

United States Patent

Grange

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[54] **SEWING MACHINE WITH COMBINED
ACCESSORY RECEPTACLE AND
AUXILIARY BED**

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[51] Int. Cl.D05b 75/00

[58] Field of Search.....112/258, 260, 217.1; 312/30,
312/21; 108/65, 66, 90

[56]

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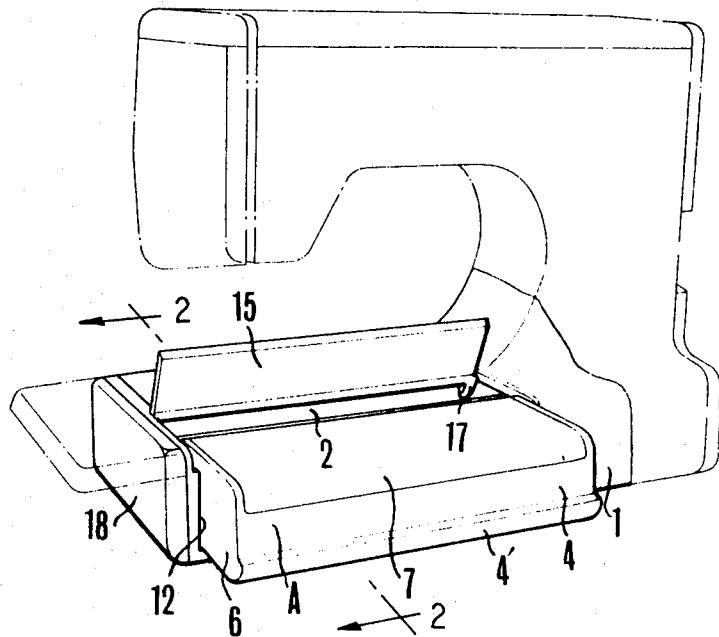
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[57]

ABSTRACT

A sewing machine having a space in the base thereof in which is received a removable receptacle for containing machine accessories. The receptacle constitutes part of the bed of the machine and may be moved outwardly of the recess to provide an extension of the work surface area of the bed of the machine. A foldable member is mounted at one end of the machine to serve as an extension of the work surface area of the bed of the machine.

7 Claims, 10 Drawing Figures

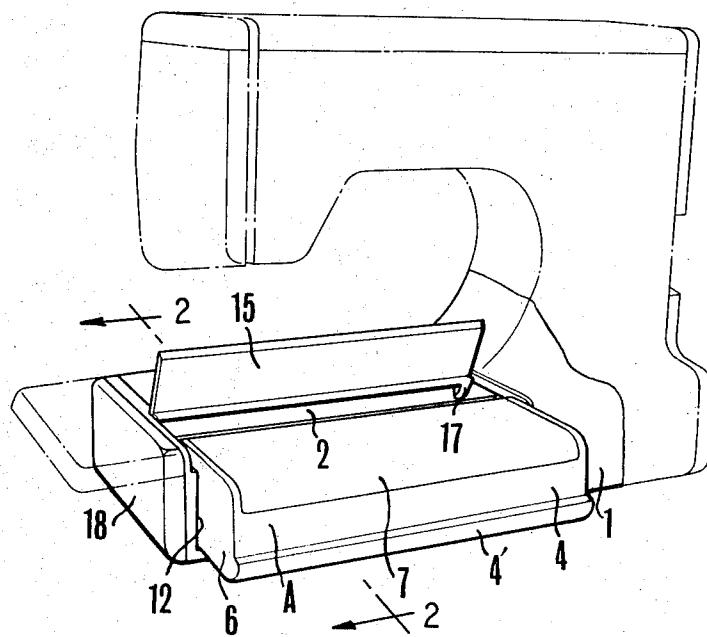


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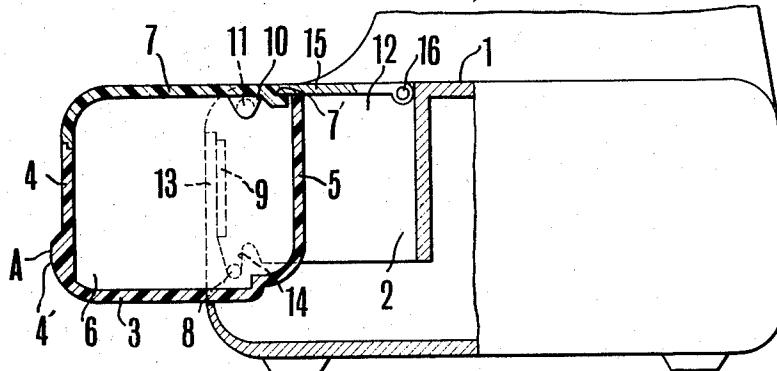
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FIG,1



FIG,2



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FIG.3

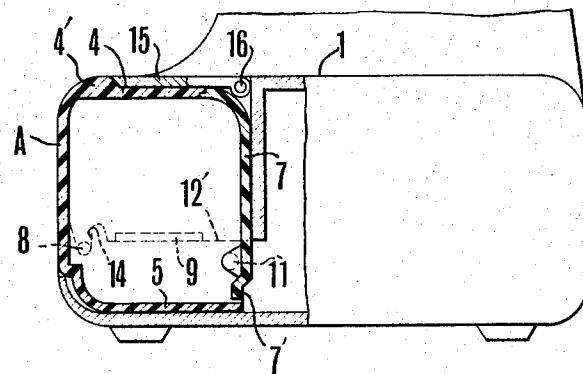


FIG.4

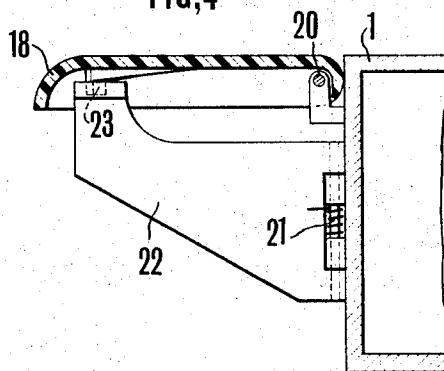


FIG.6

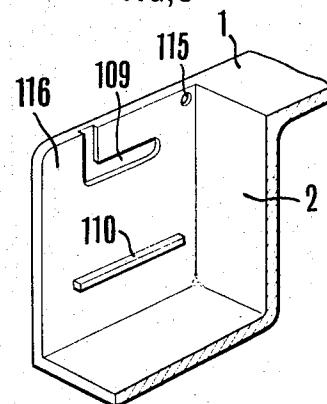
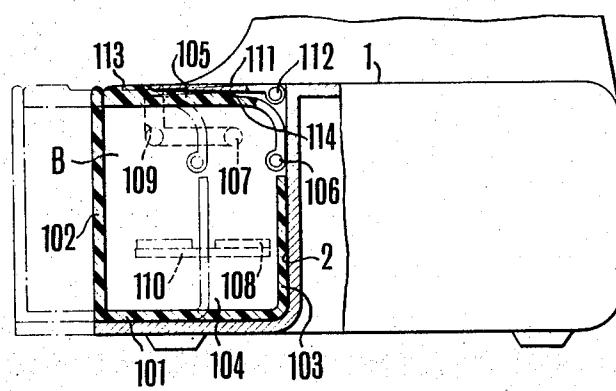


FIG.5



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FIG.7

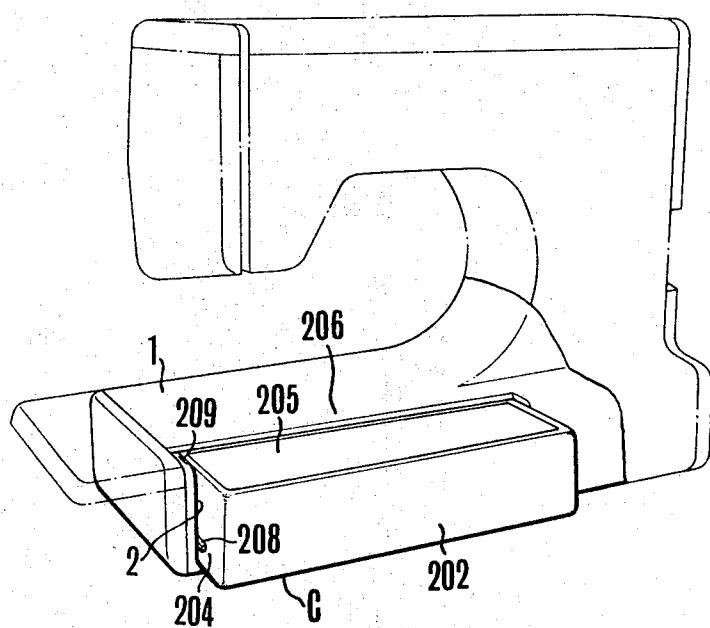
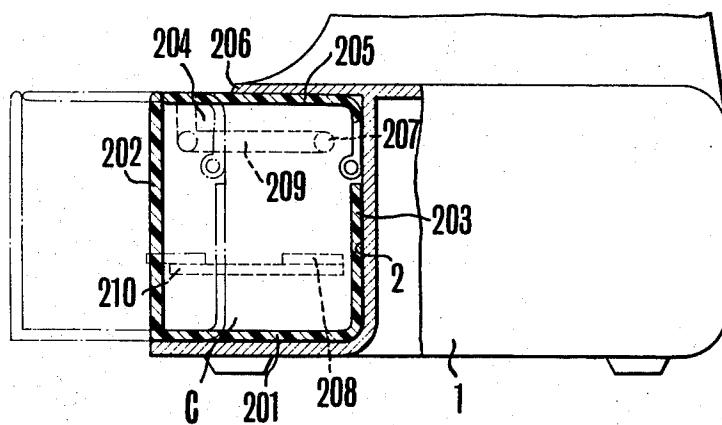


FIG.8



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FIG. 9

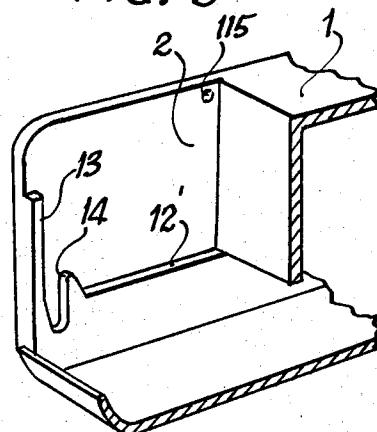
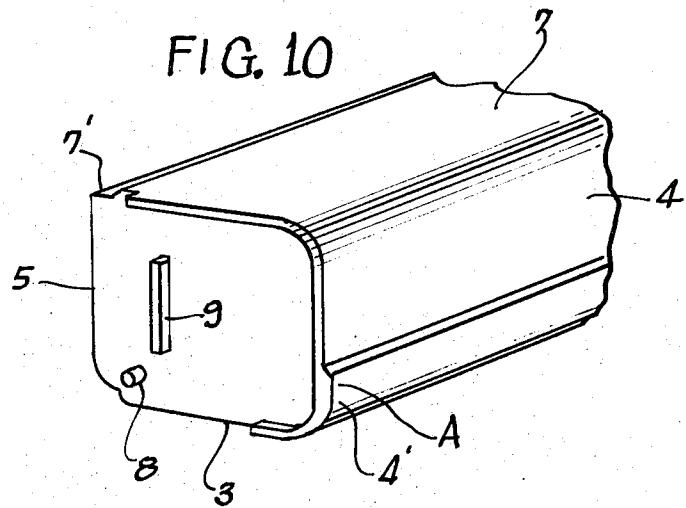


FIG. 10



SEWING MACHINE WITH COMBINED ACCESSORY RECEPTACLE AND AUXILIARY BED

This invention relates to a sewing machine having a combination accessory receptacle and auxiliary bed. The receptacle in addition to serving as a storage means for attachments and accessories for the machine may be moved out of its normal position to provide an extension of the work surface area of the bed.

SUMMARY OF THE INVENTION

One of the objects of this invention is the provision of an accessory receptacle housed within the base of the machine and arranged to be positioned so as to extend the work surface area of the bed of the machine.

Another object of this invention is the provision of an accessory receptacle of the foregoing character affording ready access to the interior of the receptacle for the placement or removal of accessories or attachments.

Still another object of this invention is the provision of an accessory receptacle in the base of the machine which is readily detachable from the machine.

A further object of this invention is the provision of an accessory receptacle disposed in the base of the machine and so arranged that it does not impair either the function or the appearance of the machine.

Other and further objects and advantages of this invention will become apparent from the following description when the same are considered in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a sewing machine illustrating a preferred embodiment of my invention and showing the same with the receptacle in extended condition.

FIG. 2 is a transverse cross-sectional view, on an enlarged scale, of the bed of the machine taken on line 2-2 of FIG. 1, and showing the receptacle in extended position.

FIG. 3 is a view similar to that of FIG. 2 showing the receptacle in normal retracted position.

FIG. 4 is a fragmentary cross-sectional view, on an enlarged scale, illustrating a structural detail in extended position.

FIG. 5 is a view similar to FIG. 3 illustrating a modified embodiment of my invention.

FIG. 6 is a fragmentary perspective view of a structural detail of the embodiment illustrated in FIG. 5.

FIG. 7 is a perspective view of another modified embodiment of my invention and showing the receptacle in extended position.

FIG. 8 is a transverse cross-sectional view, on an enlarged scale, of the embodiment illustrated in FIG. 7 and showing the receptacle in normal retracted position.

FIG. 9 is a fragmentary perspective view of an end wall defining the recess in the bed of the embodiment illustrated in FIGS. 1-4, and

FIG. 10 is a similar view of an end wall of the receptacle illustrated in FIGS. 1-3.

DESCRIPTIONS OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1 through 3, the numeral 1 indicates the bed of a portable sewing machine provided with a recess or space 2 extending longitudinally of the forward portion of bed 1. A receptacle A is adapted to be removably received in the space 2. Said receptacle comprises a bottom 3, front and back walls 4 and 5, respectively, side walls 6, 6 and a cover 7. The cover 7 is provided with a pair of depending ears 10 each carrying an outwardly extending pin 11 arranged to be received in a corresponding recess in each of the walls 6, 6. The pins 11 are coaxially aligned and the cover 7 is adapted to be rocked about the axis of pins 11. Each of the walls 6, 6 is provided with an outwardly extending stud 8, the studs 8 being coaxial. Each of the walls 6, 6 is further provided on its outer surface with an integrally formed elongated projection 9 substantially

parallel to the rear wall 5, and projections being in alignment with each other.

The space 2 in the base of the machine is defined by spaced parallel end walls 12, each provided on its inner surface with a boss 13 shaped substantially as illustrated by the broken line in FIGS. 2 and 3. The bosses 13 are in alignment and each includes a bearing portion 14 opening upwardly and adapted to receive a respective stud 8 to rockably support the receptacle A.

10 The cover 7 is provided with an offset extension 7' rearwardly of the pivotal axis 11, as viewed in FIG. 2.

A cover member 15 is pivotally supported between the walls 12 by pins 16. This cover member 15 has a beveled longitudinal edge which cooperates with complementary surfaces of the receptacle A, as will be hereinafter explained, to provide a flush continuous surface constituting the work surface area of the bed.

Referring to FIG. 3 the receptacle A is shown in normal retracted position within the chamber 2 and in such position

20 the wall 5 is in engagement with the bottom wall of the base of the machine. Correspondingly, the cover member 15 is rested on the wall 4 with the longitudinal beveled edge thereof in engagement with a complementary inclined surface of the longitudinally extending thickened portion 4'. As will be seen clearly in FIG. 3, in such condition the cover 15 is flush with the surface of bed 1.

The cover 15 is provided on its underside with a depending

lug 17 which normally occupies a space immediately below 30 the pivotal axis, at the right hand of the cover member 15, as viewed in FIG. 1. In order to obtain access to the interior of the receptacle A it is required that the receptacle be rocked from the normal retracted position illustrated in FIG. 3 to the extended position illustrated in FIG. 2. This may be accomplished by rocking the cover 15 in a clockwise direction, as

35 viewed in FIG. 3, to effect engagement of the lug 17 with a portion of the wall 7. The receptacle thus is caused to be rocked in a counter-clockwise direction about the axis of studs 8 to the position illustrated in FIG. 2 where the projections 9

40 abut against the shoulders provided by the bosses 13 and thereby prevent further rotation of the receptacle in a counter clockwise direction, as viewed in FIG. 2. It will be noted that in this position the beveled edge of the cover member 15 is received in the complementary recess formed in the offset 7'

45 so as to provide a surface area which is completely flat and flush throughout.

It will be noted that in extended position as illustrated in FIG. 2 the cover 7 of the receptacle functions as an extension of the bed 1 of the machine substantially increasing the available work surface area of the machine. In this position the cover 7 may be rocked to open position to afford access to the interior of the receptacle for the removal of attachments, accessories or other items contained within the receptacle. Also,

50 55 the receptacle A is held securely in position to support any weight applied on the work surface area of the cover 7. It will also be understood that the receptacle may be removed in its entirety from the bed of the machine merely by lifting the receptacle in an upwardly direction so that the pins 8 clear the bearings 14.

In order to retract the receptacle A within the space 2 the cover 15 is again rocked to open position in a clockwise direction and the receptacle A is rocked in a similar direction to a point where the projections 9 on the walls 6 of the receptacle engage the shoulders 12' of the bosses 13 on the walls 12. Correspondingly, the wall 5 is in engagement with the bottom of the bed and the receptacle is now in a stable position so that the cover 15 may be rocked counter-clockwise to closed position like that illustrated in FIG. 3.

60 65 An auxiliary bed extension 18 substantially coextensive in area with the right end wall 12 of the bed (FIG. 1) is pivotally supported on pins 20 carried by brackets attached to the wall 12. A supporting bracket 22 is hinged to the right end wall 12 on a vertical axis and is biased by a spring 21 to swing away from the wall 12 when freed by the upper movement of exten-

sion 18. Movement of the bracket 22 to a position 90° away from wall 12 is limited by an abutment 23 carried on the underside of the extension 18. When the parts are disposed in the relationship illustrated in FIG. 4 the extension 18 is held securely in its extended position substantially coplanar with the work area surface of the bed 1 of the machine. In order to lower the extension 18 to normal non-functioning position the bracket 22 is swung to a position contiguous to the wall 12 thus, permitting the extension 18 to drop to a vertical position, as illustrated in FIG. 1. In this position the spring biased bracket 22 is held in non-operative position by the vertically disposed extension 18.

In the modified embodiment illustrated in FIGS. 5 and 6 the accessory receptacle B comprises a bottom wall 101, front wall 102, back wall 103, end walls 104 and a cover plate 105. The cover plate is hingedly connected by pins 106 to the end walls 104 and may be rocked about the axis of said pins to open and closed positions. Each of the end walls 104 is provided with a stud 107 extending outwardly and arranged to be received in a respective L-shaped recess 109 formed in the end walls 116 defining the space 2 in the bed of the machine. As seen clearly in FIG. 6 the recesses 109 open upwardly so as to facilitate passage of the respective pins 107 into and out of the recesses when separating or installing the receptacle B in the bed of the machine. Each of the end walls 116 is provided on its inner surface with a lateral elongated projection 110 extending in horizontal direction and disposed below the recess 109. Correspondingly, each end wall 104 of the receptacle B is provided with a similar projection 108 so disposed in relation to the projection 110 that when the pins 107 are received in the horizontal legs of the L-shaped slots 109 the projections 108 will rest on projections 110.

A cover 111 is hingedly connected to the bed 1 by pins 112 which extend into apertures 115 provided in the end walls 116 of the bed. The cover 105 is provided on its surface with a recess to accommodate the cover 111 so that in close position it is flush with the work surface area of the bed.

Referring to FIG. 5, the receptacle B in the solid line position is retracted within the space 2 and in this position the pins 107 are disposed at the extreme right of each horizontal leg of recesses 109. Also, the left hand edge of the cover 111 is in abutment with a shoulder 113 in cover 105. In this position receptacle B is held securely against horizontal sliding movement in either direction and the work surface of the bed is substantially flush. In order to obtain access to the interior of receptacle B, it is slidably moved outwardly to the dotted line position where the pins 107 engage the left hand ends of the horizontal legs of recesses 109 and both covers 105 and 111 are rocked upwardly. If it is desired to have an extended work surface area of the bed, receptacle B is permitted to remain in the dotted line position and upon closing of the covers 105 and 111 the free end of the cover 111 will engage against a shoulder 114 provided in the cover 105 thereby locking the receptacle against movement in either direction. In this position the work surface area of the bed also is substantially flat.

In the embodiment illustrated in FIGS. 7 and 8 the arrangement is substantially similar to that illustrated in FIGS. 5 and 6 except that hinged cover 111 of the embodiment illustrated in FIG. 5 is replaced by an integral extension 206 of the bed plate of the machine. Referring to FIG. 8 the receptacle C comprises a bottom wall 201, a front wall 202, a rear wall 203, end walls 204 and a hinged cover plate 205. The end walls of the bed space 2 are provided with L-shaped recesses 209 in which are received the laterally projecting pins 207 carried on the end walls 204 of the receptacle C. The end walls of the bed space 2 have horizontal projections 210 which are engaged by corresponding projections 208 integral with the walls 204.

As seen clearly in FIG. 8 the receptacle C is in retracted

position and occupies the space 2 in the bed of the machine and in this position the pins 207 are disposed at the extreme right ends of the horizontal legs of the recesses 209. The extension 206 of the bed plate which overhangs the receptacle C has a lesser thickness than the balance of the bed surface plate so as to minimize the height of the step between the surface of the cover 205 and that of bed plate 206.

The receptacle C may be drawn outwardly to the position illustrated by the broken lines in FIG. 8 and the solid lines in FIG. 7 to permit cover 205 to be opened to afford access to the interior of the receptacle. Additionally, in such outward position the cover 205 functions as an extension of the machine bed 1.

It will be understood that each of the embodiments may include the end structure illustrated in FIG. 4.

In each of the foregoing embodiments the receptacle is housed in the space provided in the bed of the sewing machine and may be selectively drawn outwardly thereof, either for the purpose of affording access to the interior of the receptacle or to function as an extension of the bed of the machine and in each case the receptacle in its entirety may be removed from the machine bed.

Various changes coming within the spirit of my invention may suggest themselves to those skilled in the art; hence, I do not wish to be limited to the specific embodiment shown and described and uses mentioned, but intend the same to be merely exemplary, the scope of my invention being limited only by the appended claims.

I claim:

1. In combination, a sewing machine having a bed having a work surface and a longitudinally extending recess in the forward portion of the bed, said recess being defined by two end walls, a bottom wall and a rear wall and being open at the top and front, each of the side walls having associated bearing portions, a receptacle adapted to contain machine accessories and being received in said recess, said receptacle having end walls having outwardly extending co-axially aligned studs received in said bearing portions, said receptacle being rockable about the axis of said studs from a retracted position wherein the receptacle is substantially fully contained within said recess to an extended position wherein the major portion of the receptacle is disposed outwardly of the recess.
2. The invention as defined in claim 1 including stop means for limiting the movement of said receptacle in retracted and extended positions.
3. The invention as defined in claim 1 including a cover panel hingedly connected to the rear wall of said recess and arranged to overlie said receptacle and to be disposed in coplanar relationship with the work surface when the receptacle is in closed position.
4. The invention as defined in claim 3 in which said cover panel when the receptacle is in extended position engages a wall of said receptacle and constitutes a coplanar extension of said work surface.
5. The invention as defined in claim 1 including a hinged cover on said receptacle, said hinged cover being disposed adjacent and parallel to said rear wall when the receptacle is in retracted position.
6. The invention as defined in claim 1 in which the bearing portions open upwardly and the receptacle is freely detachable from said bed.
7. The invention as defined in claim 1 including an extension pivotally connected on a horizontal axis on one end of said bed and a bracket pivotally connected on a vertical axis to said one end of said bed below said extension, said extension being supported by said bracket in a position substantially coplanar with the work surface of said bed.

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