H. E. HOLBROOK.

FOLDING CRIB.

APPLICATION FILED AUG. 19, 1921.

1,435,299. **Patented Nov. 14, 1922.**

2 SHEETS—SHEET 1.

Fig. 1

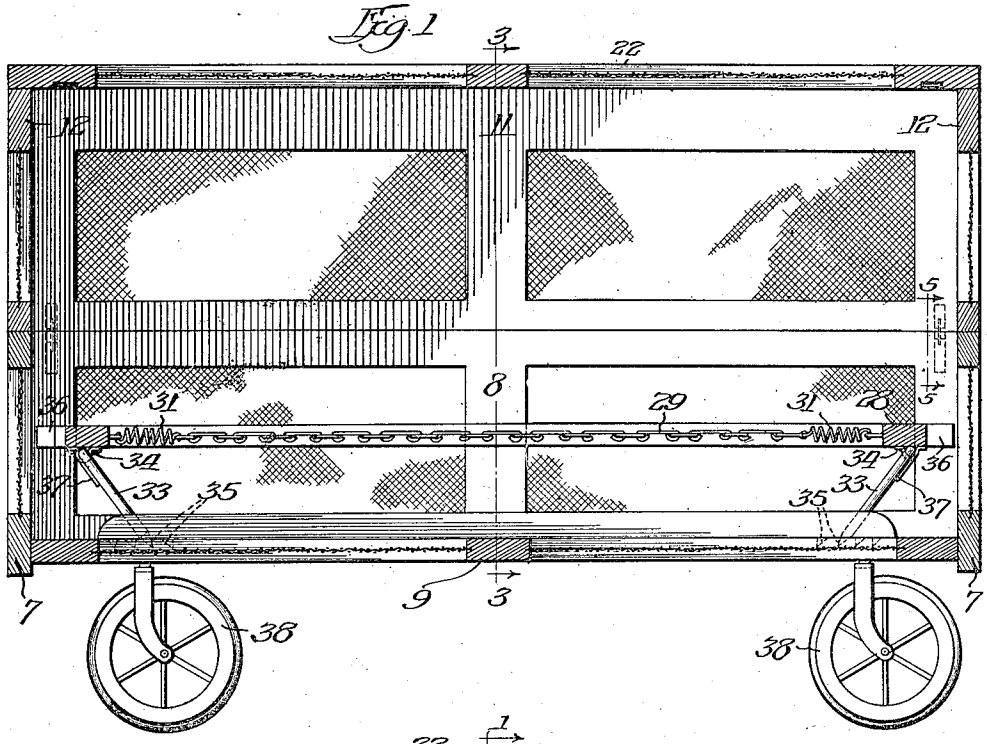
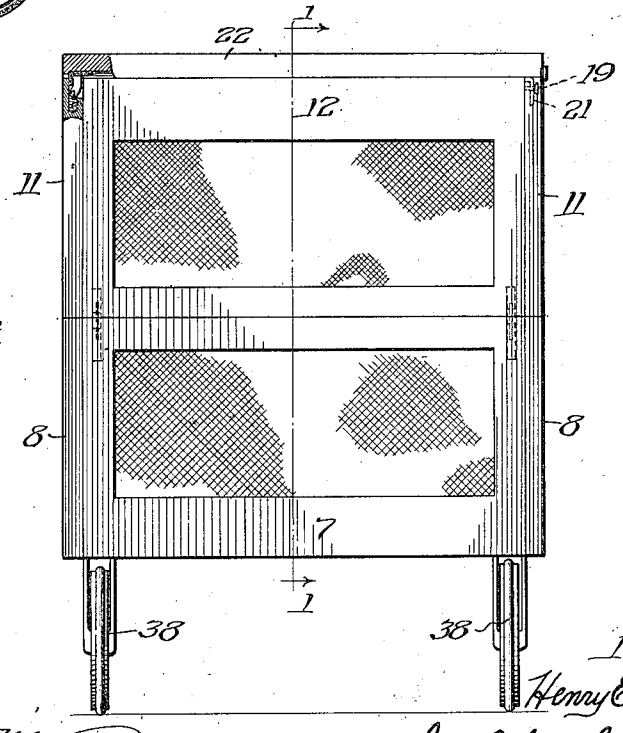


Fig. 2.



Witness:

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2 SHEETS—SHEET 2.

Fig. 3.

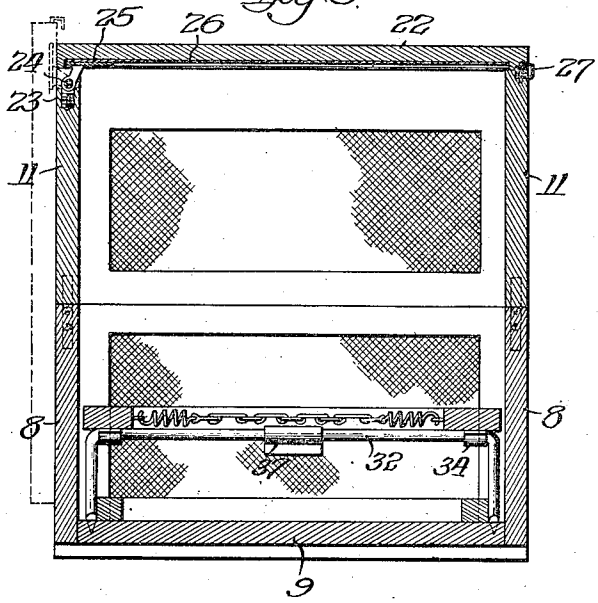


Fig. 5.

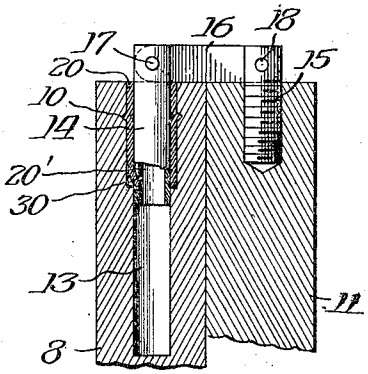


Fig. 4.

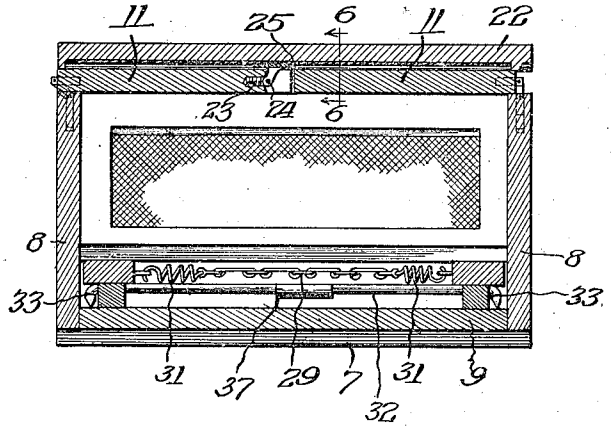
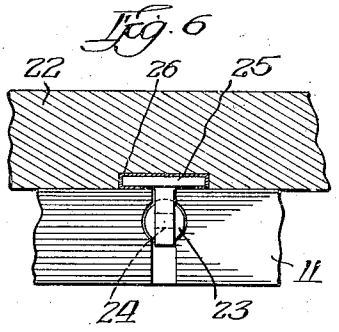


Fig. 6.



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Patented Nov. 14, 1922. 1,435,299

UNITED STATES PATENT OFFICE.

HENRY E. HOLBROOK, OF BOSTON, MASSACHUSETTS.

FOLDING CRIB.

Application filed August 19, 1921. Serial No. 493,518.

To all whom it may concern:

Be it known that I, HENRY E. HOLBROOK, a citizen of the United States, residing at Boston, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Folding Cribs, of which the following is a specification.

This invention relates to folding cribs, and has for one of its primary purposes the provision of a crib which will be entirely enclosed at the top and bottom, as well as the sides and ends with screens which will protect the occupant of the crib against flies and insects and at the same time afford adequate ventilation.

Another object is to provide a crib in which one or more of the upper side and end members may be readily folded outwardly and downwardly to permit access to the interior of the crib, and in which all of the upper side and end members may also be folded inwardly into collapsed position for purposes of shipment or storage, thereby providing a construction which will occupy a minimum of space.

A further object is to provide the crib structure with a top which may be disposed in horizontal position to close the top of the crib or may be swung into vertical position and then lowered so that it is suspended at one side of the crib and projecting very little, if any, above the upper edges of the crib, thus obviating all danger of the top accidentally swinging into closed position with possible resultant injury to a child standing in the crib. The top is also adapted, when the upper side and end members are folded inwardly into collapsed position, to cover these folded end members and lie within the contour of the crib frame so that it covers the folded end members and holds them in position and at the same time occupies a minimum of space.

Another feature of my invention resides in the adjustability of the spring frame with which the crib is equipped, novel means being provided by which the spring frame may be supported in any desired vertical adjusted position.

Other objects and many of the inherent advantages of my invention should be readily appreciated as the same becomes better understood by reference to the following description when considered in connection with the accompanying drawings.

Referring to the drawings—

Fig. 1 is a vertical longitudinal sectional view through a crib showing my invention, taken on the line 1—1 of Fig. 2;

Fig. 2 is an end view of the crib shown in Fig. 1;

Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a similar view showing the crib in collapsed position.

Fig. 5 is an enlarged detail view of one of the concealed hinges; and

Fig. 6 is an enlarged fragmentary view on the line 6—6 of Fig. 4.

From an inspection of the drawings it will be observed that my improved crib comprises end members 7, side members 8 and a bottom member 9, these lower side and end members being rigidly connected together in vertical position and also rigidly connected to the bottom member 9.

To the upper edge of each of the lower side members there is hingedly connected an upper side member 11, and similarly to the lower end members there are pivotally connected upper end members 12. The upper and lower end members and likewise the upper and lower side members are hingedly connected together by concealed hinges which permit the upper members to fold both inwardly and outwardly and when they are vertically disposed in normal position, as shown in Figs. 1, 2 and 3, the hinges are entirely concealed from view and leave smooth interior and exterior surfaces which present a pleasing appearance and offer no projecting corners or edges upon which clothing might be caught and torn.

One of these hinges is shown on an enlarged scale in Fig. 5 by reference to which it will be observed that the lower member, in this instance one of the side members 8, is provided at its upper edge with a socket 13 adapted to slidably receive a tubular shank 14 of the hinge. Likewise the lower edge of the upper member 11 is provided with a socket into which the shank 15 of the hinge is threaded so as to be immovable therein. The two shanks 14 and 15 are connected together by an elongated link 16 connected to the respective shanks by pivot pins 17 and 18, the shanks being slotted longitudinally at their exposed ends to receive the ends of the link 16 which are rounded, as shown, to permit of relative swinging movements be-

tween the shanks and the connecting link about the pivot pins. The upper member 11 is shown in Fig. 5 as folded outwardly against the outer face of the member 8. Obviously, however, it may also be folded inwardly, and when it is disposed in upright position the shank 14 will slide downwardly in the socket 13 so as to permit the lower edge of the upper member 11 to rest upon the upper edge of the member 8 in which position the lower ends of the link 16 will also be disposed in the socket 13. In order to prevent the sliding shank 14 from becoming accidentally wholly withdrawn from the socket 13, I anchor in the socket by striking outwardly one or more projections 10 from its walls a sleeve 20 provided near its lower end with an inwardly projecting resilient finger or latch 30 adapted to enter a slot 20′ formed in the shank 14, when the shank is originally inserted into the socket.

The link 16 serves when the parts are in normal vertical position, to hold the upper member against swinging movement in either direction, but for purposes of additional rigidity, I prefer to equip the side and end members near their upper edges with interlocking devices which securely lock them together. These devices may be of any preferred structure, but in the present instance I have shown the end members 12 as provided with outwardly projecting screws 19 having enlarged heads adapted to enter a slot formed in the inner face of the side members 11, in which slot there is disposed a vertically slidable metal member or plate 21 provided with a key-hole slot adapted to receive the head of the screw 19. The upper end of each plate 21 is accessible at the upper edge of the member 11, and these plates may be slightly lifted permitting the entrance of the screws into the enlarged portion of the key-hole slots, whereupon by depressing the plates the side member is securely locked to the end members.

The crib is also equipped with a top 22, also of screen construction, which is pivotally and slidably attached to the upper edge of one of the side members 11. For the purpose of providing sturdy connection I employ a plurality of hinge structures, best shown in Fig. 3, each comprising a shank 23 seated in a socket formed in the upper edge of the member 11 and pivotally connected by a pin 24 with another shank equipped with a flat head 25 which slidably engages in a metal guideway 26 attached to and extending transversely of the top on the underside thereof. These guideways are substantially channel-shaped in cross section, as shown in Fig. 6, and provided with a downwardly opening slot to accommodate the shank of the head 25. When the top is closed the parts assume the position shown in full lines in Fig. 3, and when it is desirable to open the top it is swung upwardly about the hinge pins 24, and thereupon it is lowered to the dotted line position shown in Fig. 3, wherein the top is suspended from its upper edge in vertical position on one side of the crib. This construction obviates any possibility of accidental closing of the top with possible injury to the occupant of the crib or any one in the vicinity thereof. The top may be locked in closed position by a latch 27 of any preferred construction.

Within the crib structure there is disposed a spring frame 28 equipped with suitable mattress supporting spring fabric of any preferred construction, in the present instance the fabric 29 being shown as ordinary link mesh fabric, attached to the frame by coil springs 31. This frame may either lie flat upon the bottom 9, or may be adjusted to any vertical height above the bottom, and in order to permit such adjustment, I have provided supports comprising at each end a U-shaped rod 32, the down-turned ends 33 of which form legs. These rods are pivotally attached to the bottom of the spring frame by eyes or hangers 34 and when the frame is raised they will swing by gravity toward the vertical position to support the frame in the position to which it has been elevated. The bottom member 9 is provided at each side with notches 35 in which the lower ends of the legs 33 are adapted to engage, and obviously when the frame is elevated the engagement of these legs in the notches will hold the frame in its elevated position. In order that the frame may be readily lowered, when desired, each end thereof is provided substantially at its center with a cut-away portion providing a hand hole 36, through which the fingers may be extended, and the rod is provided intermediate its ends with a finger piece 37 which may be pushed by the fingers extending through the hand holes 36 to dispose the supporting legs 33 flat against the bottom of the spring frame, whereupon the frame may be lowered flat against the bottom 9. The bottom member 9 is preferably provided with a plurality of caster wheels 38 detachably connected therewith, so that when it is desirable to collapse the crib for storage or transportation, the wheels can be readily removed and placed inside the crib where they will take up but little space.

When assembled as shown in Fig. 1, the crib may be readily trundled from place to place, the top may be swung from open to closed position permitting access to the interior of the crib, and one or more of the side and end members may be folded outwardly, if desired. When the crib is closed the occupant is fully protected against flies and insects, at the same time adequate ventilation through the screen enclosure is afforded. When it is desired to collapse the crib,

the caster wheels are first removed and placed inside the crib whereupon the end members are folded inwardly, then the side member free from the top is folded inwardly and then the top carrying side member is folded inwardly and the top is slid on its supporting hinges until it is disposed squarely over the underlying parts, all as shown in Fig. 4. In this position of the parts, the crib becomes a rectangular, compact article which will occupy a minimum of space in shipment or storage. When it is again desired for use the parts may be readily swung to their normal operative position, and the crib may be quickly set up without the use of tools of any kind and without manipulation of bolts or screws.

It is believed that my invention, its structure, mode of operation and many of its attendant advantages will be understood and appreciated from the foregoing without further description, and while I have shown and described a preferred embodiment, obviously the details of structure may be varied within considerable limits without departing from the essence of the invention as defined in the following claims.

I claim:

1. In a folding crib, the combination of a frame comprising relatively stationary side and end members, upper side and end members hinged to said respective stationary members so as to fold inwardly and outwardly thereon, means for detachably locking adjacent upper members together in upright position, and a top pivotally and slidably attached to one of said upper members so as to be movable from a horizontal position over said members to a vertical position at one side of said crib.

2. In a folding crib, the combination of a frame comprising vertically disposed side and end members, upper side and end members normally disposed in vertical position above the respective frame members, means concealed from view when the members are in normal position for hingedly connecting said upper members to their respective frame members, and permitting said upper members to fold inwardly and outwardly, a top adapted to cover the crib structure formed by said members, and means for pivotally and slidably connecting said top to one of said upper members so as to permit the top to be swung from its horizontal closed position to a vertical position at one side of the crib.

3. In a folding crib, the combination of a frame comprising vertically disposed side and end members, upper side and end members superposed thereon, concealed means hingedly connecting said upper members to their respective frame members, permitting said upper frame members to fold inwardly and outwardly, concealed means for locking said upper members together in upright position, a top provided on its under face with transversely extending guide ways, and hinges attached to one of said upper side members and slidably engaged in said guide ways, whereby said top may be moved from closed position over said members to a vertical position where it is suspended at one side of the crib.

4. In a folding crib, the combination of lower side and end members fixedly connected together, upper side and end members hinged to said lower members, and a top pivotally and slidably connected to the upper edge of one of said upper side members so as to be movable from a vertical position at one side of said crib to a horizontal position closing the top of the crib.

5. In a folding crib, the combination of lower side and end members rigidly connected together, upper side and end members hinged to the respective lower side and end members, and a top pivotally and slidably connected to one of said side members, said upper side and end members being foldable inwardly into collapsed position with said top disposed thereover and covering said folded in members.

6. In a folding crib, the combination of a frame comprising relatively stationary side and end members, upper side and end members hinged to said respective stationary members, means for detachably locking adjacent upper members together in upright position, a top and means entirely concealed from view when the top is closed for pivotally and slidably attaching said top to one of said upper members so that the same is movable from a horizontal position over said members to a vertical position at one side of said crib.

7. In a folding crib, the combination of a frame comprising vertically disposed side and end members, upper side and end members normally disposed in vertical position above the respective frame members, means concealed from view when the members are in normal position for hingedly connecting said upper members to their respective frame members, a top adapted to cover the crib structure formed by said members, and means concealed from view when the top is closed for pivotally and slidaby connecting said top to one of said upper members so as to permit the top to be swung from its horizontal closed position to a vertical position at one side of the crib.

HENRY E. HOLBROOK.