(No Model.) 4 Sheets—Sheet 1.

W. A. MORRISON.

CABINET FOLDING BEDSTEAD.

No. 262,817. Patented Aug. 15, 1882.

Fig. 1.

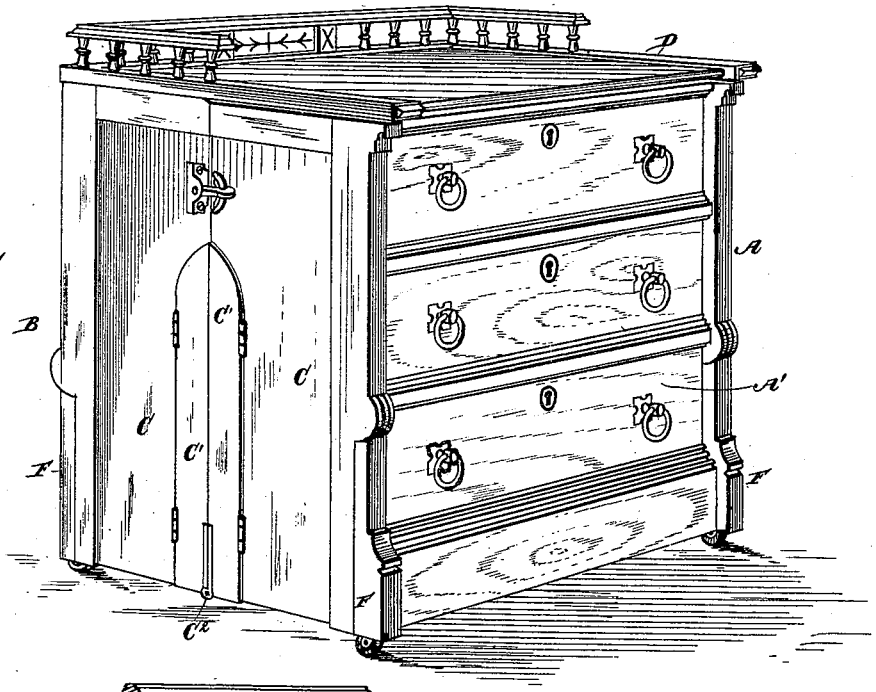
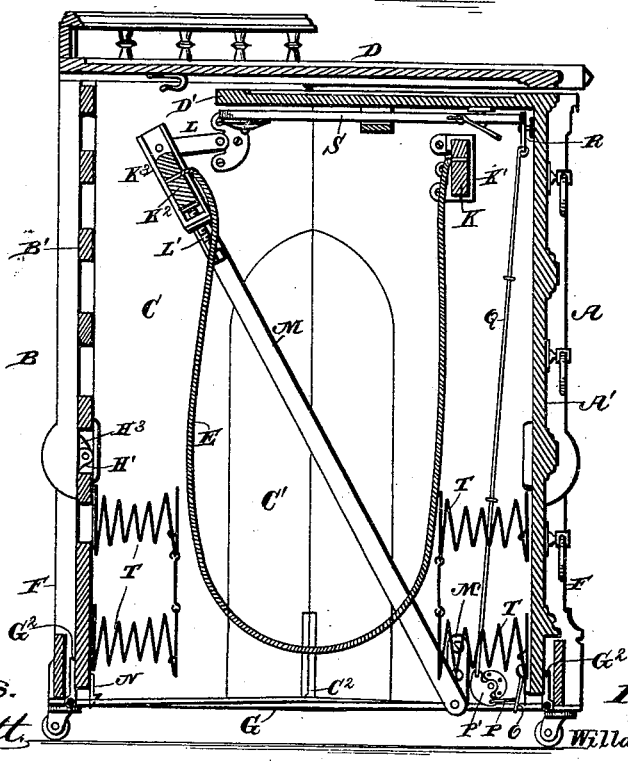


Fig. 2.



Witnesses.
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J. A. Rutherford

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By James L. Norris
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W. A. MORRISON.

CABINET FOLDING BEDSTEAD.

No. 262,817. Patented Aug. 15, 1882.

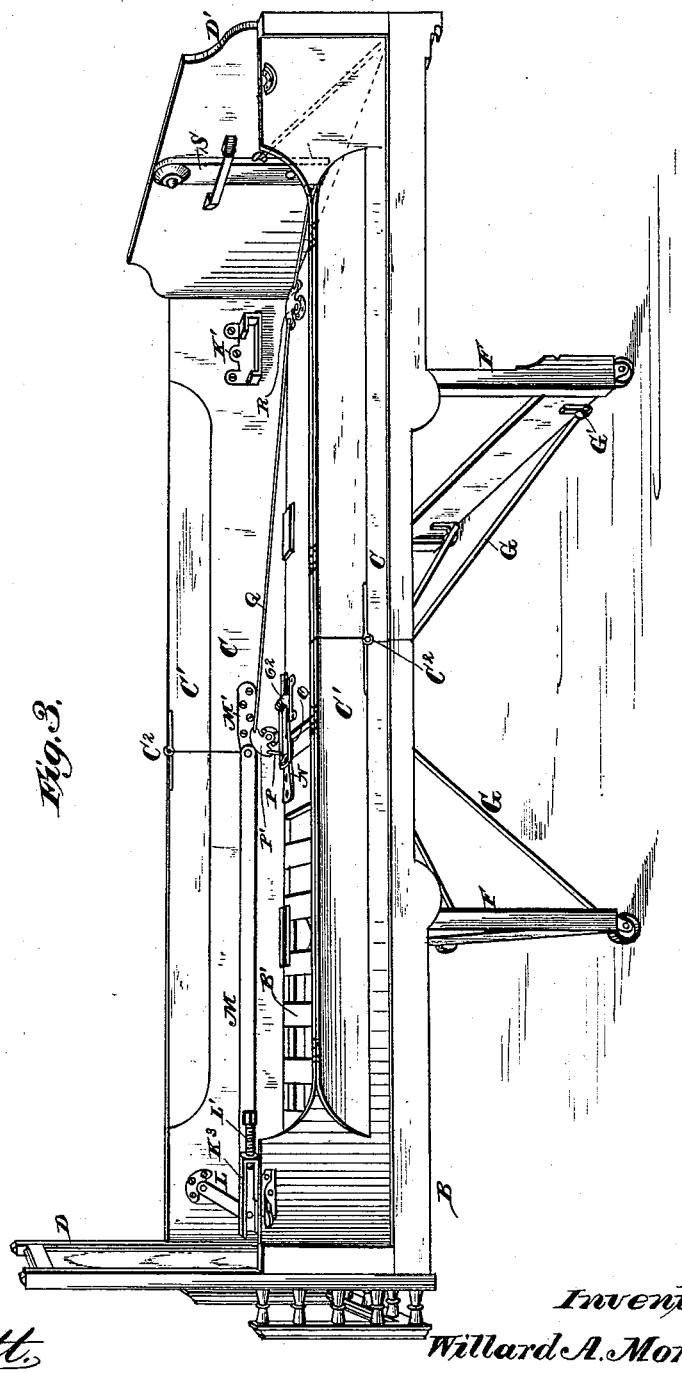

Fig. 3.

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Fig. 4.

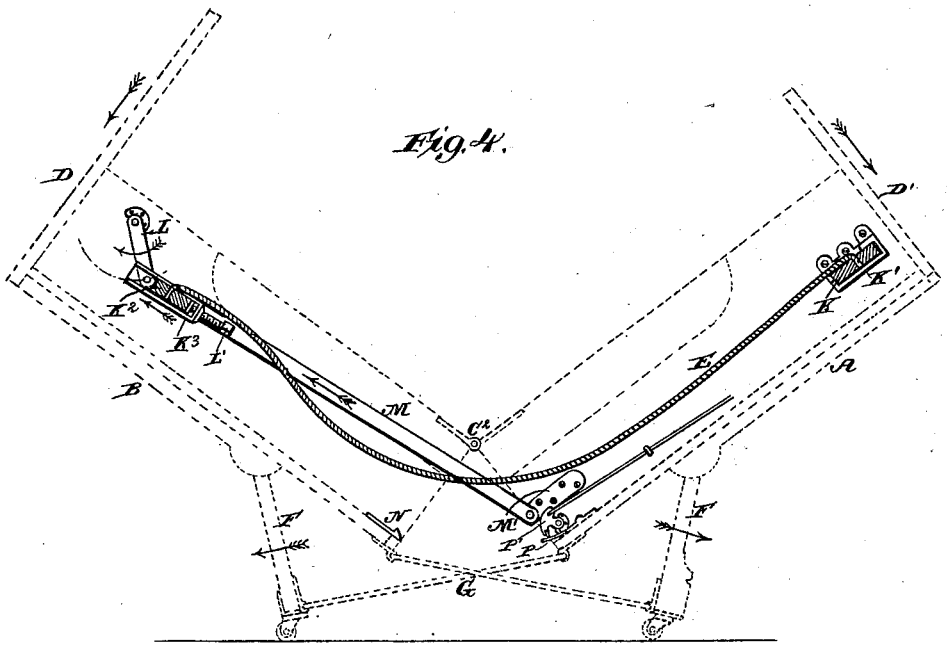


Fig. 5.

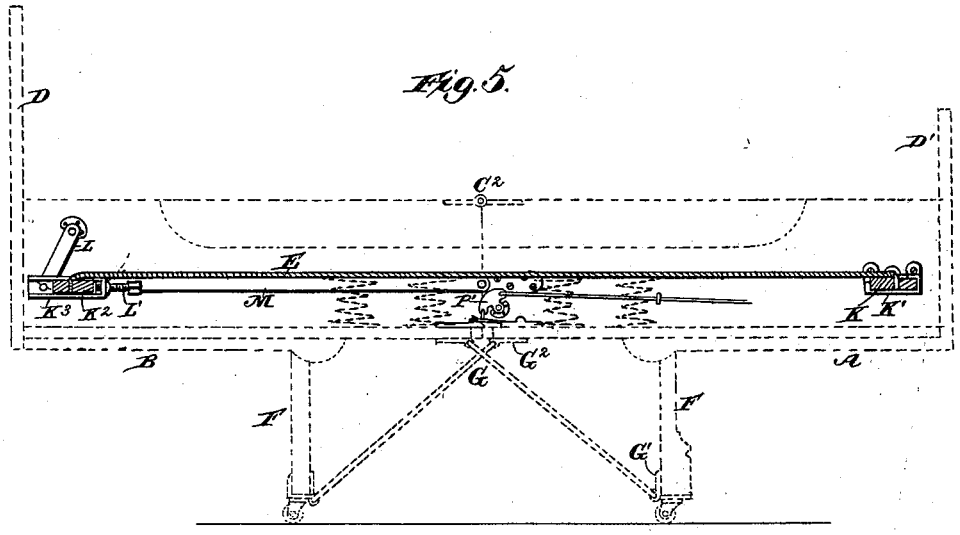
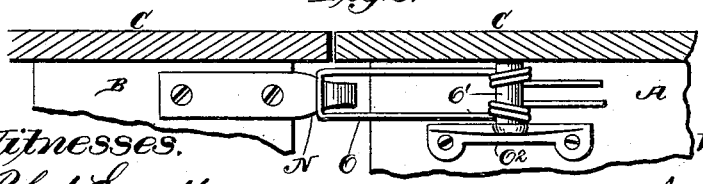


Fig. 6.



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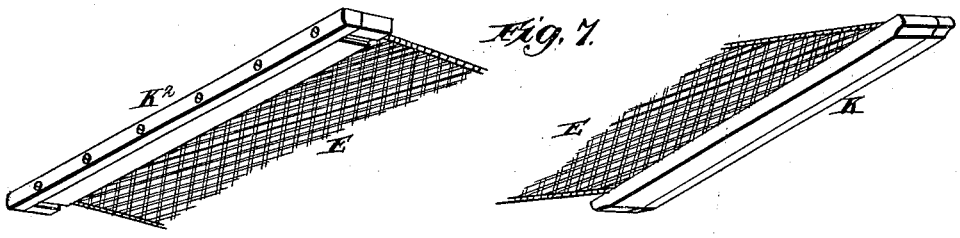
No. 262,817. Patented Aug. 15, 1882.

Fig. 7.



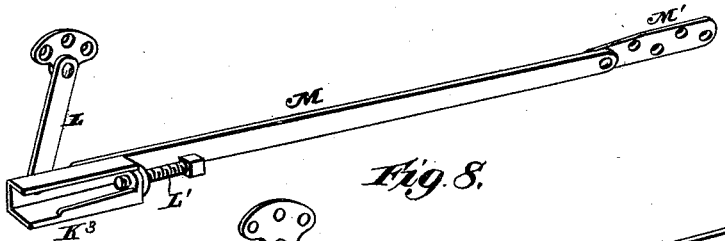


Fig. 8.

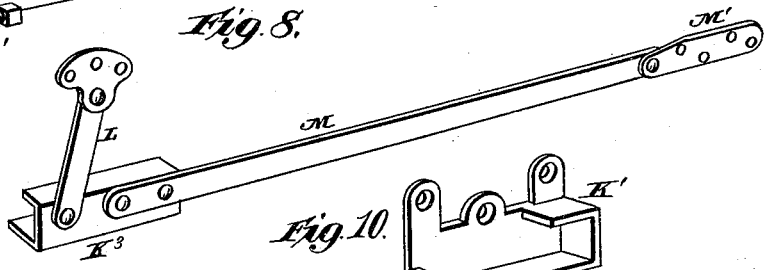


Fig. 9.

Fig. 10.

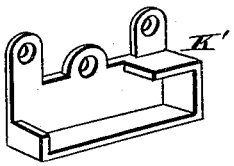


Fig. 11.

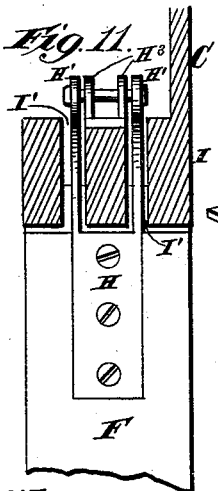


Fig. 13.

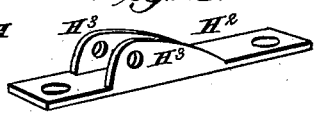


Fig. 14.

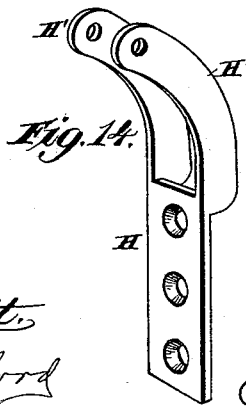
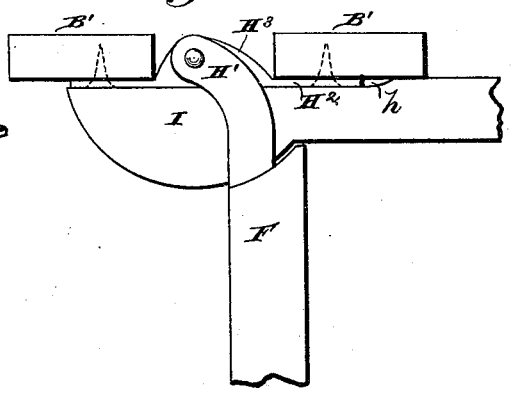


Fig. 12.



Witnesses.
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Willard A. Morrison.
By James L. Norris
Atty

UNITED STATES PATENT OFFICE.

WILLARD A. MORRISON, OF CHICAGO, ILLINOIS, ASSIGNOR TO LEVI C. BOYINGTON, OF SAME PLACE.

CABINET FOLDING BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 262,817, dated August 15, 1882.

Application filed July 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLARD A. MORRISON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Cabinet Folding Bedsteads, of which the following is a specification.

This invention relates to that class of cabinet-beds in which the bedstead comprises two frame-sections hinged together and adapted to be folded into cabinet form with the mattress and bedding inclosed.

My invention consists in a novel mechanism for automatically stretching the woven-wire fabric or analogous bed-bottom and mattress when the bedstead is unfolded, and for allowing such mattress to be folded or doubled up when the two sections of the bedstead are folded together. The object of this feature of my invention is to render the devices for stretching and supporting the mattress practicable, certain, and effective in their operation, to obtain the required leverage by simple and durable means, and to reduce the number of parts necessary to attain the desired result.

It further consists in the novel construction and organization of a catching or locking mechanism for locking the two sections of the bedstead together, so as to check any undue tendency of the sections to fold when the bedstead is open, the object of this part of my invention being to provide a simple and reliable locking device which can be conveniently operated so as to unlock the sections when they are to be folded together, and which shall operate automatically so as to lock the sections when they are unfolded.

It further consists in a novel mode of hinging the legs to the bedstead, so that the latter when unfolded or open can be set close down upon the floor and the legs be thrown near the ends of the bedstead when the latter is open.

It also consists in certain details of construction, hereinafter described and claimed.

In the annexed drawings, in which a cabinet-bed constructed in accordance with my improvement is shown, Figure 1 represents the bedstead when folded into cabinet form. Fig. 2 is a vertical central section of the bedstead when folded into cabinet form. Fig. 3 is a perspective view of the bedstead when unfolded, the mattress and springs being removed. Fig. 4 is a sectional view on a vertical central plane through the bedstead when in the act of unfolding, as indicated by the arrows, the frame-work being shown in dotted lines. Fig. 5 is a similar view, the bedstead being unfolded, as when in use, the mattress being shown in a stretched condition. Fig. 6 is a top view of one of the latches and a portion of the bedstead. Fig. 7 illustrates the end portions of the mattress, the center being removed. Fig. 8 represents perspective views of the connecting-rods and swinging brackets. Fig. 9 is a section of one of the swinging brackets and end of mattress-bar. Fig. 10 is a perspective view of one of the stationary brackets. Fig. 11 is a sectional view of the hinge for connecting the legs or supports to the side frames or rails of the bedstead. Fig. 12 is a side view of the same. Figs. 13 and 14 represent detached views of the parts composing the hinge.

Referring by letter to these several figures of the drawings, in which like letters indicate like parts, A and B respectively denote the two sections of the bedstead, which are hinged together and so constructed that when folded, as in Fig. 1, the structure shall assume the form of a cabinet or bureau.

The side rails, C, of this bedstead are each composed of two sections, respectively secured to the head-board D and the foot-board D′, and these sectional rails may, if desired, be subdivided so as to provide for each section a laterally-swinging side board, C′, connected with the upper edge of the section to which it belongs by means of suitable hinges. These sectional side boards have the meeting ends of their sections connected by strap or other analogous hinges, C^2, which in effect constitute the hinge-connection between the two main sections of the bedstead.

When the bedstead is unfolded for use the side boards, if such be present, can be allowed to remain in the same vertical plane as the rails to which they are hinged, or the said side boards can be swung laterally outward and allowed to drop alongside of the rails, where-

by ready access can be had to the bed, since the upper edges of the rails thus exposed will be but little higher than the woven-wire fabric E or its substitute—such as canvas or rope—upon which a second mattress—such as a straw, hair, or shuck mattress—with the usual bedding, can be placed and connected. When, however, the bedstead is to be folded the hinged side boards must brought into the vertical plane occupied by the sectional rails to which they are hinged.

The section A of the bedstead is provided with a bottom board, A′, having its under side adapted to represent the front of a series of drawers, as in Fig. 1, so that when the bedstead is folded this board can serve as the front side of the imitation cabinet; but as the bottom of the section B, as in Fig. 3, will, when the bedstead is folded, constitute the back of the cabinet, the said bottom can be composed simply of slats B, and thus provide for ventilation during such time as the bedstead is closed.

The legs F, which are hinged to the bottom of the bedstead, are caused to automatically fold or unfold as the latter is closed or opened by means of the brace-rods G, which have their terminals supported by and adapted to turn in castings G′, secured to cross-bars, which connect the legs together in pairs, as illustrated in Figs. 3, 4, and 5. These two rods, which are each cranked or bent at the middle, cross each other at points near said bends, and are respectively connected with the bottom portions of the two sections of the bedstead by means of brackets or castings G^2, in which they turn freely while the bedstead is folded or unfolded. The hinges for connecting these legs with the bedstead consist each of a strap, H, formed at one end with a pair of leaves, H′, which embrace a metal plate, H^2, and are pivoted to ears H^3, formed with or secured upon the said plate, as illustrated in Figs. 11, 12, and 13. This plate, which constitutes the stationary leaf of the hinge, is fitted in a horizontal recess, *h*, formed in a segmental-shaped block, I, as in Fig. 11, which is either secured to the bottom of the bedstead or which could be made integral with the same, either wholly or in part. This block is also formed with two vertical slots or recesses, I′, in which the leaves of this strap are fitted and secured in a mortise at the upper end of the leg. The under side of this block is preferably curved, and in such case the upper end of the leg can be concaved, so as to conform to the curvature of the block. The slots or recesses in the block are of sufficient depth to allow the leg to be folded close up against the under side of the bedstead, and thereby permit the latter to be seated closely upon the floor.

The woven-wire mattress or other suitable flexible bed-bottom is secured at one end to a cross-bar, K, which is supported at its ends in seats or brackets K′, secured to the inner sides of the side rails, and at its opposite end the mattress is secured to a similar cross-bar, K^2, which is supported at its ends in a movable bracket, as at K^3, Figs. 4, 5, and 8, supported by means of rods or links L, pivotally connected with the rails, and the movable brackets may be pivoted to a plate or casting, which in turn is fastened to the inside of the rail, and thus secure a strong connection between the parts. These brackets K^3 are each formed with a channel for receiving the end of the bar, and further provided with a set-screw, L′, passing through the wall at one end of the channel and abutting against the cross-bar, so that by turning the set-screw the cross-bar will be adjusted, and thereby cause the mattress to be stretched or adjusted to a greater extent when it is spread out. These brackets are all constructed so that the bars to which the mattress is secured can be readily removed from said brackets, when desired, the swinging brackets K^3 being provided with a vertical flange for interlocking with a groove formed transversely in the bar K^2, as shown in Figs. 7, 8, and 9, so as to guide the bar in its movement and prevent lateral displacement.

A connecting bar or rod, M, is pivoted at one end to each one of the swinging brackets K^3, and at its remaining end pivoted to a bracket-plate, M′, secured to that portion of the side rail which belongs to the section A of the bedstead. It will be seen that this affords a novel, simple, and effective means for spreading out and stretching the mattress when the bedstead is completely unfolded, since as the two sections of the bedstead are swung apart the connecting-rods simultaneously act and will move the swinging brackets K^3 in a direction away from the middle of the bed and toward the end of the same, thereby effectively stretching the mattress. When the bedstead has been unfolded and the mattress stretched these connecting-rods will be brought substantially parallel with the mattress, and, being on a dead-center while in such position, the mattress will be maintained in its distended condition. When, however, the two sections of the bedstead are folded together the separation of the said sections at their meeting ends will cause the connecting-rods to swing the brackets K^3 back toward the center of the bed and allow the mattress to fold along its middle.

The latches for locking the two main sections of the bed together when the bedstead is unfolded and the devices for operating said latches are as follows:

N indicates catches secured to the inner end of the bottom of one section of the bed, and O indicates the spring-latches for engaging the said catches. Each catch is composed of a spring-wire bent to form a loop and having its ends coiled around a pintle, O′, which is formed upon a casting, O^2, secured to the bottom portion of one of the sections of the bedstead. These latches are connected by links P with the bell-crank levers P′, which are piv-

oted to the rails just above the latches, and these bell-crank levers are connected by rods or wires Q with bell-crank levers R, pivoted near the corners of the bed. These two bell-crank levers R are respectively connected with the hand-lever S at points above and below the pivotal point of said lever, so that by vibrating the lever both latches will be actuated or lifted simultaneously in the same direction. This lever is conveniently pivoted to the foot-board, and when actuated in the proper direction causes the latches to be lifted, and thus disengaged from the catches. When, however, the bedstead is unfolded the latches will automatically engage with the catches and lock the sections of the bedstead together, so that they cannot be again folded until the latches have been lifted or released from the catches with which they engage.

In order to support the mattress at the center of the bed and prevent its sagging by usage, springs T will in some instances be secured upon the bottom of the bedstead-sections, near the inner ends of the same, and adapted to uphold the mattress at such point. If desired, as before stated, an additional mattress can be placed upon the mattress E and secured in place by suitable hooks, which will be connected with knobs or buttons upon the head and foot braces of the bedstead, and thus hold the mattress in position when folding and unfolding the bedstead.

Although I have shown and described my invention as applied to a cabinet of bureau form, it is to be understood that it is to be applied to cabinets representing in form writing-desks, dressing-cases, book-cases, sideboards, wash-stands, &c.

Having thus described my invention, what I claim is—

1. The combination, in a folding bedstead, of a flexible bed-bottom with swinging brackets supported by one of the frame-sections for supporting one end of the flexible bed-bottom, with connecting-rods pivoted to the opposite frame-section, and also pivotally connected with the swinging brackets, whereby when the bedstead is unfolded the connecting-rods will throw said brackets toward the end of the bed, and thereby spread out and stretch the flexible bed-bottom, substantially as described.

2. The combination, in a folding bedstead, of a flexible bed-bottom with brackets fixed to one of the frame-sections and adapted to support the ends of a cross-bar at one end of the flexible bed-bottom, and also to admit of the said bar being lifted from its seat in said brackets, substantially as described.

3. The combination, in a folding bedstead, of a flexible bed-bottom with suitable swinging brackets, which receive the ends of a cross-bar connected with one end of the flexible bed-bottom, said brackets being provided with channels in which the ends of said bar are adjustably held by means of set-screws, and also adapted to admit of the ready removal of the bar therefrom, substantially as described.

4. The combination, with the frame-sections or side rails of the bedstead, of fixed brackets, swinging brackets, a flexible bed-bottom, and means for automatically throwing the swinging brackets toward the end of the bedstead when its sections are unfolded, substantially as described.

5. The combination, with the frame-sections or side rails of the bedstead, of fixed brackets, swinging brackets, a flexible bed-bottom having its end cross-bars removably held by said brackets, and means for automatically throwing the swinging brackets toward the end of the bedstead when its sections are unfolded, substantially as described.

6. The combination, in a folding bedstead, of the frame-sections with catches secured to the inner end of one section, the spring-latches for engaging said catches, and a pivoted lever connected with the latches for simultaneously lifting or operating the same, substantially as described.

7. The combination, in a folding bedstead, of the frame-sections with catches secured to the inner end of one section, the spring-latches for engaging said catches, and a pivoted lever connected with the latches by wires and bell-crank levers for simultaneously lifting or operating the same, substantially as described.

8. The combination, with the frame-sections in a folding bedstead, of hinges for the legs, each hinge comprising a strap secured to the leg and provided with a pair of leaves which are received in a recessed under side portion of the bed-frame and are pivoted to the sides of a plate secured above said recesses, substantially as described.

9. The combination, with the frame-sections in a folding bedstead, of the folding legs with their hinges, each comprising a strap secured to the leg and formed with a pair of leaves, a block located on the under side of the bed-frame and formed with recesses for the said leaves, and a plate located above these recesses and formed with legs, to which the leaves of the strap are pivoted, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

W. A. MORRISON.

Witnesses:
JAMES L. NORRIS,
J. A. RUTHERFORD.