(No Model.)

W. H. HOWELL.

CHILD'S SUSPENDED ADJUSTABLE CHAIR AND BED.

No. 305,003. Patented Sept. 9, 1884.

Fig. 1.

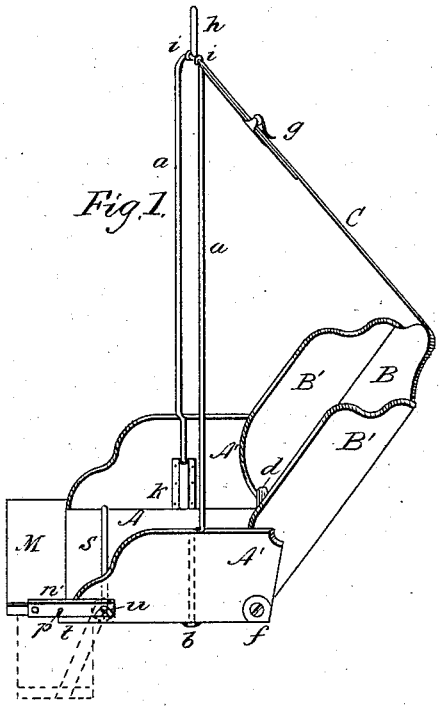


Fig. 2.

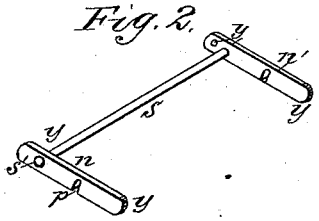


Fig. 3.

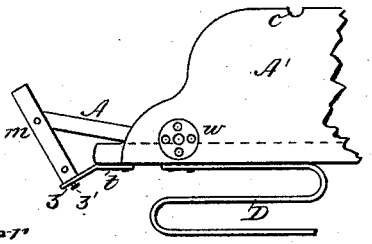


Fig. 4.

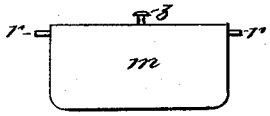


Fig. 5.

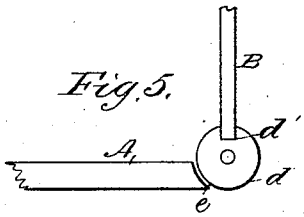
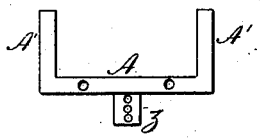


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM H. HOWELL, OF WESTFIELD, NEW YORK.

CHILD'S SUSPENDED ADJUSTABLE CHAIR AND BED.

SPECIFICATION forming part of Letters Patent No. 305,003, dated September 9, 1884.

Application filed April 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HOWELL, a citizen of the United States, residing at Westfield, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in a Child's Suspended and Adjustable Chair and Bed, of which the following is a specification, reference being had therein to the accompanying drawings.

These improvements relate to a combined chair and bed that is suspended from a spiral spring, and that has an adjustable or hinged back; and the invention consists in the improved construction of the various parts, as fully hereinafter set forth.

In the drawings, Figure 1 is a perspective of the whole device; Fig. 2, detail view of the side irons and rod removed; Fig. 3, detail of side of seat, showing the bail-slot therein, the bottom spring, and also the disk, &c., for fastening the side irons and holding the extension in position; Fig. 4, extension-piece removed; Fig. 5, portion of bottom, back, and roller-hinge removed, and showing their construction and connection; Fig. 6, front view, detail of front of seat with its angle-iron.

A represents the seat, with raised side pieces A′ A′, and B the back, with its side pieces B′ B′. The whole is suspended by a single strong wire bail, *a*, arranged as follows: Both ends of the bail come through the seat-bottom close to the sides A′ A′, and a nut, *b*, screwed onto each end. This supports the device. A slot, *c*, is cut in each of the side pieces in the top edge, and the bail bent into them. Then it is bent up into a gentle curve at the sides to the apex, where it is flattened to receive around it the back-strap C. This is a simple and important way of attaching the bail, as it keeps the device firm, and, being set into the slots *c c*, prevents the body from rocking or swaying, except with the bail. It also does away with all side cords, sheaves, rings, links, &c., generally used. A metal covering piece or stay, *k*, is usually put over the bail inside the side pieces A′, (see Fig. 1,) giving additional stability, as well as allowing the bail to be withdrawn without interfering with the upholstering of the seat and sides.

The back B and seat A are hinged together by a roller, *d*, working in a segmental groove, *e*, in the back edge of seat A, thereby making a close connection as well as giving some support to the roller *d*. In this roller is cut a groove, *d′*, in which is set the back B, (see Fig. 5,) which is for the important purpose of preventing the back from warping, as they are apt to do. There will be ferrules on the ends of the roller, and through the sides A′ A′ will be set screws or rods for the roller and back to swing on, and washers on the sides of the side pieces A′ A′, either permanent or loose, for the rod or screw-head to work against. Thus the back is made adjustable at any angle required by this hinge, in connection with a back-strap, C, of leather or any flexible material. (instead of the usual metal back-brace,) one end fastened to the back B in any suitable manner, the other end carried around the apex or flat part of the bail *a*, and fastened at any point by a buckle, eccentric, as shown, or other suitable fastener. The back-strap, being of a flexible material, makes the device lighter, and prevents injuring a child's head when it is put in, or rising, &c., as metal ones are apt to do. A clutch or hook, *h*, is fastened to the apex of the bail, to which the usual spiral spring is hooked. (Not shown.) Also, washers *i i* may be fastened to the top of the bail, if necessary, to prevent slipping of either hook or strap.

In addition to the seat I provide an adjustable extension to the same. This consists of a wooden piece, *m*, with side irons, *n n′*, pivoted at their outer ends thereto. About midway in each iron is a notch, *p*, and a nail or pin, *r*, on or in the sides of the piece *m* fits therein, preventing the piece from swinging out, and, in connection with the projection *t* of seat A or pins driven therein, keeps the extension-piece *m* in line with the seat, in connection with the side irons attached by their inner ends to the seat, as follows: A rod, *s*, is fastened solid with a head, *s′*, to the (left-hand) side iron *n*, and always moves with the rod. The other end of the rod is passed through the side pieces A′ A′ and side iron *n′*, and ends with a thumb-nut, *u*, thereon. (See Fig. 1.) A circular plate, *w*, (see Fig. 3,) is fastened to each side piece A, the rod *s* running through

both. In these plates are a series of holes or notches, as shown, and on the inside of each side iron *n* is a short projecting pin, *y*. (See Fig. 2.) When the thumb-nut *u* is turned up, it draws together these ends of the side irons and throws these pins *y* into the holes in plates *w*, and thus clamps or tightly confines the extension in any position desired, either as shown in dotted lines, Fig. 1, or up as a table, or in front as a barrier. To hold this extension at an angle I pivot a flat piece of iron, *z*, to the bottom of the seat A, having its front end bent down at an angle and projecting beyond the front of seat A. (See Figs. 3 and 6.) In this are two or more holes (or ratchet-teeth,) and in the inner edge of the extension is a ratchet or a pin, *z'*, to set in said holes, holding it in about the position shown in Fig. 3—that is, at an angle—preventing the occupant of the device from sliding out; or, if a child, the playthings from dropping out. When the extension is in other positions, the pivoted iron piece *z* is swung under the seat out of the way. On the bottom of the seat will be fastened, also, a spring or springs, D D, as shown, or a series of spirals, so that the device can set thereon near the floor, and do away temporarily (or altogether) with the usual suspended spiral spring at top.

If desired, wheels can easily be attached to the sides and the whole converted into a perambulator or carriage. The device can be made large enough for grown people, or so small as to make a toy for a child, or to put a doll in, either as a bed, chair, or hammock.

The spring or springs D D are made preferably as shown, consisting of a **C** or **S** shape, one each side, so that the chair will not tip endwise or sidewise.

I am aware that combined suspended chairs and beds have heretofore been known with pivoted back and adjustable strap to support it, and adjustable front or foot piece, and that baby-jumpers with coiled springs under them have been used, and I do not claim such features, broadly.

I claim—

1. In a suspended chair and bed, the combination, with the seat-bottom A, curved, as shown at *e*, at the rear end, sides A' A', and back B, of the roller *d*, pivoted in the sides A' and having the lower edge of the back set into a longitudinal groove formed therein, whereby a smooth round pivot is provided, part of which is always below the upper surface of the bottom, thereby preventing pinching or chafing.

2. In a suspended chair or bed, the combination, with the bottom A and sides A' A', provided with the covering-pieces *k*, of the bail *a*, made of a single piece of wire, as described, bent over the top edges of the sides A' A' in notches *c c* and passed down through the covering-pieces *k* and secured beneath the seat-bottom, as set forth.

3. In combination with the seat A *t* and sides A' A', the notched plates *w w* thereon and the side irons, *n n'*, pivoted thereto, one rigidly attached to rod *s* and moving with it, each having a projection, *y y*, to set into the notched plates, the other ends of side irons, *n n'*, pivoted to an extension, *m*, all substantially as and for the purpose specified.

4. The combination, with the seat A, provided with the pins *t*, sides A', and extension *m*, of the side irons, *n n'*, pivoted to the seat and to the extensions, and provided with the notches *p* about their mid-length adapted to rest over the pins *t*, whereby the side irons are supported at this point and held firmly against longitudinal movement over the pins, as set forth.

5. In combination with the extension *m* and seat A, the side irons, *n n'*, pivoted to the extension and held in any desired position by the rod *s*, notched plates *w w*, and thumb-nut *u* on rod *s*, all substantially as specified.

6. In combination with the bottom A of the chair or bed, the springs D D of **C** or **S** form, and the bail *a a* and adjustable strap C, substantially as and for the purpose specified.

7. In combination with the bottom A, the pivoted angling iron *z*, having holes or teeth therein, and the swinging extension *m n n'*, having a projecting pin, *z'*, to engage said iron *z*, all substantially as specified.

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

WILLIAM H. HOWELL.

Witnesses:

E. S. BARTHOLOMEW,

JOHN F. SHAW.