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HAND RESTRAINT

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4 Claims

ABSTRACT OF THE DISCLOSURE

A flexible mitt having a pocket to receive the extended hand of a patient, with a first tape fastened to the mitt in the mid-fingertip area while a second tape is fastened to the area medial to the thenar eminence. The mitt folds with the patient's hand into fist shape and the first and second tapes are tied together maintaining the hand in position of function. Thus, hand activity is limited without discomfort or developing stiffness in the hand.

BACKGROUND OF THE INVENTION

This invention pertains to the field of art involving treatment of the human body and more specifically, to appliance for restraining a patient's hand activity to prevent self-injury or annoyance or injury to others.

In hospitals, there is a need for hand restraints to be used on un-cooperative or confused patients to prevent them from scratching or removing catheters, nasal or intravenous tubes. Various types of hand restraints have been used to limit the hand activity of patients. A common form includes a rigid hand compartment that cannot bend with the hand along the knuckles and finger joints. Thus, the hand is maintained in an extended position which becomes uncomfortable after a period of time. Furthermore, the hand tends to become stiff if retained in such a manner for a long period. Another type of hand restraint used is a heavily padded glove, such as a boxing glove, which permits the hand to be flexed. This restraint is rather clumsy to put on a patient and the heavy padding without ventilation causes excessive perspiration of the hand. Also, in the case of boxing gloves having a thumb, a patient can grasp objects between the thumb and finger portion making the restraint ineffective when the primary purpose is to prevent the patient from removing nasogastric tubes, indwelling catheters, intravenous needles, etc.

SUMMARY OF THE INVENTION

A hand restraint in the form of a flexible fingerless glove which folds with a person's hand and can be fastened in fist shape to retain the hand in position of function, thereby limiting hand activity. The position of function is natural to the hand enabling restraint for extensive periods of time without discomfort or becoming stiff. Hand activity is limited in such position since the fingers cannot grasp objects but the fingers do hook about the folded palm sheet of the glove, preventing withdrawal therefrom.

This hand restraint has the advantages of being economical to manufacture, easy to put on the hand of a patient, natural for positioning the hand while restrained, comfortable on the hand, difficult to remove by a patient, light in weight, readily washable and adequately ventilated. Such advantages were achieved by eliminating the stiffening members and heavy padding of restraints now used. By tying the restraint to lock the hand in position of function, these elements were no longer necessary.

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 is a plan view of a hand restraint embodying the present invention.

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FIGURE 2 is a vertical section taken on the line 2—2 of FIG. 1.

FIGURE 3 is a side elevation view of the hand restraint with the mitt fastened in fist shape and a portion broken away to show the hand maintained in position of function.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A hand restraint 10 is shown in FIG. 1 and includes a flexible mitt 12 with a first tape 50 and a second tape 52 attached to lock the mitt in a hand restraining position. The mitt has a palm sheet 14 made of heavy duty duck cloth lined with an intermediate sheet 15 (see FIG. 2) of pelon and an interior lining 16 made of surgical cotton or soft flannel sheeting. Few people are allergic to such flannel sheeting which gently contacts the hand. The lining is secured to the palm sheet by the quilt stitching 18, as shown in FIG. 1, and a set of stainless steel grommets 20 are fitted through openings 22 in the palm sheet and lining to provide for ventilation within the mitt. A wrist flap 24 extends integrally from the wrist side of the palm sheet and a tie tape 26 is secured thereto by the stitching lines 28. A back sheet 30, shown in FIG. 2, is similar in size, shape and material to the palm sheet and aligned opposite therefrom. Similarly, an interior lining 32 and an intermediate sheet 33 are secured to the back sheet by quilt stitching and grommets 34 are fitted therein. A wrist flap 36 extends from the wrist side of the back sheet and is integral with the wrist flap 24 of the palm sheet along fold line 38. Slit opening 39 is provided at the opposite side of the wrist flaps between edges 40 and 42 of flaps 36 and 24, respectively. The wrist flaps are lined with a double thickness of pelon which is stitched around the wrist opening as indicated by the stitch line 44. Pelon is stiff and causes the wrist flaps to break and fold around the wrist in accordin fashion to minimize the danger of impairing circulation by the tie tape 26.

The palm sheet 14 and back sheet 30 are placed together and stitched along the outer perimeter leaving an opening for the wrist. The mitt is then turned inside-out, as shown in FIG. 2, providing a pocket 46 between sheets and a wrist opening passage 48 between the wrist flaps 36 and 24. A first tape 50 is secured to the outer tip of the palm sheet, remote from the wrist flap, and is made of rug binding tape. A second tape 52, made of similar material, is secured to the palm sheet by stitch lines 54 in the area medial to the thenar eminence of the hand. This is the outer edge of the palm near the base of the hand at the ball joint of the thumb.

The hand restraint 10 is slipped upon the extended hand of a patient with the palm sheet 14 adjacent the palm and back sheet 30 covering the back of the hand. Wrist flaps 36 and 24 fit about the wrist portion of the patient's arm and the hand restraint is secured thereon by tying tape 26 tightly about the wrist flaps, as shown in FIG. 3. The hand is then folded along the knuckles and the fingers are folded again at the first joints spaced outwardly from the knuckles. First tape 50 is tied to second tape 52, as shown in FIG. 3, locking the hand in position of function. The hand can be retained in this position for great periods of time without becoming stiff or causing discomfort. At the same time, activity of the fingers is limited so that the patient is prevented from removing nasogastric tubes, indwelling catheters, intravenous needles, and from scratching areas of skin. The hand hooks about the palm sheet when the first and second tapes are tied and cannot be removed from the pocket 46 without untying these tapes. To further limit a patient's hand activity when the restraint has been applied, tape 26 can be untied from about the wrist since

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the hand can not be removed from the pocket and this tpe is then used to tie the restraint to a bed rail or to the patient's belt.

Hand restraints of the type described can be manufactured in three sizes (small, medium and large) for adults and perhaps further sizes for children. Such sizes could be readily identified by using different colored tape for each size. While first tape 50 and second tape 52 illustrate one manner of securing the tip of the palm sheet in proximate contact with the area medial to the thenar eminence, snap fasteners, hooks, buttons, buckles and clasps could be used for this purpose.

It will be understood that modifications and variations of the embodiments of the hand restraint disclosed herein can be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A hand restraint for a patient comprising:

a mitt having a pocket therein to receive an extended hand;

said mitt being flexible to fold with the hand into fist shape; and

means for fastening the finger tip portion of the mitt in proximity with that area of the mitt superposed the thenar eminence of the hand;

whereby the pocket is secured in a curled position which limits use of the fingers, prevents withdrawal of the

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hand from the mitt, and maintains the hand in position of function.

2. A hand restraint as described in claim 1 wherein said mitt includes a palm sheet, and a back sheet joined to the palm sheet around an outer edge portion thereof and open at a wrist portion, said fastening means linking the tip of the palm sheet remote from the wrist portion with an area thereof superposed medial the thenar eminence of the hand.

3. A hand restraint as described in claim 1 wherein said fastening means includes a tape fastened to the finger tip portion of the mitt.

4. A hand restraint as described in claim 3 wherein said fastening means includes a tape attached to the mitt opposite the thenar eminence of the hand and adapted to be tied to the tape fastened to the finger tip portion of the mitt for securing the pocket in a curled position.

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