(No Model.) 2 Sheets—Sheet 1.

F. FAY.

FOLDING CRIB.

No. 411,653. Patented Sept. 24, 1889.

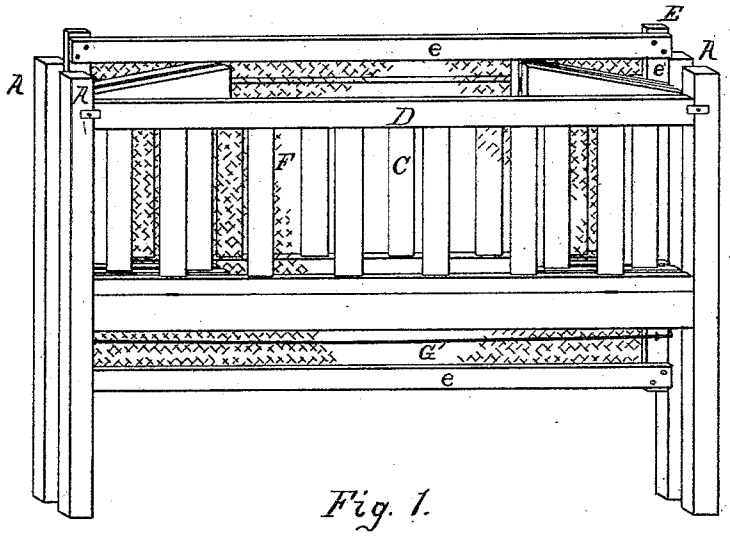


Fig. 1.

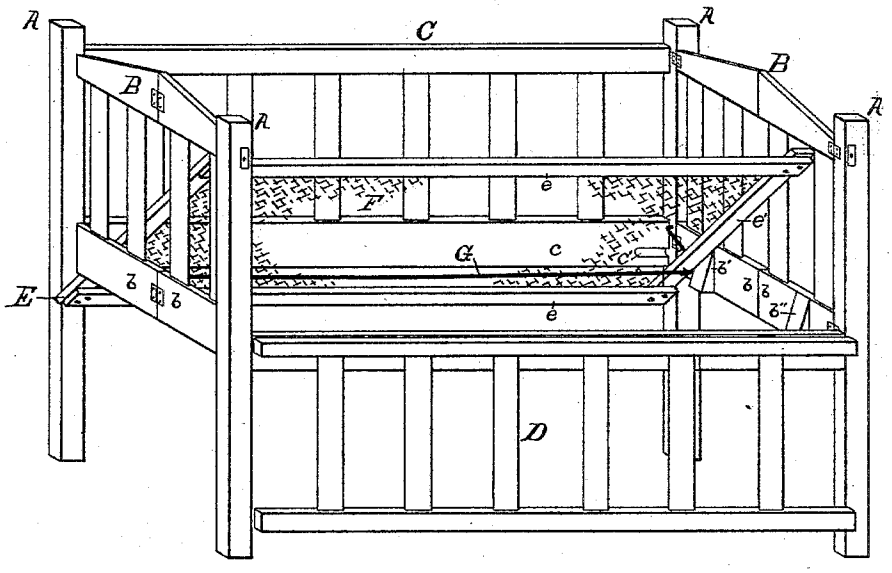


Fig. 2.

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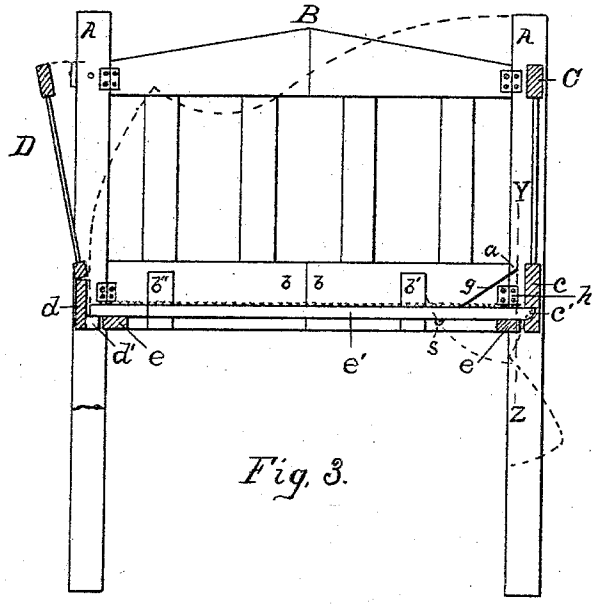


Fig. 3.

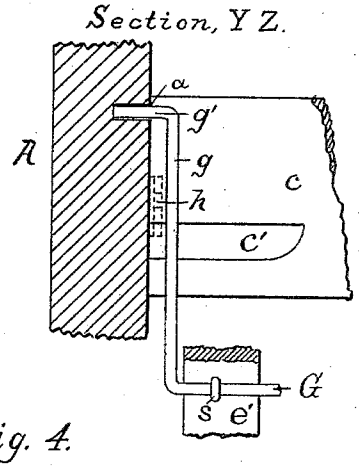


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANK FAY, OF CHESTER, MASSACHUSETTS.

FOLDING CRIB.

SPECIFICATION forming part of Letters Patent No. 411,653, dated September 24, 1889.

Application filed February 8, 1889. Serial No. 299,158. (No model.)

To all whom it may concern:

Be it known that I, FRANK FAY, of Chester, in the county of Hampden and Commonwealth of Massachusetts, have invented a new and useful Improvement in Folding Cribs, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to that class of folding cribs in which a woven-wire or other bottom is so connected to the crib-frame as to be capable of being folded with the latter into a compact form. In such cribs the end pieces usually have a hinged joint midway between their ends, whereby they are adapted to fold inwardly, and, so far as I am aware, the end pieces of the bottom have also been jointed in the middle to enable the bottom to be folded upon itself longitudinally. Such construction of the bottom, besides materially increasing its cost of manufacture, renders the operation of folding the crib laborious and necessitates the consumption of considerable time in such operation. The bulk of the crib when folded, moreover, is thereby increased.

The object of my invention is to obviate these objections to existing constructions by providing a crib in which means are provided for connecting an unbroken woven-wire bottom to the frame in such manner that the whole can be quickly and conveniently folded and set up and which when folded will occupy a very small space.

To these ends my invention consists in the folding crib comprising a frame having connected to one of the side pieces thereof an unbroken woven-wire bottom, as hereinafter fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a view in perspective of the crib as it appears when folded or closed. Fig. 2 is a similar view thereof partly set up. Fig. 3 is a cross-section of the crib, taken at a point adjacent to one of the end pieces. Fig. 4 is a vertical section taken upon line Y Z of Fig. 3 and looking toward the right in said figure, with the bed-bottom partly folded, as in Fig. 2.

The letter A designates the four corner-posts, B B the end pieces, and C D the side pieces, of the crib. The end pieces are jointed in the middle and are hinged to posts A, and side piece D is hinged to side rail *d*, as is customary in folding cribs.

The letter E designates the bottom, consisting of side pieces *e* and end pieces *e'*, between which is stretched the woven wire F in a manner common to bed-bottoms. The bottom E is unbroken—that is to say, has no joint in the middle to permit one portion thereof to be folded upon the other, as is usual in crib-bottoms.

In order to enable the bottom E to be conveniently folded with the crib, I attach it at each end by a link to two of the posts A, and I prefer to make such link-connection as follows: An iron rod G extends from end to end of the bottom, being inserted through staples *s* upon the lower side of end pieces *e' e'* near one end of the latter, as shown in Figs. 2 and 4, said rod being bent at substantially a right angle just outside of said end pieces to form the arms *g*, and being again bent at a right angle to form the fingers *g'* at the extreme ends. The two posts A upon the rear side of the crib are provided with holes *a* in their adjacent sides located slightly below the plane of the upper edges of the lower rails *b c*, as shown, which holes receive the fingers *g'* of said rod G and form bearings, within which said fingers are free to rotate. The bottom E thus mounted upon said rod is capable of receiving both a pivotal movement upon the main portion of the rod and also a swinging movement with the latter about the holes *a* as a center, and is therefore adapted to occupy both a horizontal and a vertical position and to be moved from one of said positions to the other by swinging its rear side clear of the rail *c*. A cleat *d'* upon the inner side of rail *d* (see Fig. 3) receives the front side piece *e* or front ends of end pieces *e' e'* of the bottom when the latter is in its horizontal position and forms a support therefor, and as a similar cleat upon rail *c* would interfere with the swinging movement of the rear side of the bottom I form a groove or recess *c'* within the inner side of said rail *c* near each end thereof to receive the project-

ing ends of end pieces e' e' of the bottom, as shown in Figs. 2 and 3. Said end pieces by thus projecting into said recesses form a firm support for the rear side of the bottom, and the location of the staples s on the bottom and the holes a in the posts is such that rod G is swung by the weight of the bottom toward rail c, and thus securely retains said end pieces within the recesses.

A groove or recess extending throughout the entire length of rail c to receive the edge of the rear side piece e of the bottom could be employed in lieu of the construction shown, if desired; but the combined action of rod G and the ends of the end pieces e' e' in the short recesses affords sufficient strength for all ordinary purposes.

By reference to Fig. 4 it will be observed that the depth of the holes a in posts A is less than the length of fingers g' of rod G, and the object of such construction is to cause the arms g of said rod to clear the lower hinges h, which connect the end pieces B of the crib to posts A, one of said hinges being shown by broken lines in said figure.

As the two portions of the end pieces B are hinged to swing inwardly when the crib is folded, to insure the requisite amount of rigidity to said end pieces when the crib is set up I secure upon the inner side of the lower rails b thereof two inverted-wedge-shaped blocks b' b'', against which the end pieces of the bottom E bear when the latter is lowered to its operative position, thereby effectually locking the end pieces B against inward movement. The two rear blocks b', moreover, are so located that their vertical rear sides serve as stops to the rod G to prevent the latter from swinging forwardly farther than is necessary to enable the ends of end pieces e' to clear the lower edge of rail c in the manipulation of bottom E, and the necessity of exercising care in such manipulation is thereby avoided.

The movements of the various parts in folding and setting up the crib will be readily understood by reference to Fig. 3, in which the lines traversed by the front side of bottom E, the rear ends of end pieces e' thereof, and rod G are indicated by broken lines. Supposing the crib to be set up as indicated in said figure, to fold it the operator grasps the front side rail of the bottom and raises it first vertically, thereby withdrawing the ends of end pieces e' from recesses c' and bringing rod G into contact with the rear side of blocks b' b'', then diagonally toward the center of the crib to cause the said end pieces to clear the lower edge of rail c, as shown in Fig. 2, after which rod G swings downwardly until its arms g occupy a vertical position and the bottom E is raised to a vertical position against side piece C of the crib. End pieces B B are then folded inwardly against said bottom, and side piece D is brought against said end pieces, as shown in Fig. 1, and the operation is completed. To set up the crib again these movements are reversed. It will be observed, as hereinbefore stated, that in these operations the blocks b' positively limit the swinging movement of rod G at the proper point to enable end pieces e' to clear rail c, so that the movements of the bottom can be made very quickly and with but slight effort.

The fact that the bottom is unbroken not only overcomes the serious objections to jointed bottoms as regards the comfort of the occupant of the crib, but it also enables the crib to be folded into a much smaller compass than is possible with a jointed bottom. In other words, it gives to a folding crib all the advantages incident to an unbroken woven-wire bed-bottom.

In practice I prefer to make the angle which the arms g make with rod G slightly obtuse, whereby the pressure of fingers g' against the bottom of holes a will cause the central portion of the rod to bow slightly in a downward direction, as shown in Fig. 1, to allow for sagging of the woven wire without striking said rod. The arms g and fingers g' could be pivotally connected to the ends of the bottom E and the rod G could be omitted; but I prefer to use the construction shown, inasmuch as it greatly increases the stiffness of the connection between the bottom and the crib-frame.

While I have shown and described the bottom E as being composed of woven wire, I desire to have it understood that so far as the means for connecting the bottom to the crib are concerned I do not limit myself to a woven-wire bottom, as the same means are equally well adapted to connect an unbroken bottom of any material to a crib-frame.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the posts and side and end pieces of a crib-frame, of a crib-bottom and a plurality of links, each of which is pivotally connected at one end to said bottom and at the opposite end to one of the posts of said frame, substantially as and for the purpose described.

2. The combination, with the posts, side pieces, and inwardly-folding end pieces of a crib-frame, of a crib-bottom having an unbroken rectangular frame and two links, each of which is pivotally connected at one end to one of the posts of said crib-frame and similarly connected at its opposite end to one of the end pieces of said bottom-frame, substantially as described.

3. The combination, with the posts, side pieces, and inwardly-folding end pieces of a crib-frame, of a rectangular bottom-frame and a rod or similar device extending from end to end of said bottom-frame and having pivotal connection therewith, said rod having its ends bent at substantially a right angle to the body portion thereof, and having each of said ends

pivotally connected, respectively, with one of the posts of said crib-frame, substantially as described.

4. In a crib, posts A, side piece C, having groove or recess c' within its inner side, side piece D, and inwardly-folding end pieces B B, combined with bottom E, having a portion of its rear side adapted to enter said groove or recess c' when said bottom is in its operative position, and links connecting said bottom to the two rear posts A, substantially as and for the purpose described.

5. In a folding crib, posts A, side piece C, having the grooves or recesses c' therein, side piece D, having cleat d upon its inner side, and inwardly-folding end pieces B B, combined with woven-wire bottom E, having the projecting end pieces e', and rod G, pivotally connected with said end pieces e', said rod being bent at its ends to form arms g and fingers g', and having said fingers journaled in two of said posts A, arranged and operating substantially as set forth.

6. In a folding crib, posts A, the two rearmost of which are provided with holes a, side pieces C D, and inwardly-folding end pieces B B, combined with bottom E and rod G, pivotally connected to said bottom and having its ends bent to form arms g and fingers g', said fingers being inserted in the holes a in said posts and being of greater length than the depth of said holes, whereby space is left between the arms g and the posts, substantially as and for the purpose described.

7. In the folding crib herein described, the combination, with the two rear posts thereof, bottom E, and rod G, pivotally connecting said bottom with said posts, of stops secured to the end pieces of the crib to limit the swinging movement of said rod, substantially as and for the purpose set forth.

8. In a folding crib, side pieces C D, the former being provided with the recesses c' and the latter with cleat d, and inwardly-folding end pieces B B, combined with bottom E, composed of side pieces e e, end pieces e' e', and woven wire F, said end pieces having their rear ends projecting beyond the rear side piece e, rod G, connected to said end pieces e' e' near their rear ends by means of staples s, said rod having its ends bent to form arms g and fingers g' and having said fingers journaled in side piece C, and wedge-shaped blocks b' b'', secured to said end pieces B B upon their inner sides, said blocks b' being so located as to serve as stops to limit the forward movement of rod G at a point where the rear ends of end pieces e' e' of the bottom will clear side piece C, arranged and operating substantially as and for the purpose set forth.

FRANK FAY.

Witnesses:
W. H. CHAPMAN,
J. E. CHAPMAN.