Oct. 31, 1944. W. NICHOLAS 2,361,789

FIRST-AID COT

Filed May 12, 1942

Fig. 1.

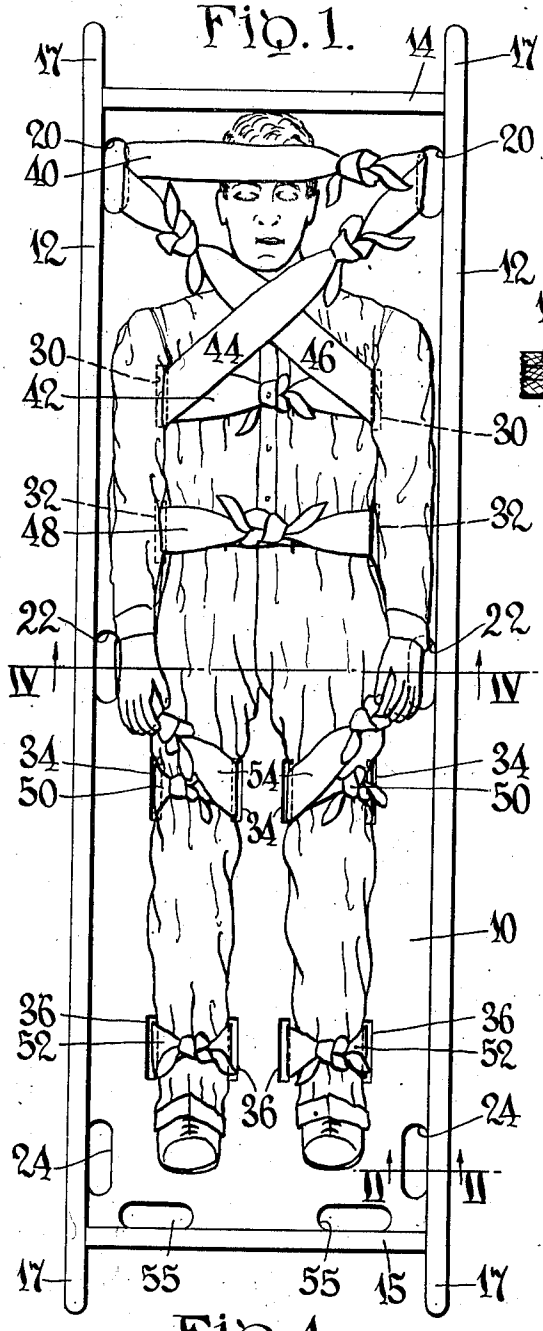


Fig. 2.

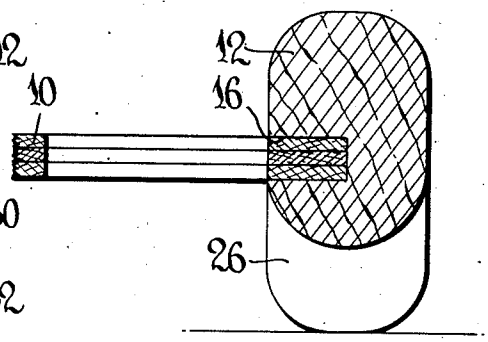


Fig. 3.

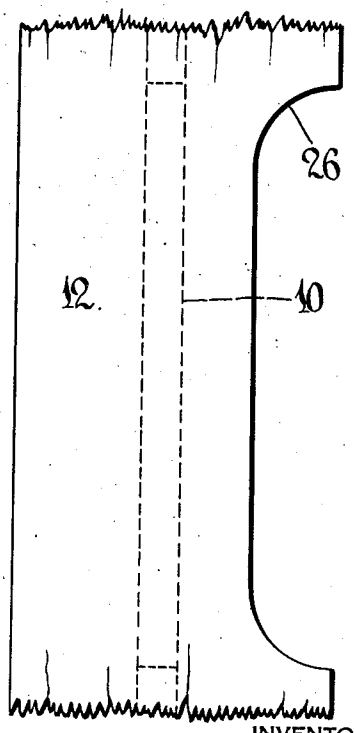
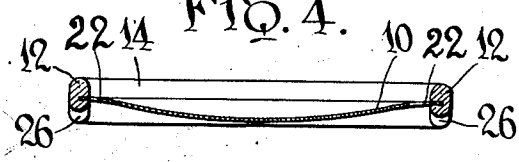


Fig. 4.



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FIRST-AID COT

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4 Claims. (Cl. 5—82)

This invention relates to first aid apparatus, and more particularly to an improved first aid cot for handling and transporting victims from the scene of a casualty.

One of the objects of the present invention is to provide an improved cot for the purpose described which is adapted to support bone fracture cases in improved manner. Another object of the invention is to provide an improved apparatus of the character described which is in the nature of a cot adapted to be elevated and lowered between different floor levels of a building or the like in improved manner. Another object of the invention is to provide a cot or stretcher of the character described which is so designed as to be manufactured in accord with simplified procedures, and through use of readily available materials. Another object of the invention is to provide a first aid cot of the character hereinabove referred to which is of simplified structural form; light in weight; rugged of construction; inexpensive to manufacture; and manipulatable with improved facility in connection with the transportation of casualty victims. Other objects and advantages of the invention will appear in the specification hereinafter.

In the drawing:

Fig. 1 is a top plan of a cot of the invention, showing a patient in carrying position thereon;

Fig. 2 is a fragmentary section on an enlarged scale taken along line II—II of Fig. 1;

Fig. 3 is a fragmentary side elevation of the cot of Fig. 1, on an enlarged scale; and

Fig. 4 is a section taken along line IV—IV of Fig. 1.

In the drawing the cot is illustrated as comprising generally a bottom plate 10 which in one preferred form of the invention is made of relatively light weight ply-board as shown in Fig. 2. Or, the bottom plate 10 may be formed of some suitable light weight sheet metal, or the like, as may be preferred. The bottom plate 10 is margined by means of a pair of side rails 12—12 and a pair of head and foot rails 14—15, respectively; and as illustrated by Figs. 2 and 4, the margining rail members are generally rectangular section wood pieces, or the like, having their edges rounded so as to be smooth to touch. The margining rails are grooved as illustrated at 16 to receive the corresponding edge portions of the bottom plate 10 in telescopically mounted relation therewithin; and it will be understood that the margining rails may be fastened to the telescoped portions of the bottom plate by any suitable fastening means such as nails, screws, cement, or the like. As illustrated at 17, the rails 12 may be extended beyond the end rails 14—15 to provide convenient hand hold devices.

As illustrated in Fig. 1, the bottom plate 10 is formed with oval shaped apertures adjacent the side rails 12—12 at opposite sides of the cot; said apertures including a pair of apertures 20—20 at the approximate elevation of the head of an adult patient when lying upon the cot as illustrated in Fig. 1. A second pair of apertures are disposed as indicated at 22—22 at a position about midway of the length of the cot; and a third pair of the apertures are disposed as indicated at 24—24 at opposite sides of the foot portion of the cot. Hence, the apertures 20—22—24 provide convenient hand-hole means disposed contiguous to the side rail member 12—12 whereby the persons carrying the cot may conveniently grip the latter by inserting their hands through the apertures while wrapping the fingers around the corresponding side rail. It will be appreciated that any desired number of hand-holes of the type illustrated and described may be furnished and may be spaced along the corresponding side edges of the cot in any manner as may be preferred.

As illustrated particularly by Figs. 2 and 3, the side rails 12—12 are cut away as indicated at 26 at their under surface portions at positions in registry with the apertures 20—22—24 of the bottom plate 10. Thus, the recesses so provided in the side rails facilitate the gaining of grips upon the cot when the cot is resting upon the ground or other supporting surface, preparatory to lifting the cot for transporting the patient.

As illustrated by Fig. 4, the bottom plate 10 is preferably dished to conform somewhat to the shape of the body of the patient, thus providing the cot of comfortable form and reinforcing the bottom plate member of the cot structure against accidental deformation as the result of impact against obstructions or the like. It will be understood that if the bottom plate 10 is formed of ply-wood or some other wood-conversion product or the like, it may be readily fabricated into the dished form referred to hereinabove by means of a simple pressing operation; and that if the bottom plate is fabricated of sheet metal or the like, it may also be simultaneously pressed into the dished form and stamped so as to provide the hand-hole apertures referred to.

As illustrated in Fig. 1, the bottom plate 10 is also formed with a pair of slot-shaped apertures 30—30 at positions registering approximately with the arm pits of the patient to be carried by the

cot. Another pair of similar apertures 32—32 are disposed at opposite sides of the patient's body and in approximate registry with the position of his waistline. Two pairs of slots 34—34 are formed in the bottom plate 10 at such positions as to lie at opposite sides of the upper legs of the patient, and a similar double pair of slots 36—36 is formed in the bottom plate at opposite sides of each ankle of the patient.

Thus, it will be understood that the patient may be readily strapped firmly to the cot in the manner illustrated by Fig. 1, wherein a bandage 40 is threaded through the apertures 20—20 and tied over the forehead of the patient so as to hold his head down against the cot. A similar bandage 42 may be threaded through the apertures 30—30 to lie across the chest of the patient to hold him against the cot; and additional bandages 44—46 may be threaded in diagonal directions as shown in the drawing between opposite of the apertures 20—30 to provide a pair of crossed lacings for firmly holding the upper body portion of the patient against the cot. A bandage 48 may be threaded through the apertures 32—32 and tied as illustrated to hold the patient at his waistline to the cot; and bandages 50—52 may be threaded through the apertures 34 and 36, respectively, as illustrated to tie the legs of the patient firmly to the cot. In addition, bandages 54 may be threaded through opposite of the apertures 22—34 to provide additional diagonally directed lacings for holding the thighs of the patient against the cot. Apertures 55 may also be provided in the bottom plate 10 along the rail 15 to permit threading of lacings (not shown) around the bottom rail and thence around either or both ankles of the patient to apply traction upon leg fractures.

Thus, it will be appreciated that subsequent to tieing a patient upon the cot as illustrated and described hereinabove the patient will be firmly fixed thereto so that the cot may be lifted bodily and carried in whatever manner may be necessary to transport the patient away from the scene of an accident to a wound dressing station. The method of supporting the patient upon the cot so securely fastens the patient that the cot may then be turned into upright attitude and raised or lowered in vertical directions by means of ropes or the like tied through the apertures 20—20 in connection with raising the patient out of a basement or lowering him from an upper story to the ground level. It will be appreciated that the exact location of the hand-hole and bandage threading apertures in the bottom plate may be varied from the exact arrangement illustrated and described hereinabove so as to suit any condition of use and any preferred arrangement of ties for holding the patient to the cot.

It will also be understood that inasmuch as the bottom plate 10 of the cot is of rigid character, the cot is adapted to function not only as a transportation medium but also as a fracture supporting medium in that the patient's body is firmly held by the rigid bottom plate against movements such as would further damage the fractured parts of his body. If, in addition, it is desired to employ any conventional form of splint or the like for supporting a fractured member such as an arm, for example; it will be understood that any suitable form of splint for such purpose may be employed in combination with the cot and tie arrangement illustrated and described hereinabove. In such case the bottom plate 10 will provide a convenient base for mounting and supporting the splint.

It will be understood that various changes may be made with respect to the details of the structure. For example, the bottom plate may be fabricated of a series of slat-like members interconnected by transverse support means whereby to provide a generally flat bottom plate which is interspersed with slot-shaped openings through which bandages or other lacing devices may be threaded and tied about various parts of the patient's body for firmly strapping the patient to the cot as explained hereinabove. Therefore, although only one form of the invention has been shown and described in detail, it will be apparent to those skilled in the art that the invention is not so limited but that various changes may be made therein without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A first aid cot comprising a thin plate member of wood material to provide a cot bed portion of spring-like characteristics, marginal edge reinforcing members rigidly embracing said plate member in three directions at its marginal edge portions, said plate member having apertures therethrough disposed contiguous to said reinforcing members for hand gripping purposes, and said plate member having other apertures therethrough disposed adjacent various body portions of the patients to be carried upon said cot, said apertures being adapted to receive strapping devices in threaded relation therethrough for tieing the patients in reclining position upon said cot.

2. A first aid cot comprising a plate member of springy sheet material embraced at its marginal edge portions by relatively rigid reinforcing rail members extending above the level of said plate member to provide a patient supporting flange therearound and extending below the level of said plate member to provide an elevating foot support for said cot, said plate member having apertures therethrough disposed contiguous to said rail members for hand gripping purposes, and said plate member having other apertures therethrough in alignment with various body portions of the patients to be carried upon said cot, said apertures being adapted to receive strap devices in threaded relation therethrough for tieing the patients in reclining position upon said cot.

3. A first aid cot comprising a thin plate-like member of rigidly springy sheet material normally set into dish-like form and enclosed at its marginal edge portions by means of relatively rigid reinforcing rail members extending above the level of said plate member to provide a patient supporting flange therearound and extending below the level of said plate member to provide an elevating foot support for said cot, said plate member having apertures therethrough disposed contiguous to said rail members for hand gripping purposes, and said plate member having other apertures therethrough in alignment with various body portions of the patients to be carried upon said cot, said apertures being adapted to receive strap devices in threaded relation therethrough for tieing the patients in reclining position upon said cot, said rail members being undercut at positions in registry with said contiguous apertures for hand gripping purposes.

4. A first aid cot comprising a plate-like member of springy sheet material set to normally assume a dish-like form and enclosed at its marginal edge portions by means of relatively rigid reinforcing rail members, said plate member hav-

ing apertures therethrough disposed contiguous to said rail members for hand gripping purposes and in alignment with various body portions of the patients to be carried upon said cot, said apertures being also adapted to receive strap devices in threaded relation therethrough for tieing the patients in reclining position upon said cot, said rail members being extended downwardly to provide foot rests elevating said plate member from the supporting surface and being undercut at positions in registry with said apertures to facilitate manual gripping of said rails for cot lifting purposes.

WILLIAM NICHOLAS.