

No. 675,519.

Patented June 4, 1901.

H. McDONNELL.
FOLDING BED.

(Application filed May 10, 1900.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

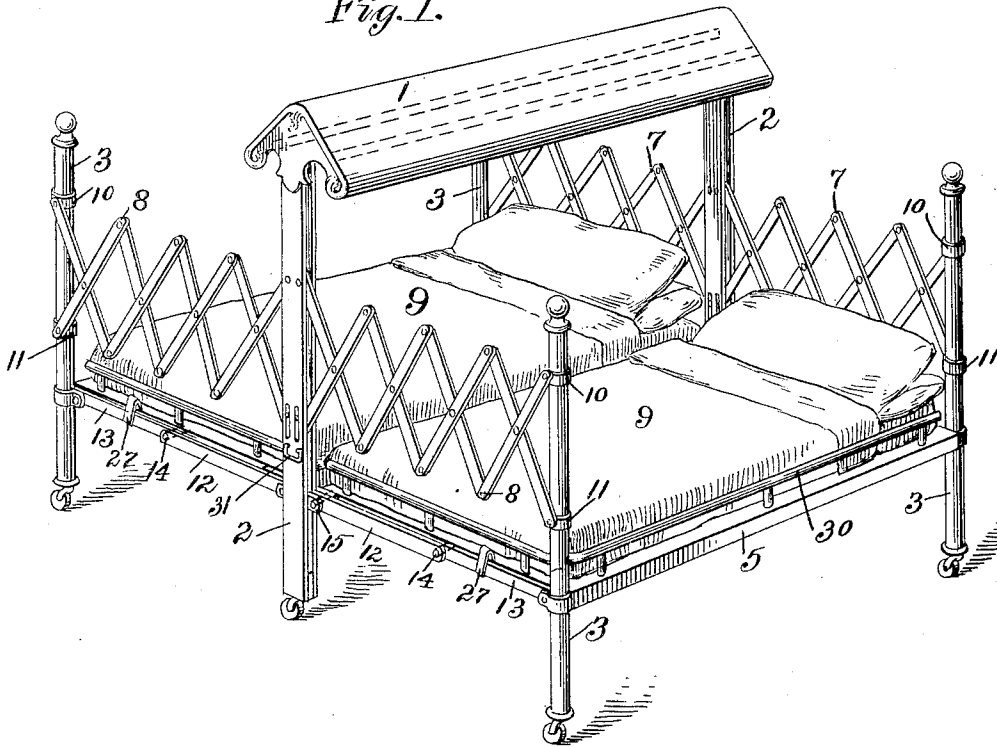


Fig. 2.

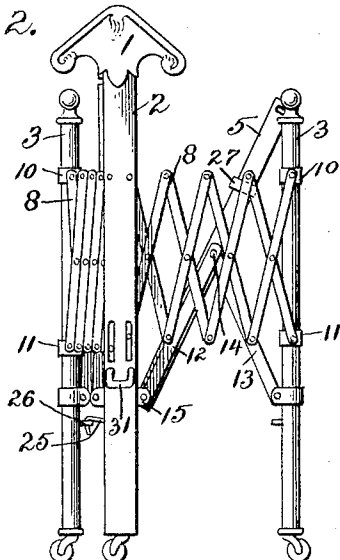
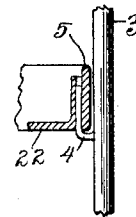


Fig. 8.



WITNESSES

J. H. Gadel.
James F. Duhamel.

INVENTOR

Hugh McDonnell
per Fred W. Wacker,
ATTY

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3 Sheets—Sheet 2

Fig. 3.

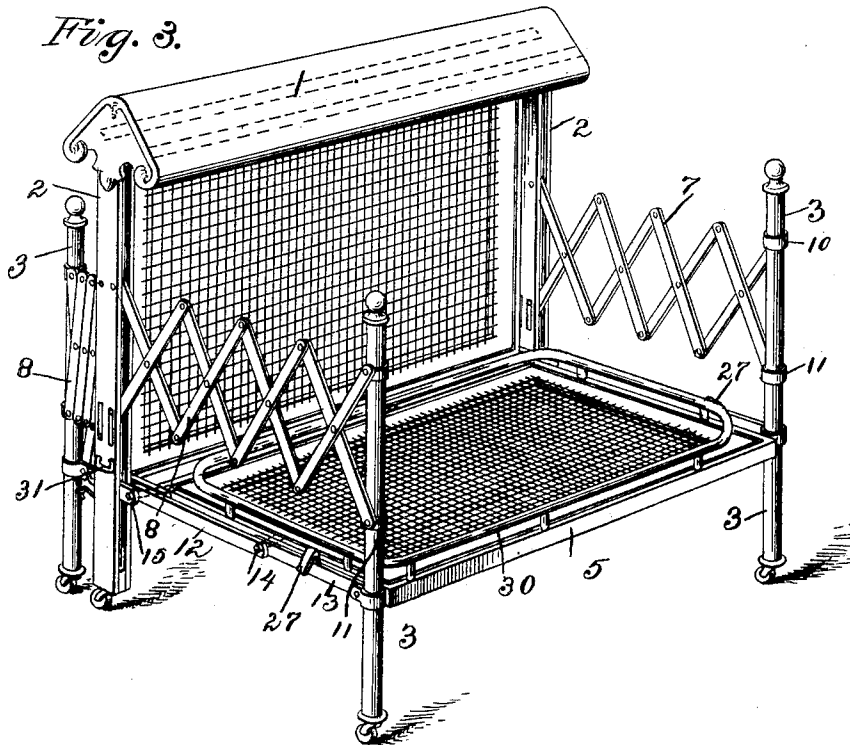
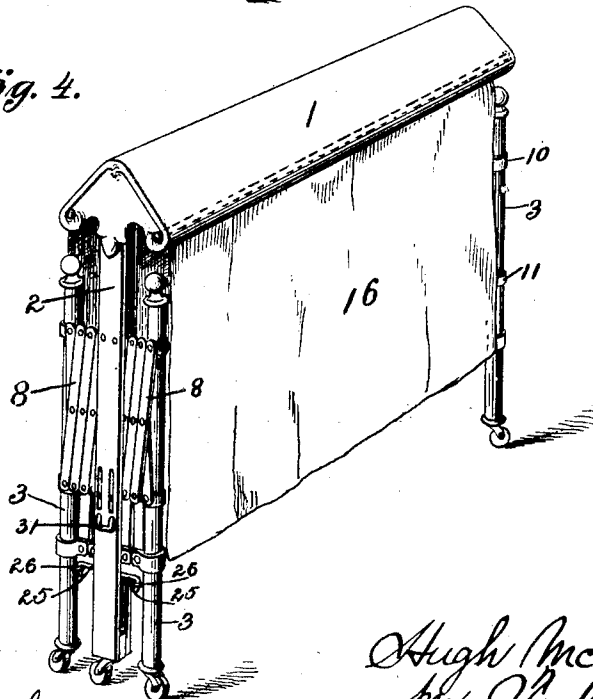


Fig. 4.



WITNESSES

J. Stadel
James P. Duhamel

INVENTOR

Hugh McDonnell
per Fred Wacker
ATTY

H. McDONNELL.
FOLDING BED.

(Application filed May 10, 1900.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 5.

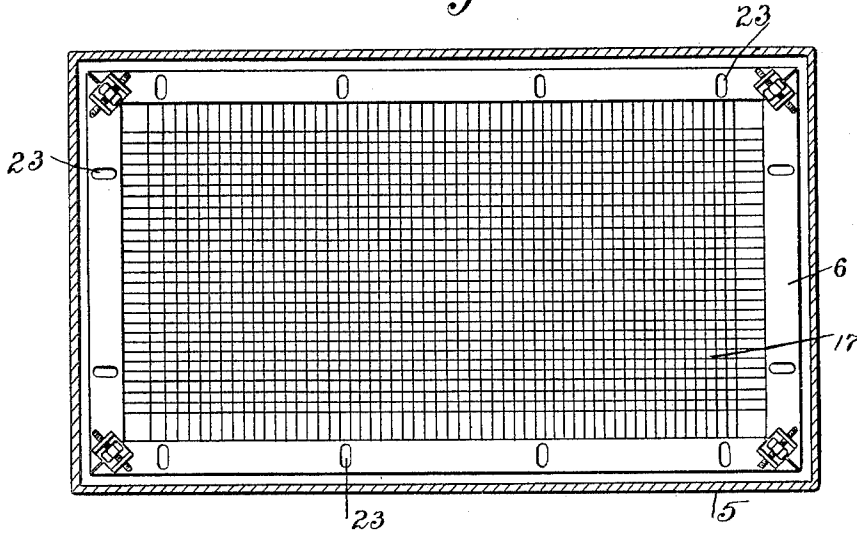


Fig. 6.

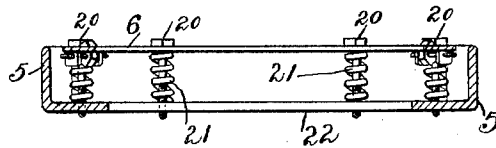
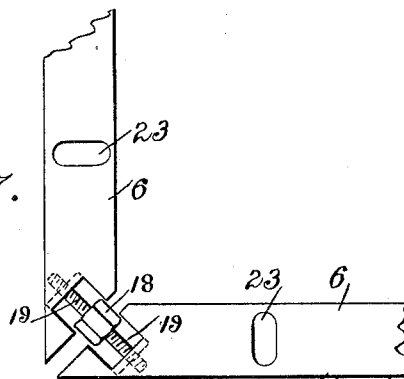


Fig. 7.



WITNESSES

J. S. Cadel.
James D. Duhamel

INVENTOR

Hugh McDonnell
per Charles A. Baker
ATTY

UNITED STATES PATENT OFFICE.

HUGH McDONNELL, OF NEW YORK, N. Y.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 675,519, dated June 4, 1901.

Application filed May 10, 1900. Serial No. 16,159. (No model.)

To all whom it may concern:

Be it known that I, HUGH McDONNELL, a citizen of the United States of America, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to certain improvements in bedsteads, bed-frames, springs, and the like, having for its object the production of a simple, convenient, and inexpensive folding bed and a spring combined therewith having special characteristics of excellence and importance; and the invention consequently consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a perspective view of my improved folding bed, the same being of a double form and shown with the two beds unfolded and in their open or horizontal position. Fig. 2 is an end elevation of the same with one of the beds entirely closed and the other partially so. Fig. 3 is a perspective view of my improved bedstead with one bed folded and the other extended, the bedding being removed. Fig. 4 is a perspective view with both beds closed and side curtains drawn thereover. Fig. 5 is a plan view of the bed-frame and construction of springs. Fig. 6 is a cross-section of the parts shown in Fig. 5. Fig. 7 is a detail view of one corner of the spring-frame and shows the device for tightening the wires of the spring-bed. Fig. 8 is a detail view of the hook and its socket for sustaining the bed in a horizontal position. Similar numerals of reference designate like parts throughout all the different figures of the drawings.

1 denotes a doubly-inclined cover or head supported rigidly at each end on the uprights 2 2, which consist, preferably, of parallel bars, as shown. Said uprights have handles 31 for the convenient moving of the bed. The cover 1 and uprights 2 2 together constitute the intermediate frame of the double form of folding bed portrayed in the drawings, and under the cover 1 are rods or the like for the support of pillows and bedding

that may be placed therein and below the cover, as in a receptacle. On each side of this intermediate frame is a folding bed, consisting, essentially, of the vertical posts 3 3, horizontal bed-frame 5, and the horizontally-extensible levers or lazy-tongs 7 8, one of which is at the head and the other at the foot of the bed. Within bed-frame 5 is the spring-frame 6, that carries the mattress and other bedding 9. A guard-rail 30 keeps the bed-clothing in place. This rail is secured to the bed-frame 5, as shown. Bed-frame 5 is made in rectangular form of angle-iron with a longitudinal flange 22 and is pivoted at its inner edge or end in some suitable way—as, for instance, to the pieces 15, that are secured rigidly to uprights 2 2—and the outer edge of the frame 5 has sockets that normally engage the hooks 4, attached to the posts 3, and it lifts off of or is disconnected from said hooks during the process of folding the bed. The head lazy-tongs 7 are pivoted to the uprights 2 and posts 3, the upper pivotal points being stationary on the posts, as at 10, while the lower pivotal ends of the levers are movable, as the ring 11, for example, in order to allow the requisite play to permit the levers to properly adjust themselves in extending or compressing, and a like statement is true of the foot lazy-tongs 8.

In addition to having the uprights 2 and posts 3 connected together by means of the head and foot lazy-tongs 7 and 8 I also provide interpivoted links 12 and 13, the pivotal point thereof being 14, said link 12 being pivoted to piece 15, while link 13 is pivoted to post 3 or to a stationary ring thereon. The pivot 14 passes through the adjoining edge of the bed-frame 5, so that when frame 5 is lifted vertically links 12 and 13 will be correspondingly lifted, and this will draw post 3 toward upright 2 and compress lazy-tongs 7 and 8, and this is the operation that takes place when either of the duplicate beds is folded.

16 designates a roll-curtain suspended from beneath the inner edge of cover 1 and adapted to be drawn down into the position shown in Fig. 4, so as to enshroud and conceal the bed when folded.

The spring-frame 6 carries the woven-wire springs 17. The corners of this frame are

mitered and provided with tightener devices, consisting of oppositely-threaded or right and left hand screws 19 19, having nuts 18. By turning the nuts 18 the corners of the frame 5 may be tightened or the corners spread apart, so as to take up any slack in the wires. The frame 6 rests on springs 21, which are interposed between frame 6 and the bottom flanges 22 of frame 5, said springs 21 being coiled about the screw-bolts 20, which are screwed firmly into flanges 22 and work loosely through the slots 23 in frame 6, said slots being to allow the frame to expand in tightening the wires.

15 If the thickness of the flanges 22 is insufficient to sustain the bolts 20 with the necessary firmness and rigidity, taps may be placed on said bolts beneath the flanges.

In folding up the bed or transferring its parts from the position that they occupy in Fig. 1 into the position they occupy in Fig. 4 the user of the same needs only to lift up one of the bed-frames 5 by grasping the outer edge thereof, and after one frame has been 25 lifted to a vertical position and the accompanying parts properly folded, as shown at the left hand in Fig. 3, the other frame will then be similarly lifted and arranged in a vertical position on the other side of the intermediate frame. The hooks 25 on the uprights 2 are 30 intended to engage staples 26 on the posts 3, and thus keep the parts together when folded. After the two beds have thus been closed the curtains 16 may be drawn down over the sides, 35 as has been already explained. In unfolding the combination it is only necessary to unfasten the hooks and then let the beds down, first one and then the other. The ends of the bed-frame 5 are provided with lugs or 40 angle-pieces 27, intended to embrace the links 13 during the unfolding process, so as to keep the parts so positioned relatively that the sockets on the front corners of the bed-frames may be properly engaged by the hooks 4. It 45 will be noticed that in folding the bed the bed-frame is the only part requiring to be lifted, because the head and foot pieces rest on the floor at all times and do not have to be lifted.

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

1. The combination with the bed-frame, of the spring or mattress frame having slots therein and carrying a woven mattress, tension devices at the corners of the frame for regulating the tension of the wires, bolts projecting upwardly through the aforesaid slots, and springs surrounding the said bolts between the two frames, substantially as described. 60

2. In a folding bed, the combination with the inner posts or uprights, of a hinged bed-frame, the outer posts, head and foot pieces composed of lazy-tong levers pivotally connected to the posts and interpivot links at each end of the bed pivoted to the posts and the common pivotal point of which is connected with the bed-frame. 65

3. In a folding bed, the combination with the hinged frame, of the inner posts, the outer posts, said frame engaging said outer posts when in its normal operative position and being disengaged therefrom when the frame is lifted, and the lazy-tongs connecting together the two posts at the head of the bed and also 75 connecting together the two posts at the foot of the bed, interpivot links at each end of the bed pivoted to the posts and the common pivotal point of which is connected with the bed-frame, the outer posts being adapted to automatically travel in and out toward or away from the others in folding and unfolding without being lifted from the floor. 80

4. In a folding bedstead, the combination of two bed-frames hinged to inner posts or uprights, the head and foot pieces consisting of lazy-tongs, that close automatically when the bed-frames are folded in an upright position and open automatically when the bed-frames are unfolded in a horizontal position. 90

Signed at New York city this 8th day of May, 1900.

HUGH McDONNELL.

Witnesses:

J. S. CADEL,

FRED E. TASKER.