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LIMB SUPPORT FOR OPERATING TABLES

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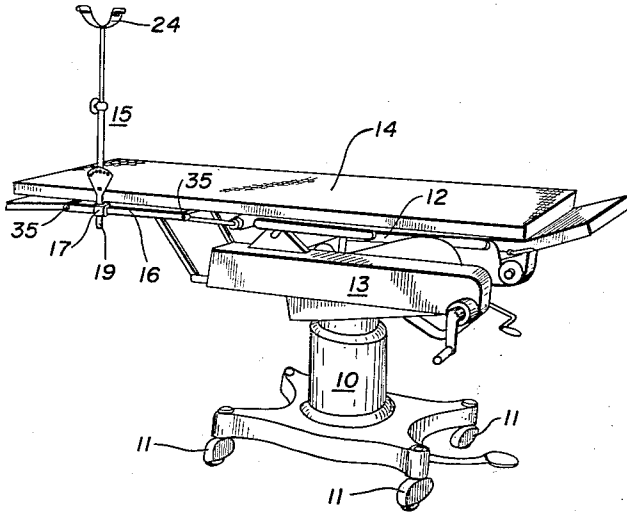


FIG. - 1

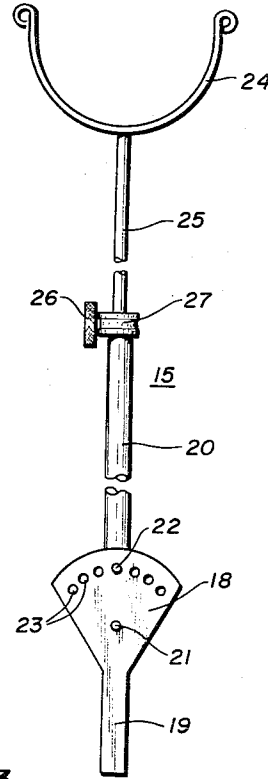


FIG. - 2

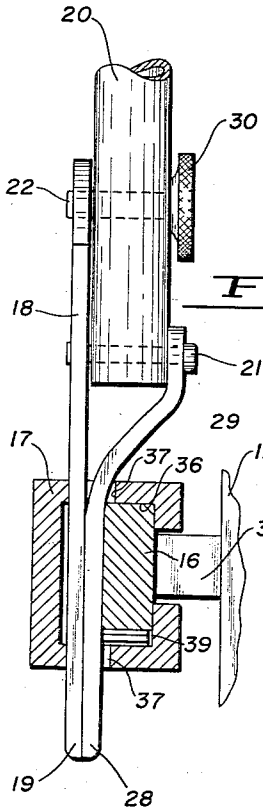


FIG. - 4

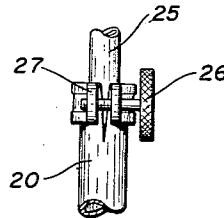


FIG. - 3

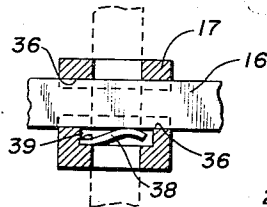


FIG. - 6

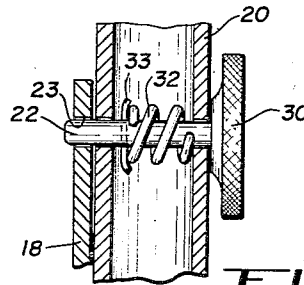


FIG. - 5

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## LIMB SUPPORT FOR OPERATING TABLES

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2 Claims. (Cl. 311-10)

This invention relates to auxiliary equipment for hospital operating tables and specifically to an improved limb rest which is particularly suited to supporting a patient's leg above the level of the table.

During the preparation of a patient for surgical operation, it is frequently necessary to support the patient's leg or arm in a raised position above the level of the operating table. It is the general practice, for example, to employ the services of a nurse or assistant to hold the limb in its required position while another person prepares the limb for the operation. It is desirable that the patient's leg or arm be handled with minimum discomfort to the patient and various mechanical supports heretofore provided, such as those designed as splint rests, have not proved fully satisfactory for this purpose. Ease of adjustment and speed of handling are important both from the standpoint of the patient's comfort and from the standpoint of safety. Accordingly, it is an object of this invention to provide an improved limb rest for use on hospital operating tables and the like.

It is another object of this invention to provide a limb rest for operating tables and the like including an improved arrangement for facilitating quick adjustment and positioning of the rest with respect to the limb to be supported thereon.

Further objects and advantages of this invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

In carrying out the objects of this invention in one embodiment a limb rest is constructed to comprise a relatively short tubular member and a telescoped extension member having a limb rest or yoke at the far end thereof. The tubular member is pivoted on a plate support which has a foot extending downwardly for attaching it to the operating table. The plate is provided with an arc of spaced recesses and a readily detachable detent mounted in the tubular arm is arranged to engage a selected one of the recesses and thus position the tubular member and support angularly with respect to the upright supporting foot. The foot of the supporting plate is secured to the operating table so that the axis of the tubular member is transverse to the table, the support being moved in a plane parallel to the longitudinal axis of the table. In order further to facilitate the handling of the support by one person, an arrangement is provided for attaching the foot of the supporting plate to the slide bar commonly provided along the edge of operating tables. This connecting arrangement comprises a block having transverse intersecting passages therein arranged so that one of the passages accommodates the slide bar and the other the foot of the support. The foot of the support is provided with a wedging portion and when it is pressed into the recess in the slide bar, it wedges the block and bar together and securely holds the limb rest with respect to the operating table. This wedging attachment is quickly adjustable and one person may hold the patient's limb

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and adjust the position of the rest along the slide bar quickly and without assistance. The entire construction is simple and rugged and the limb support may easily be disassembled for sterilizing in an autoclave.

5 For a better understanding of the invention, reference may be had to the accompanying drawing, in which:

Fig. 1 is a perspective view of an operating table provided with a limb support embodying the invention;

Fig. 2 is an enlarged elevation view of the limb support;

10 Fig. 3 is an enlarged view partly in section of the lower end of the limb support in position on a slide bar of an operating table;

Fig. 4 is an enlarged detail view of the slide lock for the extension member of the support;

15 Fig. 5 is an enlarged sectional view of the adjusting detent of the leg support; and

Fig. 6 is a longitudinal view of a section of the slide bar of an operating table with the slide block in position thereon shown in section.

20 Referring now to the drawing, the operating table illustrated in Fig. 1 comprises a base 10 mounted on roller supports 11 and an adjustable table top 12 carried by the base 10 on adjustable supporting mechanism 13, a pad and mattress 14 being provided on the top of the table 12. A limb rest 15 embodying the present invention is supported at the side near the foot end of the table 12 on the usual slide bar 16 which is attached to the side of the table 12 and is spaced therefrom a distance sufficient to allow passage of a slide block 17 in which the support 15 is secured. As shown in Figs. 1 and 2, the support 15 comprises a lower supporting plate 18 having a foot 19 for engagement with the block 17 and carrying a tubular bracket 20 pivoted to the plate on a shaft 21 and provided with a pin or detent 22 for engaging any one of a series of recesses 23 formed in the plate in an arc about the pivot 21. The bracket arm 20 may thus be adjusted angularly with respect to the supporting foot 19 of the plate 18. A rest or stirrup 24 is provided with a supporting arm 25 is adjustably mounted with respect to the tubular bracket 20, the arm 25 being telescoped within the tube 20 and being adjustably secured in position by a set screw 26 mounted in a collar 27 at the top of the bracket 20.

35 The manner in which the tubular bracket 20 is mounted in the supporting plate 18 is clearly shown in Figs. 4 and 5. Fig. 4 is a side elevation view and shows the foot 19 and an integrally attached reinforcing member 28 which is soldered, welded or otherwise suitably bonded to the foot 19 and has its upper portion 29 bent away from the plate 18 to provide a forked portion in which the pivot pin 21 is secured and held normal to the base of the plate 18. The detent 22 passes entirely through the tubular bracket 20 and is provided with a knurled knob 30. As shown in Fig. 5, the detent 22 is pressed toward the left into its position in engagement with one of the recesses 23 by a coiled compression spring 32 which surrounds the detent 22 and exerts pressure between a stop pin 33 and the right hand inner wall of the tubular bracket 20. The knob 30 is large and is easily accessible so that the operator may quickly press the knob out of position to withdraw the pin 22 from the recess 23 and may then release it in the desired position in registry with another of the recesses 23. Since pin 21 is maintained rigidly at right angles to plate 18 and the bracket 20 is secured tightly on the pin, the bracket 20 swings in a plane parallel to the plate 18.

45 As shown in Fig. 4, the slide bar 16 is attached to the table 12 on posts 35 at either end of the bar. The block 17 is provided with a horizontal passage which receives the bar 16 with a sliding fit. The block 17 is also provided with a vertical cross passage which intersects the passage 26 so that the bar 16 extends into the passage 37.

Passage 37 is made of a size to accommodate the foot 19 of the bracket and when the foot is inserted in the passage and pressed downwardly, the wedge-shaped portion provided by the offset part 29 comes against the top of the bar 16 and wedges it tightly in position within the block thereby providing a lock for securing the block 17 in the selected position. The block is readily released by shaking and upward movement of the bracket to raise the foot 19 and release the wedging member 29. The wedging action may thus be released without withdrawing the foot from its position in the recess 37 and the block may be moved to another position along the bar 16 and the wedge restored to lock the bracket in its new position; this releasing and locking action may be accomplished by the operator using one hand while employing the other hand to hold the stirrup 24 in its required position with respect to the patient's limb. The smooth sliding action of the block 17 along the bar 16 is further facilitated by providing a spring 38 within a recess 39 in communication with the passage 36 and below the bar 16 so that it presses against the lower edge of the bar and holds the block against jamming as it is moved along the bar.

The action of the bracket assembly 15 is such that an operator may hold the patient's limb in the required position while adjusting the bracket both as to angle and to position along the slide bar 16. In such case the length of the bracket is adjusted beforehand by setting of the thumb screw 26 to the approximate distance required, and the operator may then grip the bracket and hold the detent 22 out of locking position by placing a finger between the knob 30 and the tube 20, then by holding the foot 19 loosely in its position in the block 17, the block and bracket may be slid to the desired position, the angle of the bracket changing since the detent is free; when the required position is reached, the foot may be pressed into position in the block 17 to lock the block against the bar 16 and the detent 30 released so that the bracket 20 is locked in position with respect to plate 18. It will be understood that during the use of the bracket suitable pads are placed in the stirrup 24 to avoid discomfort to the patient. It is apparent that a simple and rugged bracket attachment has been provided which enables one person without assistance to locate the bracket in the required position with respect to the patient's leg to facilitate the preparation for operation.

While specific details of a preferred embodiment of the invention have been illustrated various modifications will occur to those skilled in the art, therefore it is not desired that the invention be limited to the details of construction illustrated and it is intended by the appended

claims to cover all modifications which fall within the spirit and scope of the invention.

I claim:

1. A limb rest for operating tables and the like comprising a supporting plate, an elongated attaching foot extending from one edge of said plate and generally in the plane of the plate, a limb supporting arm pivotally mounted on said plate on an axis normal thereto, means for locking said arm in any of a plurality of angular positions about said axis, means including a slide block for adjustably securing said rest to a side bar of an operating table, said block having two intersecting passages therethrough at right angles to one another, one of said passages being provided to receive a slide bar of an operating table, whereby said block may be slid along the bar and the other of said passages being shaped to receive said attaching foot, and said foot having a sloping portion positioned to engage the edge of a slide bar in said one recess and to wedge said block against the bar to lock the rest in position.

2. A limb rest for operating tables and the like comprising a support, an elongated attaching foot extending from said support in general alignment therewith, a limb-supporting arm pivotally mounted on said support on an axis normal to the longitudinal axis of said foot, means for locking said arm in any of a plurality of angular positions about said axis of said arm, means including a slide block for adjustably securing said rest to a side bar of an operating table, said block having two intersecting passages therethrough at right angles to one another, one of said passages being provided to receive a slide bar of an operating table whereby said block may be slid along the bar and the other of said passages being shaped to receive said attaching foot, and said foot having a sloping portion positioned to engage the edge of a slide bar in said one recess and to wedge said block against the bar to lock the rest in position.

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