

Sept. 15, 1970

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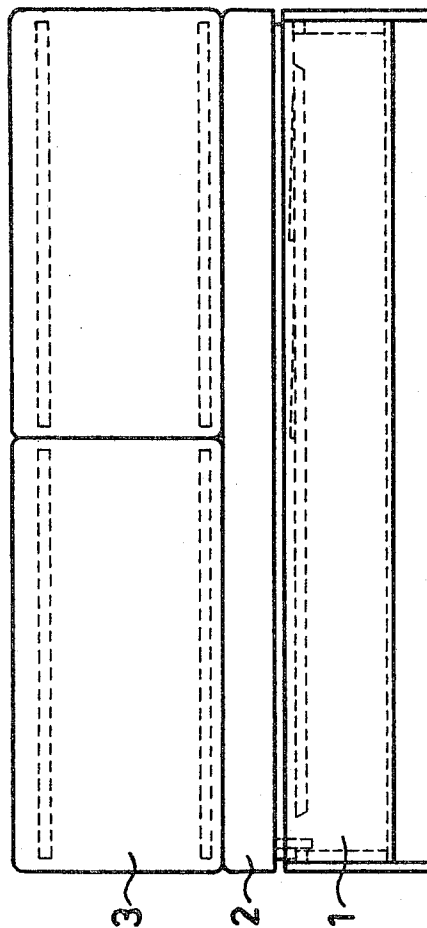
3,528,113

COMBINED SITTING AND LYING FURNITURE

Filed May 14, 1968

4 Sheets-Sheet 1

FIG. 1



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FIG. 2

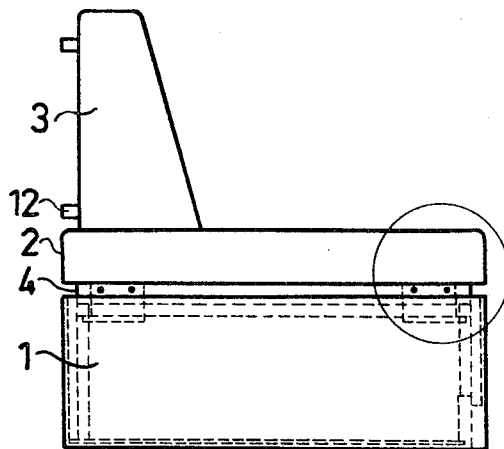
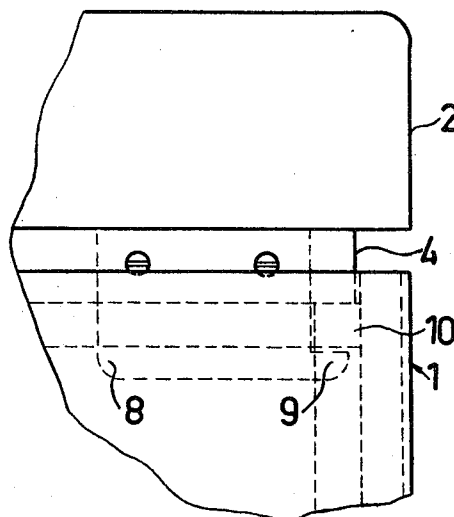


FIG. 3



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FIG. 4

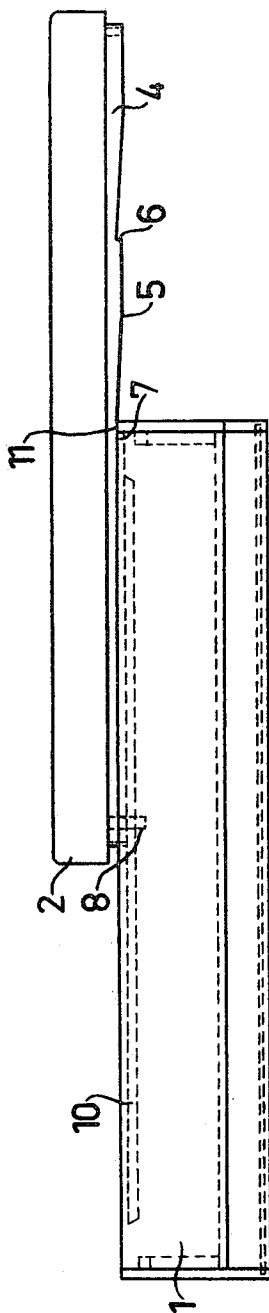
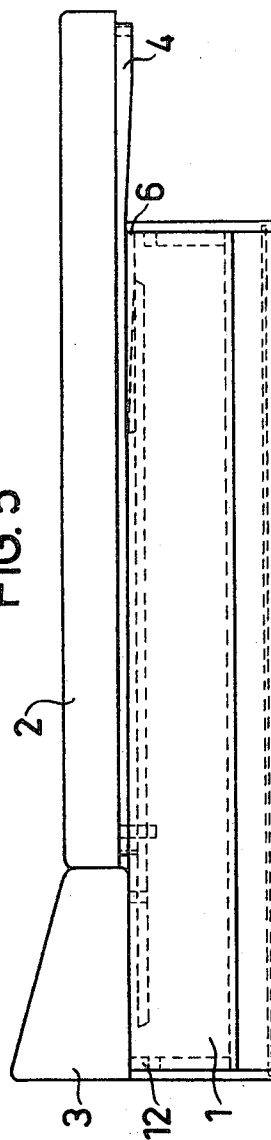


FIG. 5



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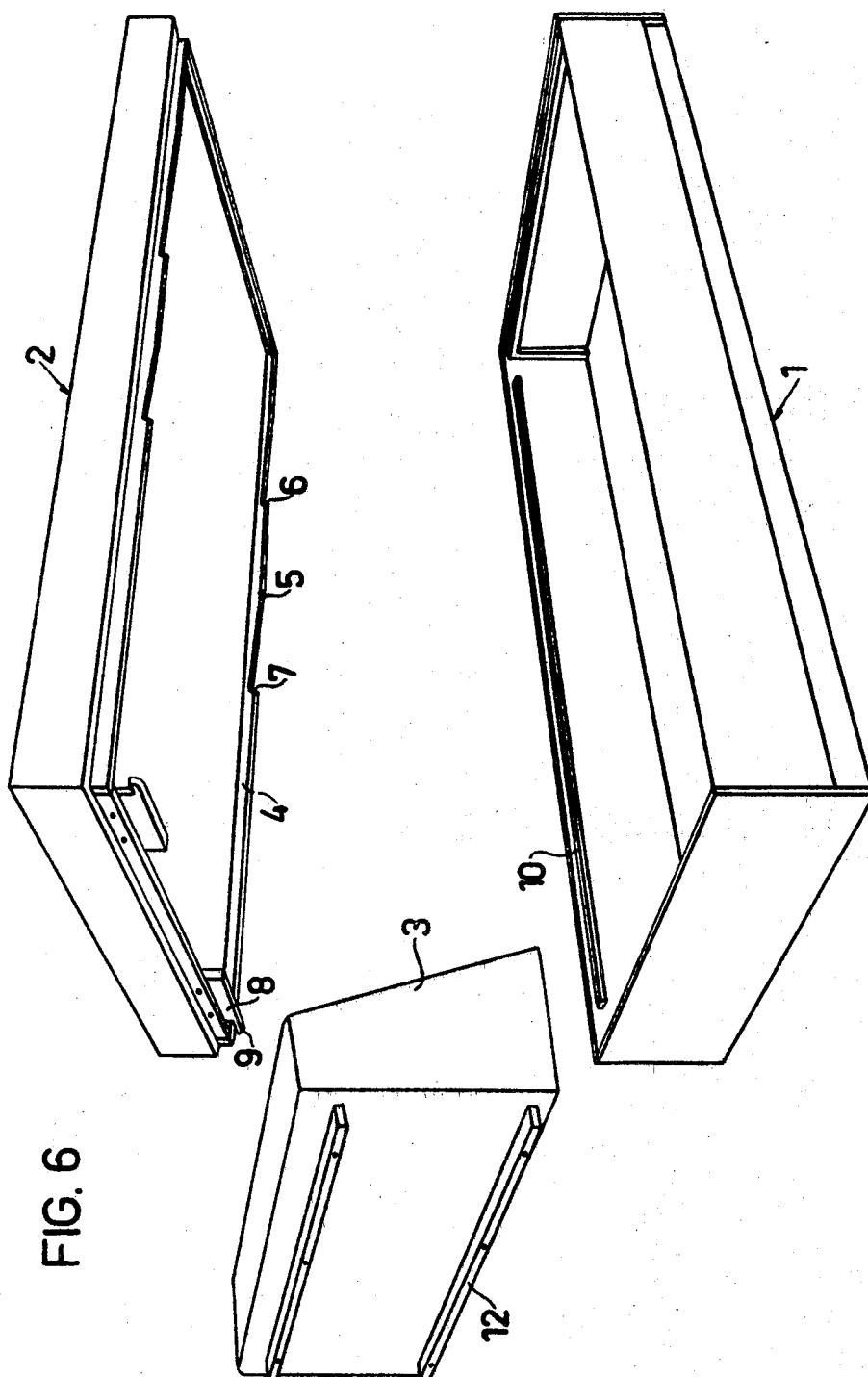


FIG. 6

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COMBINED SITTING AND LYING FURNITURE
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6 Claims

ABSTRACT OF THE DISCLOSURE

The disclosure relates to a sofa bed comprising a bottom frame portion and a rigid seat cushion which is supported on the frame. The cushion is slidable longitudinally relative to the frame and is thus movable to an overhanging position which uncovers a portion of the frame, with an auxiliary cushion then being adapted to fit over the portion so uncovered. A means is provided for engaging the rigid cushion with the frame so as to maintain the two parallel to each other even when the rigid cushion is in a substantially overhanging position.

Heretofore seating sofas are known which have full length for lying thereon and, thus, can more or less directly be utilized as beds, after the necessary bedclothes have been placed thereon. Usually, the underframe of the seating sofa is a storage box for bedclothes, in such a manner, that the storage box can be pulled out or the seat cushion is lifted or turned up for providing access to the bedclothes. In many cases, however, it is desired that this combination furniture when it is being used for sitting, shall not unnecessarily infringe upon the often limited room space being utilized during day-time. Therefore, it has been tried in different ways to reduce the length of the furniture in its state intended for sitting purposes, but none of the known constructions has succeeded in combining simplicity with daintiness and easy operation.

This is, however, the case with the combined sitting and lying furniture according to the invention, which is characterized in that on an underframe a self-supporting rectangular seat cushion can be displaced longitudinally to a stop position located such, that the seat cushion together with a separate cushion filling the exposed space on the underframe, preferably a back cushion associated with the furniture, forms a lying cushion of normal length.

The invention is described in greater detail in the following, with reference to the accompanying drawings, wherein FIGS. 1 and 2 show a front view and a lateral view, respectively, of an embodiment of the combined sitting and lying furniture according to the invention, FIG. 3 on an enlarged scale shows a detail of the view in FIG. 2, FIGS. 4 and 5 show front views of the furniture in bedding and lying position, respectively, and FIG. 6 shows a perspective exploded view of the furniture construction.

In the embodiment shown, the furniture comprises an underframe in the form of a storage box 1 for bedclothes. On the box is supported a self-supporting seat cushion 2 with back cushions 3 placed upright thereon. As appears most clearly from FIG. 6, the seat cushion 2 on its lower surface is provided along each of the longitudinal edges with a strip 4 having steps or recesses 5, so that on every strip two stops 6 and 7 are formed. On the lower surface of the seat cushion, in every corner of one short end, an angular block 8 is mounted, one angular leg of said blocks forming a lateral protrusion 9 for engaging below a longitudinal bar 10 on the inside of the longside of box 1 close to its upper edge. As appears from FIG. 3,

the strip 4 is placed at such a distance from the edge of the seat cushion, that the strip will be located immediately inside of the inner edge of the longside when the cushion is being applied to the box 1, said inner edge then serving at lateral guide and having support against the bar 10.

In FIG. 1 the furniture is shown in its state serving as sitting sofa, in which state it preferably may have a length of about 160 cm.

When the sofa is intended to be used as a bed, the back cushions 3 are removed whereafter by an easy turn of the hand-lifting of the end of cushion 2 which is the right-hand end in the figure, and pulling out the cushion until the stop 7 of the strip 4 is locked by the upper edge 11 on the right-hand short end of box 1 (FIG. 4) there is comfortable access to the bed-clothes stored in the box.

Thereafter the cushion 2 is pushed back until the stop 6 of the strip 4 snaps down behind the upper edge of the short end of the box. The cushion end which then still is projecting, may have a length of, for example, about 40 cm. On that part of the box which has been exposed by the cushion pushed out, one of the back cushions 3 is now being placed so as to lie as shown in FIG. 5. The cushion 3 has such a width (equals height in seat position), that it entirely fills the free space whereby with the dimensions stated, a lying cushion of a total length of about 200 cm. is obtained, i.e. normal bed length. As appears most clearly from FIG. 6, the back cushion 3 is provided on its rear side with two transverse strips 12 the ends of which, in lying position of the cushion, guide against the inside of the upper edge on the longside of the box, as well as one strip (the lower one in FIG. 6) forms a stop against the inside of the upper edge of the short end of the box (see FIG. 5). By the aforementioned angular blocks 8 engaging below the bars 10 of the box, a comfortable safety is obtained that the cushion does not tip when it is in pulled-out and loaded state.

The invention is not restricted to the embodiment shown, but different modifications within the scope of the invention are obvious to the expert, particularly concerning the arrangement for defining the two stop positions and the locking against tipping. In principle, a single stop position is sufficient (corresponding to full lying length), although then it is less comfortable to take the bedclothes out of the storage box. In the case that a storage box is not of interest, but the furniture has a pure frame construction (with legs), more than one stop position, of course, is superfluous. Finally, instead of using a back cushion associated with the furniture for filling the space exposed by the seat cushion pushed out, any other cushion of fitting dimensions can be used.

What I claim is:

1. A sofa bed comprising in combination:

a bottom frame portion defining a cushion supporting surface, a rigid seat cushion having a length substantially equal to that of said frame and being supportable on said supporting surface and being also longitudinally slidable thereon in at least one direction from a central in-register position where said cushion is centrally disposed on said frame to a position wherein one end of said cushion substantially overhangs said frame,

first means for maintaining said cushion substantially parallel to said supporting surface when said cushion has been longitudinally moved to said overhanging position,

said first means comprising an element on said bottom frame portion cooperating with an element on said rigid seat cushion for substantially preventing vertical motion therebetween as said rigid seat cushion is longitudinally slid relative to said bottom frame portion,

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and second means on said frame for supporting an auxiliary cushion in the space on said frame uncovered by said rigid cushion when in said overhanging position whereby said seat cushion is securely held in said overhanging position without requiring further vertical support for the overhanging portion.

2. The sofa bed of claim 1 in which said bottom frame portion includes front and side members enclosing a storage compartment to which top access is provided by sliding said rigid cushion to said overhanging position.

3. The sofa bed of claim 1 in which said auxiliary cushion comprises a rear back-rest cushion when said sofa bed is being used as a sofa.

4. The sofa bed of claim 1 in which said first means comprises at least one longitudinally extending strip on said frame and means on said rigid cushion adapted to extend under and slide along the bottom edge of said strip.

5. The sofa bed of claim 1 which further includes stop means for determining a first overhanging position of said rigid cushion relative to said frame in which the uncovered portion of said frame substantially matches a linear dimension of said auxiliary cushion.

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6. The sofa bed of claim 5 in which said stop means also determines a second overhanging position of said rigid cushion in which the amount of overhang is substantially greater than in said first overhanging position, whereby ready access is provided to the space in said frame beneath said rigid cushion.

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