

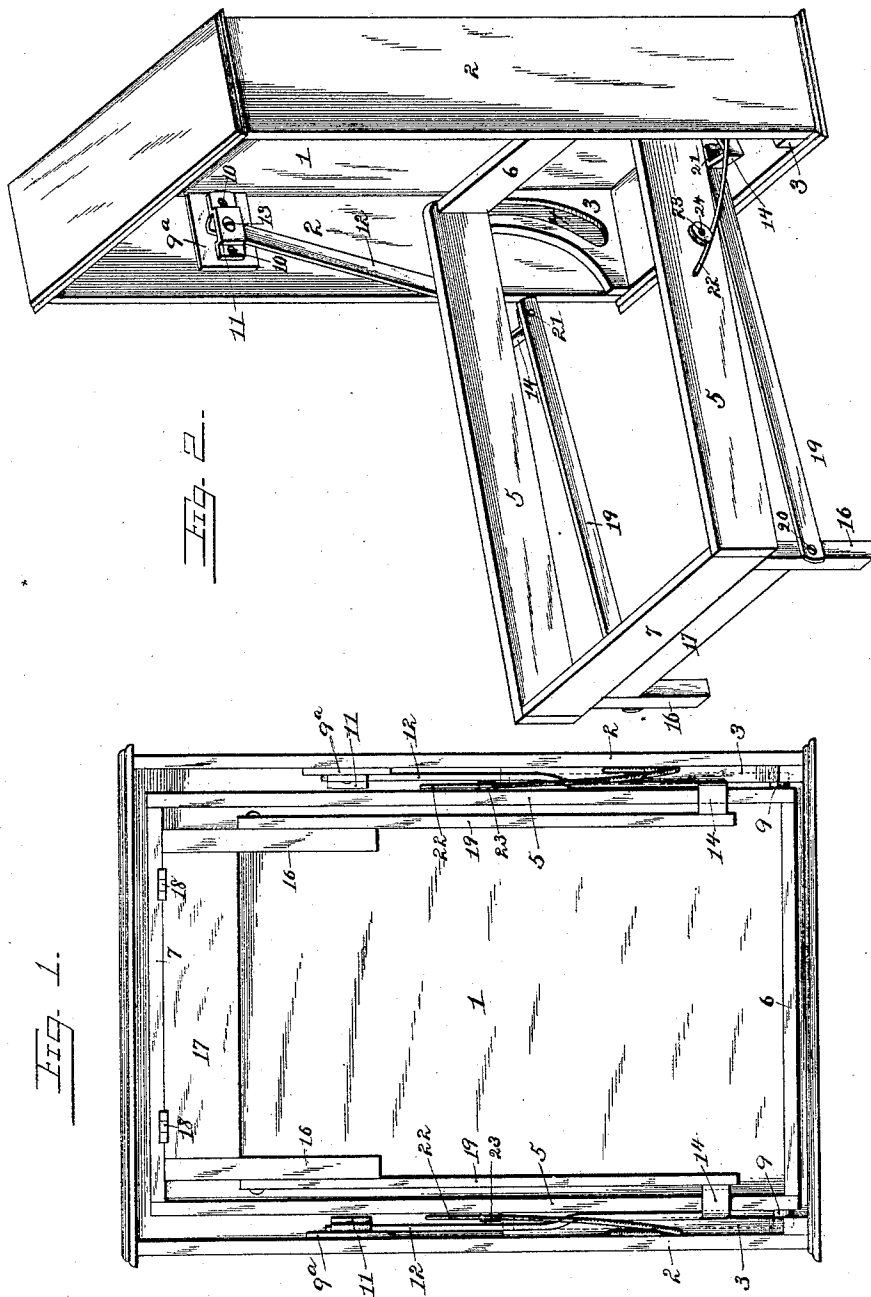
(No Model.)

2 Sheets—Sheet 1.

J. W. HAYTON & S. H. SWIFT.
CABINET BED.

No. 476,923.

Patented June 14, 1892.



Witnesses

Walter T. Higgins
J. R. Higgins

Inventors

John W. Hayton
Samuel H. Swift

By their Attorneys,

C. A. Snow & Co.

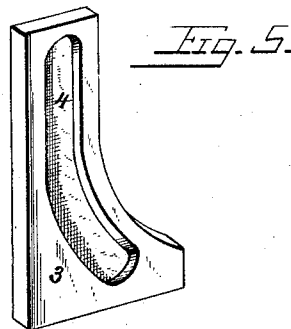
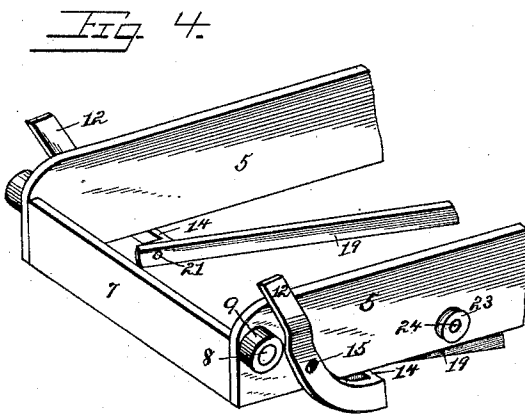
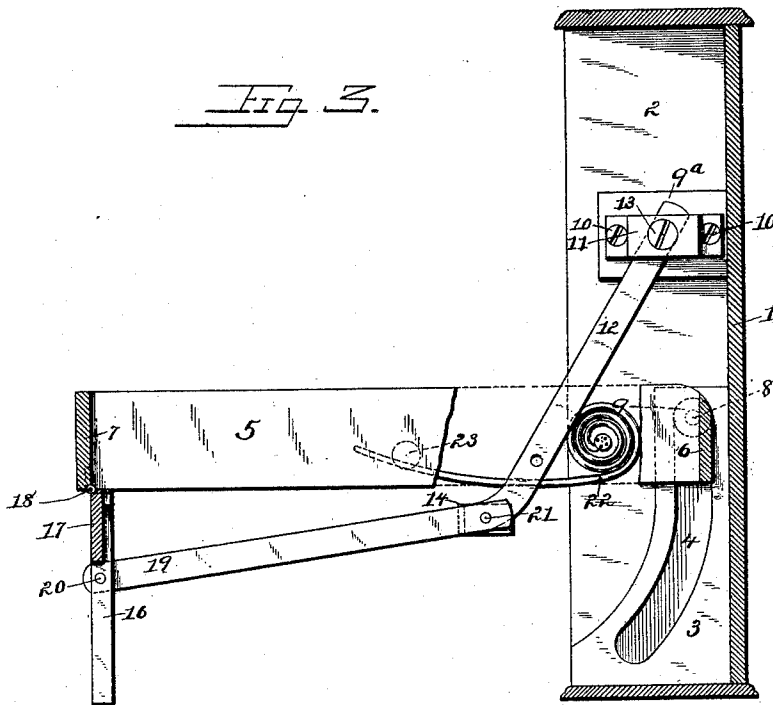
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UNITED STATES PATENT OFFICE.

JOHN W. HAYTON AND SAMUEL H. SWIFT, OF TAYLOR, TEXAS.

CABINET-BED.

SPECIFICATION forming part of Letters Patent No. 476,923, dated June 14, 1892.

Application filed February 6, 1892. Serial No. 420,495. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. HAYTON and SAMUEL H. SWIFT, citizens of the United States, residing at Taylor, in the county of Williamson and State of Texas, have invented a new and useful Cabinet-Bed, of which the following is a specification.

This invention relates to cabinet or folding beds, the objects in view being to provide a cheap and simple construction of bed of this class, adapted to be readily folded or unfolded and to provide means for automatically folding and unfolding the legs for supporting the foot of the bed-frame when said frame is raised or lowered.

Various other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective of a folding bed constructed in accordance with our invention, the same being closed. Fig. 2 is a similar view, the bed being open or unfolded. Fig. 3 is a vertical longitudinal sectional view, a portion of the side bar of the bed-frame being broken away to expose the inner side of one of the side walls of the cabinet or casing. Fig. 4 is a detail in perspective of the rear portion of the bed. Fig. 5 is a detail perspective view of one of the metal plates.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the back wall of the casing, and 2 the opposite side walls, the same being surmounted by any suitable design of crown-piece. To the opposite side walls 2 are secured metal plates 3, which are provided with curved ways or recesses 4, constituting the track. These plates 3 are secured by screws to the inner faces, and at the lower ends of the said side walls.

The bed-frame proper comprises opposite longitudinal side walls 5, connected by front and rear transverse bars 6 and 7, constituting, respectively, the head and foot boards of the frame. Pins 8 project laterally from the side bars 5, near their rear ends, and upon these are mounted friction-rollers 9, which ride loosely in the curved recesses or tracks 4 of the metal plates 3.

To the inner sides of the side walls 2 metal

plates 9^a are secured, and the same have fastened thereto by screws 10, which also pass through the plates 9^a, keepers 11. Between the plates and keepers take the upper ends of a pair of suspension-straps 12, said upper ends being pivoted by transverse bolts 13 to the keepers and plates. The lower ends of the straps are inwardly and upwardly bent, as at 14, loosely embracing the lower edges of the side bars 5, and being pivoted to the latter by pivot-bolts 15.

16 designates the front legs of the bed-frame, the same being connected at their upper ends by a cross-bar 17, connected by hinges 18 to the under edge of the foot-board 7. Bars 19 are pivoted, as at 20, to the legs 16, rearwardly extend and are pivoted, as at 21, to the inner bent ends of the suspension-straps. Convoluted springs 22 have one of their terminals secured to each of the side walls 2 of the cabinet, and each has its remaining terminal forwardly disposed and curved, as shown, and resting against the under side of a loose roller 23, mounted upon a laterally-disposed bearing-pin 24. The tendency of the springs is to contract, and hence aid in elevating the bed.

In operation, in order to draw the bed to an unfolded position, it is simply necessary to pull the upper end of the bed downward, during which movement the pivot-bolts 15 of the suspension-straps serve as the pivots for the frame, the loose rollers at the opposite sides and rear end of the bed, riding up the curved track 4, and the springs opening against their tensile strength. As the frame descends the straps 12 oscillate upon their pivots, their lower ends moving toward the foot of the bed-frame, and consequently through the medium of the bars 19 swinging the legs outwardly to a vertical position, where they perform their usual functions of supports. This downward movement of the bed-frame is against the tension of the coiled springs, the coils of which are thereby loosened, the outer terminals of the said springs riding loosely over the rollers 24 at the opposite sides of the bed. In order to fold the bed, it is simply necessary to start the same by lifting or aiding the spring to lift the bed-frame, and when the same has reached a certain point of elevation the remainder of its elevation is through the me-

dium of the spring alone, and exerting its tendency to close. The pivots 15, when the bed is lowered, are a slight distance in advance of and below the springs, and the rear rollers 9 are slightly above the same and lie in the upper vertical portions of the tracks 4. When, however, the bed at its foot is given a light upward push the rollers pass from the vertical portions of the tracks to the lower curved or inclined portions, throwing the lower end of the bed-frame outwardly, and consequently the upper end inwardly, into the cabinet or casing. The springs being sufficient to about balance the weight of the bed, it will readily be seen that after the first push or aid given the springs they will accomplish the remainder of the operation. As the suspension-straps swing inwardly the pivots 15 of the bed-frame swing downwardly, thus drawing the bed-frame closer to the springs and permitting the latter to more easily operate to elevate the frame. The movement upon the part of the suspension-straps in assuming a vertical position, or nearly so, causes, through the medium of the connecting-bars 19, an inward swinging of the legs 16 to a vertical position, so that the folding and unfolding of the legs is automatic.

From the foregoing description, in connection with the accompanying drawings, it will be seen that we have provided a folding bed, certain parts of which are automatic in their operation, requiring no adjusting by hand or insertion of braces, and which withal is composed of extremely few parts and those of simple form, whereby they may be readily manufactured and assembled. By extending the ends of the springs under the anti-friction rollers the movement of the bed in opening and closing is rendered noiseless. The inward bending of the lower ends of the suspension-straps hides the greater portions of them and also the connecting-straps 19

from view, or, in other words, directly under the bed between the side rails.

Having described our invention, what we claim is—

In a folding bed, the combination, with the rectangular casing, the metal plates 3, secured to the opposite side walls thereof and provided with the curved recesses or ways 4, the upper portions of which are straight, of the bed-frame, the laterally-extending trunnions having rollers for riding in the recesses of the plates, the pins projecting laterally from the bed-frame and provided with anti-friction rollers, the opposite convoluted springs having their inner ends secured to the walls of the casing and their outer ends taking loosely under the laterally-projecting anti-friction rollers, said springs having a closing tendency, the plates 9^a, having the keepers 11, the straps 12, having their lower ends bent to loosely embrace the lower edges of the side bars of the bed-frame and terminating at the inner sides thereof, pivots for connecting the upper ends between the keepers and plates and the lower ends to the bed-frames, the pair of legs 16, transverse connecting-bars 17, hinges for connecting the bar with the foot of the frame, and the connecting-bars 19, pivoted at their rear ends to the lower upturned ends of the suspension-straps and at their forward ends to the legs 16, said connecting-bars lying within and adjacent to each side rail of the bed-frame, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN W. HAYTON.
SAMUEL H. SWIFT.

Witnesses:

E. W. TILEY,
T. D. JONES.