

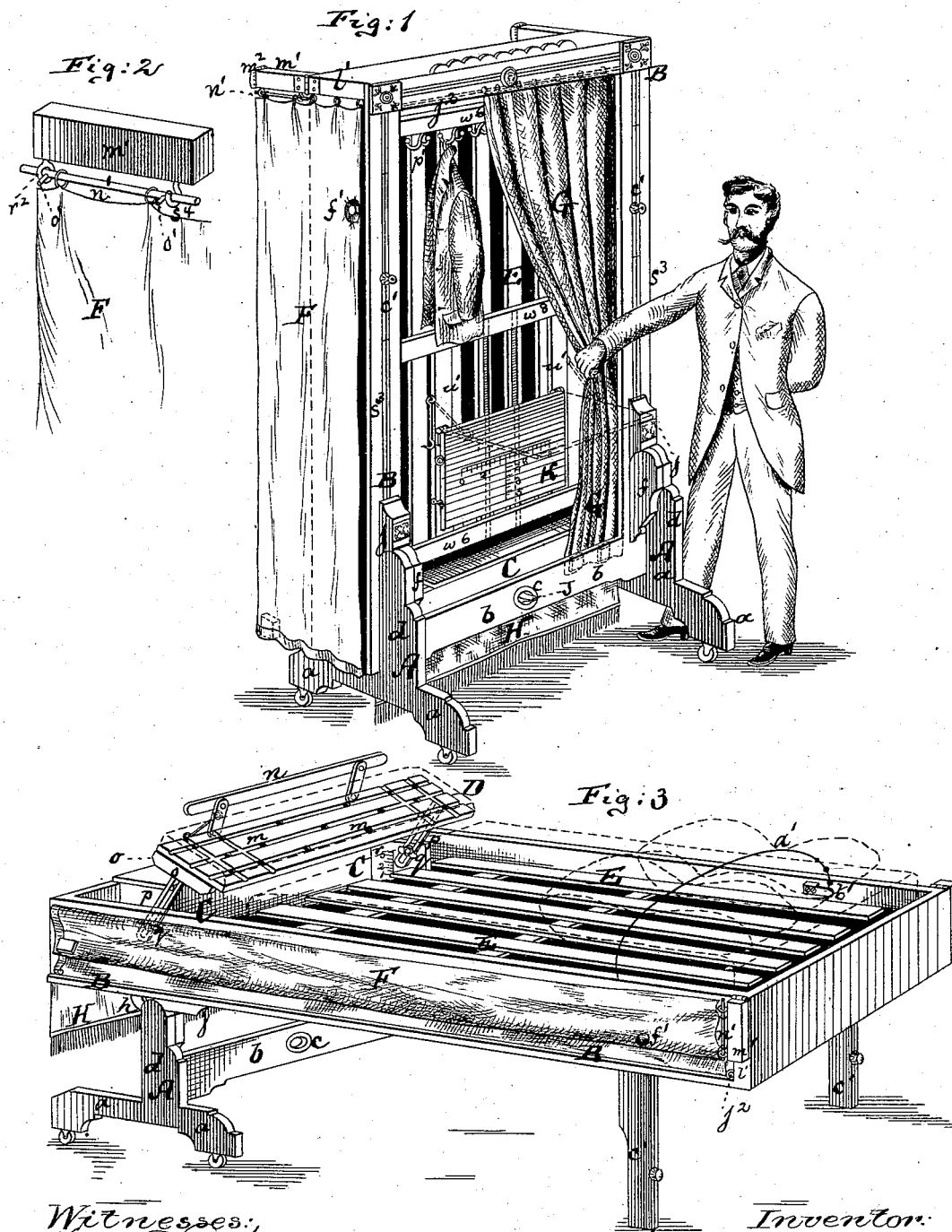
(No Model.)

2 Sheets—Sheet 1.

A. W. LOZIER.
SWINGING BEDSTEAD.

No. 261,617.

Patented July 25, 1882.



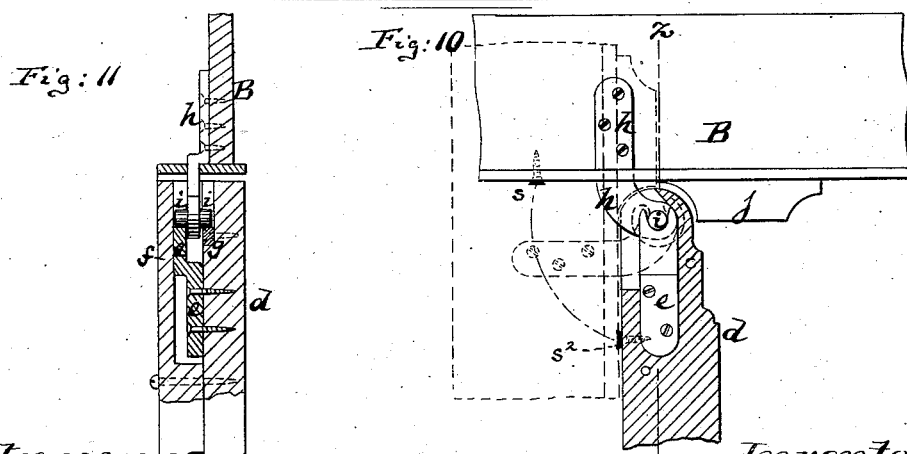
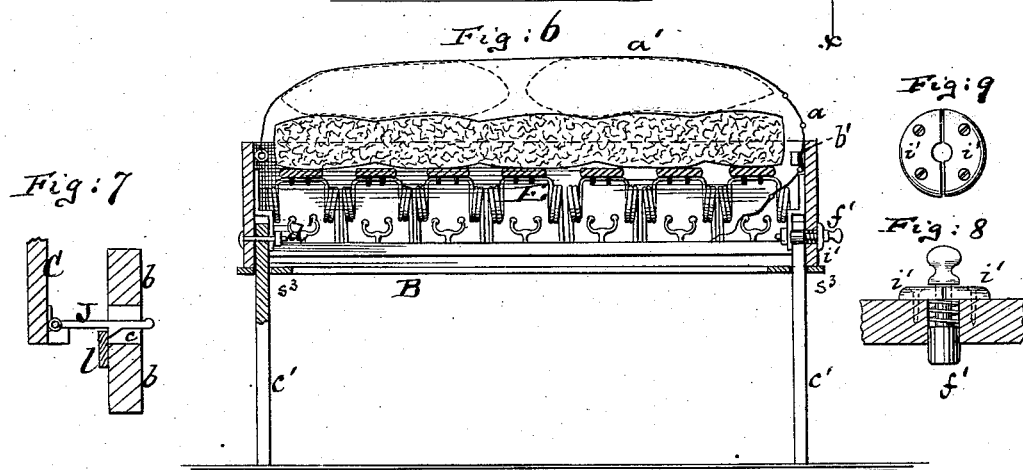
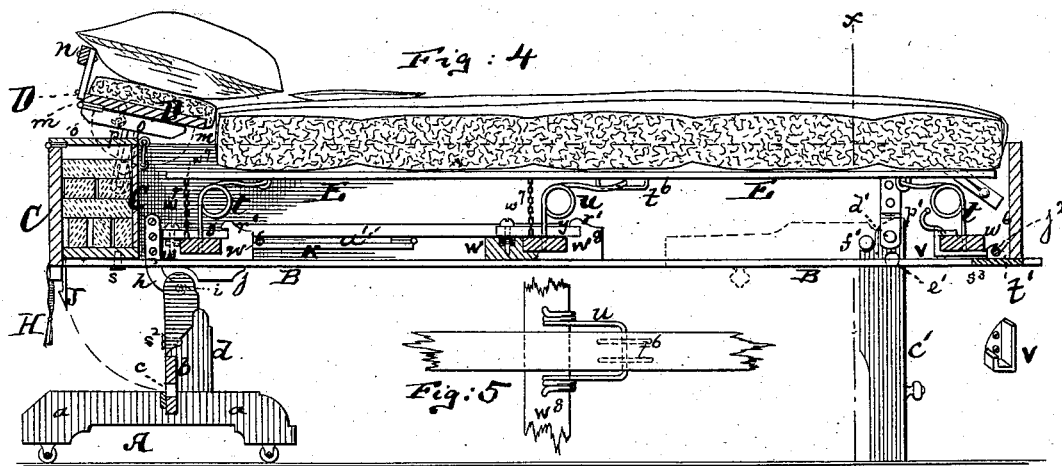
Witnesses:
Henry H. Parker.
John C. Tunbridge

Inventor:
Abraham W. Lozier
by his attorneys
Briesau & Betts

A. W. LOZIER.
SWINGING BEDSTEAD.

No. 261,617.

Patented July 25, 1882.



Witnesses
Henry A. Parker
John C. Dunbridge.

Inventor.
Abraham W. Lozier
by his attorneys
Brisson & Betts

UNITED STATES PATENT OFFICE.

ABRAHAM W. LOZIER, OF NEW YORK, N. Y.

SWINGING BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 261,617, dated July 25, 1882.

Application filed October 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM W. LOZIER, of New York, in the county and State of New York, have invented an Improved Swinging Bedstead, of which the following is a specification.

Figure 1 is a perspective view of my improved swinging bedstead in its upright position. Fig. 2 is a detail perspective view of a portion of the curtain at the side thereof, showing the method of hanging the same. Fig. 3 is a perspective view of the bedstead, showing it when lowered ready for use. Fig. 4 is a vertical longitudinal central section of the bedstead when lowered ready for use. Fig. 5 is a plan view, showing the arrangement of the middle bed-springs. Fig. 6 is a cross-section through Fig. 4 on the line *x x*. Fig. 7 is a detail vertical section, showing the locking-catch which holds the bed-frame in its upright position. Fig. 8 is a detail vertical section of the catch for holding or lowering the movable legs of the bed. Fig. 9 is a face view of the plate by which the catch shown in Fig. 8 is held to the frame. Fig. 10 is a vertical section, showing the arrangement by which the bed-frame is pivoted and turned from its vertical to its horizontal position. Fig. 11 is a cross-section of Fig. 10 on the line *z z*.

My invention relates to improvements in swinging bedsteads; and it consists in the novel arrangement and adaptation of parts hereinafter more fully described, and pointed out in the claims.

Swinging bedsteads have hitherto necessarily been expensive structures, which involved the use of a large amount, and generally of a costly kind, of wood where it was desired to produce a good appearance. My invention is intended to produce a cheap and simple article of swinging bedstead, which shall at the same time present a good appearance and be capable of withstanding a greater amount of hard usage than the ordinary swinging bedstead without getting out of order. It can also be more readily and thoroughly cleansed and easily adapted to various uses, and can be easily separated for oiling or cleaning or for transportation, and afterward put together without the use of tools, besides being easily and completely ventilated and adapted to the faces of walls.

In the drawings, A represents the stationary frame-work of my bedstead. This consists of two end pieces, *a a*, set parallel to each other, and mounted on rollers, if so desired. These end pieces, *a a*, are firmly joined by a cross-piece, *b*, which has through it a hole, *c*, through which may project the catch J, which serves to hold the bedstead in its vertical position. The upper part of each of the end pieces, *a*, carries a projecting vertical post or standard, *d*, which holds and upon which is pivoted the revolving portion of the bedstead, that can be turned into a horizontal or vertical position, as desired, or be lifted out from the standards for oiling or transportation. The construction of this post *d* is shown clearly in Figs. 10 and 11.

The letter *e* represents a bar fastened to the post *d*, and just above the point where it is fastened bent outward at an angle and then upward again, so as to leave a narrow space between it and the post *d*. The outer side of this bar *e* is hidden beneath a plank, *f*, which is fastened to the post *d* in any suitable manner, but which serves simply to conceal the bar *e*, and is not called upon to bear any of the weight of the moving frame, that rests wholly on the bar *e* and on the concave block *g*, which is also fastened to the post *d* between it and the upper end of the bar *e*. This bar *e* and block *g* both have circular bearings or notches in their upper ends. Into these bearings fit gudgeons on the arm *h*. This arm *h* is firmly fastened to the movable frame B of the bedstead at a distance from its bottom when in a vertical position about equal to the height of the post *d*. The lower end of the arm *h* is curved forward below the frame B. The lower part of the arm *h* is provided with the circular gudgeons *i i*, one on each side thereof, which fit, when the bed-frame is placed in position, upon the standards *d*, one of them into the circular bearing on top of the bar *e* and the other into the circular bearing in the block *g*, as already described, and the arm *h* turns freely backward and forward on its said bearings. The bar *e* and block *g* are centered together in such a way that when the bedstead is in its vertical position the bottom of the bedstead will set close against the post *d*, as shown by dotted lines in Fig. 10; but when the bedstead is in its horizontal position, and while it is be-

ing turned from the horizontal to the vertical position, or the other way, the frame of the bedstead will be held above the post *d*, and will not touch the same until it again reaches the vertical position.

To the lower side of the frame B, being the lower side when said frame is in the horizontal position, is fastened in front of the arm *h* a block, *j*, which is in line with the standard *d* and plank *f* on each side of the bed, and has its then rear end cut concave and somewhat eccentric to the upper rounded end of the post *d* and plank *f*. When the frame B is swung up into the vertical position the block *j* fits nicely upon the upper end of post *d* and plank *f*, and serves to conceal the joint or pivot of frame B. As soon as the frame B is swung down into the horizontal position the block *j* leaves contact with the parts *d* and *f*, owing to the eccentric form of its end, and does not therefore, by binding or otherwise, interfere with the free movement of the frame B.

B represents the rectangular frame of the bedstead, open on top and bottom. This frame B, by means of the arms *h*, is pivoted on the standards *d*, as already described, one of these arms *h* being on each side of the frame. At that end of the frame B which forms the bottom when it is swung into a vertical position is a box, C, having a cover, which may be fastened by any ordinary means. Into this box may be put brick or any heavy substance to act as a counter-weight and aid in bringing the bed to its vertical position and holding it there. The box may also serve as a receptacle for valuables. From one side of this box or from the frame of the bed, and at a point which will enable it to pass through the hole *e* of the cross-piece *b*, projects the pivoted catch J, which is shown in detail in Fig. 7, and which is preferably of the form there shown. Its own weight tends to throw it downward and engage its barbed portion with the lip or catch-plate *l*, that is fastened to the cross-piece *b*. The catch passes through the hole *e* and engages with the lip *l* when the bed is swung into a vertical position. The bed is thus held firmly by the catch, and if it is desired to lower it the catch J may be conveniently swung up and disengaged from the plate *l* by the foot, when the frame B will swing freely on its pivot into a horizontal position.

To the frame B, at the end which is to be used for the head of the bed, and which is the end having the box C, is attached the adjustable bolster D. This consists of a slab, *m*, of wood or other suitable material, through which holes may be bored, and the surface of which may be grooved, as shown in the drawings, for the purpose of ventilation or for the application of a medicated sponge under the pillow. This slab *m* is intended to support the pillow, and has at its back a rail, *n*, which consists of a slat fastened to two upright pieces, which are in turn fastened to the slab *m*, these fastenings being pivotal connections, which permit

the back rail, *n*, to be pushed sidewise and downward out of the way on either side. The rail *n* may be rigidly held upright by a small hook connecting it to the frame. This rail *n* is designed to keep the pillow from slipping backward. The slab *m* is fastened by a hinge-connection to end pieces, *o*, one over each side of the bed-frame, and these pieces *o* have fastened to their bottoms slotted bars *p*, which slide up and down on pins set firmly into the bed-frame on either side. These slotted bars *p* may be stopped and fixed firmly in any desired position by the thumb-nuts *q*, which fit over the pins, and may be screwed down, so as to force a spring-washer against the slotted bars to hold them. A graduated scale, *r*, marked on the inside of either side of the bed-frame, renders possible the exact adjustment of the two bars *p*, so that the bolster D shall be of the same height on one side as on the other, and the arrangement of the slotted bars *p* and nuts *q* enables the bolster to be adjusted in many different positions. A screw or stop, *s*, is fitted into that portion of the bed-frame B which comes against the post *d* when the bed is vertical. At the back of the post *d* is an adjustable screw or stop, *s*², which, in the vertical position of the frame B, is struck by the stop *s*. These adjustable stops permit the adjustment of the frame B at different distances from the posts *d*, so as to compensate for irregularity in the planes made between the wall and the floor of the room. Either the stops *s* or the stops *s*² are made adjustable.

E is the spring-bed, which is set into the bed-frame B, and may be of any ordinary kind. I find it advantageous, however, to fasten the springs of the bed in the manner shown in Fig. 4, which I believe to be novel with me.

t t represent the end springs of the spring-bed, which are the ordinary coiled springs having their lower ends firmly fastened in the lower cross-bars of the spring-bed, and having their upper ends fastened to the upper slats of the bed E by staples or otherwise. The central springs, *u*, however, though fastened at the bottom in the same manner as the springs *t*, have the upper ends loose either by being passed through long staples *t*², as shown, which leaves the upper ends of the spring free to play backward and forward therein, or by merely resting their upper ends loosely under the lower sides of the upper slats. This arrangement makes the bed easy, while it tends to prevent the breaking of the middle springs, which have the greater portion of the weight to bear. The upper loose ends of the springs *u* may carry suitable friction-rollers.

The upper longitudinal springing slats of the bed E are held down to the lower end cross-bars, *w*⁶, by short chains *w*⁷, as shown.

The springs *t* and *u* may be fastened horizontally into the sides of the cross-pieces holding them, instead of vertically, as shown in the drawings. This will throw the coil of the springs alongside the said cross-bars, instead

of above them, and narrow the distance between the upper and lower slats.

The spring-bed E is fastened into the frame B by slipping the cross-bar w^6 at one end into box-shaped castings v , one of which is fastened to the frame B on the inside of each side thereof near the foot end of the frame B. A separate perspective view of the shape of these castings v is given near Fig. 4, and shows that they are adapted to receive the cross-bar w^6 , and hold it firmly in place when slipped in. The spring-bed E is also held at its central portion and at its other (head) end by having its central cross-bar, w^2 , and head cross-bars w^6 slipped into recessed blocks w , which are fastened to the bed-frame B. Latches y , revolving on screw-pins that are set into the blocks w , each latch bearing on a spring-washer that embraces the pivot, serve to engage over the cross-bars and catch under hook-projections r of the blocks w , and hold the cross-bars down. These latches y are formed on either side of the frame B. The spring-washers hold the latches in any desirable position when putting in the spring-frame.

Figs. 3 and 6 show my arrangement for fastening the pillows so that they shall not fall out when the bed is to be placed in a vertical position. This consists in a cord, a' , fastened at one end on the side of the frame B, under which cord the pillows are placed when the bed is to be raised. The other end of the cord, which is knotted, is then passed into a cleat or catch, b' , on the opposite side of the bed-frame, and drawn up until the cord is tight, when one of the knots is slipped into the catch b' .

The end pieces, a , and standards d form the legs of the bed at one end when it is in a horizontal position. The legs at the other end are formed by pieces c' , which are held by pivots d' in each side of the frame B. These legs c' play through slots in the facing s^3 of the bed-frame B, and have through them each a hole, e' , at the upper end, through which slips a spring-bolt, f' , holding the legs in place, and back within the frame B when it is vertical. (See dotted lines in Fig. 4.) When the frame is to be lowered the spring-bolts f on either side must be pushed or pulled outward, so that the bolts shall disengage from the holes e' in the legs c' , when these legs can be swung or will naturally fall downward until they are locked firmly at right angles to the frame B by means of the spring-bolts f' engaging over shoulders at the upper ends of said legs. (See full lines in Fig. 4.) The spring-bolts f' are either made with projecting handles, which may penetrate through the side curtain of the bed, a suitable button-hole being left for that purpose, or with flat heads fitting close to the frame that can readily be pushed outward from within.

The bolt f' is shown in detail in Fig. 8, and consists of a central rod forming a handle or knob at one end and a bolt at the other, be-

tween which is a coiled spring. This bolt f' is inserted through the side of the bed-frame, and two semi-annular plates, v' , are slipped on and secured so as to catch inside of the handle and act as a shoulder for the spring to press against when the handle is moved outward.

To cover and conceal the front of the bed when it is in a vertical position, a curtain, G, is hung, which may be mounted on a wire or roller, j^2 , so as to be easily moved backward and forward or up and down. This wire or roller j^2 is set into slotted side bearings, t' , one on each side of the frame, and cut at such an angle that the wire or the gudgeons of the roller will be held therein in any position of the moving frame B. This curtain G is weighted at the bottom, the weights moving horizontally backward and forward back of the cross-piece b ; or a wire with sliding rings may be placed at the bottom, also behind b . The sides of the curtain slip behind the facing-strips s^3 at the sides of the frame B.

In front of the spring-bed E, as it stands in a vertical position, may be fastened a desk-board, K, which is hinged to a portion of the bed, E, so as to be moved upward into the horizontal position shown by dotted lines in Fig. 1, and is there held by a suitable hook or latch, and constitutes a desk or table. This desk K, when not in use, is folded closely against the spring-bed E, locked to its face in suitable manner, and when thus locked, and when the bed is in the horizontal position, forms a support for articles stuffed between it and the bed-slats. Upon the board K may be marked a graduated scale for measuring, as shown in the drawings. At the sides of the bed hang curtains F, one on each side. A portion of each curtain F is fastened or hooked at the top to the main frame B of the bed, as at l' , while the other portion, as is shown on a large scale in Fig. 2, is hung by rings from a rod, n' , which rod is held by a ring, r^2 , and a hook, s^4 , that are fastened into an extension-piece, m' , which is hinged to the bed-frame B. The rod n' is provided with projections o' , which, coming between the suspension-hook s^4 and ring r^2 , prevent it from slipping out of its supports. The hinging of the bar m' to the frame B allows the curtain F to be folded over, as shown in Fig. 3, when the bed is in its horizontal position. The rear end of the extended bar m' has a cushion, m^2 , Fig. 1, to protect the wall. This curtain F is weighted at the lower end and serves to conceal the wood-work and any exposed bed-clothes, and so the cheapest kind of wood may be used for the frame except in its exposed portions. Hooks p' are fastened along that cross-piece of the spring-bed E which will come uppermost when it is in a vertical position, and may be used for suspending articles of clothing, as shown in Fig. 1. A short curtain, H, fastened at the lower end of the frame B, adjusts itself in either the horizontal or vertical position of the bed to prevent persons from looking under

it. Slats *u u'* are affixed to the front face of the vertical spring-bed frame, forming, together with the slats of the spring-bed, a convenient clothes-press or receptacle for small parcels. Access to this clothes-press is obtained by the openings left at the sides of the outer slats, *u'*.

It will be seen that when the bed is upright its face will consist of the framing *s*³ and curtain G. The latter folds partly behind the former. The legs *c'*, folding into *s*³, are effectively concealed, and yet within reach. Thus the entire structure is light, inexpensive, and of fair appearance. By having the frame B open-faced the spring-bed is exposed and easily cleaned and ventilated. Ventilation at night is secured through the slots in the facing *s*³, which slots, during day-time, are filled by the legs *c'*.

I claim—

1. In combination with a pivoted bedstead and its extension-bar *m'*, having ring *r*² and hook *s*⁴, the curtain-rod *n'*, provided with the projections *o' o'* and adapted for the curtain F, substantially as shown and described.

2. The combination of the slab *m*, cross-pieces *o o*, and hinge-connection between said slab and cross-pieces with the folding rail *n*, slotted bars *p p*, and clamping devices *q* on frame B, substantially as shown and described.

3. The combination of the end piece, *a*, post *d*, bar *e*, and block *g* with the arm *h*, rigidly attached to the frame B of a swinging bed, and turning in and upon the bar *e* and block *g*, substantially as shown and described.

4. The pivoted frame B, having covering-plates *j*, and combined with the supporting-standards A, to which said frame is pivoted, said plate and standard having their ends shaped eccentrically, substantially as specified.

5. In a swinging bed, the combination of the swinging frame B, provided with a movable catch, J, with the stationary cross-piece *b*, having aperture *c*, and catch-plate *l*, all arranged to give access to said catch when locked, substantially as shown and described.

6. The combination of swinging bed-frame B, standard A, and adjustable stop *s*², substantially as specified.

7. The bed-frame B, provided with the recessed blocks *w*, in combination with the spring-bed E, setting in said recessed blocks, and with the spring-latches *y y* to lock the spring-bed to the said blocks, substantially as shown and described.

8. In a swinging bed, the combination of the frame B, having arms *h*, with the standards A, having posts *d* and bearings thereon, and with the spring-bed E, substantially as shown and described.

9. The swinging bed-frame B, combined with stationary support and with the curtain H, which is attached to one end of the frame B to serve its purpose when the frame B is in the horizontal and also when in the vertical position, substantially as specified.

10. A combined bed and desk consisting of the spring-bed E, open frame B, and of the lid K, which is hinged to the spring-bed to form a support for articles when the bed is horizontal and a desk when vertical, substantially as shown and described.

11. In combination with swinging bed-frame B, the folding bar *m'*, hinged thereto, and the curtain F, suspended therefrom, substantially as herein shown and described.

12. A swinging bed composed of the standards A, bed-frame B, spring-bed E, bolster D, box C, pivoted legs *c' c'*, spring-bolt *f'*, and catch J, all arranged substantially as shown and described.

13. In a swinging bedstead having an open front, the curtain G, arranged over said open front and fitting behind the rim of the frame, substantially as shown and described.

14. The combination of the side rails, *s*³, provided with slots, with the swinging legs *c'*, fitting in said slots, substantially as shown and described.

15. The combined bed and clothes-press consisting of the bed-frame B, the spring-bed E, and of the rods *w'*, substantially as herein shown and described.

16. The open bed-frame B, mounted on pivots, and provided on its inner side, behind its top rail, with concealed hooks *t'*, rod *j*², inserted therein, and curtain G upon said rod, substantially as shown and described.

17. A swinging bedstead having frame B, with open face, a spring-bed, and a curtain, G, all arranged to have the bed freely placed therein, ventilated when in use, and its contents concealed when in an upright position, substantially as specified.

A. W. LOZIER.

Witnesses:

SAML. R. BETTS,

WILLY G. E. SCHULTZ.