Sept. 9, 1958 J. T. POSEY 2,851,033

SUPPORTING MEANS

Filed April 19, 1954

FIG. 1.

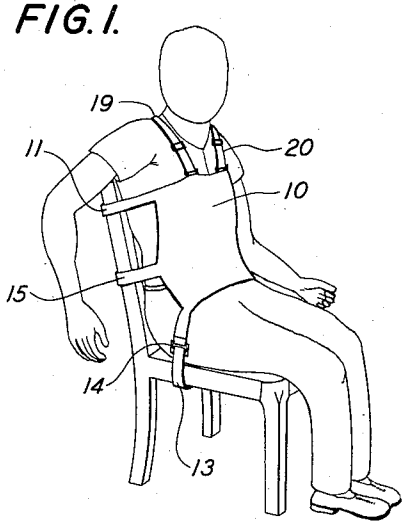

FIG. 2.

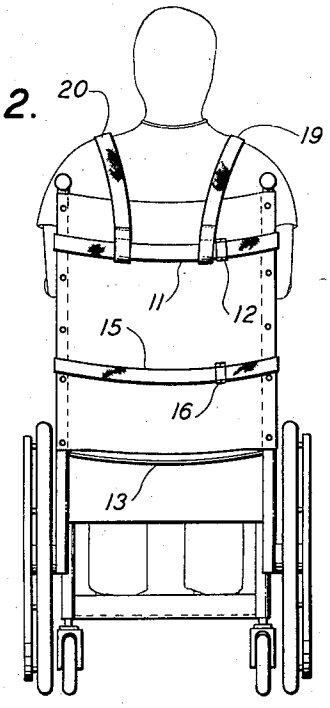

FIG. 5.

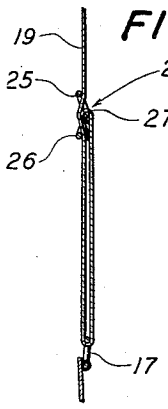

FIG. 3.

FIG. 4.

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SUPPORTING MEANS

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1 Claim. (Cl. 128—134)

This invention is concerned with supporting means and more particularly with supports for securing persons such as invalids to chairs.

In hospitals and sanatoriums there is need for a simple and rugged device for securing patients in a sitting position in chairs with safety and without fear of falling. The instant invention fulfills this need.

In its simplest form the support of the invention comprises a bib for placement over the front of the person's torso, first strapping means fastened to opposite sides of an upper portion of the bib for securing the upper torso to the chair back and second strapping means fastened to opposite sides of a lower portion of the bib for securing the lower torso to the chair seat. Preferably, the device is provided with a third strapping means fastened to opposite sides of an intermediate portion of the bib for securing an intermediate portion of the torso, say the abdomen, to the chair back. An additional desirable feature is at least one shoulder strap fastened to the top of the bib for passing over the patient's shoulders, this shoulder strap being secured to the first strapping means behind the back of the chair.

Preferably the shoulder strap has a loop on its free end through which the first strapping means is passed, and has means for adjusting its effective length between bib and loop.

The support may be made of a variety of materials, but I prefer to employ canvas—or other fabric which is easily laundered.

These and other aspects of the invention will be thoroughly understood in the light of the following description which is illustrated by the accompanying drawing, in which:

Fig. 1 is a perspective view showing a preferred form of the device securing a patient to an ordinary chair;

Fig. 2 is a rear view of a wheel chair to which a patient is secured by the support of Fig. 1;

Fig. 3 is a plan view of the support of Fig. 1;

Fig. 4 is a fragmentary section taken through the looped end of a shoulder strap along the lines 4—4 of Fig. 3; and

Fig. 5 is a fragmentary section through a shoulder strap of Fig. 3 showing a preferred means for adjusting the effective shoulder strap length.

Referring to the drawings and particularly to Fig. 3, the preferred form of the support comprises a rectangular bib **10**, of such size that it fits conveniently on the front of the patient's torso extending from the lap to the chest. It may be made of any sheet material, but preferably is formed of heavy sail cloth about 15 inches square. A first or chest strap **11** is fastened by sewing across the top of the bib from side to side with both ends projecting about the same distance. It has a buckle **12** on one end to which the opposite end of the strap may be adjustably secured. The lower or lap strap **13** is secured across the bottom of the bib from side to side by sewing. The projecting right hand end of this strap is somewhat shorter than the projecting right hand end of the first strap and carries a buckle **14** for receiving the projecting left hand end of the strap. An intermediate or belly strap **15** passes across the bib from side to side about half way between the first two straps and is also secured to the bib by sewing. This intermediate strap is similar in length to the first strap and carries a buckle **16** on its right hand end for connection with the left hand end of the strap. The free left hand ends of all three straps are of approximately the same length, as are the free right hand ends of the top and intermediate straps.

The chest, belly and lap straps are all parallel to each other and perpendicular to the sides of the bib.

A pair of connector links **17, 18** are sewed into the top edge of the bib, for securing a pair of shoulder straps **19, 20** to the top of the bib. The shoulder straps have loops **21, 22** formed at their free ends (see Fig. 4), so that the upper or first strap can be passed through these loops behind the chair back.

The shoulder straps are adjustable with respect to length, this being accomplished by means of sliding buckles **23, 24**, one on each strap. One sliding buckle is shown in section in Fig. 5. It has an upper bar **25**, a lower bar **26**, and an intermediate bar **27** to which one end of the strap is fastened. The strap then passes through the link of the top of the bib, under the lower bar, over the intermediate bar and underneath the upper bar of the buckle. The buckle may be slid along the strap, to adjust the effective length of the strap from the link to the loop, and will then be held at this length by friction.

In the preferred form of my device all of the straps are made of heavy cotton webbing about 1½ inches wide.

To secure the patient to a chair, the bib is placed on the front of the patient's torso (see Fig. 1), and the shoulder straps are adjusted to proper length. Then the chest strap is passed around the back of the chair, threaded through the loops on the ends of the shoulder straps and buckled (see Fig. 3), thus holding the patient's chest against the back of the chair. The belly strap is passed around the back of the chair and buckled, thus keeping the patient's mid section against the back of the chair. The lower strap goes across the patient's lap and underneath the chair, keeping the patient's hips from moving forward in the chair. The short end of this strap facilitates convenient fastening.

The buckles employed to secure the ends of the three straps that pass across the bib may be of various types, but I prefer to use a conventional type of sliding belt buckle which is held securely to a web belt by friction alone.

The shoulder straps, body straps and lap straps should be made long so as to accommodate practically all sizes of adult patients. A smaller version of the device may be employed with children.

In the interests of economy, the buckles may be eliminated and the straps secured by tieing their ends. However, this is not recommended, for tieing and untieing such straps are time consuming.

To facilitate laundering, the buckles should be corrosion resistant. I prefer to employ brass buckles covered with nickel plating.

The device of my invention provides a number of outstanding advantages. It allows some otherwise bedridden patients to be ambulatory. It protects the patient and conserves nurses' time. It is easy to apply and remove. It causes no fear or discomfort to the patient and provides him with psychological security. In its preferred form it is strong and durable yet soft and comfortable and may be laundered by ordinary methods.

I claim:

A support for holding a helpless patient in a conventional sitting position in a chair having a generally horizontal seat and a generally vertical back comprising a bib proportioned to extend across the front of the patient held in the chair and also to extend from the chest downwardly to the region of bend resulting from the sitting position, first strapping means fastened to the bib in the chest area and adapted to be fastened around the chair back to hold the upper part of the patient's torso against the chair back, second strapping means fastened to the lower extremities of the bib and adapted to be fastened around the seat of the chair for exerting a downward and rearward restraint on the lower torso so as to hold the lower extremities of the torso snugly in the angle of the chair subtended by the seat and back, and a pair of shoulder straps attached to opposite sides of the upper part of the bib and extending over the patient's shoulders, each of said shoulder straps having a loop formed from the shoulder strap material through which

said first strapping means is passed when positioned on a patient with the loops and the first strapping means being positioned behind the chair back.

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