

(No Model.)

2 Sheets—Sheet 1.

W. A. SOWDEN.
COMBINATION FOLDING BED.

No. 496,327.

Patented Apr. 25, 1893.

FIG. 1.

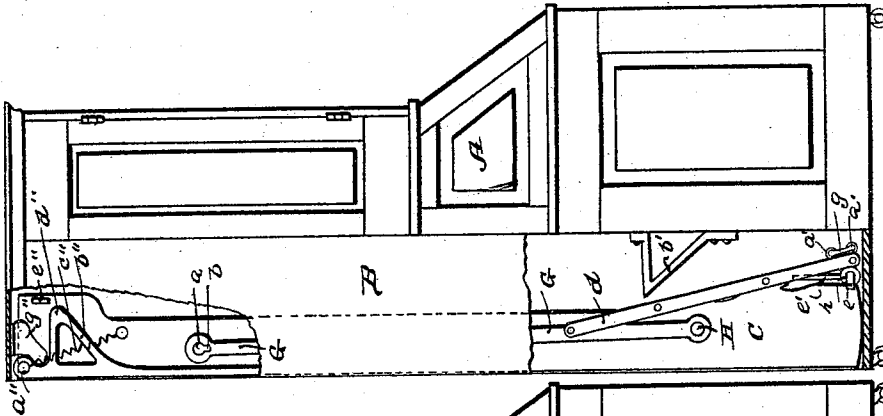


FIG. 2.

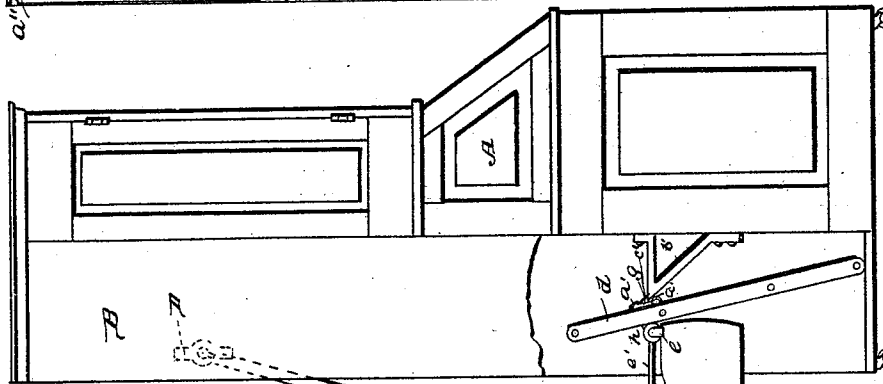
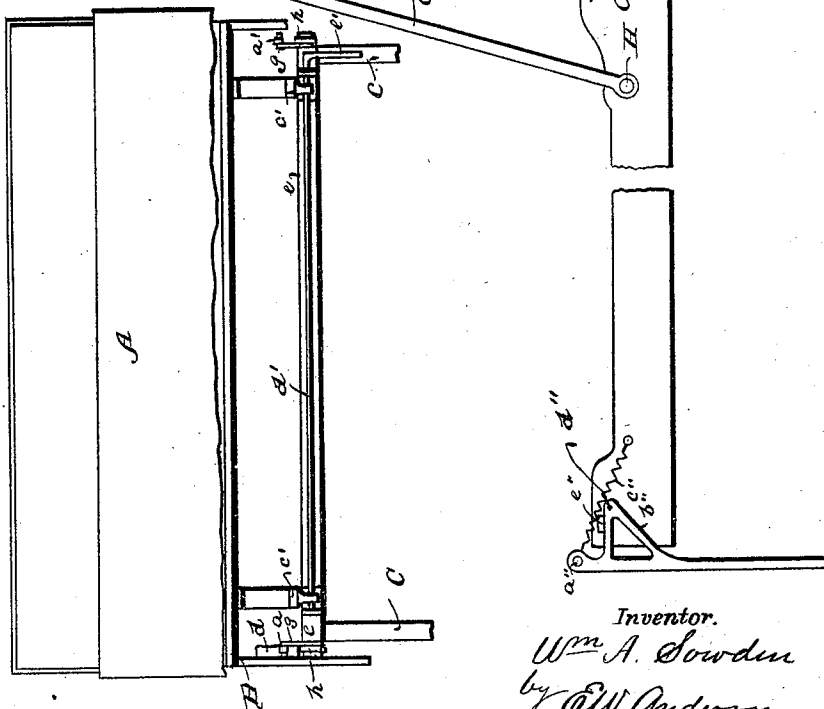


FIG. 3.



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Fig. 4.

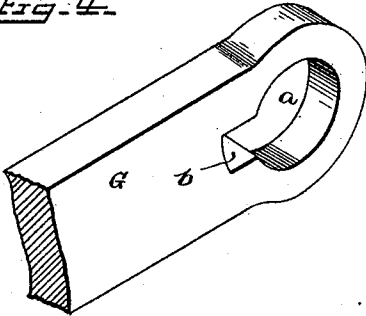


Fig. 5.

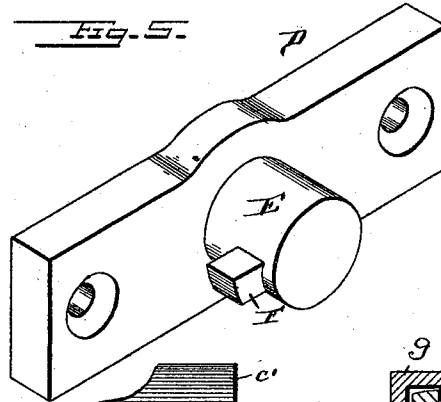


Fig. 6.

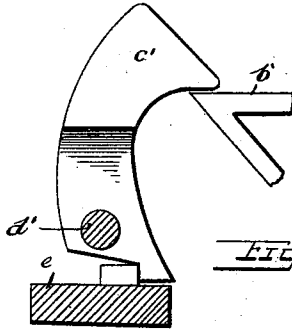


Fig. 7.

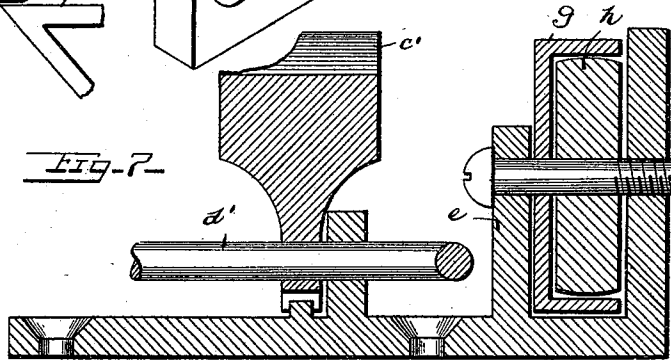


Fig. 8.

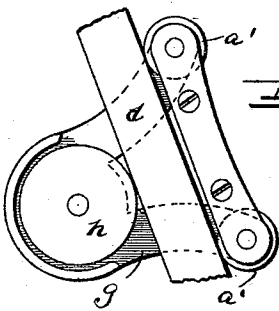
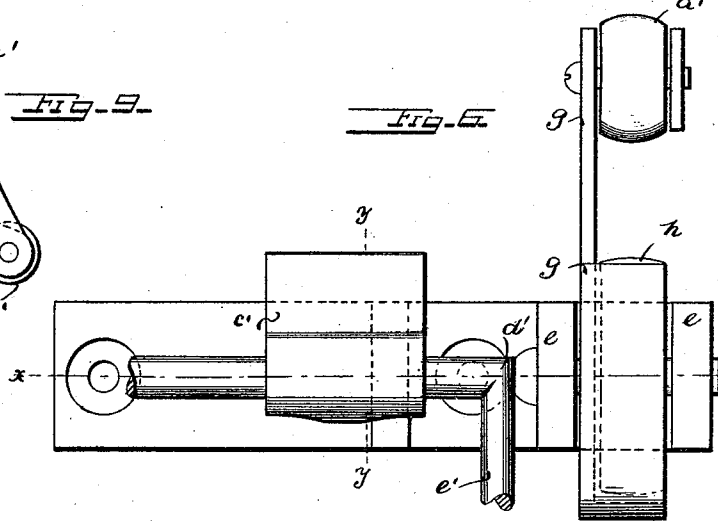


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM A. SOWDEN, OF COVINGTON, KENTUCKY.

COMBINATION FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 496,327, dated April 25, 1893.

Application filed June 16, 1892. Serial No. 437,003. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SOWDEN, a citizen of the United States, and a resident of Covington, in the county of Kenton and State of Kentucky, have invented a new Combination Folding Bed, of which the following is a specification.

My invention relates to folding or turn up beds and especially to that class of beds or bedsteads called combination beds, that is, one which can be used as a book-case, wardrobe, or some other useful or ornamental piece of furniture, and also by turning it around, a folding bed can be let down and used, thus by a combination of two (2) useful articles of furniture a large saving of space can be had which is a great advantage in houses having small rooms.

My aim and object has been to produce a combination folding bed, which can be sold at a nominal figure, the action of which is entirely automatic, (that is one which adjusts itself when opened and does not require any additional adjustment or fixing before it can be used,) one that is absolutely safe, in which there is no possibility of its closing up with the occupants, or chance for it to fall down on them, and one in which the mechanism is so simple and well contrived, that the ordinary help found in all stores can set it in place, and the owner operate without trouble.

I will now describe my invention.

Figure 1 is a side elevation having the bottom and top of the standard broken to show the bed when closed or folded up. Fig. 2 is a side elevation showing the bed when drawn down. Fig. 3 is a fragmentary view of the plan when the bed is drawn down. Fig. 4 is an enlarged detail view of a portion of one of the swinging rods. Fig. 5 is a similar view of one of the brackets to which said rods are attached. Figs. 6, 7, 8, and 9 are enlarged detail views of the roller sheaves and locking device.

In Fig. 1 is shown the combination of a book-case A having the sides extended out at the back forming the standards B on which swings the bed proper C. Attached to the standard B is a bracket D one on each side, (see details Fig. 5) having a neck or bearing E which has a teat or key F, for the purpose hereinafter shown. Rods G are attached, one on each

side, to the sides of the bed proper C, having at their lower end a bolt H which passes through holes in the rods G into and through the sides of the bed proper C securely binding the rods G and the bed C together, but still allowing a free and easy swinging horizontal and also a rocking motion; the upper ends of the rods G are provided with holes *a* (see in detail at Fig. 4) having a keyway *b*, and adapted to pass over the key F and swing freely on the neck or bearing E Fig. 5; when the bed proper C is down the keyway *b* being in position with the key F the rod G can be slipped off of the neck or bearing E over the key F, facilitating the removal of the bed C from the standards B to aid in moving from one room or residence to another, as will be further described hereinafter; when the bed proper C is partially closed or raised from the floor the keyway *b* passes the key F and prevents this removal. Attached to and fastened securely to the standards B are metallic guide bars *d*, one on each side. These bars *d* are set diagonally across the standards B, and the head of the bed proper C for the purpose hereinafter specified.

Securely fastened to the rear end and top edge of the bed proper C are brackets *c* (see enlarged details, Figs. 6, 7, 8, and 9), carrying sheave carriers *g*, adjusted to swing freely up and down and always remain at a right angle with the bed proper C; the sheave carriers *g* carry a friction roller *h* situated in front, and two (2) friction rollers *a'* situated in the rear of and adapted to fit over the guide bars *d* and slide or roll smoothly up and down when the bed proper C is raised or lowered. The combination of the guide bars *d* with the brackets *c*, carriers *g*, and friction rollers *h* and *a'* have a triple purpose. First they prevent the bed proper C from moving forward, backward, or sidewise, except as desired, pushing the bed proper C forward on the swinging rods G when opened and drawing it back into its flat compact position when closed. Second the guide bars *d* being set diagonally across the head of the bed proper C, when drawn down or opened the friction rollers *h* and *a'* must travel diagonally up hill counteracting in a large degree the tendency to fall abruptly of the front or heavier portion of the bed proper C, and thus

reducing largely the weight necessary to accurately balance the bed proper C. Third in combination with the holes *a* and keyway *b* of the rods G, and the neck or bearing E and key F of the bracket D, operated as hereinbefore specified, the whole bed proper C can be lifted up, the brackets *c* carrying the sheaves or friction rollers *h* and *a'* slipping off of the guide bars *d*, thereby separating the whole combination into two (2) distinct parts to facilitate moving from one place to another as hereinbefore specified, the separating into two (2) parts and replacing again being unattended with any preliminary or subsequent preparation or adjustment.

The hangers *b'*, one on each side, shown as a fragment in detail in Fig. 6 being securely fastened to the rear wall of the standards B, projects out and near the rear end of the bed proper C and connects with the spring catches *c'* shown in detail in Figs. 6, 7, and 8. The said spring catches *c'* are also attached to and are a part of brackets *c* carrying the rollers or sheaves *h*. The said spring catches *c'* are connected by a rod *d'* extending across the head of the bed proper C, the rod *d'* having a right angle bend *e'* adapted to be pressed down with the thumb thus disengaging the spring catches *c'* from the hangers *b'* to allow the bed proper C to be drawn up or closed. The combination of the spring catches *c'* connecting or locking with the hangers *b'* when the bed is open, prevents the bed proper C from closing up with the occupants and also acts in place of the legs which are in other beds at the head of the bed, inasmuch as when they are locked the swing rods G may be slipped off or taken away without any detriment to the bed or any danger of falling or closing. The leg *a''* having an angle like projection *b''* and the coil spiral spring *c''* with one end attached to the leg *a''* and the other end attached to the side of the bed proper C, in such a manner that when the leg *a''* is pivotally connected to the side of the bed proper C, at *d''*, the spring *c''* will press the leg *a''* against the stop *e''*; when the bed proper C is closed or folded the end of the leg *a''* comes in contact with the stop *g''* which pushes the leg *a''* around flat and close to the bed proper C: in opening, when the bed proper C leaves the

stop *g''* the spring *c''* pulls the leg *a''* against the stop *e''* and into position for letting down or opening.

Having described this invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the book case frame having the standards B, B, the bed arranged to fold upwardly between said standards, the detachable swing rods, the guide bars *d*, *d*, one on each side of and secured rigidly to said standards, said guide bars extending diagonally across said standards, and the head of the bed, the brackets *c* rigidly affixed one at each side, to the rear end and upper edge of said bed, the sheave carriers *g* carried by said bracket at right angles to the bed and arranged to swing freely up and down, the friction rollers *h* carried by said sheaves and traveling said guide rods, and the locking devices, substantially as specified.

2. In a folding bed, the guide bars *d*, *d*, extending diagonally of the supporting standards, and rigidly secured thereto, the brackets *c* rigidly affixed one at each side to the rear end and upper edge of the bed proper, the sheave carrier *g* carried by said brackets at right angles to the bed, and capable of a free up and down swing, the three friction rollers carried by each of said carriers, two on one side of each of said guide bars and one upon the other side, and traveling thereon, hangers *b'*, one secured to each standard, the catches *c'*, one of which is attached to each of said brackets *c*, and forms a part thereof, said catches engaging with said hangers and forming means whereby they may be disengaged from said hangers, substantially as specified.

3. In a folding bed, the combination with the bed frame C, of the legs *a''* having an angular projection at their upper ends pivoted to said frame, the stops *e''* for said legs, the spring *c''* attached to the legs and to the frame, and the stops *g''* on the standards for said legs when folded, substantially as specified.

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