March 10, 1931. M. MELZER 1,795,435

STRETCHER

Filed Nov. 20, 1929

Fig. 1

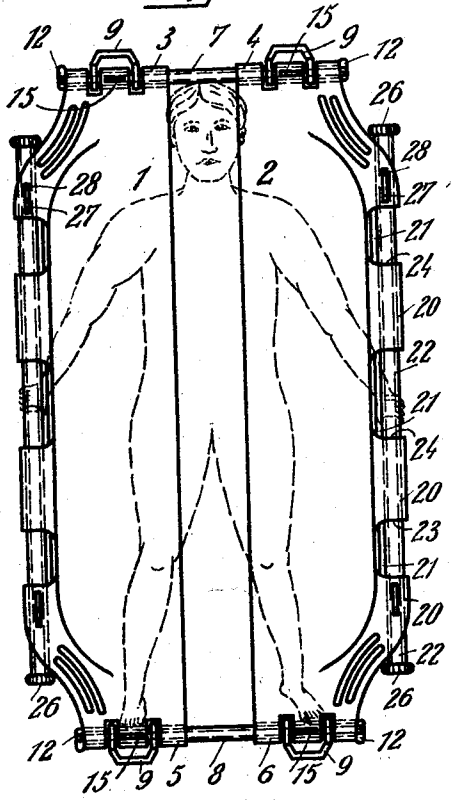


Fig. 2

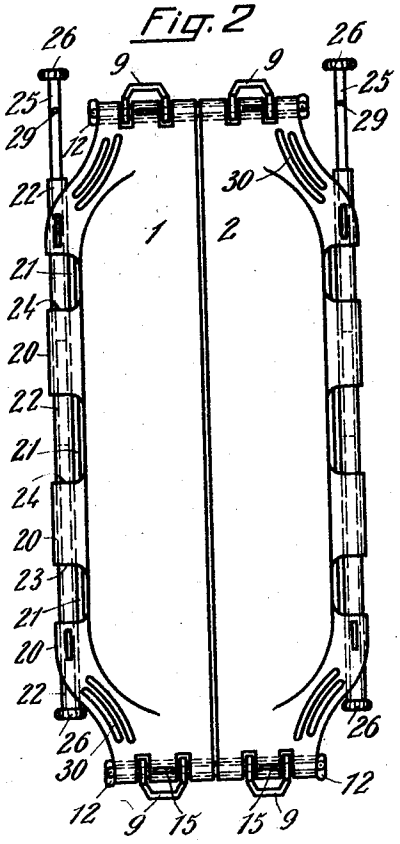


Fig. 3

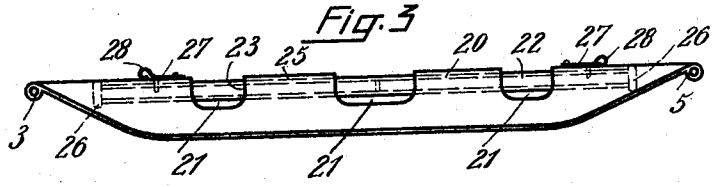


Fig. 4

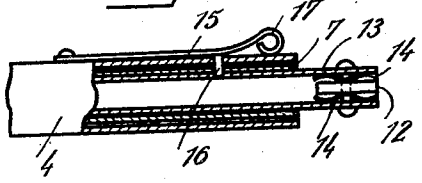
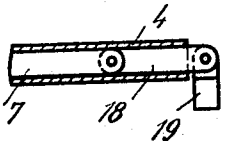


Fig. 5



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UNITED STATES PATENT OFFICE

MARTHA MELZER, OF LEIPZIG, GERMANY

STRETCHER

Application filed November 20, 1929, Serial No. 408,483, and in Germany February 2, 1928.

This invention relates to stretchers for carrying the sick or wounded from one place to another and has for its object to provide an improved construction whereby devices of this character may be rendered more effective in the transfer, care and treatment of the sick or wounded, and whereby pain and discomfort which is due in large measure to the shocks and jars to which the patients are subjected, may be reduced to a minimum. For this purpose, my improved construction contemplates a stretcher comprising two rigid portions or plates which may be inserted from opposite sides between a patient and the bed or ground upon which he is lying and locked together to form a rigid unit.

Other and further objects of the invention will appear in the specification and certain minor features of construction will be recited in the claims, reference being had to the accompanying drawings which represent a preferred embodiment of my invention and in which

Figure 1 is a top plan view of the stretcher showing the rigid plates or portions thereof in laterally separated position.

Figure 2 is a similar top plan view of the same with the portions closed together.

Figure 3 is a longitudinal inside elevation of one of the rigid plates or portions.

Figure 4 is a side elevation of one end of one of the extensible connections between the rigid plate portions of the stretcher, parts being broken away and parts shown in section.

Figure 5 is a fragmentary section of a modified form of extensible connection.

Referring to Figures 1 to 3 of the drawings, the rigid plates 1 and 2 which constitute the separable portions of the stretcher, may be constructed of light metal and suitably shaped to form a trough-like cavity when united together. The edges at opposite ends of both plates are formed with tubular sockets 3, 4, 5 and 6 for the reception of bolts or rods 7 and 8, these parts forming laterally-extensible slidable connections between the rigid plate portions 1 and 2. As shown in Figures 1 and 2, the tubular sockets 3, 4, 5 and 6 may be slotted to accommodate lifting handles or links 9 which swivel upon the rods 7 and 8. Let it be supposed that a patient is to be removed from an operating table to a bed. For this purpose, the plates 1 and 2 are pushed in under the patient from opposite sides until their inner edges are close together as shown in Figure 2 or in contact. The bolts 7 and 8 are then inserted into the tubular sockets 3, 4, 5 and 6 to unite the rigid plate portions together. As shown in Figure 4, the rods 7 and 8 are preferably made tubular in form and thus adapted to receive telescoping extensions 13. In the outer ends of extensions 13 are pivoted lock buttons 12 which are yieldably held in either of two 90 degree separated positions by means of leaf springs 14. A spring clip 15 on the outer wall of socket 4 is provided with an inwardly presented pin 16 which interlocks with holes in the extension 13 in either of two positions corresponding to the relative positions of the stretcher portions 1 and 2 shown in Figures 1 and 2 respectively.

As shown in Figure 1, the separable stretcher portions 1 and 2 may be set to provide a relatively large gap, say for example 8 inches, to permit various functions and treatments related to the evacuation of the bowels, administering an enema, etc. In the usual patient-transfer position shown in Figure 2, the separable portions 1 and 2 of the stretcher may be separated by a small gap such as one having a width of 1 inch to accommodate fold in the clothing. It will be understood that in either of the relative positions of stretcher-portions 1 and 2 referred to above, the pivoted lock-buttons 12 when arranged transversely to the tubular extensions 13, prevent the axial displacement of tubular rods 7 and 8 in either direction in the sockets

3, 4, 5 and 6. When, however, said lock-buttons are turned in lengthwise alinement with the tubular extensions 13, said rods 7 and 8 may be readily removed from their sockets and the stretcher thus dismantled. A somewhat simpler construction for this locking device is shown in Figure 5, according to which a link 18 is pivotally connected to either end of each of the tubular rods 7 and 8, said link 18 carrying at its outer end a second pivotal member 19. The transverse position of either or both of these sections 18 and 19 will serve to lock the rods 7 and 8 against endwise displacement in the sockets 3, 4, 5 and 6, but when said sections are arranged in alinement, the rods 7 and 8 may be readily removed.

The rolled lateral edges of the stretcher-portions 1 and 2 may be cut away at 21 to provide axially-spaced sockets 20. Suitable stiffening side bars 22 may be arranged in sockets 20 and as indicated in Figure 1 the portions of said side bars between the sockets 20 may serve as convenient handles or grips to be grasped by the patient to support and ease himself or by the attendants when transporting the patient.

To facilitate the conveyance of sick or wounded for relatively long distances, extension tubes 25 may be inserted into tubular side bars 22 and provided on their outer ends with knobs 26 whereby they may be moved inwardly or outwardly. Means for locking the tubular rods 25 in adjusted position may be provided in the form of leaf springs 27 mounted upon some of the sockets 20, said springs being provided with inwardly-presented pins 28 adapted to engage in holes 29 in the tubular bars 25. The stretcher-portions 1 and 2 may be reenforced at the four outer corners by forming corrugations 30 in the metal at these points.

It will be understood that various changes and modifications may be made in the structure embodying my invention without departing from the spirit of my invention.

I claim:—

1. A stretcher for conveying sick or wounded patients, said stretcher comprising longitudinally parted body portions constructed of rigid material, the ends of said body portions being formed with tubular sockets, and bolts mounted in said sockets for uniting said body portions.

2. A stretcher for the sick and wounded as recited in claim 1, in which each of said bolts are constructed of greater length than the combined lengths of the sockets through which it extends for permitting a predetermined separation of said body portions without disuniting them.

3. A stretcher for the sick and wounded as recited in claim 1, in which said bolts are made of sufficient length to permit a predetermined amount of lateral separation of said body portions without disuniting them, said bolts being provided with relatively movable end portions adapted to interengage with said stretcher portions in extended or in closed-in position.

4. A stretcher according to claim 1, in which said bolts comprise telescopic sections provided with means for interlocking said sections together.

In testimony whereof I affix my signature.

MARTHA MELZER.