Dec. 17, 1935. C. N. ALLERDING 2,024,960

CONVERTIBLE FURNITURE

Filed June 5, 1933 2 Sheets-Sheet 1

Fig. 1.

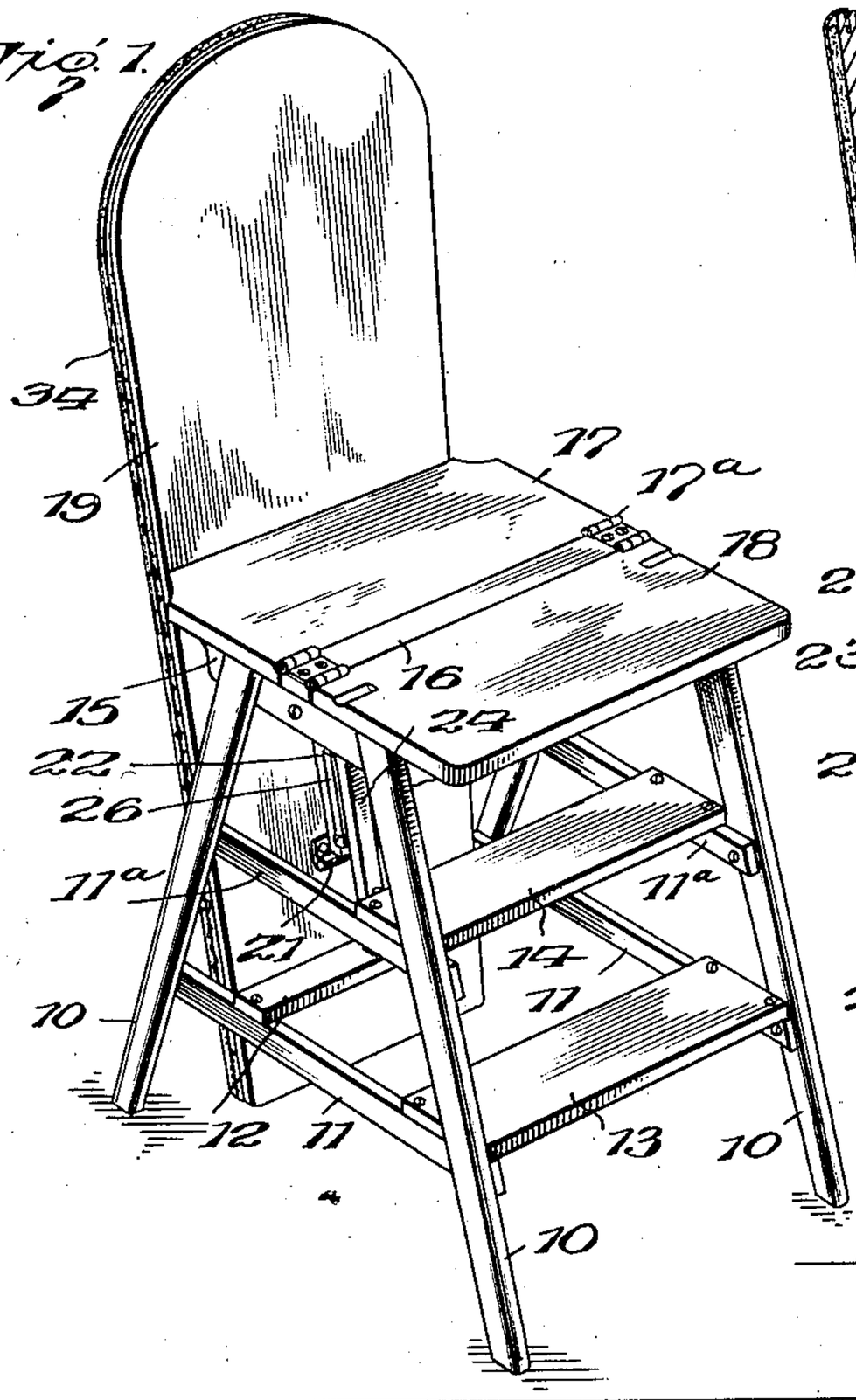


Fig. 2.

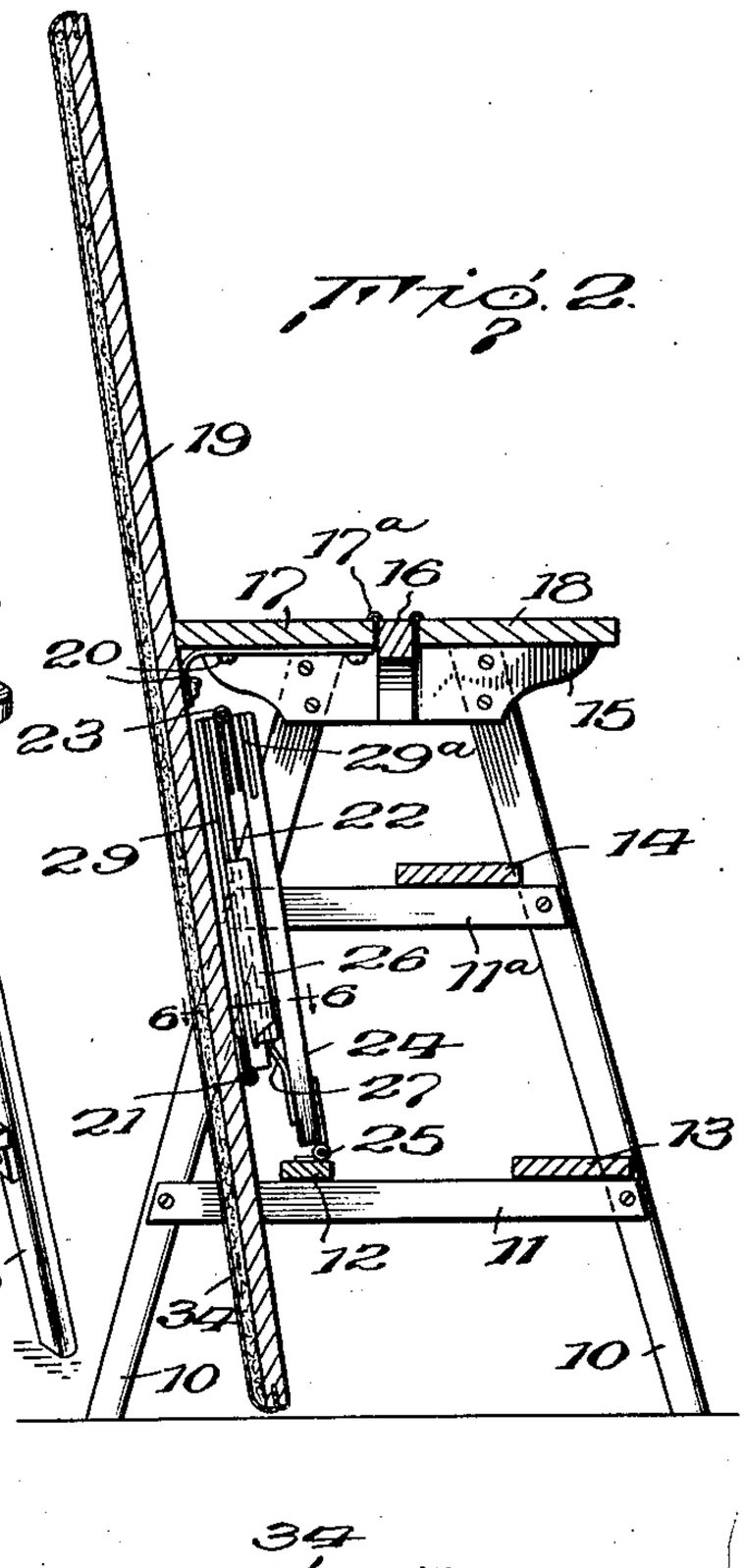


Fig. 3.

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Fig. 4.

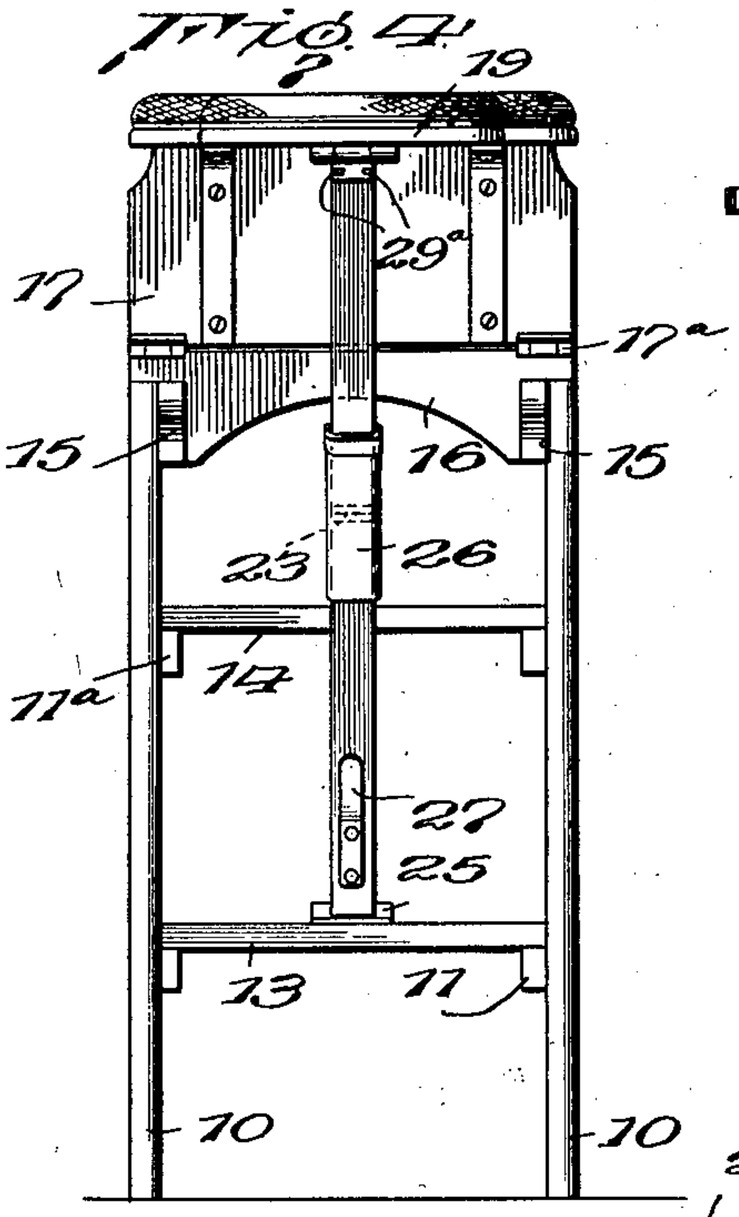


Fig. 5.

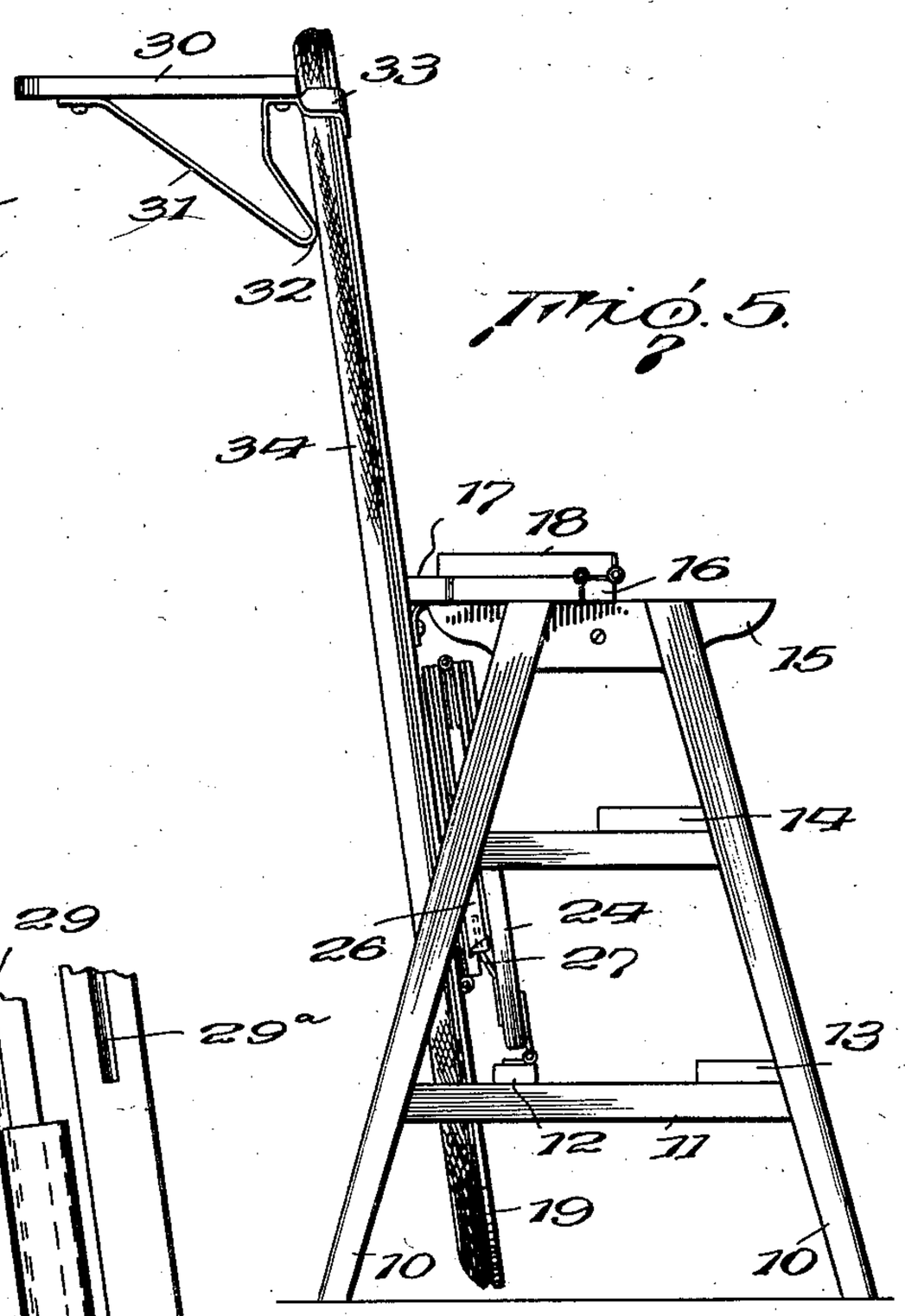
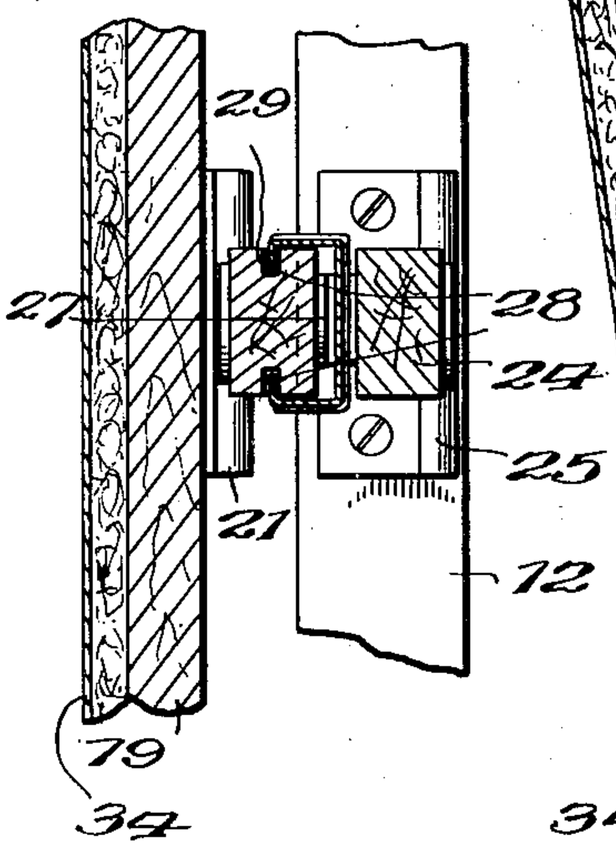


Fig. 6.



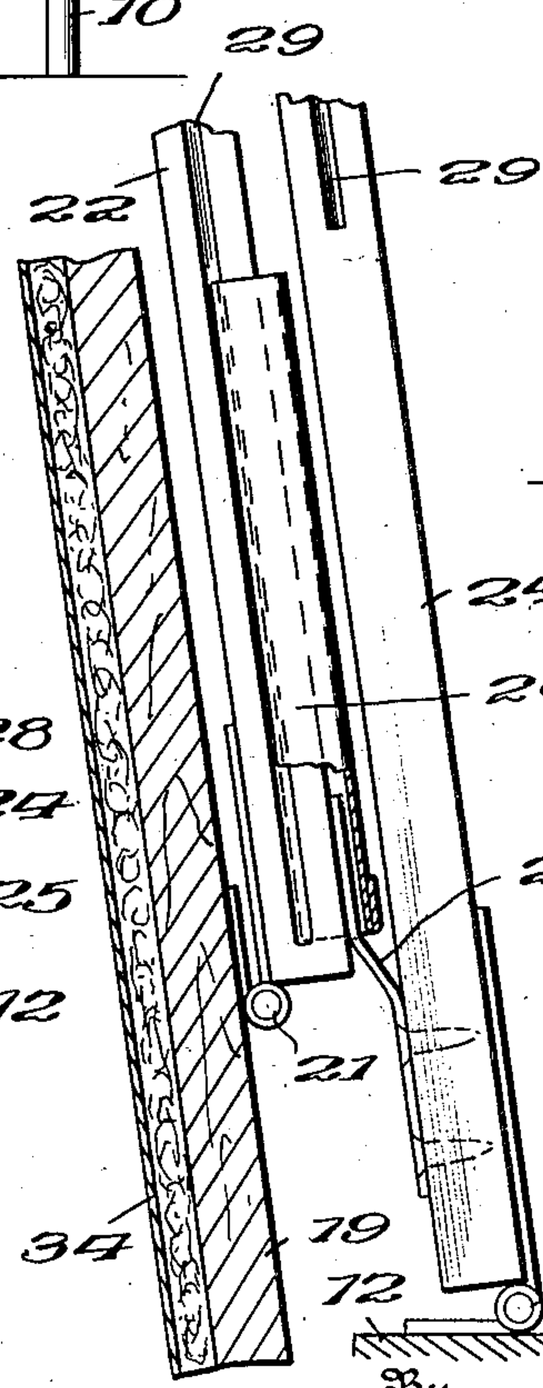
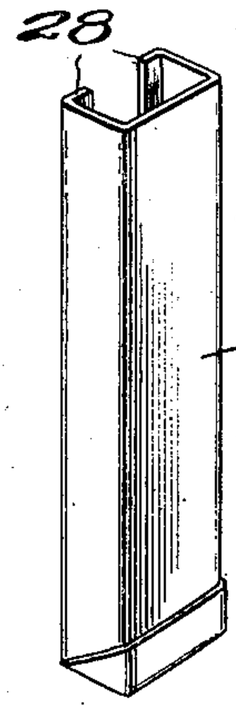


Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE

2,024,960

CONVERTIBLE FURNITURE

Cletus N. Allerding, Metropolis, Ill.

Application June 5, 1933, Serial No. 674,433

7 Claims. (Cl. 155—41)

This invention relates to improvements in convertible furniture and, more especially, to an article of furniture that can be used either as a chair, an ironing board, or a stepladder.

The primary object of the invention is to provide a simple but efficient form of supporting means with which the article of furniture can be securely and rigidly held in any form to which it may be converted.

More especially, the invention contemplates a pedestal having hinged thereto a member which may constitute either a chair back or an ironing board, depending upon the position to which it is adjusted with respect to the pedestal and the supporting means comprise a pair of links hinged to said back and pedestal, respectively, and to each other, and adapted to collapse or fold upon each other when the article is used as a chair, and to unfold or extend in a straight line when the article is used as an ironing board. There is also provided a lock, preferably in the form of a sleeve slidable on one of said links to engage a catch on the other link, when the links are collapsed, and to embrace the hinged connection between the links, when the links are extended, whereby the links will be securely locked in either of the positions they may be caused to assume.

A still further object is to provide means for limiting the movement of said locking sleeve downwardly by gravity, when the links are extended, whereby accidental displacement of said sleeve is prevented.

The pedestal, before referred to, has formed therewith one or more steps for use when the article is converted into a stepladder, and a seat which constitutes the seat of the chair and another object of the invention is to provide a novel form of chair seat which may be readily converted into an additional step for the stepladder.

With these and other objects in view, the invention consists in certain details of construction and combinations and arrangements of parts, all as will hereinafter be more fully described and the novel features thereof particularly pointed out in the appended claims.

In the accompanying drawings,

Figure 1 is a perspective view of the present article with the parts adjusted to the positions they occupy when the article is used as a chair;

Fig. 2 is a vertical sectional view through the chair;

Fig. 3 is a side elevation of the article converted into an ironing board;

Fig. 4 is an end view of the article when used as an ironing board;

Fig. 5 is a side elevation of the article converted into a stepladder;

Fig. 6 is a detail sectional view on the line 6—6 of Fig. 2;

Fig. 7 illustrates, partly in elevation and partly in section, a portion of the chair back or ironing board and portions of its supporting links; and

Fig. 8 is a perspective view of the locking sleeve for the supporting links.

Referring to Figs. 1 and 2, wherein the article is illustrated in its chair form, the several parts will be described and then the movement of the movable parts will be described to clearly set forth how the article may be converted from its chair-like form to either an ironing board or a stepladder. As illustrated in said figures, there is a pedestal composed of four legs 10 braced with suitable cross members 11, 11*a* and 12. Mounted on the lower cross members 11, there is a step 13, and on the upper members 11*a*, there is a step 14. It will be understood, however, that any number of cross members and steps may be provided, although only two steps are shown in the present instance. At the upper portion of the pedestal there are side members 15 on which is supported that portion of the article which constitutes the seat of the chair, but which may be converted into an additional step for the article when the latter is converted into the stepladder. This portion will, for convenience, be referred to as the chair seat and consists of a fixed intermediate section 16 mounted on the side members 15 and two sections 17, 18, hinged to the said intermediate fixed member and adapted to rest on said side members 15 when serving as a chair seat. Secured by any suitable form of fastening means to the hinged section 17 of the chair seat, is the unit 19 which serves as the chair back. This connection between the seat section 17 and the back 19 may be reinforced by a brace 20 attached to said seat and back. Adjacent its lower extremity, said back has pivotally attached thereto at 21, a link 22, which, in turn, is connected by a hinge 23 to a link 24 pivoted at 25 on the pedestal brace 12. When the article is used as a chair, these links 22, 24, are collapsed or folded upon one another, and to prevent accidental movement of the chair back, said links are preferably locked in such collapsed or folded position.

Referring to Figs. 6 and 7, these locking means are shown more in detail and consist of a latch

26, slidable on link 22 and engageable with a catch 27 on link 24. Preferably, for reasons which will later appear, latch 26 is of sleeve-like construction, as shown in Fig. 8, one side of said sleeve being formed by the inturned edge portions 28 of the metal from which said sleeve is made, so that by having the inturned portions spaced from one another, said edge portions can be engaged in a groove 29 extending longitudinally of the sides of the links 22, 24. In other words, the sleeve 26 is slidable along the grooves 29 into and out of engagement with the catch 27, but, it will be apparent that, when said sleeve is in engagement with catch 27, there is no danger of the sleeve becoming accidentally disengaged.

When the article is converted into an ironing board, as shown in Figs. 3 and 4, the back 19 and the seat section 17 is turned upon the hinge 17a by which said seat section is connected to seat section 16. It will be understood that, previous to turning the back and seat section, as just described, latch 26 will have been manually disengaged from the catch 27. This movement of the back 19 causes it to assume a horizontal position, as shown in Fig. 3, and, at the same time, the links 22, 24, are extended so that they project upwardly from brace 12 in a straight line. The parts having been adjusted to this position, the latching sleeve is then slid downwardly in the groove 29 to a point where it will embrace the hinge connection 23 between the links 22, 24. For this purpose, groove 29 has a continuation 29a in link 24, but it will be seen, by reference to Fig. 3, that the extension 29a of the groove is of such length as to limit its downward movement of the sleeve 26 to prevent it moving past said hinge connection. In other words, it is utterly impossible for the latch 26 to move by gravity past the point where it will embrace the hinge connection between the two links. The two links 22, 24, having assumed a position where they extend in a straight line, afford an exceedingly firm support for the chair back which at that time has assumed the character of an ironing board and the latching sleeve 26 will prevent accidental collapsing or folding up of the links 22, 24.

When the article is to be used as a stepladder, the back 19 occupies the same position as it does when the article is used as a chair, as illustrated in Fig. 5. It will also be observed that the links 22, 24 are folded upon one another and locked together when the article is used as a stepladder. In fact, where the article has been used as a chair, if it is desired to convert it into a stepladder, it is only necessary to fold the movable section 18 of the chair seat upwardly and over upon the sections 16, 17. By thus folding the seat sections upon one another, there is formed the additional step for the stepladder which is offset with respect to the next lower step as is customary in ordinary stepladder construction. If desired, there may also be provided a work or tool support 30 mounted on metal strips 31, which engage the back of the chair seat at 32 and which are formed at their ends with clips 33 adapted to engage around the edge of the chair seat back and against the front face of the seat back, the upper portion of the back being rounded, as is usual in ironing boards, so that said clips 33 will engage the seat back with more or less of a wedging action.

From the foregoing it will be apparent that the present article is not only of exceedingly simple construction, but may be readily converted either into a chair, an ironing board, or a stepladder, and regardless of the position which the unit constituting the chair back or ironing board occupies, that unit will be firmly and rigidly supported against any accidental movement. This is of special importance when the article is used as an ironing board, as the vibration set up in the application of the iron to the surface of the board has a tendency to loosen the supporting elements of the board. This, however, is eliminated in the present construction.

It should be added that that face of the seat back or unit 19 which constitutes the ironing surface is provided with suitable padding 34. This padding material may be secured in any desired way.

What I claim is:

1. A convertible article of furniture comprising a pedestal having steps, one of said steps being formed of articulated sections adapted to fold one upon the other, said sections when unfolded forming a chair seat, a chair back, said back being pivotally supported on said pedestal by one of said step sections and normally occupying an upstanding position at one side of the pedestal, said article constituting a chair when said back is in its upstanding position and said step sections are unfolded, and said article constituting a step-ladder when said back is in said upstanding position and said step sections are folded one upon the other, said back being movable on its pivotal center to a horizontal position to form an ironing board, and means pivotally connected to said pedestal for rigidly supporting said back in its horizontal position and its upstanding position.

2. A convertible article of furniture comprising a pedestal, a plurality of steps at the front of said pedestal, a chair back at the rear of said pedestal, a chair seat comprising a fixed section mounted on said pedestal and a front edge section hinged to the fixed section, said hinged section being movable on its pivotal center to fold on the fixed section and form an additional step above the first-mentioned steps, said hinged section being movable on its pivotal center independently of the chair back and said hinged section when unfolded being supported solely by the pedestal, and means pivotally connecting said chair back to the fixed seat section, said chair back being movable on its pivotal center to a horizontal position to form an ironing board.

3. A convertible article of furniture comprising a pedestal having steps, a chair seat formed of front and rear sections pivotally mounted on said pedestal, said front section being adapted to be folded over the rear section to form an additional step, a chair back carried by one of said seat sections and normally occupying an upstanding position at one side of the pedestal, said article serving as a chair when said back is in its upstanding position and the seat sections are unfolded and said article constituting a stepladder when said back is in its upstanding position and said pivoted seat section is folded on the rear seat section, and said chair back being movable on the pivotal center of the seat section by which it is carried to assume a horizontal position above said pedestal to provide an ironing board, and means for rigidly holding said back in its said upstanding and horizontal positions, said means comprising a pair of links hinged to said back and to said pedestal, respectively, said links being pivotally attached to each other to fold when the back occupies its upstanding position

and to unfold and extend in a straight line when said back is in its horizontal position, and means for locking said links in both of said positions.

4. A convertible article of furniture comprising a pedestal having steps, a chair seat formed of front and rear sections on said pedestal, said front section being pivoted and adapted to be folded over the rear section to form an additional step, a chair back pivotally supported on said pedestal and normally occupying an upstanding position at one side of the pedestal and movable on its pivotal center to a horizontal position above the pedestal, said article constituting a chair when said back is in its said upstanding position and the seat sections are unfolded and said article constituting a step-ladder when said back is in its said upstanding position and the front seat section is folded over the rear seat section, and said article serving as an ironing board when said back is in its said horizontal position and means for rigidly holding said back in its upstanding and horizontal positions, said means comprising a pair of links hinged to said back and to said pedestal, respectively, said links being pivotally attached to each other to fold upon each other when the back occupies its upstanding position and to unfold and extend in a straight line when said back is in its horizontal position, a catch on one of said links, and a latch slidable on the other link to embrace the hinged connection between the links when the latter are extended and to engage said catch when said links are collapsed.

5. A convertible article of furniture comprising a pedestal having steps, a chair seat formed of front and rear sections on said pedestal, said front section being pivoted and adapted to be folded over the rear section to form an additional step, a chair back pivotally supported on said pedestal and normally occupying an upstanding position at one side of the pedestal and movable on its pivotal center to a horizontal position above the pedestal, said article constituting a chair when said back is in its said upstanding position and the seat sections are unfolded and said article constituting a step-ladder when said back is in its said upstanding position and the front seat section is folded over the rear seat section, and said article serving as an ironing board when said back is in its said horizontal position and means for rigidly holding said back in its upstanding and horizontal positions, said means comprising a pair of links hinged to said back and to said pedestal, respectively, said links being pivotally attached to each other to fold upon each other when the back occupies its upstanding position and to unfold and extend in a straight line when said back is in its horizontal position, a catch on one of said links, a sleeve slidable on the other link to embrace the hinged connection between the links when the latter are extended and to engage said catch when said links are collapsed and means for limiting the downward movement of said sleeve on said links when the latter are extended.

6. A convertible article of furniture comprising a pedestal having steps, a chair seat formed of front and rear sections on said pedestal, said front section being pivoted and adapted to be folded over the rear section to form an additional step, a chair back pivotally supported on said pedestal and normally occupying an upstanding position at one side of the pedestal and movable on its pivotal center to a horizontal position above the pedestal, said article constituting a chair when said back is in its said upstanding position and the seat sections are unfolded and said article constituting a step-ladder when said back is in its said upstanding position and the front seat section is folded over the rear seat section, and said article serving as an ironing board when said back is in its said horizontal position, and means for rigidly holding said back in its upstanding and horizontal positions, said means comprising a pair of links hinged to said back and to said pedestal, respectively, said links being pivotally attached to each other to fold upon each other when the back occupies its upstanding position and to unfold and extend in a straight line when said back is in its horizontal position, said links having grooves extending longitudinally thereof, a catch on one of said links, a sleeve slidably secured in said grooves to engage said catch when the links are collapsed and to embrace the hinged connection between the links when the latter are extended, the grooves in one of said links limiting downward movement of said sleeve when the links are extended whereby accidental displacement of the sleeve by gravity is prevented.

7. A convertible article of furniture comprising a pedestal, a plurality of steps at the front of said pedestal, a chair back at the rear of said pedestal, a chair seat composed of an intermediate section mounted on said pedestal and front and rear sections hinged to said intermediate section, said front section being foldable on the other sections to form an additional step, said hinged front section when unfolded being supported solely by the pedestal, said chair back being attached to the rear section of the seat and movable on the pivotal center of said rear seat section to assume a horizontal position above the pedestal, said article constituting a chair when said back is positioned at the rear of the pedestal and the seat sections are unfolded, and constituting a step-ladder when said back is at the rear of the pedestal and the front section is folded on the other seat sections, and said article constituting an ironing board when said back is in its said horizontal position.

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