G. M. THOMSON.

FOLDING CRIB.

APPLICATION FILED DEC. 31, 1921.

1,437,623.

Patented Dec. 5, 1922.

4 SHEETS—SHEET 1.

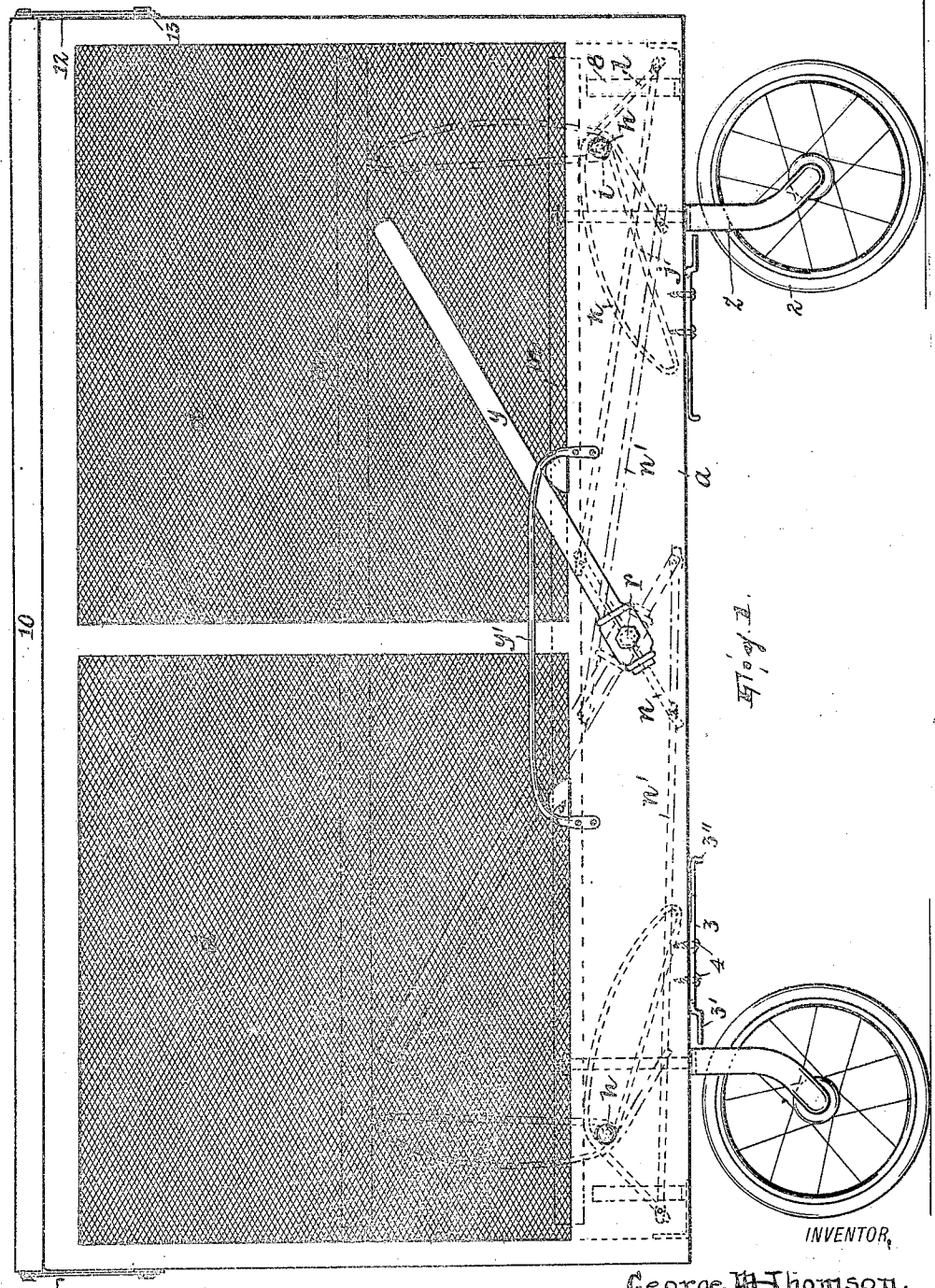


Fig. 1.

Witness
Wm. D. Bell

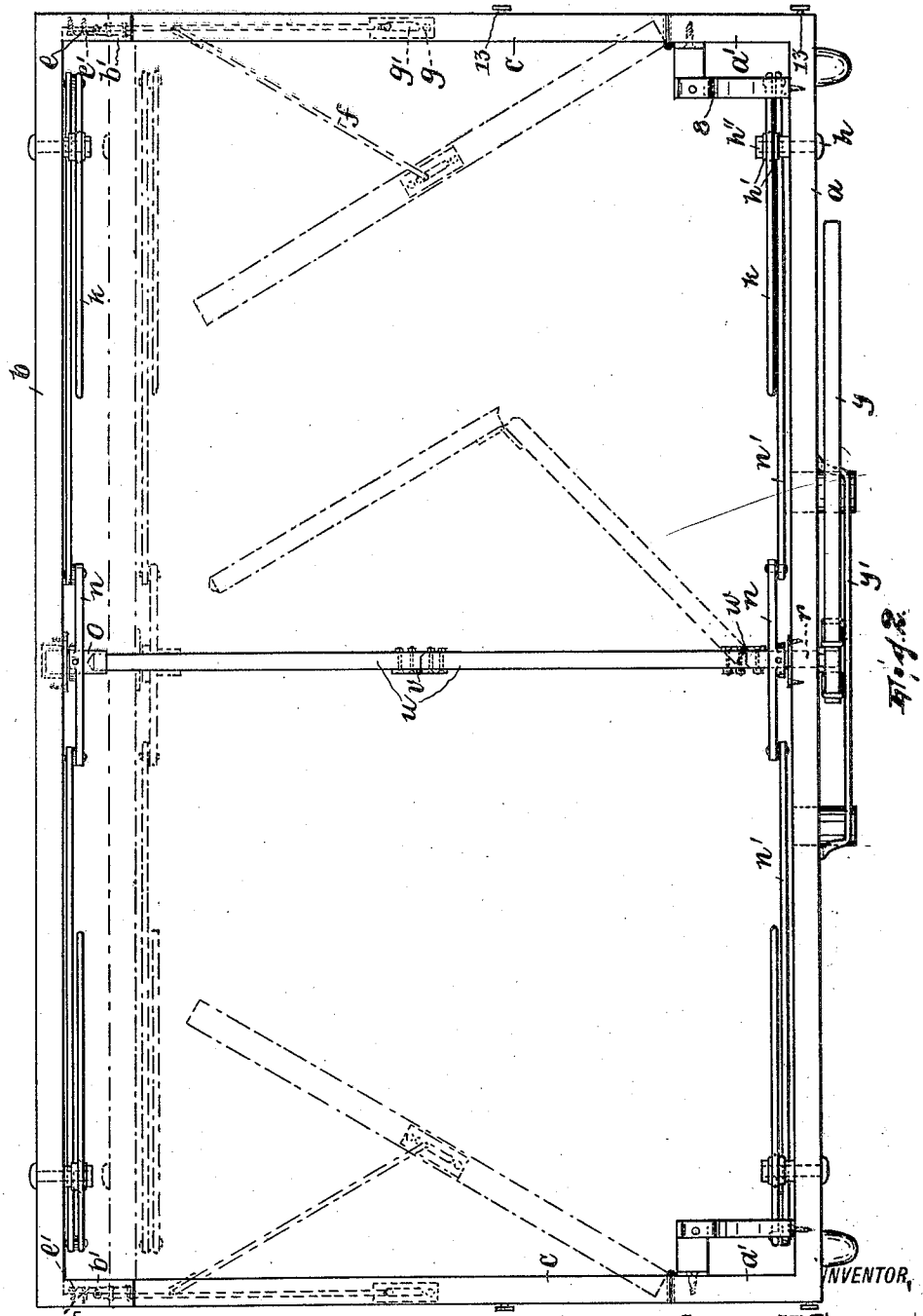
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4 SHEETS—SHEET 2.



WITNESS
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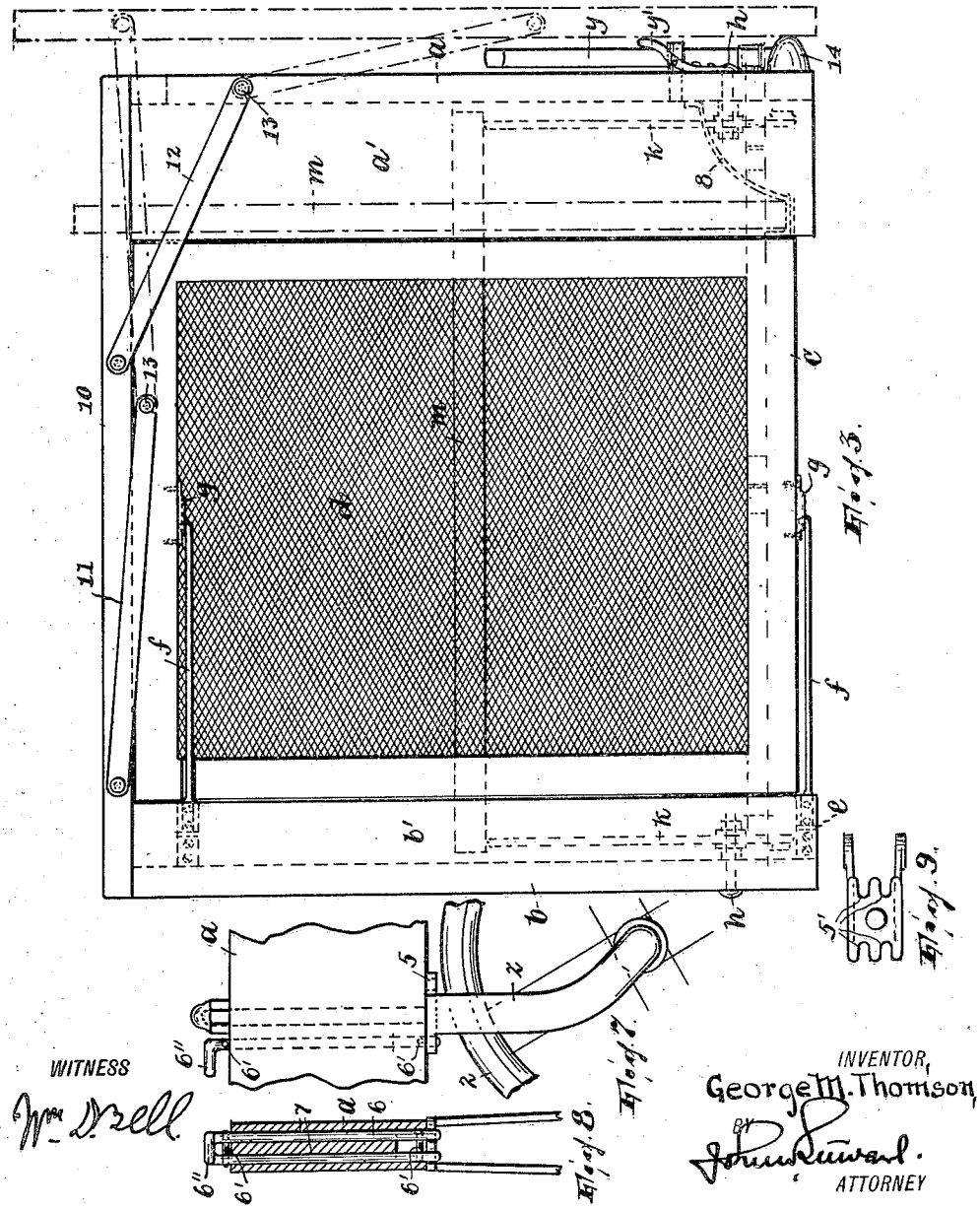
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4 SHEETS—SHEET 3.



WITNESS

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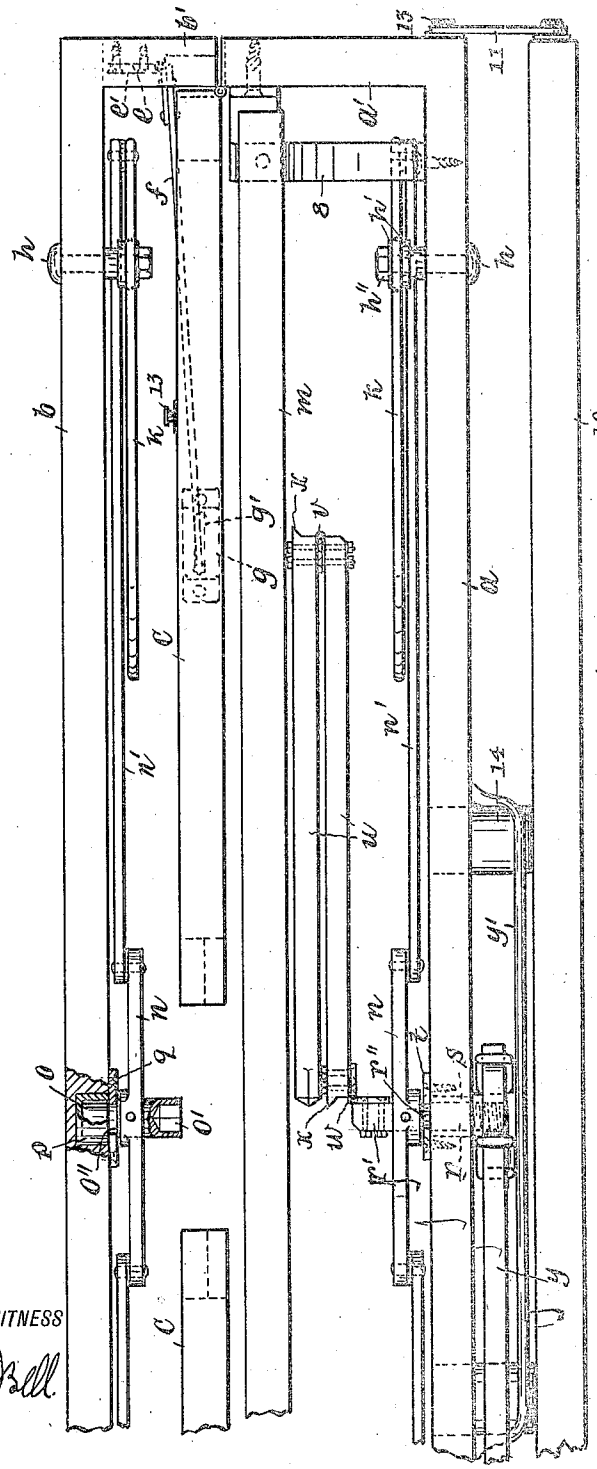


Fig. 4.

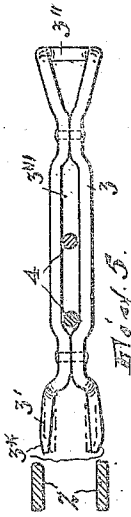


Fig. 5.

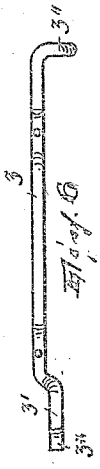


Fig. 6.

WITNESS

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Patented Dec. 5, 1922. 1,437,623

UNITED STATES PATENT OFFICE.

GEORGE M. THOMSON, OF MONTCLAIR, NEW JERSEY.

FOLDING CRIB.

Application filed December 31, 1921. Serial No. 526,201.

To all whom it may concern:

Be it known that I, GEORGE M. THOMSON, a citizen of the United States, residing at Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Folding Cribs, of which the following is a specification.

This invention relates to cribs and particularly to that class of cribs in which there are two side structures (forming side walls) and two end walls all pivotally connected together in such manner that one side structure may be moved laterally into close relation to the other to fold the crib. Usually there is a mattress support, as a spring-mattress, adapted to be seated when in use in horizontal position in the crib and to stand upright between the two structures when the crib is folded. Such cribs also usually are mounted on wheel supports each turning on a vertical axis. Again, these cribs frequently have a removable screen to cover the top, as where the two side structures and the end walls are provided with screening.

The present invention consists in certain improvements in such cribs briefly indicated as follows: In novel elevatory means for supporting the mattress-support, so that it may be sustained for reception of the mattress at different elevations; in novel means for supporting the mattress support when the same stands edgewise in the folded crib; in novel connections between the two side structures and the end walls; in novel means for locking each wheel support against turning; and in novel means for connecting the top screen with the crib.

In the drawings,

Figure 1 is a side elevation of a crib embodying my invention, the mattress support being in its depressed position and its position when elevated being shown by dotted lines;

Figure 2 is a plan of the crib, with the spring mattress removed, the crib being extended; Fig. 3 an end elevation;

Figure 4 is a fragmentary plan, showing the crib folded;

Figures 5 and 6 are details of the wheel-support locking means; and

Figures 7, 8 and 9 are details of a modification of such locking means.

a and *b* designate the two side structures, the same being preferably rectangular frames and each having its bottom rail of appreciably superior width. Said structures have at their ends and projecting toward each other (Fig. 2) the end plates *a' b'* so that each forms a housing at the inner side. To the end plates *a'* are hinged the end walls *c*, which are also preferably rectangular frames. The side structures and the end walls may have screening *d* secured therein. The end walls, which form with the side structures a folding frame or body, swing inward on vertical axes to the position shown in Fig. 4, and when they are thus swung inward the side structure *b* moves in unison therewith to the position shown in that figure, as in folding the crib, connections to that end being provided as follows: The plates *b'* of the side structure *b* are recessed at their inner sides, as at *e'*, Figs. 2 and 4, to receive the hinges on the ends of the links *f*, there being two such hinges or links, upper and lower, at each end of the crib, and the opposite ends of the links are upturned and engaged in the slots *g'* of fittings *g* one of which is secured to the under side of each horizontal rail (top and bottom) of the frame forming each end wall. The slots extend lengthwise of the plane of the frame or end wall *c*, and thus they afford some lost motion to prevent binding of the parts when in folding the crib they are brought to the position shown by Fig. 4.

At the ends of the crib, to wit, at opposite points in the lower rails of the side structures *a* and *b*, suitable fulcra are provided, as by the stud-bolts *h* projecting inwardly. On each stud-bolt is fulcrumed a lever forming part of the elevating means. Each lever consists in the present example of a piece of heavy wire one end of which has a bearing on the stud-bolt, as by being bent into an eye *i* to receive the same, the wire having a straight portion *j* extending from its bearing *i*, a rebent arched portion *k*, and an obliquely bent-off arm *l*; each lever is confined to move in a vertical plane between two washers *h'* held on the stud-bolt by the nut *h''*. The two levers at each end of the crib preferably have their arched portions so arranged that when the levers are swung to the position shown by Fig. 1 so that they stand upright said arched portions will face the respective nearer ends of the crib. On these levers is adapted to rest the mattress support *m*, as an ordinary spring-mattress, which it will be obvious will be

raised or lowered by them when they are in unison swung up or down, their arched portions having wiping contact with the lower face thereof; when they are up the mattress support will rest on their ends and when they are down it will rest on the bends connecting their portions *k* and *l*. Since the two levers at one end of the crib always move on their axes reversely to the other two the tendency of either pair to shift the mattress support endwise is counteracted by the other and so the movement of said support is substantially vertical at all times. At the inside of the bottom rail of each side structure is arranged a two-armed lever *n* (secured on a shaft to be described in detail), and the arms of each such lever are respectively pivotally connected to the arms *l* of the aforementioned elevating levers by links *n'*; since the arms of the levers *n* project in opposite directions it will appear in view of the above-described arrangement of the elevating levers that when said levers *n* are moved together one way or the other in the same direction all the elevating levers will either be raised or lowered together. The means *n n'* connecting the two elevating levers *j—k—l* at each side of the crib serve not only for raising and lowering them but for holding them against falling from the elevated to the depressed positions; in the present instance this latter is due to connecting the relatively corresponding arms of the elevating levers, by the links (*n'*), one with one arm and the other with the other arm of the lever *n*, so that when the elevating levers are in their elevated positions the links assume approximately dead-center relation to the axis of lever *n*. As for the mentioned shaft: One end portion thereof is formed by a stub *o* journaled in a bearing *p* in the lower rail of side structure *b* and having a square inwardly open socket *o'* and a circumferential groove *o''*, being kept in said bearing by a notched plate *q* straddling it and engaged in its groove *o''* and secured to said rail. The other end portion of the shaft is formed by a stub *r* journaled in a bearing *s* in the lower rail of side structure *a* and having a squared inner end *r'* and a circumferential groove *r''*, being kept in the bearing by a notched plate *t* straddling it and engaged in said groove and secured to the rail. There are also two rods *u*, square in cross-section, and jointed by the hinge *v* end to end so as to stand alined with each other (Fig. 2) or folded (Fig. 4), one rod being hinged at its outer end to the stub *r* by the hinge *w* and the other being adapted to enter and fit the square socket *o'* of the stub *o*. So that the torque of the shaft will not impose undue strain on the hinges *v* and *w* there may be an end lug *x* on each rod, one to overlap the stub *r* and the other to overlap the other rod. The levers *n* are mounted on the stubs of the shaft. The shaft has on one of the stubs, as *r*, a handle or lever *y* for turning it, *y'* being a guide for this lever. When the crib is folded, rod *u* adjoining the side structure *b* has its end withdrawn from socket *o'*, whereupon the rods are shifted to the folded position.

Each wheel support, including a fork *z* pivoted on a vertical axis in the lower rail of a side support, and a wheel 2, is adapted to be locked in the position where all the wheels are parallel by the following means: A slide, shown as a heavy wire 3 bent midway its length and shaped so as to form at one end of the slide the spring-fork 3', at the other end a down-turned handle or lug 3'' and between its ends a longitudinal slot 3''', is attached to the under side of the rail by two screws 4 passed through said slot. The spring-fork projects toward the fork *z* and when the latter is in proper position the slide may be moved longitudinally to thrust the fork 3' into fork *z* to lock the latter against turning or to withdraw said fork 3' and unlock fork *z*; preferably fork 3' is beveled, as at 3*, to facilitate its entry into fork *z*. In Figs. 7 to 9 is shown a modified form of wheel-support locking means: The fork *z* has at its crotch a horizontal plate 5 with diametrically opposed pairs of notches 5'. A U-shaped wire clip 6 is slidable vertically in holes 7 in the rail, its movement being limited by the stops 6' and it preferably having its upper end bent over to form a handle 6''; when the clip is forced down, with either pair of notches in registry with its legs, the latter will engage in said notches and lock the wheel support against turning.

When the crib is folded (which will usually be done when the elevating levers are depressed) the mattress support is shifted from the horizontal position and placed in the compartment formed by the housing *a a'* and the (folded) end walls *c*. For its support at this time I provide a pair of hangers 8 each consisting of a strong strip of metal having one end secured to the inside of the lower rail of side structure *a* and its body portion arched and bent downwardly and its free end bent to form an upwardly open hook or socket. The arched portion not only affords the necessary clearance for the arm *l* of the adjoining elevating lever but serves to guide the edge of the mattress support to its seat in the hook or socket and clear of the folded parts *u u* of the shaft when said support is to be stowed in the compartment mentioned.

The top screen 10 is connected with each end of the crib as follows, assuming the crib to be extended as in Figs. 2 and 3 and the screen to be superimposed thereon: Hooks 11 and 12 are respectively pivoted to the edge of the screen adjoining the end of the crib near the back and somewhat to the right

of the center (Fig. 3) of the screen, and their hooks are engaged with headed studs 13 arranged one on the end wall *c* and the other, somewhat lower, on the side structure *a a'*. With these connections the screen can be swung to the dotted position in Fig. 3 where it will hang suspended and may rest against a buffer 14. The hooks may be detached from the studs 13 so as to remove the screen from the crib, if desired.

It will be understood that the mattress adapted to rest on the mattress support may, when the crib is folded, be stowed in the compartment mentioned between the mattress support and the wall *a*.

Having thus fully described my invention, what I claim is:

1. In combination, a frame, a structure to be sustained therein at different elevations, and elevatory supporting means for said structure including a lever fulcrumed in said frame to move in an upright plane and having an arm arched from substantially the fulcrum to the end of the arm and the arched surface of said arm in wiping contact with an under face of said structure.

2. In combination, a frame, a structure to be sustained therein at different elevations, and elevatory supporting means for said structure including a lever fulcrumed in said frame to move in an upright plane, said lever being formed of a length of metal having a part thereof rebent and arched and the arched surface of its arched portion in wiping contact with the under side of said structure.

3. In combination, a frame including two side structures and foldable means connecting them, a structure to be sustained therein, elevatory means supporting the latter structure and movable in each side structure, and means to move said elevatory means in unison including a foldable member extending from one to the other side structure and journaled therein.

4. In combination, a frame including two side structures and foldable means connecting them, a structure to be sustained therein, elevatory means supporting the latter structure and movable in each side structure, and means to move said elevatory means in unison including power transmitting parts journaled in the respective side structures and a foldable member extending from one of said parts to the other and connected to rotate with but disconnectible from one of them and also connected to rotate with the other of them.

5. In a crib or the like, the combination of a frame including a horizontally elongated housing open at the top, a flat structure to be received therein in upright position, and hangers attached to and projecting inwardly and each bent in a curve downwardly from one wall of the housing and having at their free ends upwardly open hooks to receive one edge portion of said structure, said hangers being arched as to their upper surfaces from their hooks to substantially said wall.

In testimony whereof I affix my signature.

GEORGE M. THOMSON.