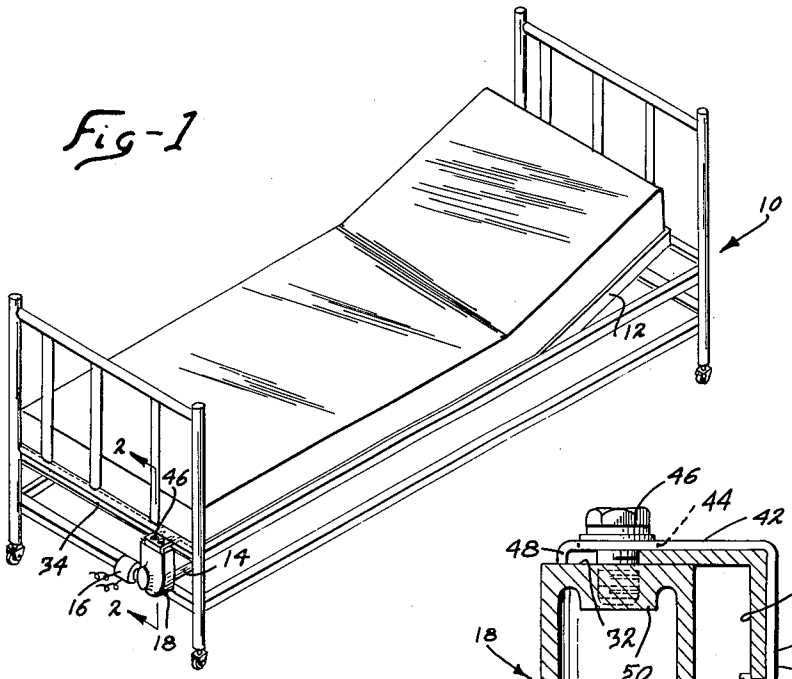
Aug. 29, 1961 S. S. BROWN 2,998,215

MOTOR BRACKET AND CLAMP ASSEMBLY

Filed March 4, 1959

Fig-1



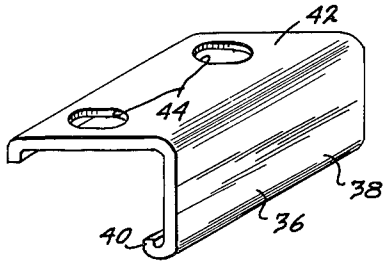


Fig-3

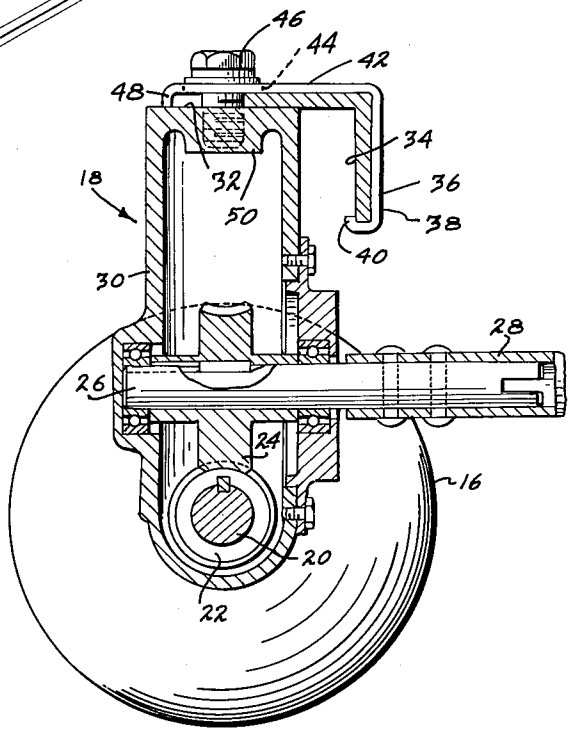


Fig-2

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MOTOR BRACKET AND CLAMP ASSEMBLY

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This invention relates to a clamp device and is particularly concerned with an extremely simple and novel clamp arrangement for supporting a motor on the frame of a bed such as a hospital bed so that it can readily be connected with the shaft of the bed which it is to operate.

Heretofore, in constructing hospital beds having motorized adjustments, or in motorizing the adjustments of manually operated beds, expensive and heavy brackets and the like have been used for connecting the motor to the frame of the hospital bed or for mounting the motor on the frame of the bed. This has been an expensive arrangement that has hindered the motorizing of existing beds and has caused beds of new manufacture to be more expensive and complicated than desired.

With the foregoing in mind, it is a primary object of the present invention to provide a support bracket or clamp for mounting an electric motor on the frame of a hospital bed or the like which is extremely inexpensive and compact.

Another object is to provide a clamp arrangement of the nature referred to which makes it extremely simple to attach a motor to the frame of a hospital bed.

A still further object of this invention is the provision of the combination of a geared head motor having a special cast head thereon adapted for coupling with a sinmple clamp so that the motor can be clamped to one of the end rails of a hospital bed with the shaft in alignment with the adjustment shaft of the bed which it is to operate.

It is also an object of this invention to provide a motor frame constructed especially for use with a clamp of the nature referred to but which motor construction can also be utilized for another purpose.

These and other objects and advantages will become more apparent upon reference to the drawings in which:

FIGURE 1 is a perspective view of a hospital bed;

FIGURE 2 is a sectional view through the end rail of the bed as indicated by line 2—2 and with the frame of the motor partly in section showing how the motor is supported on the end rail of the bed; and

FIGURE 3 is a perspective view showing the novel clamp of this invention.

Referring to the drawing somewhat more in detail, bed **10** of FIGURE 1 has one or more movable portions **12** which are adapted for being elevated or moved by rotation of one or more adjustment shafts. One of the adjustment shafts of the bed is indicated at **14** adjacent the foot of the bed and attached thereto is a reversible electric motor **16** and which drives through a speed reducing geared head **18**.

Reference to FIGURE 2 will show that motor **16** has an output shaft **20** driving a worm **22** that engages a worm wheel **24** that is keyed to transverse shaft **26** which is connected as by coupling **28** with shaft **14** so that energization of the motor will cause the shaft to rotate. The gear referred to is disposed within a specially shaped end frame casting **30** of the motor which is characterized in having a portion on the side of worm wheel **24** opposite the motor output shaft extending upwardly a substantial distance from the worm wheel and terminating in a flat surface **32**. This surface is adapted for abutting the underside of end rail **34** of the bed. The attachment of the motor to the end rail is accomplished by a special clamp **36** which is shaped to engage the outer face of the

end rail. In this case the end rail is angular and clamp **36** is accordingly an angular member so that the two legs thereof will engage the front and top faces of the angle end member **34**. The lower end of the vertical leg part **38** of the angular clamp is bent over as at **40** so as to hook over the lowermost edge of the vertical leg of the rail **34**.

The horizontal leg **42** extends across the top of the rail and is provided with slots **44** (see FIGURE 3) through which clamp screws **46** pass and which screws **46** are threaded into threaded bores **48** in the top part of the casting **30**.

The extreme left end tip of top leg **42** of the clamp as is viewed in FIGURE 3 is turned down as at **48** to form a lip along the edge of the clamp which is preferably of the same dimensions as the thickness of the top leg of the end rail **34**. When screws **46** are tightened the motor will be firmly supported because of the engagement of the end frame casting **30** thereof with the underside of the horizontal leg of the angle and with the turned down lip **48** of the clamp member.

The arrangement is such that it becomes extremely simple to mount a motor on an existing hospital bed and furthermore the same construction can be employed with new manufacture thereby permitting motorized beds to be produced as new manufacture without any modification in the frame structure.

It will be evident that differences in the distance from the end rail to the adjusting shaft could be compensated by introducing shims beneath the end rail and the turn down lip of the clamp and the upper surface of the casting **30**. The motor would still be tightly and fixedly clamped to the rail by the use of the screw **46**, or by somewhat longer screws if necessary.

It will also be evident that while the clamp illustrated will accommodate substantially all bed frames on which motors are to be mounted, some modification in the exact dimensions and shape of the clamp could be made without in any way departing from the spirit of the present invention.

It will be understood that this invention is susceptible to modification in order to adapt it to different usages and conditions; and, accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. A clamp for attaching an electric motor or like member to an angle frame member of a hospital bed, a motor frame on which said motor is mounted, said clamp comprising first and second leg portions disposed at the same angle to each other as the legs of said frame member, the first leg of the said clamp having a reverse bend therein to engage over the edge of the one of the legs of said frame member, the second leg of the clamp extending beyond the edge of the other leg of said frame member and having its extreme end part bent down to present an edge which is in the same place as the inside surface of the said other leg of said frame member, said motor frame member being adapted to engage the underside of the said other leg of said angle frame member and the turned down end part of the said second leg of the clamp, and screw threaded means extending through the said second leg of the clamp and engaging the said motor frame member on which said motor is mounted.

2. A clamp for attaching an electric motor or like member to an angle frame member of a hospital bed, a motor frame comprising a casting member on which said motor is mounted, said clamp comprising first and second leg portions disposed at the same angle to each other as the legs of said frame member, the first leg of the said clamp having a reverse bend therein to hook over the outermost edge of the one of the legs of said frame

member, the second leg of the clamp extending beyond the edge of the other leg of said frame member and having its extreme end part bent down to present a terminal edge portion which abuts against the casting member of said motor frame and which terminal edge portion lies in the same plane as the inside surface of the said other leg of said frame member, said motor frame member being adapted to engage the underside of the said other leg of said angle frame member and the turned down end part of the said second leg of the clamp, and a screw threaded means extending through the said second leg of the clamp and engaging the said motor frame member on which said motor is mounted.

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