Sept. 10, 1935. F. BRAMLETT 2,014,244

PATIENT HANDLER

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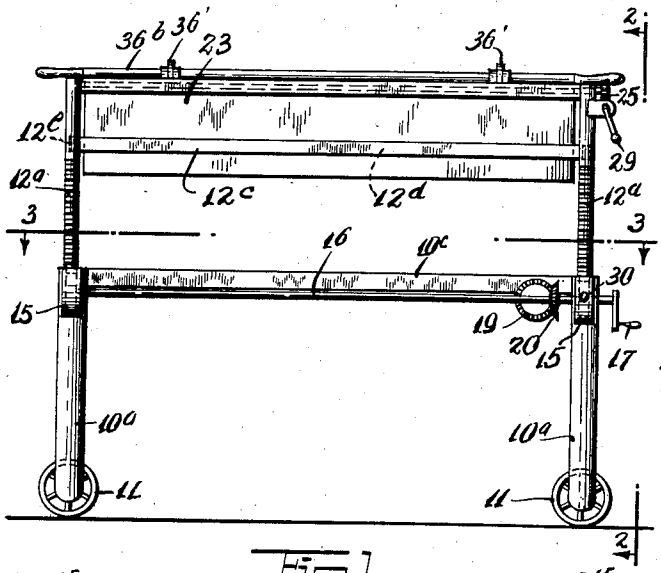

Fig. 1.

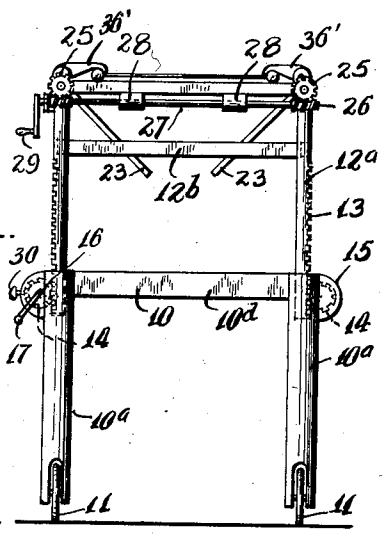

Fig. 2.

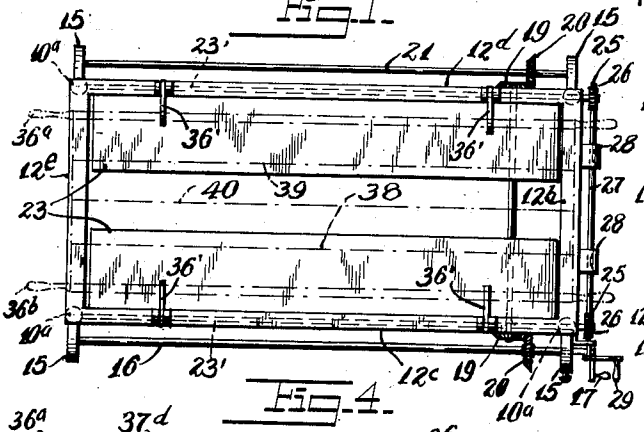

Fig. 4.

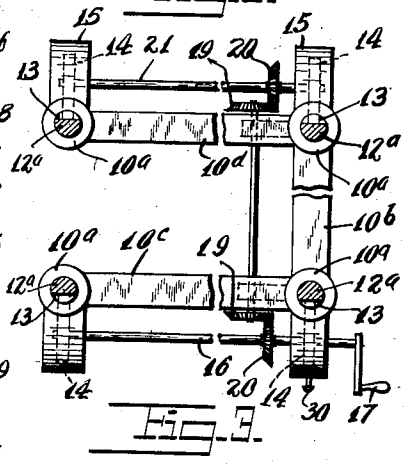

Fig. 3.

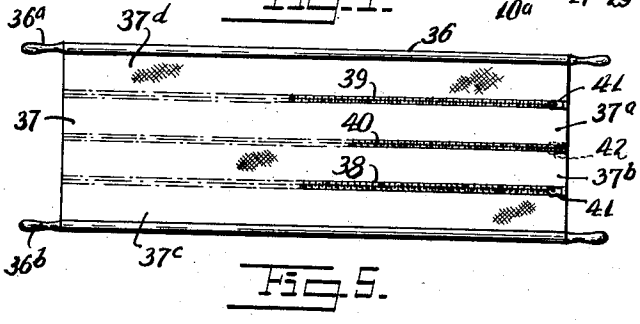

Fig. 5.

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PATIENT HANDLER

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6 Claims. (Cl. 296—20)

This invention relates to new and useful improvements in a patient handler.

The invention has for an object the construction of a device as mentioned which is characterized by an arrangement by which a patient may be comfortably and conveniently conveyed to the operating room and brought back after the operation.

Heretofore, various stretchers and patient handlers have been produced which were satisfactory in conveying a patient to the operating room, but thereafter necessitated manual handling of the patient to properly place him upon the device to bring him back to his room. This is extremely objectionable in many types of operations.

The instant invention contemplates the provision of a holder which is characterized by a pair of leaves hingedly mounted at the sides and mounted within a frame adapted to be placed over a bed, and furthermore contemplates the use of a stretcher used in conjunction with the leaves having several removable sections arranged so that certain of the sections may be allowed to remain under the patient during the operation so that thereafter they may be conveniently connected with other of the sections, and an arrangement for withdrawing all of the sections from under a patient when the patient has been placed back into bed.

Another object of the invention is the construction of a device as described which is simple and durable and which can be manufactured and sold at a reasonable cost.

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

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a side elevational view of a device constructed according to this invention.

Fig. 2 is an end elevational view looking in the direction of the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a plan view of Fig. 1 in which the stretcher has been indicated by dot and dash lines in its proper position.

Fig. 5 is a plan view of the stretcher per se.

The device, according to this invention, comprises a base frame 10 provided with casters 11 by which it may be wheeled along the floor and consisting of several vertical legs 10^a supporting an open frame member 10^b, 10^c and 10^d. More particularly, the elements 10^b, 10^c, and 10^d constitute one end and the two sides of the open frame member, and the legs 10^a are arranged at the corners thereof. The opposite end to frame 10^b is left unbraced so that the device may be wheeled to surround an operating table. A super-frame 12 is mounted upon the base frame 10 and consists of a plurality of legs 12^a telescopically associated with the legs 10^a and a top open frame member consisting of the side elements 12^b, 12^c, 12^d, and 12^e.

A means is provided for holding the frame at various elevations upon the base frame. This means consists of ratchet teeth formed upon the legs 12^a and cooperating with pinions 14 associated with mechanism by which the pinions may be turned for moving the legs 12^a. More particularly, the pinions 14 are housed within protuberances 15 formed on the legs 10^a and are connected by several shafts. There is a drive shaft 16 connecting the pinions 14 along one side of the device, which shaft is provided with an operating handle 17 at its front end.

There is a transverse shaft 18 equipped with bevel gears 19 meshing with bevel gears 20 mounted upon the shaft 16, and another shaft 21. This latter mentioned shaft is extended between and connects the pinions 14 along the other side of the device. The arrangement is such that the handle 17 may be turned in one direction or the other to raise or lower the superstructure relative to the base structure. The arrangement is such that when the handle 17 is turned in one direction all of the pinions 14 are turned to simultaneously move the racks 12^a in the same direction.

A pair of leaves 23 are hingedly mounted upon the outer edges of the top open frame member and are for the purpose of closing this open frame member. These leaves have their outer edges fixed upon tubes 20' which are fixed on the elements 12^c and 12^e.

A means is provided for raising and lowering the leaves, and consists of a hand operated mechanism as follows: The elements 12^c and 12^e are rotative through the elements 12^b and 12^d. The elements 12^c and 12^e project from one end of the frame and are there equipped with worm wheels 25. These worm wheels mesh with worm pinions 26 on a transverse shaft 27 rotatively mounted in bearings 28 supported on the element 12^b. One end of the shaft 27 is equipped with a handle 29 by which the leaves may be operated. The leaves 23 will maintain adjusted positions

in that forces cannot possibly turn the leaves against the interlocking of the worm wheels **25** with the worm pinions. It is only possible for the worm pinions to turn the worm wheels. The super-frame is held in various adjusted positions upon the base frame by a catch **39** engaging through one of the protuberances **14** and engaging one of the pinions **14** to hold this pinion stationary. Consequently, all of the pinions are held against rotation.

In conjunction with the super-frame there is a stretcher **36**. This stretcher is held in position by suitable clamps **36'** and consists of a pair of side parallel handles **36a** and **36b** connected by cloth material **37**. This cloth material is of several longitudinal sections. Namely, there is a central longitudinal section consisting of the parts **37a** and **37b**. This central section is connectible with end sections **37c** and **37d**. The end sections are connected with the handles **36** and **36b**. Hook fasteners **38** are adapted to connect the sections **37b** and **37c** together. Hook fasteners **39** connect the sections **37a** and **37d** together. The central section is composed of two parts, **37a** and **37b**, connected together by hook fasteners **40**. The control for the hook fasteners **38** and **39** are indicated by reference numerals **41** and are arranged at the top of the stretcher. The control for the hook fasteners **40** is indicated by reference numeral **42** and is arranged at the bottom of the stretcher.

The operation of the device may be understood from the following description:—When a person is wheeled to the operating room he is placed upon the stretcher **37** which is rested across the super-frame by reason of the handles **36a** and **36b** engaging across the ends of the super-frame, as clearly shown in Fig. 1. In the operating room the leaves **23** are moved to the horizontal position by operating the handle **29**. Then the hook fastener controls **41** are moved to disconnect the central section **37a**, **37b** from the end sections **37c**, **37d**. The operation is performed without disturbing the central section of the stretcher **37a** and **37b**. When the operation is completed, without transferring the patient, the sides of the stretcher are reconnected and the stretcher may be used to transfer the patient. The patient is then wheeled to the bed and the device slipped over the bed. The super-section is then lowered to the proper height so that the leaves **23** may be gently opened to allow the patient to be discharged on to the bed.

The leaves **23**, in their horizontal position, do not touch but provide a small space, as shown in Fig. 4, through which the control **42** of the stretcher may be operated. When the patient is over the bed, the control **42** is operated to divide the stretcher into two parts. Each side half may then be conveniently removed. The leaves **25** are lowered so that the person is discharged on to the bed. The super-structure is then raised and shifted off from its position over the bed.

It is to be understood that the leaves **23** may or may not be used in putting the patient to bed. The leaves are more or less to be used as a convertible table for the purpose of having the patient in position for dressing or undressing him, and getting him ready for operation and getting the same results as if the patient was on a table without changing him. The hook fastener control **42** can be operated properly without the protection of the leaves as well.

It is also to be understood that the width of central stretcher sections **37a** and **37b** of the carrier may be standardized so as to be interchangeable with the central stretcher sections of an ambulance stretcher and thus these stretcher sections may be left under the patients until after the operation.

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.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame, and consisting of legs telescopically associated with said legs and a top open frame member, means for holding said super-frame at various elevations on said base frame, a pair of leaves for closing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections.

2. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame and consisting of legs telescopically associated with said legs and a top open frame member, means for holding said super-frame at various elevations on said base frame, a pair of leaves for closing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections, said pair of leaves normally being within the same plane as the top open frame with the adjacent edges slightly spaced to provide for the opening of the central seam of the stretcher.

3. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame and consisting of legs telescopically associated with said legs and a top open frame member, means for holding said super-frame at various elevations on said base frame, a pair of leaves for clos-

ing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections, said pair of leaves normally being within the same plane as the top open frame with the adjacent edges slightly spaced to provide for the opening of the central seam of the stretcher, said central seam being controlled with a hook fastener having a slide control.

4. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame and consisting of legs telescopically associated with said legs and a top open frame member, means for holding said super-frame at various elevations on said base frame, a pair of leaves for closing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections, said pair of leaves normally being within the same plane as the top open frame with the adjacent edges slightly spaced to provide for the opening of the central seam of the stretcher, said central seam being controlled with a hook fastener having a slide control, said slide control being operable from the bottom.

5. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame and consisting of legs telescopically associated with said legs and a top open frame member. means for holding said super-frame at various elevations on said base frame, a pair of leaves for closing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections, said pair of leaves normally being within the same plane as the top open frame with the adjacent edges slightly spaced to provide for the opening of the central seam of the stretcher, said central seam being controlled with a hook fastener having a slide control, said slide control being operable from the bottom, and other slide controls operable from the top for connecting the central section with the end sections for the purpose described.

6. A patient handler, comprising a base frame with casters to be wheeled along the floor and consisting of several legs supporting an open frame member adapted to be located over a bed, a super-frame mounted on said base frame and consisting of legs telescopically associated with said legs and a top open frame member, means for holding said super-frame at various elevations on said base frame, a pair of leaves for closing said top open frame member and hingedly mounted at their outer edges, means for lowering said leaves by hinging said leaves downwards, a stretcher mounted across said open frame member and comprising side handles resting and secured on the ends of said open frame member, and cloth material between said side handles, said cloth material resting on the hinged leaves in the raised positions of the said leaves, and said cloth material comprising a central longitudinal section connected with end longitudinal sections which in turn are connected with said handle, and said central longitudinal section being formed from separable sections, said means for lowering the leaves comprising rotative members to which the outer edges of the leaves are attached, worm wheels on said rotative members, worm pinions meshing with said worm wheels, and on a common shaft, and a handle for turning said shaft.

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