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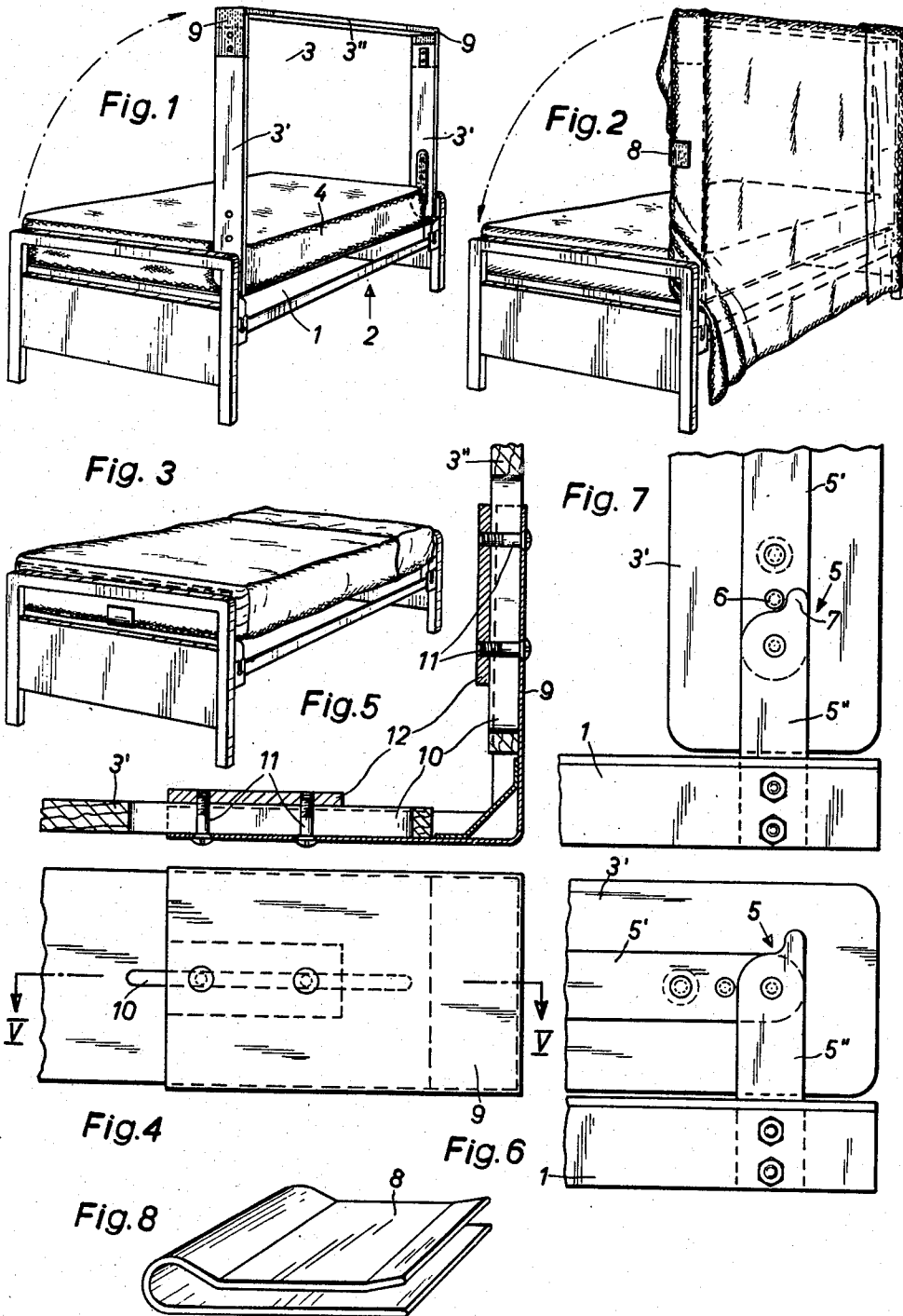
E. WILD

2,947,008

APPARATUS FOR THE DAILY MAKING OF BEDS

Filed Oct. 22, 1958

2 Sheets-Sheet 1



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APPARATUS FOR THE DAILY MAKING OF BEDS

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2 Sheets-Sheet 2

Fig. 9

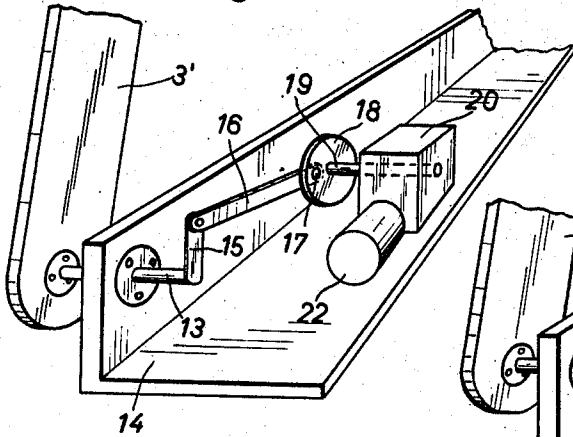


Fig. 10

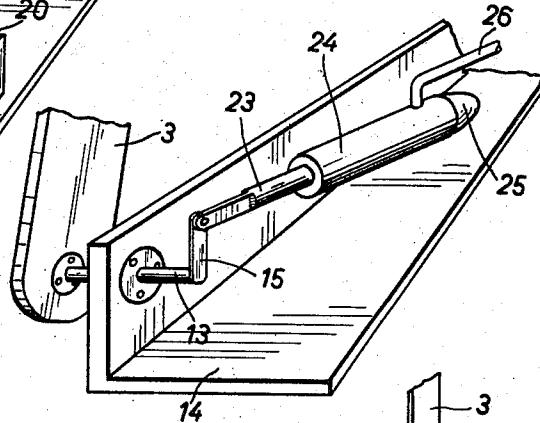


Fig. 11

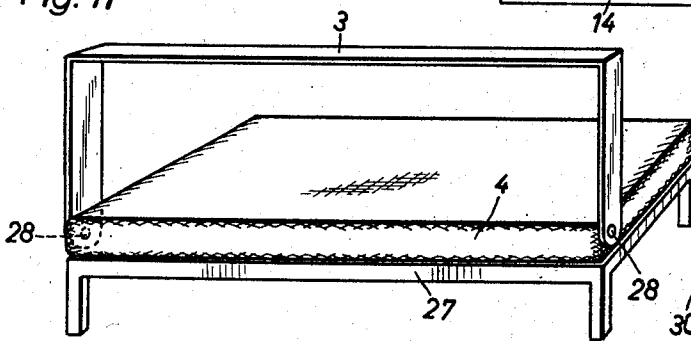


Fig. 12

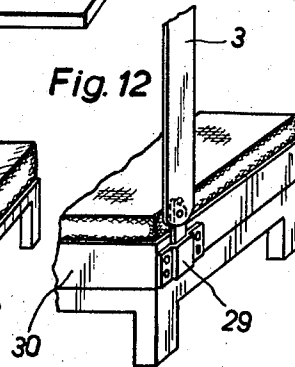
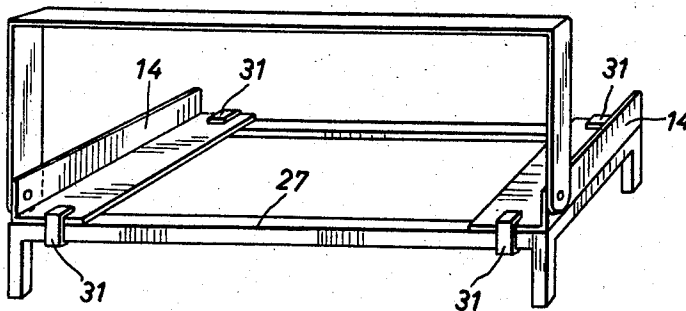


Fig. 13



1

2

2,947,008

APPARATUS FOR THE DAILY MAKING OF BEDS

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6 Claims. (Cl. 5—321)

This invention relates to a method and an apparatus for the daily making of beds.

Putting the beds in order requires every day to air sheets and wool blankets, to spread, stretch and securely clamp the marginal portions thereof underneath the mattress and to orderly arrange the bedding, while this procedure has been carried out in the same manner for centuries, it is a strenuous and time-consuming work particularly with modern low beds.

It is an object of the invention to provide a method and an apparatus which would permit putting the bed in better and nicer order by means of a few manipulations in some seconds, without causing fatigue and without involving inconvenient stooping.

It is a feature of the method according to the invention that by means of a novel apparatus the operating surface for making the bed may be changed from the horizontal position into vertical position and placed in an ideal operating level and location, in order to better air, stretch and arrange the bedding in a more convenient working position.

According to the invention, the apparatus for carrying out the method comprises a U-shaped frame which abuts against one longitudinal side and against the two short sides of the mattress and is pivotally mounted to be swung about a horizontal axis, extending along the second longitudinal side, from the horizontal position, in which it surrounds the mattress, into a vertical position, in order to facilitate making the beds by placing and fastening the lower and the upper linen as well as the wool blanket to or on the upturned frame, by tilting the frame over into the horizontal position and by inserting the bed sheets underneath the free-remaining longitudinal side of the mattress.

The present invention will now be described in more detail with reference to the accompanying drawings illustrating, by way of example, several embodiments of the invention, and in which:

Figs. 1-3 show a bed provided with the novel apparatus in the initial state, in the intermediary state and in the finished state of making the bed, in perspective view,

Fig. 4 is a detail of the frame,

Fig. 5 is a section on the line V—V of Fig. 4,

Figs. 6 and 7 show a further detail in two positions,

Fig. 8 shows an auxiliary means,

Figs. 9 and 10 are views of an electromechanic driving device and a hydraulic driving device, respectively, and

Figs. 11-13 show modifications of the apparatus according to the invention.

Referring more particularly to Fig. 1 of the drawings, the mattress frame 1 of a bed 2 supports a U-shaped frame 3 which is adapted to be swung about an axis, extending on the longitudinal side of the mattress 4. For this purpose the free end of each short side 3' of the frame 3 is connected to the mattress frame 1 by means of a hinge 5 (see Figs. 6 and 7). The hinge plate 5', secured to the frame 3, of the hinges 5 is provided with an abutment pin 6 which coacts, in the vertical position

of the frame 3, according to Fig. 1, with a nose-shaped abutment 7 of the lower hinge plate 5' screwed to the mattress frame 1. The frame 3 can be turned by means of this hinge 5 from the vertical position shown in Fig. 1 into horizontal position. In this position the frame 3 tightly engages the longitudinal side and the two short sides of the mattress 4, while the top edge of the frame 3 will be situated lower than the top edge of the mattress 4. The second longitudinal side of the servicing flank of the bed remains free.

When making the bed, the frame 3 is pulled upwards into vertical position until engaging the abutment. The hinge 5 is formed so as to cause the frame 3 to remain fixed in the described position. Now the lower bed sheet is placed over the then overlying longitudinal side 3' of the frame 3 in such a manner that approximately 6 inches of the bed sheet remain free on this longitudinal side. The bed sheet is equally distributed at the short sides of the frame 3. The free marginal portion of the lower sheet is wrapped around the sides of the frame and tightly retained by means of the fastening clamps 8 shown in Fig. 8. Now the top bed sheet together with the wool blanket is placed over the frame, folded back at the head side, wrapped around the frame sides on the remaining sides, and held in place by clamps 8. This stage of bedding is illustrated in Fig. 2. Hereupon the frame 3 together with the bed sheets and the wool blanket can be turned down into horizontal position, whereupon the bed sheets are orderly spread and tucked underneath the mattress 4 at the servicing side of the bed, whereby making the bed is completed. The bed (Fig. 3) put in order in this manner may in addition be covered by a top blanket.

Apart from the fact that the bed can be conveniently and rapidly fixed at the servicing side of the bed, the fixed bed itself offers further advantages by preventing the bed sheets, securely retained on the frame 3 by clamps 8, from coming into disorder even with a restless sleeper.

As evident from Fig. 1 but particularly from Figs. 4 and 5, the short sides 3' of the frame 3 are connected with the longitudinal side 3'' by means of angular pieces 9. The ends of the short sides 3' and of the longitudinal side 3'', respectively, are suitably provided with longitudinal slots 10 through which screws 11 pass, which are inserted in holes of the angular pieces 9. The screws 11 engage clamping latches 12 which abut against the inner side of the frame 3. This arrangement permits the widening or lengthening of the frame 3, whereby the frame sides may be securely clamped to the angular pieces 9 in any position of adjustment. Thereby the frame 3 may be easily adapted to the prevailing dimensional proportions of the bed and the mattress, respectively. Since mounting of the frame 3 is a simple matter anyhow and since the described construction of the frame readily permits to attach it to all beds of standard sizes, the apparatus could be advantageously produced and put on the market as self-made unit, to be built from purchased parts according to instructions.

The frame 3 could also be moved by means of a driving mechanism. According to Fig. 9 one of the short sides 3' of the frame at its end is connected in fixed relation for rotation with a shaft 13 which is rotatably mounted in a reinforcing angle 14 secured to the bed frame not shown. The shaft 13 carries a crank arm 15 which through a connecting rod 16 is linked to an eccentrically located pin 17 of a circular disk 18. The disk is keyed to the take-off shaft 19 of a reduction gear 20. The drive shaft of the gearing 20 is connected with the shaft of an electromotor 22. The motor 22 can be controlled by means of a switch not shown so that the frame will be turned up or down.

According to a similar modification shown in Fig. 10 the piston rod 23 of a piston movable within a cylinder 24 is linked to a crank arm 15. The cylinder 24 is anchored to the reinforcing angle 14 at a point of articulation 25. Pressure fluid for actuating the piston is passed to the cylinder 24 through a duct 26 from a pressure source not shown, said fluid supply taking place over a control element which enables in this modification the setting of the frame in upright or horizontal position.

Fig. 11 shows a bed in which the mattress 4 is placed directly upon the bedstead 27. The frame 3 is here swingably mounted on pivot pins 28 which are built into the interior of the short sides of the mattress 4.

In another modification according to Fig. 12 hinges 5 such as shown in Figs. 6 and 7 are attached to the frame 3, in which case, however, the lower hinge plate 5" is not screwed-on but inserted in holders 29, which holders in turn are secured to a submattress 30. Thereby the frame 3 can be removed from the bed in the most simple manner or set up again.

In Fig. 13 reinforcing angles 14—such as shown in Figs. 9 and 10—are arranged at the head end and at the foot end of a bedstead 27 and secured thereon by means of holding brackets 31. The frame 3 is mounted on these angles 14. Also this arrangement is very well adapted for subsequent assembly and permits easy mounting and dismantling of the frame.

The features of the described embodiments of the invention, which have been chosen from a great number of possible modifications, naturally may be combined in any desired manner.

I claim:

1. In combination with a bed including a mattress and a frame supporting said mattress, a covering device comprising a frame having an open side and a shape conforming to that of said mattress, means hingeably supporting said frame on said bed for hinged movement

about said open side and clamping means adapted for clamping sheets and covers onto said frame whereby the sheets and covers are pivotal as a unit with the frame onto said mattress, the open side providing for the engagement and disengagement of the sheets and covers beneath said mattress.

2. A device as claimed in claim 1 wherein said frame includes sides and means adjustably connecting said sides for accommodating mattresses of different sizes.

3. A device as claimed in claim 1 comprising means coupled to said frame and providing power to pivot the frame.

4. A device as claimed in claim 1 wherein the first said means supports the frame of the covering device on frame of said bed.

5. A device as claimed in claim 1 wherein the first said means supports the frame of the covering device on said mattress.

6. A device as claimed in claim 1 wherein the frame of said covering device includes end portions pivotally supported on the first said means, said end portions sandwiching said mattress along a side of the mattress in all positions of the latter said frame.

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