

Aug. 23, 1966

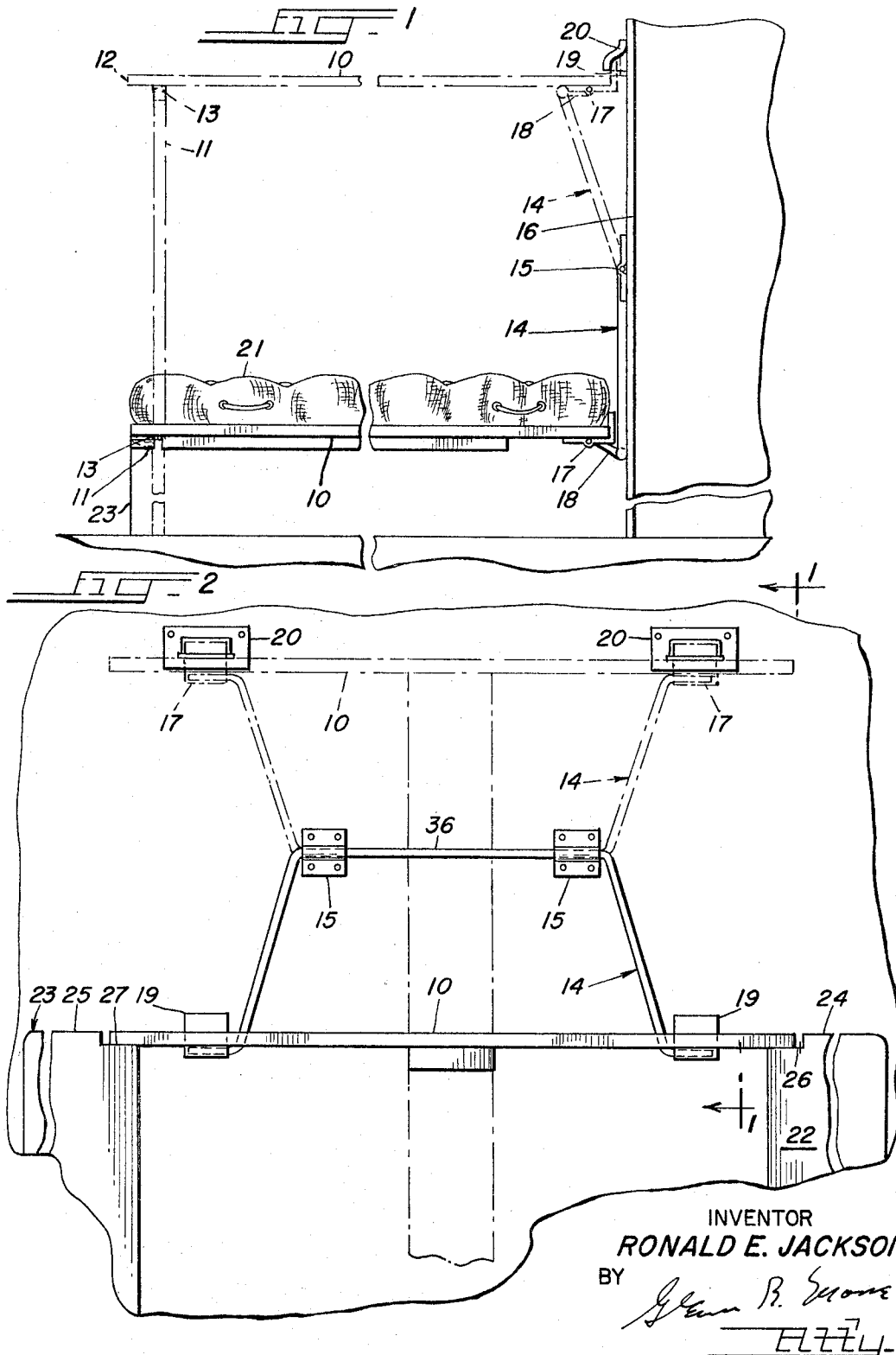
R. E. JACKSON

3,267,879

CONVERTIBLE ARTICLE OF FURNITURE

Filed Aug. 3, 1964

3 Sheets-Sheet 1



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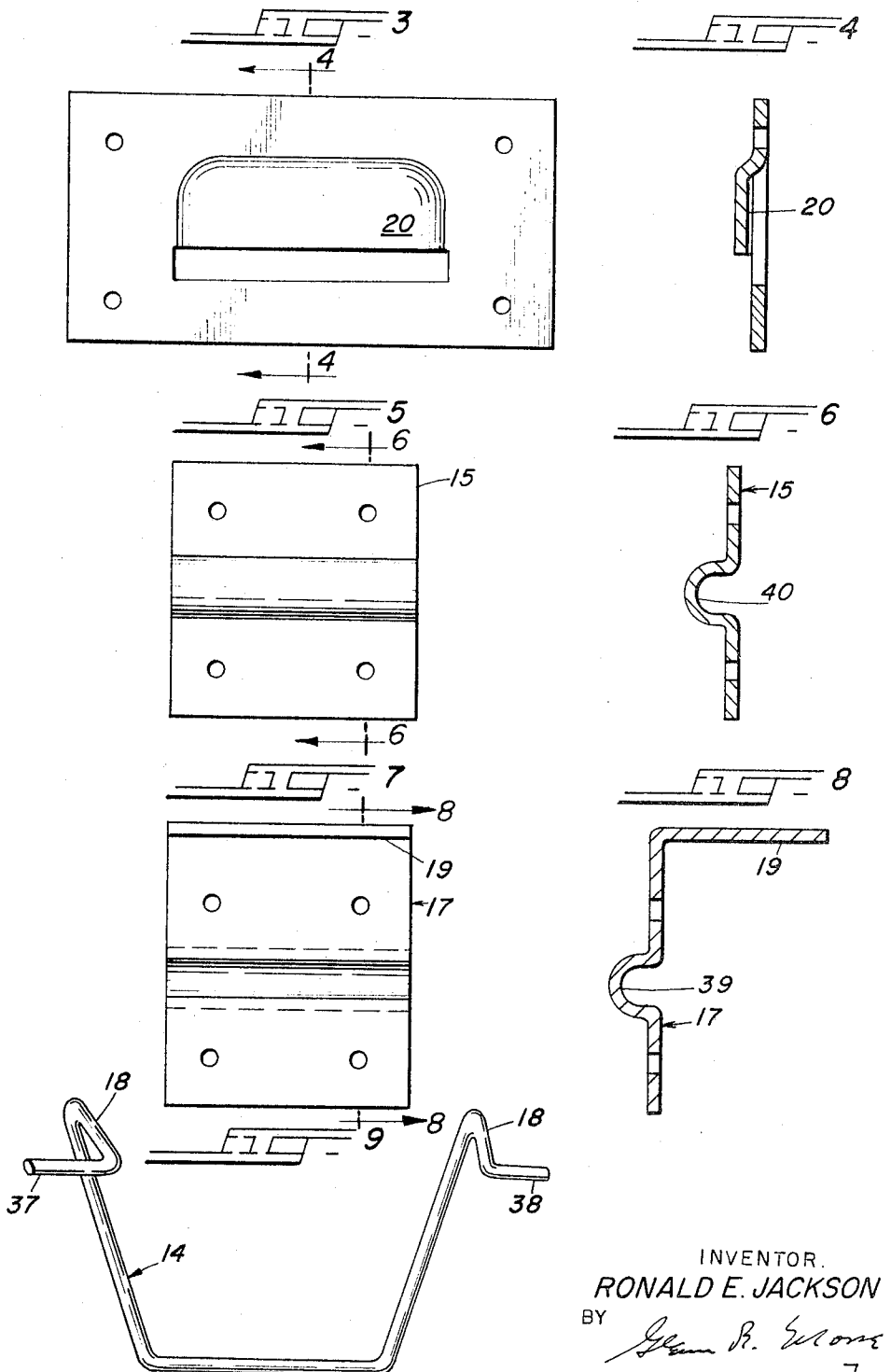
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CONVERTIBLE ARTICLE OF FURNITURE

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3 Sheets-Sheet 2



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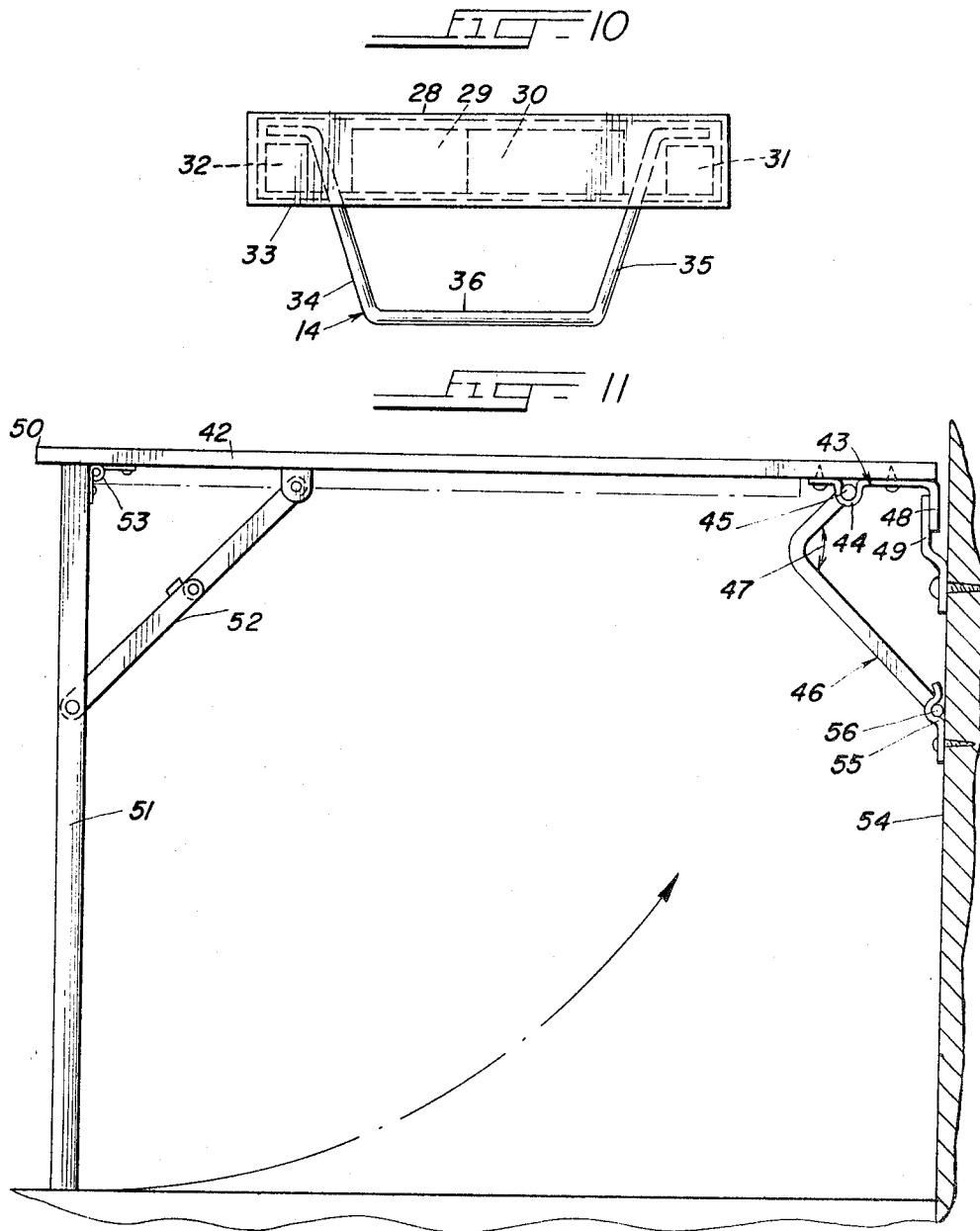
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CONVERTIBLE ARTICLE OF FURNITURE

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3 Sheets-Sheet 3



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3,267,879  
**CONVERTIBLE ARTICLE OF FURNITURE**  
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 8 Claims. (Cl. 108—11)

This invention provides an article of furniture having the functions of both a table and a bed. In house trailers, small apartments, or in any areas where living space is at a premium, any form of double-utilization of floor space is very desirable. The device is preferably mounted on a wall structure, and centers in a horizontal panel that can be supported in either an "up" position corresponding to table height, or in a "down" position in which the panel rests upon end-supports to provide a sofa or bed. Preferably, these end-supports serve as dinette benches when the device is in the table position. Movement from "up" to "down" positions is accomplished without de-mounting the device from the wall.

The several features of the invention will be analyzed in detail through a discussion of the particular embodiments illustrated in the accompanying drawings. In the drawings:

FIGURE 1 shows the device in the "down" position in full lines, the "up" position being shown in dotted lines.

FIGURE 2 is a front elevation of the device shown in FIGURE 1.

FIGURE 3 is a front elevation on an enlarged scale of the wall-mounted socket.

FIGURE 4 is a section through the central portion of FIGURE 3.

FIGURE 5 is a plan view of the hinge connection.

FIGURE 6 is a section on the plane 6—6 of FIGURE 5.

FIGURE 7 is a plan view of the hook engageable with the socket shown in FIGURES 3 and 4.

FIGURE 8 is a section on the plane 8—8 of FIGURE 7.

FIGURE 9 is a perspective view of the link member.

FIGURE 10 shows the preferred packaging for the hardware associated with this invention.

FIGURE 11 illustrates a modified form of the invention in which the retaining socket is concealed below the table level.

The preferred form of the invention illustrated in the drawings utilizes a panel 10 preferably equipped with a folding leg 11 arranged near the outer edge 12 of the panel. When the panel is in position to serve as a table, the leg 11 is swung downward about the hinge 13; and when the unit functions as a bed or sofa, the leg is swung upward against the underside of the panel 10.

The inner side of the panel 10 is supported by the link 14, which is pivotally connected to the hinges 15 secured to the wall structure 16. The opposite ends of the link 14 are pivotally connected to the panel 10 at the hinges 17, and the link 14 has an offset 18 which provides freedom of movement from the position shown in full lines in FIGURE 1 to the dotted line position. In full lines, the link 14 functions as a suspension link, and in the table position shown in dotted lines, it serves as a compression strut. The slanted relationship of the link in the table position requires some form of locking device to prevent the panel 10 from moving outward as load is applied to it. For this purpose, the hinges 17 are provided with extensions 19 embracing the inner edge of the panel 10, and engaging the sockets 20, as shown in dotted lines in FIGURE 1, when the unit is in the table position. The sockets 20 are normally secured to the wall structure 16. The engagement and disen-

agement of the extensions 19 from the sockets 20 are accomplished by elevating the outer edge of the panel above the horizontal position shown in dotted lines in FIGURE 1, which causes a rotation about the axis of the hinges 17. This can be continued to the point where the extensions 19 become engageable with the sockets 20, and the table may then be lowered into the dotted line position of FIGURE 1.

In the "down" position shown in full lines in FIGURES 1 and 2, a mattress shown at 21 may be placed upon the panel 10 to provide a sofa or bed. It is preferable that the bench units 22 and 23 be used on conjunction with the device so that the upper surfaces are more or less continuous with that of the panel 10 to provide the necessary length for a bed. Any softness of upholstery on the top of the benches 22 and 23 will eliminate the need for the offset shown at 26 and 27, and these same units will serve as dinette benches when the device is in the table position. The mounting of the hardware must be such that the height of the benches 22 and 23 does not interfere with the "down" position determined by the link 14. Having thus determined the location of the hinges 15, the location of the sockets 20 is determined by the "up" position of the link 14. For ultimate economy, it is readily possible to use the interior space of these bench units as storage cabinets.

The hardware items used in this invention are normally marketed as a separate package. It is usually preferable for the local lumber yards to supply the panel 10, and the construction of the bench units 22 and 23 is also usually a local project. The hardware, however, is effectively marketable as a separate package of the type shown in FIGURE 10. A box 28 contains the fitting packages 29 and 30, and also the packets of fastenings 31 and 32. The sidewall 33 of the box is provided with apertures for the passage of the arms 34 and 35 of the link 14. The portion 36 of the link (extending between the hinges 15 when installed) functions nicely as a handle.

The construction of the various components of the set of hardware can be of utmost simplicity. The link 14 is preferably made of bent round rod stock, with the out-turned ends 37 and 38 serving as journals in conjunction with the bearing portions 39 of the hinge members 17. These may be constructed as bent pieces of sheet metal, if desired, and the same holds true for the hinges 15 shown in FIGURES 5 and 6. The central formed portions 40 of the hinges 15 embrace the portion 36 of the link member as best shown in FIGURE 2.

Referring to FIGURE 11, a modified form of the invention is illustrated as an example of an arrangement for concealing the hardware below the level of the panel 42. The fitting 43 includes a bearing portion 44 for receiving the out-turned ends 45 of the link 46. The angle 47 of this link is selected so that there will be proper freedom to rotate from the position shown in FIGURE 11 to a position corresponding to the full line position of FIGURE 1.

The fittings 43 have the downwardly-extending hook portions 48 engaging with the sockets 49 mounted to open upwardly. This engagement is obtained by lowering the outer edge 50 of the table from the position shown in FIGURE 11 a sufficient amount for the hook portions 48 to slip over the top of the sockets 49. After this has been accomplished, the leg 51 can be swung downward, and a diagonal brace 52 locked in position. The leg 51 and the brace 52 can be of any convenient design, the illustrated type being associated with folding card-table construction. The leg 51 is hinged to the panel 42 at a conventional hinge unit 53.

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There are some occasions in which it becomes desirable to completely disengage the assembly associated with the panel 42 from the wall structure 54. The hinge 55 is modified as shown in FIGURE 11 to provide a leaf-spring retention of the portion 56 of the line 46, and a sharp upward pull will be sufficient to disengage the link from the hinge fittings 55.

The particular embodiments of the present invention which have been illustrated and discussed herein are for illustrative purposes only and are not to be considered as a limitation upon the scope of the appended claims. In these claims, it is my intent to claim the entire invention disclosed herein, except as I am limited by the prior art.

I claim:

1. In combination with a wall structure, a convertible article of furniture, comprising:

a panel including folding support means mounted on the under side thereof;

a dual-position support for the inner side of said panel including a link pivotally connected to the under side of said panel for rotation on an axis spaced from the edge of said inner side, and said link further being pivotally connected to said wall structure on a normally horizontal axis, said support also including a socket mounted on said wall structure, and a hook engageable with said socket and mounted on said panel at a position adjacent the edge of said inner side and spaced from the axis of the pivotal connection of said link to said panel, and engageable with said socket only on displacement of said panel from a horizontal position in an upward position of said link; and

support means disposed under the said panel to receive the same in the lower position thereof.

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2. An article as defined in claim 1, wherein said link has an offset providing freedom of rotation between positions extending above and below said panel.

3. An article as defined in claim 1, wherein said hook is an extension of a hinge member providing the pivotal connection of said link to said panel.

4. An article as defined in claim 1, wherein said hook extends downward, and said socket opens upward.

5. An article as defined in claim 1, wherein said hook extends upward, and said socket opens downward.

6. An article as defined in claim 1, wherein said link is releasable from the pivotal connection to said wall structure.

7. An article as defined in claim 1, wherein said folding support includes a leg hinged to the said panel adjacent the outer edge thereof on an axis disposed to cause said leg to fold upward and inward.

8. An article as defined in claim 1, wherein said socket is disposed below the normal upper position of said panel as determined by the said link.

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