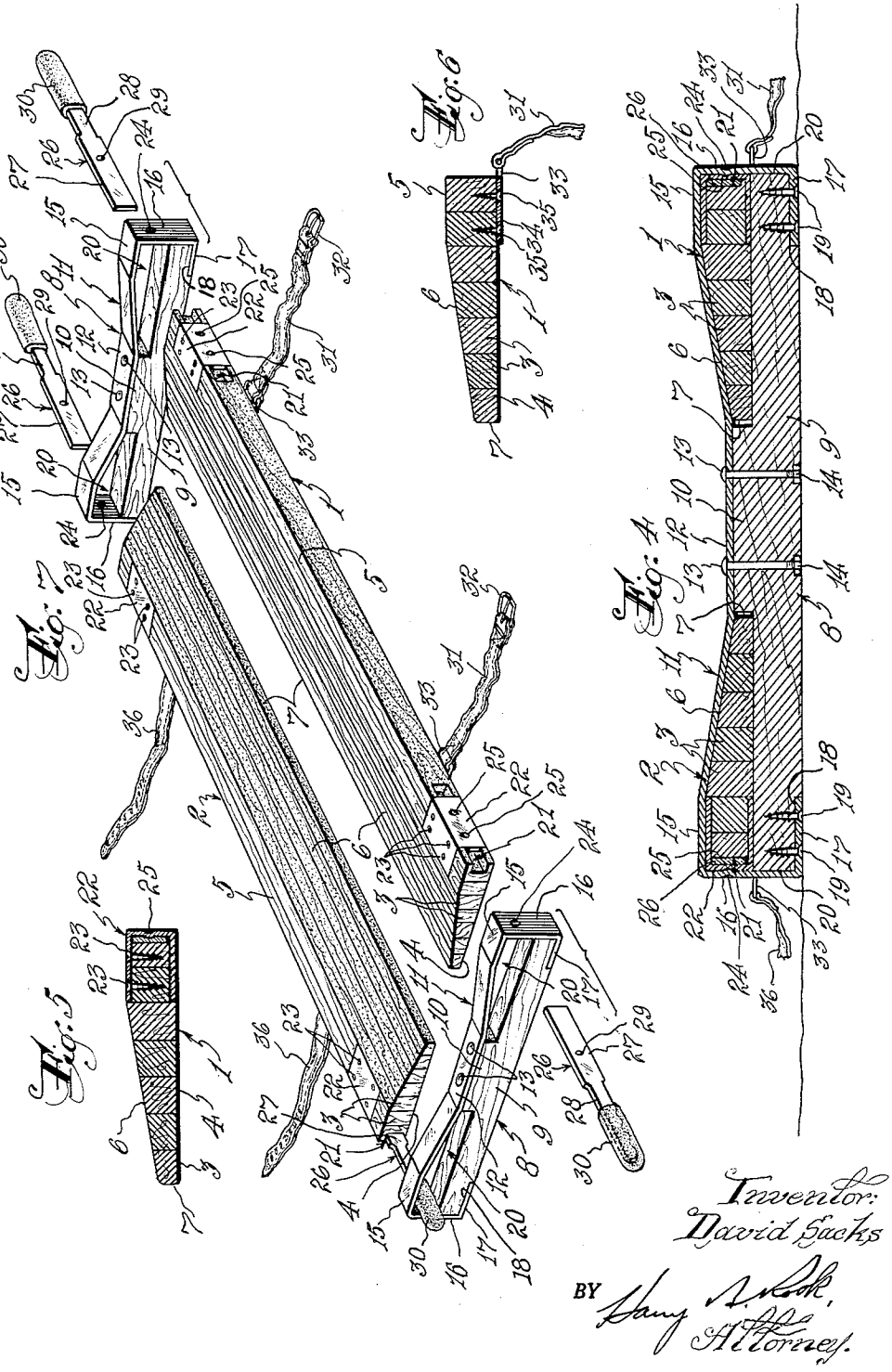


Fig. 4

Fig. 5

Fig. 6

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STRETCHER

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4 Claims. (Cl. 5—82)

This invention relates to stretchers for carrying disabled persons, sometimes called atraumatic carriers.

A prime object of the present invention is to provide a stretcher which can be built up under the patient when he is lying prone on the ground, floor or other supporting surface so as to cause a minimum of disturbance to him, which can readily and comfortably support him during transportation, and which can readily be placed upon a bed or the like with the patient thereupon and disassembled so as to transfer the patient to the bed in a gentle manner with a minimum of disturbance.

Another object of the invention is to provide a stretcher with sloping body bearing panels which can be separately and freely maneuvered over the ground, accommodating themselves to the shape of the ground when being inserted under the patient.

A further object of the invention is to provide a stretcher which can be readily assembled and disassembled.

A still further object of the invention is to provide a stretcher with readily attachable and detachable handles.

It is further proposed to construct a stretcher which is simple and durable in construction, is sanitary and which can be manufactured at a reasonable cost.

For a further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Figure 1 is a top plan view of a stretcher embodying the invention.

Figure 2 is a side view of the stretcher on the ground.

Figure 3 is a sectional view taken on the plane of the line 3—3 of Figure 1.

Figure 4 is an enlarged sectional view taken on the plane of the line 4—4 of Figure 1.

Figure 5 is an enlarged sectional view taken on the plane of the line 5—5 of Figure 2.

Figure 6 is an enlarged sectional view taken on the plane of the line 6—6 of Figure 1.

Figure 7 is a spread perspective view of the stretcher.

Referring in detail to the drawings, a stretcher made in accordance with the invention comprises a pair of elongated rigid panels 1 and 2, of wood, plastic or other suitable material, forming the bearing surface of the stretcher. Each panel is laminated and consists of a plurality of planks 3 cemented or otherwise suitably fastened together. The panel has a plane bottom surface 4 as viewed in Figure 7 and its top surface, adjacent its outer edge, is also plane as indicated at 5, but the remainder of the top surface is tapered or beveled thereby forming a sloping surface 6, terminating in a narrow edge 7.

The panels are connected together at their ends by detachable end frame members 8, each consisting of an elongated block 9 of wood or the like, with its upper surface, as shown in Figure 7, formed with an enlargement 10, at its center. A metal strap 11 is positioned over the upper surface of the block and is provided with a plane central portion 12 secured to the top surface of the enlargement 10 by bolts 13 and nuts 14. The strap tapers outwardly and upwardly from each end of its central portion 12 and continues into a plane end portion 15 and thence downwardly at right angles to the end portion, as indicated at 16, terminating in an inwardly extending flange portion 17. The flange portions seat flush in cut-out portions 18, on the bottom surface of the block 9, at both ends thereof, and are secured by screws 19. Spaces or openings 20 are thus provided above the ends of the block, which spaces conform in shape to the cross-sectional shapes of the panels 1 and 2 and slidably and fittingly receive the ends of the panels. An elongated slot 21 is formed in each panel, along its wide edge, at each end thereof, and covering said slot is a channel-shaped plate 22 secured to the panel by screws 23.

The end frame members 8 are adapted to be slipped over the ends of the panels 1 and 2 for detachably fastening the panels at their ends. Each end frame member is yieldingly held in fastening position by a protuberance 24 pressed inwardly from the outer surface of each portion 16 of the strap 11 engaging in one of a pair of spaced depressions 25 formed in the outer surface of each channel-shaped plate 22.

Elongated handle members 26 are detachably inserted into the slots 21 at the corners of the stretcher, each handle member consisting of a flat shank portion 27 formed of bar metal, with a hand gripping portion 28 extending from one end thereof. The shank portion is yieldingly held in the slot against displacement by a depression 29 on the shank engaging the other depression 25 of the pair of depressions on the channel-plate 22. A suitable cover 30 may be placed over the gripping portion 28 of the handle member for better gripping purposes.

Strap sections 31, with buckles 32, are hingedly connected to the slotted ends of plate 34 secured to the under surface of panel 1 by screws 35, and opposed perforated strap sections 36 are similarly connected to the other panel 2, whereby a patient may be securely strapped onto the panels of the stretcher.

The end frame members 8 in addition to tying the panels together also serve to reinforce the ends of the stretcher and to support the panels off of the ground as shown in Figure 2.

In practical use, when it is desired to transport a patient, who is lying on the ground or floor, the stretcher is disassembled and the long narrow edge of one of the panels placed alongside the patient. The panel is then manipulated until it is under the body of the patient, the shape of the panel and the fact that it is not tied to any other part of the stretcher permitting this manipulation. The other panel is then similarly positioned and inserted under the patient until the opposed narrow edges of the panels are in proper spaced position to receive the end frame members 8. Each end frame member is readily mounted by placing it close to the ends of the panels as shown in Figure 7, passing the handle members 26 through the spaces 20 thereof and inserting the shank portions 27 thereof in the slots 21 of the panels. When both handle members are thus inserted, the ends of the panels may be readily lifted by the handle members and the end frame member 8 slipped over the handle members and over the ends of the panels into interlocking engagement with the channel-shaped plates 22. When the end frame members 8 are thus fastened, the patient is strapped to the panels by the strap sections 31 and 36, ready for transportation. At the point of destination, the stretcher with the patient strapped thereon may be readily placed

on a bed or the like. The stretcher may be readily disassembled and removed from under the patient by merely removing the handle members **26** and end frame members **8** and then sliding the panels **1** and **2** sidewise outwardly of the patient by means of the strap sections **31** and **36** whereby the patient will have been deposited onto the bed or other support with a minimum of disturbance.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims. For example, other suitable means than the protuberances **24** and **29** and the corresponding depressions **25** may be utilized for separably connecting the end frame members to the panels and the handles to the panels; the panels **1** and **2** may be constructed of one piece of material rather than the plurality of pieces **3** cemented together, and the end frame members may be formed wholly of metal instead of the wooden base piece and metal strip as shown.

What I claim is:

1. In a stretcher, a pair of tapered panels in spaced relationship, and detachable end frame members fastening the ends of said panels, each frame member consisting of an elongated block, an enlargement at the center of the upper surface of the block, a strap having a portion fastened to the top of said enlargement and having its ends secured to the under surface of the block, the remainder of the strap being spaced from the block to provide spaces to receive the ends of the panels.

2. A stretcher comprising two rigid elongate panel sections each of which is tapered in cross-section so that the panel section is thinner at one longitudinal edge than at the opposite longitudinal edge, a handle secured to the thicker longitudinal edge at each end of each of said panel sections and projecting longitudinally beyond said end, and two similar rigid end frames each having two openings, each opening conforming in shape and size to the cross sectional shape and size of each of said panel sections to slidably telescopically receive one end of one of said panel sections, whereby said panel sections may be laid flat on a supporting surface in parallel relation to each other with their thinner edges in juxtaposed spaced relation and slid beneath a person to be carried, after which said end frames may be slid over said handles and the corresponding ends of said panel sections to firmly connect said panel sections together.

3. A stretcher as defined in claim 2 with the addition of cooperating separable fastener means on said panel sections and said end frames for releasably locking the end frames on said panels.

4. A stretcher as defined in claim 3 wherein the last-named means comprises cooperating protuberances and recesses on the inner side of one wall of each of said openings in the end frames and on the outer surface of each of said handles, whereby as said end frames are telescopically slid onto said panel sections, said projections will seat in the cooperative recesses.

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