

(No Model.)

2 Sheets—Sheet 1.

A. ECKERT.
CONVERTIBLE FURNITURE.

No. 490,952.

Patented Jan. 31, 1893.

Fig. 1.

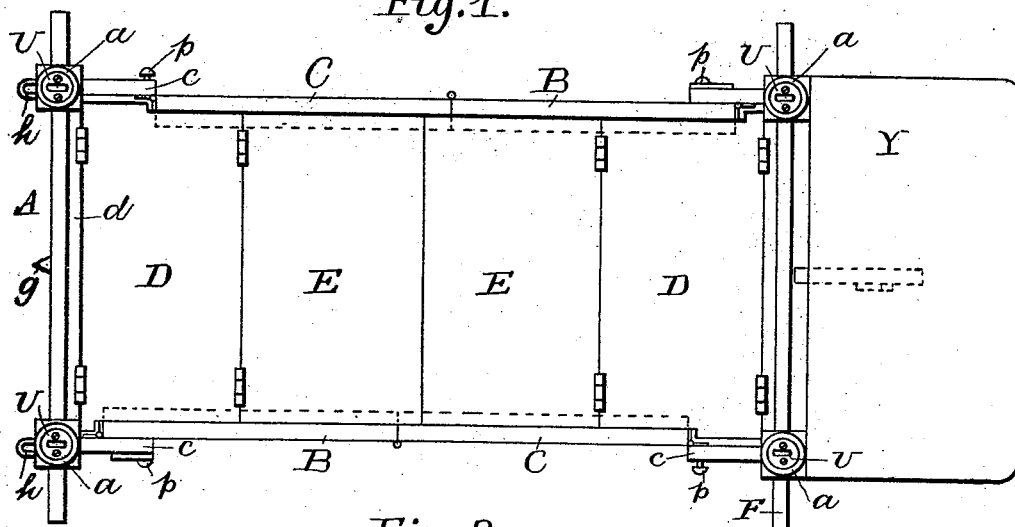


Fig. 2.

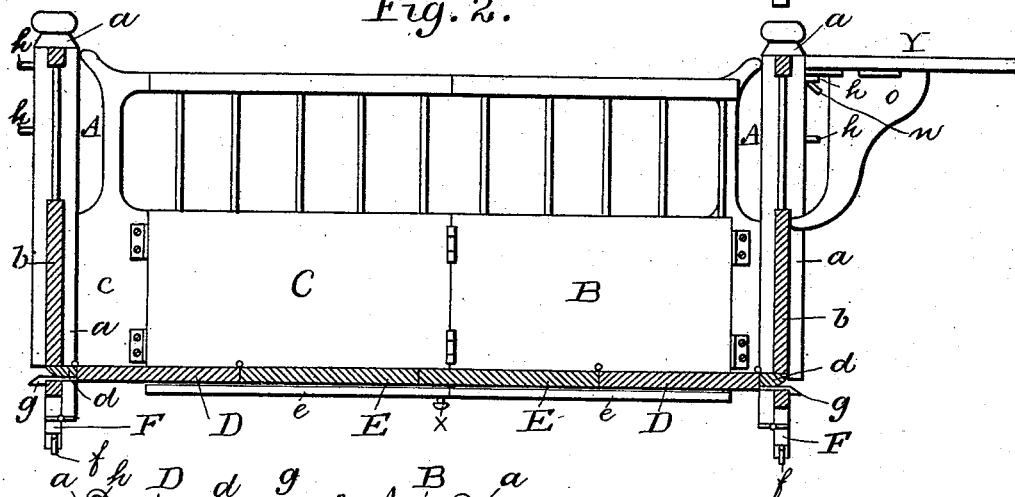
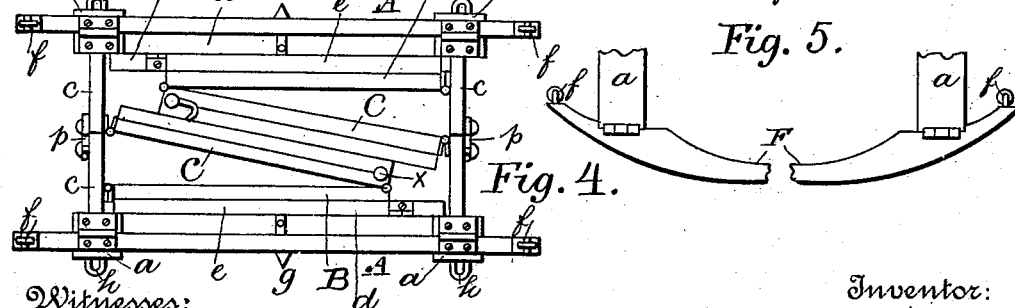


Fig. 5.



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2 Sheets—Sheet 2.

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Fig. 3

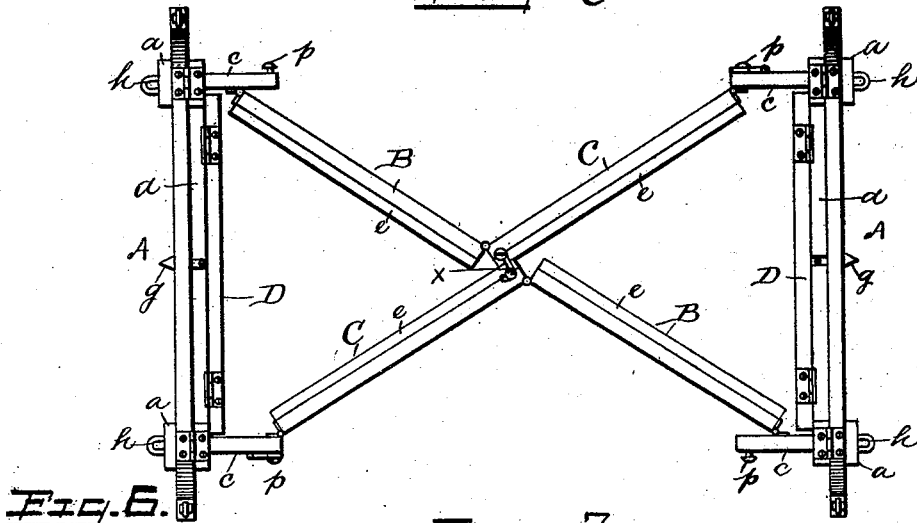


Fig. 6.

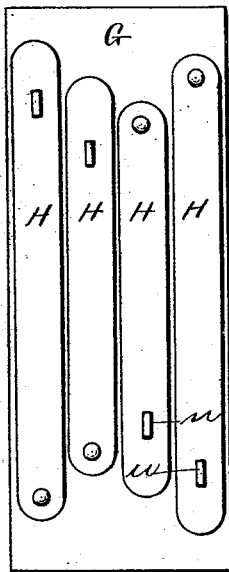


Fig. 7

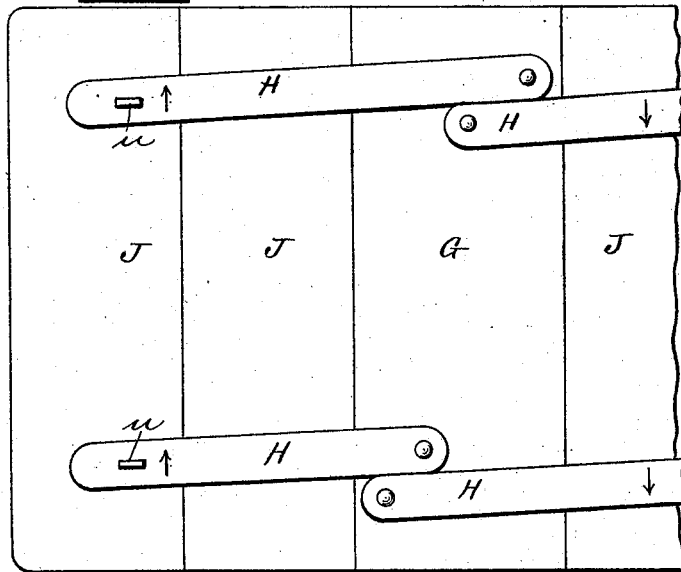


Fig. 8.

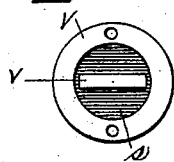


Fig. 9.

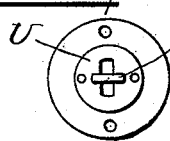
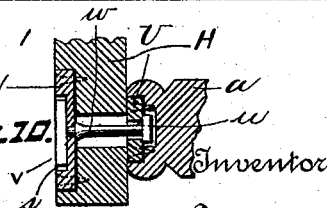


Fig. 10.



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UNITED STATES PATENT OFFICE.

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CONVERTIBLE FURNITURE.

SPECIFICATION forming part of Letters Patent No. 490,952, dated January 31, 1893.

Application filed February 17, 1892. Serial No. 421,805. (No model.)

To all whom it may concern:

Be it known that I, AMOS ECKERT, a citizen of the United States, residing at Gettysburg, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Convertible Furniture; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of the present invention is to produce a child's crib and cradle which may be readily folded to small compass if necessary or desirable, and which, when not in use as a crib or as a cradle, may be utilized for various other purposes, as hereinafter set forth.

The invention consists in the features of construction of the article of furniture described which permit of its folding and which adapt it to be used as a crib, as a cradle, as a child's play-box or walking-box, and as the support of a table top; and the invention consists further in the special construction of the table top and the means for securing the same to the crib frame.

The invention is fully illustrated in the accompanying drawings, in which

Figure 1, is a top view of the crib. Fig. 2, is a central longitudinal section. Fig. 3, is a bottom view showing the crib-frame arranged to support a dining-table top. Fig. 4, is a bottom view of the crib-frame entirely folded together. Fig. 5, is a fragmentary detail view showing the operative position of the cradle rockers. Figs. 6, and 7, are bottom views of the dining-table top, in its folded and extended positions respectively. Figs. 8, 9, 10, are top, bottom and sectional views respectively of the fastening device employed for securing the table top in place.

In Figs. 1 and 2, is shown the arrangement of parts which exists when the structure is to be used as a crib. The body of the crib is made up of a number of sections, namely, the end sections A, A, the side sections B, B, C, C, and the bottom sections D, D, E, E, all of

which are permanently hinged together, in a manner to be described, so that the relative position of the sections may be changed to adapt them to their several functions without disconnecting any of the sections.

The special construction and arrangement of the sections A, B, C, D, E, which not only adapts them to be used in forming a crib as shown in Figs. 1 and 2, but also permits them to be shifted to the position shown in Fig. 3, or to the position shown in Fig. 4, is as follows:—The end sections A A are exactly alike, each comprising the posts *a, a*, an end panel *b* connecting the posts, and side pieces *c c* projecting inwardly from the posts in the direction of the sides of the crib-frame. At the bottom of the end panel *b* is a strip *d* (see Fig. 2) which extends from post to post beneath the panel and projects in front of the panel as far as the inner faces of posts *a a*, thus forming a supporting ledge which aids in supporting the bottom pieces of the crib frame. Each projecting side piece *c*, of each end section A, has hinged to it one of the side sections B, B, or C, C, of the crib-frame; and the two side sections secured to one end section A, are hinged to the two side sections secured to the other end section A, so that the two end sections A A are joined together by the hinged side sections. Moreover, hinged to the strip *d*, of each end section is one of the bottom sections D, while to the bottom sections D, are hinged the two inner bottom sections E, as shown.

The particular manner of hinging together the sections of the crib frame, so that they may be shifted to their different positions, should be noticed. The hinges connecting the side sections B C to the end sections are applied to the edges of the sides sections and to the inner faces of the side pieces *c* of the end sections, thus permitting the inward folding of the sections. Each side section C, is hinged to its side piece *c* at the inner edge of the side piece, while each side section B, is hinged back from the inner edge of its side piece, the effect of which arrangement will hereinafter appear. It will be noted that the side section B, carried by one end section is opposite to the side section C carried by the other end section, the adjacent sections B C

at each side of the crib being so hinged together, as shown, that they may fold inwardly but cannot bend outwardly.

When the structure is used as a crib or cradle, the bottom sections D E are or may be extended to serve as the crib bottom, in which case they are supported by the strips *d d*, and by inwardly extending strips *e, e*, at or near the lower edge of the side sections B C. The combined width of the bottom sections is substantially equal to the distance between the end panels *b b*, so that, when extended, the inner edges of sections E E meet at the center of the crib.

When the bottom sections D D E E are extended, they serve to hold the side sections in their proper extended position. The outward bending of the sections is prevented by the manner of hinging them and any inward bending is precluded by the bottom sections. When the parts are in this position (Figs. 1, 2,) the structure may be used as a crib without any shifting of the parts, or, if preferred, the inner bottom sections E, E, may be folded back upon the outer bottom sections D, D, and a mattress placed above them supported at the center if necessary by a slat or slats.

When the bottom sections are extended the structure is adapted to be used as a play-box.

To use as a child's walking-box, the inner bottom sections E, E, are folded back upon the sections D, D, leaving an open space therebetween, and then supporting straps may be fastened to the sides or ends of the box and brought together to a belt at the center for supporting the child if desired. For holding the structure more firmly together when used as a play-box or walking-box, there may be provided, if necessary, positive fastenings such as catches uniting the bottom sections D, to the crib-frame, but no such fastenings are illustrated and they may not be usually essential.

In order that a rocking cradle may be produced, reversible supports F F are provided, which serve as rockers when desired, but which may be reversed to serve as ordinary legs or supports when rockers are not to be employed. In Fig. 5 is shown one of the supports F, in position to be used as a rocker. The rockers are so hinged to the bottom of the crib-posts *a a* that they may either be turned up to the position shown in Figs. 1 and 2, or occupy their position of use shown in Fig. 5. At their extremities the rockers are decidedly curved, so that when the rockers are turned up their ends extend down to the floor and serve as legs for the crib. These supporting ends of the rockers are provided with casters *f, f*, (which serve also as rollers for the walking-box.) The supports F, are held in each of their two positions by some suitable means, as by providing spring hinges therefor to keep the rockers in position for use and catches *g g* on the crib-frame with which the rockers co-operate to maintain them

in their reversed position. The rockers are hinged to turn up against the outer surfaces of the posts, as shown, though if preferred they might be arranged to turn inwardly against the inner surfaces of the posts. In either case, when the rockers are in their position of use the ends of the posts *a a* rest upon the upper surface of the rocker; and when the rockers are turned up to form ordinary supporting legs for the crib then (as shown most clearly in Fig. 2) the body of the crib is itself supported directly by the reversed rockers at the points where the catches *g g* are located, thus avoiding any strain upon the hinges of the rockers.

Each of the posts *a*, of the crib-frame is provided on its outer face with loops or eyes *h h*, which are adapted to support a sewing-table attachment Y, illustrated in Figs. 1, and 2. A sewing table attachment to a crib has great utility, and is very convenient for a person who is watching the occupant of the crib. By placing the loops *h* on all the posts, the sewing table can be used at either end of the crib. Only the upper loops *h* are required to support the sewing table, but lower loops are also provided so that the loops *h* may, if desired, have the additional function of serving as sockets to receive the standards of a mosquito net canopy.

The sewing machine attachment Y is attached to the crib by hooks *n n* which enter the upper loops *h h* on the crib-posts, and is supported by a hinged bracket *o* which is hinged to the bottom of the table Y, and bears against the end panel *b* of the crib-frame. To better support the table, the hooks *n* are recurved as shown, and it is therefore necessary in putting the attachment in position for use to first fold the bracket *o* against the table in order that the table may be so held as to bring the hooks into engagement with the eyes *h h*. When the hooks are properly inserted, then the table is raised and the bracket lowered.

Fig. 3, of the drawings is a bottom view showing the position to which the sections of the crib-frame are shifted in order to make it serve as the support of a dining table. The bottom sections D D E E are folded entirely up against the ends of the crib, the innermost sections E E folding in behind the sections D D and coming directly above the bottom strip *d* of the end sections. Then the hinged side sections are bent inwardly (the bottom sections now not preventing) and the side sections C, obliquely opposite, are brought together, the inner face of one slightly overlapping the inner face of the other, and the overlapping sections are secured in this position by some suitable fastening device, indicated in the drawings by the hook and pin *x x* carried by the two sections respectively. The crib-frame is now ready to receive the dining-table top, which is illustrated in Figs. 6, and 7. The dining table top is composed of separate leaves or sections so that it may be reduced to small compass when not in use.

The middle section, G, carries the leaf-supporting slats H, H, which are designed to rest upon the posts of the crib-frame and support the table-top, these slats being securely fastened to the section G, but so pivoted thereto that they may be swung around horizontally to occupy either their folded or their extended position. The arrangement of the slats H, H, is such (as shown) that when in their folded position they lie parallel or approximately so and do not extend beyond the periphery of the section G. (See Fig. 6.) To extend the slats, they are swung around on their pivots to the position shown in Fig. 7, so as to bring the ends of the several slats into proper position to rest upon the tops of the crib-posts. Owing to the peculiar arrangement of the slats which permits of their proper folding, it is necessary to make one pair of the slats H, longer than the other pair in order to have them project equal distances beyond the section G, when extended; and in order that the extremities of the slats on each side of the table top may be in line with each other it is necessary that the slats when fully extended should occupy a slightly oblique position as shown. The pivots of the slats are so arranged as to just permit this slightly oblique position. It will be noted that in extending the slats H, H, from the position of Fig. 6, the two long outer slats are swung entirely around the ends of the board G, describing about three-quarters of a circle, while the short inner slats are moved just a quarter way round to a position parallel with the long slats. When the slats H, H, have been extended, the dining table is constructed by securing the ends of the slats to the posts *a, a*, of the crib-frame by means of a special fastening device (illustrated in Fig. 8), and then placing upon the extended slats on both sides of section G, the additional leaves or sections J, J.

Fig. 4, of the drawings is a bottom view of the crib-frame folded up, as is desirable for purposes of transportation or storing. To shift to this position from the position of Fig. 3, the fastening *x*, is opened, and the ends of the crib-frame are brought together, folding the side sections B, against the raised bottom sections D, and bringing the side sections C, C, face to face. This causes the side pieces *c, c*, of both end sections to come close together, edge to edge, and by means of hooks and staples *p, p*, carried by the pieces *c*, at each side the posts are held firmly together in the folded position. It will be noticed that in this position the bottom-supporting strip *e* at the lower edge of one side section C, is in contact with the corresponding strip of the other section C, while the strip *e* of each side section B, fits under the edge of the adjacent raised bottom section D.

The folded crib-frame shown in Fig. 4, is well adapted to be used as the support of a fancy table top, which could be so constructed as to be applied thereto in a manner similar

to that adopted in the case of the dining table top, by means of the fastening device shown in Fig. 8. This special fastening device for securing a table top to the crib-frame consists of two parts, one of which is carried by a crib-post *a*, and the other of which is secured to the end of a supporting piece H, of the table top. The part carried by the crib post (see Figs. 1, and 8) is simply a slotted metallic disk U, which is sunk into the top of the post and screwed thereto, the exposed face of the disk U, being flush with the top surface of the crib post. The part of the fastening device carried by the supporting pieces of the table top comprises a metallic disk V, which may be larger than the slotted disk U, and a turning key *u v w*, journaled in said disk V. The turning key is formed with a locking-bolt *u* adapted to co-operate with the slot of disk U, a thumb-piece *v* which extends across the upper face of disk V, and a shank *w* which extends down through a central aperture in disk V and connects the locking bolt to the thumb-piece. Preferably the shank *w* is shouldered just below the under surface of disk V, so as to permanently connect the turning key to the disk V. The thumb-piece *v* turns in a circular cavity formed in disk V, so that the thumb-piece does not extend above the surface of the disk.

To apply the fastening to the supporting pieces H, of the table top, the disk V, is sunk into the top-surface of the piece H and screwed thereto, and the shank *w* carrying the bolt *u* passes down through the piece H and projects therebelow. To secure the supporting pieces of the table-top to the crib-posts, it is only necessary to have the locking-bolts *u* enter the slots in the slotted disks U, and then to turn the bolts *u*, by manipulating the thumb-pieces *v*, across the slots in disk U, which securely holds the ends of the supporting pieces H, against the crib-posts. In order that the bolts *u* may enter the slots in the disks U in the crib-posts, and may turn freely therebeneath to lock the parts, the crib-posts are hollowed out beneath the slots as illustrated.

The construction and manner of applying the fastening device are clearly shown in the top, bottom and sectional views thereof constituting Fig. 8, of the accompanying drawings. While this fastening device is the means which I preferably use for holding the table top in position, it is not absolutely essential, since it might be sufficient to have simple pins carried by the table top or its supporting pieces which would enter holes or sockets in the crib-posts. This, however, would obviously be a much less perfect and satisfactory means of fastening the parts together.

I claim as my invention:—

1. In a folding structure, the two similar end sections A, A, each having two inwardly-extending side pieces *c c*, of equal length in combination with the side sections B one of which is hinged to one of the side pieces *c* of

each end section, and the side sections C one of which is hinged to the other side piece c of each end section, the side section B of one end section being hinged to the side section C, of the other end section, and said sections B being hinged farther back from the inner edge of their side pieces c than the side sections C, substantially as set forth, whereby said end sections A A may be brought together and said side sections B B C C may be folded together and accommodated in the space formed between said end sections and their meeting side pieces.

2. Arched reversible supports F, F, in combination with an article of furniture to which said supports are applied, whose leg-posts a a rest upon the concave surfaces of said supports when their convex surfaces are turned down to serve as rockers, and whose body portion rests upon the convex surfaces of the supports when their extremities are turned down to serve as simple supporting legs, substantially as set forth, whereby the structure is directly supported by said supports F, F, in either of their positions.

3. A crib frame having end sections of equal height and having hinged sides, each side being composed of two sections B C hinged together and to the two ends of the crib frame respectively in such manner that by a slight approach of said ends the sides of the crib frame are bent inwardly and two obliquely opposite sections, B B or C C, are caused to

overlap, in combination with means for securing together the ends of said overlapping sections and maintaining them firmly in their overlapped position, substantially as set forth, whereby the crib frame is adapted to receive a dining-table-top and the sections B, C, are folded in to leave space beneath the table at the sides.

4. In combination with a crib frame and its corner posts a a, a folding table top composed of a central section G carrying the swinging slats H H adapted to be secured to the posts a a, and the additional leaves or sections J J which are supported by said slats H H on either side of the section G, substantially as set forth.

5. A folding table top adapted to be secured to a crib frame, comprising the supporting slats H, and plurality of separate leaves or sections supported thereby, said supporting slats H H being pivoted to the underside of one of said leaves or sections in such manner that they may be extended to rest upon the posts of the crib frame or may be swung horizontally on their pivots to a position entirely beneath the section to which they are pivoted, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AMOS ECKERT.

Witnesses:

JAMES HERSH,
W. H. TIPTON.