No. 640,022.

Patented Dec. 26, 1899

J. W. PEPPER.

FOLDING BEDSTEAD.

(Application filed Oct. 21, 1899.)

(No Model.)

FIG. 1.

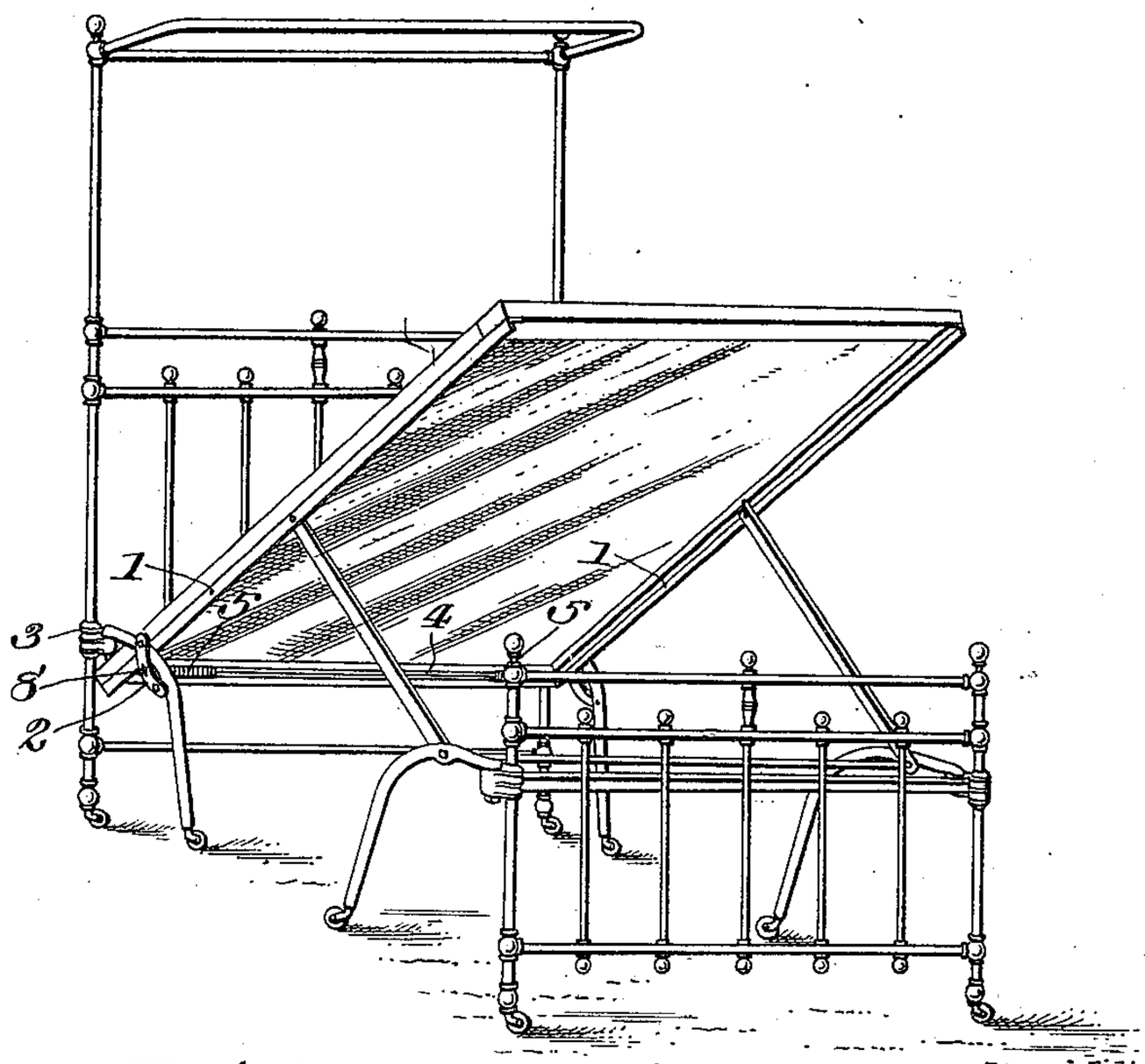


FIG. 2.

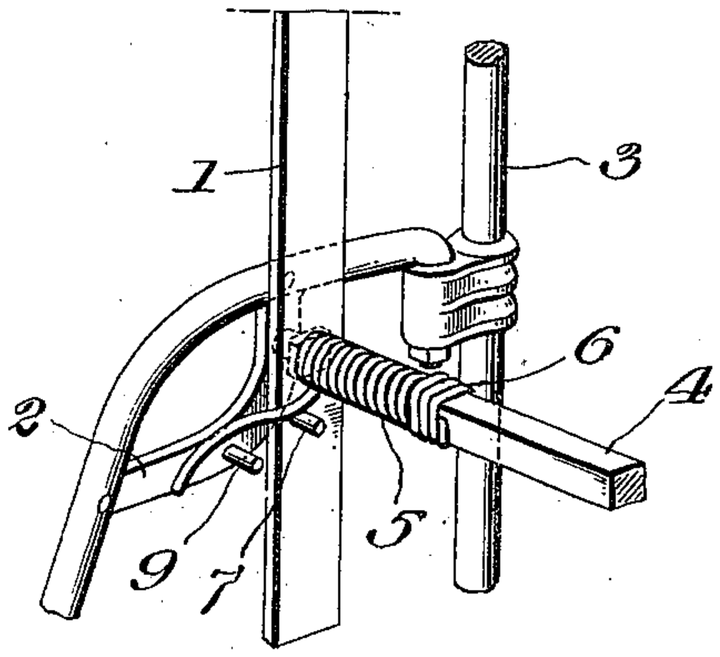


FIG. 3.

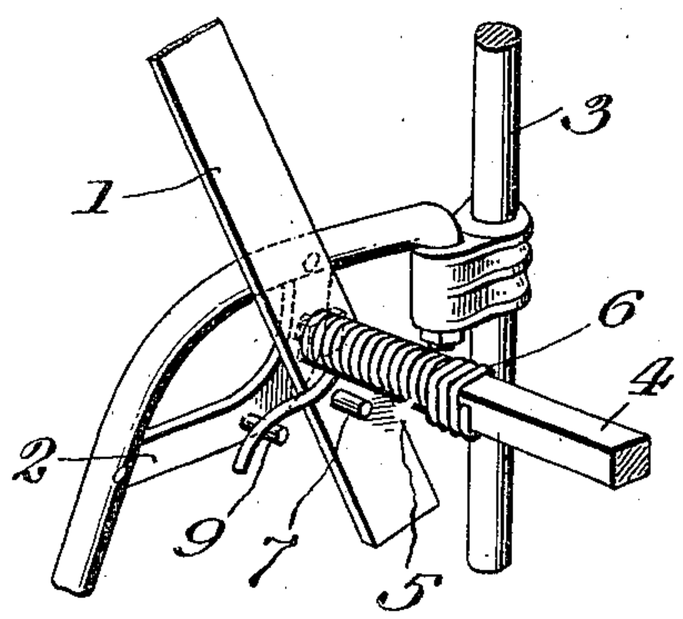
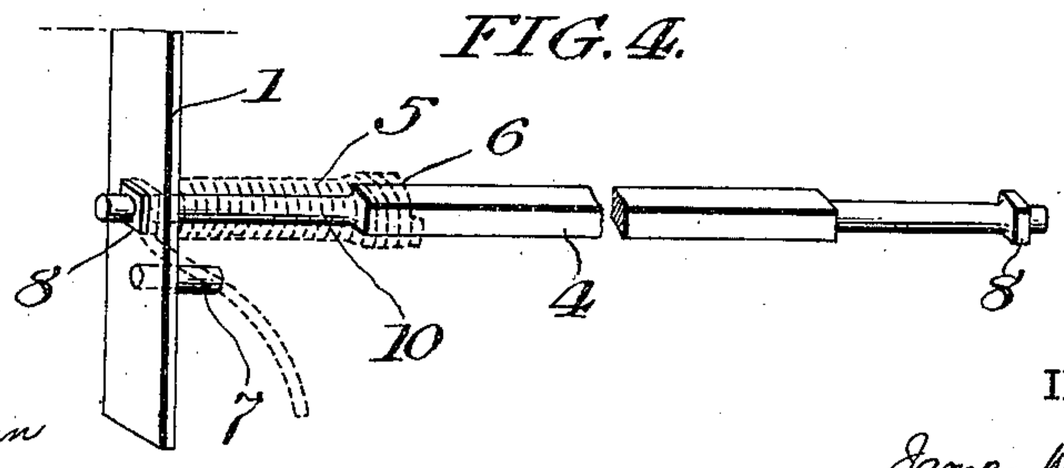


FIG. 4.



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UNITED STATES PATENT OFFICE.

JAMES WELSH PEPPER, OF PHILADELPHIA, PENNSYLVANIA.

FOLDING BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 640,022, dated December 26, 1899.

Application filed October 21, 1899. Serial No. 734,374. (No model.)

To all whom it may concern:

Be it known that I, JAMES WELSH PEPPER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Folding Bedstead, of which the following is a specification.

My invention relates to improvements in connection with folding bedsteads; and it consists in providing an improved adjustable spring-balance operating between the fixed and movable parts of said bedstead to assist in the folding and unfolding of the same.

Referring to the drawings, Figure 1 is a perspective view of a bedstead employing my improved device, said bedstead being in a partially-open position. Fig. 2 is a view in perspective of a detail, showing the condition of the spring when the bedstead is closed. Fig. 3 is a similar detail showing the position of the spring when the bedstead is partially open. Fig. 4 is a detail of the connecting-bar which supports the springs.

Similar numerals refer to similar parts throughout the several views.

The bed-bottom 1 is pivotally secured, by means of the horizontal cross-bar 4, to the limb members 2, connecting the supplemental feet with the head member 3. This horizontal cross-bar 4 is rectangular in cross-section at its juncture with one or both of the side members of the bed-bottom, but circular in cross-section at its extreme ends to permit its freely rotating in the apertures of the said stationary limb members 2, so that said bar rotates with the movement of the bed-bottom. Said bar 4 is laterally movable in said bed-bottom, so that said square portions may be disengaged from the coöperating square apertures in the bed-bottom to permit the rotation of the bar independently of the bed-bottom for the purpose hereinafter specified. Wound around the bars at either end thereof, but within the side members 1 of the bed-bottom, are the coiled springs 5. One end of said spring conforms to the square cross-section of the bar, as shown at 6, the other end being free and adapted to encounter a projection 9 on the fixed member 2. Another projection 7 is secured to the side members 1, adapted to encounter this free end of spring 5 some little distance from its extremity. The tension of the spring 5 may now be adjusted to the required tension by removing the square portion 8 of the bar 4 from the corresponding square aperture in the side of member 1 and rotating said bar while the free portion of the spring still encounters the projection or pin 7, whereby the spring is wound or unwound at will. The square portion 8 of bar 4 being again replaced in the corresponding square aperture of the member 1, said spring is securely locked into position with the required adjustment of tension. Now the special purpose of pin 7 is to provide an additional stop for spring 5 instead of relying upon the pin or stop 9, secured to the stationary member 2. This permits of the preliminary movement of the bed-bottom from the position shown in Fig. 2 to that shown in Fig. 3 in the act of opening the bed before the spring begins to exert its resistance to the further opening movement of the bed-bottom, thus diminishing the force which would otherwise necessarily have to be exerted in starting the bed and yet affording sufficient resistance after the preliminary movement is accomplished to assist in checking its downward movement.

It will be noted by inspection of the drawings that upon the opening of the bed the consequent revolving of the horizontal cross-bar 4 operates to wind up spring 5 upon the bar. It will be noted that the ends 6 of said spring 5, as has been stated, are wound tightly about the square portion of the bar for two or three windings, while the portion of the bar between said square windings 6 and the square portion 8 is cut down and rounded, as shown at 10, to permit the bar to freely turn within the spring and also to afford room for the tightening of the spring as it is wound up. When the bedstead is in the open position, the springs 5 will consequently be wound to their maximum and will exert their maximum tension to assist in lifting the bed-bottom in the act of closing the bedstead. When the springs are wound to the proper tension and the square portions 8 of the bar 4 are inserted in the square apertures of the members 1, the round portions 11, which reside in the round apertures of the stationary members 2, have threaded extremities for nuts,

which are now secured thereto to hold the combined parts in position.

What I claim is—

1. In a folding bedstead having stationary and movable members, a cross-bar rotatably secured to the stationary member and normally rigid with the movable member, a coiled spring upon said cross-bar stops upon said members whereby the spring encounters with its free end the fixed member, after a required preliminary movement of the movable member, in opening or unfolding the bedstead, substantially as described.

2. In a folding bedstead having stationary and movable members, a laterally-movable cross-bar rotatably securing the movable to the fixed member, a spring coiled upon said cross-bar and secured at one end thereto with its free end adapted to encounter the fixed member and means for locking the cross-bar with the movable member after it has been turned to secure the desired tension of the spring.

3. In a folding bedstead having stationary and movable members, a spring having one end rigid with the movable member a projection on said movable member adapted to check the free end of the spring so that a certain preliminary movement of the movable part from the closed toward the open position is required before the free end of said spring encounters the fixed member.

4. In a folding bedstead having fixed and movable members, a spring having one end rigid with the movable member a projection on the movable member to check the free end of the spring, so that a certain preliminary movement of the movable part from the closed toward the open position is required before the free end of said spring encounters the fixed member of said bedstead, and means for adjustably securing the tension of said spring means.

5. In a folding bedstead having stationary and movable members, a laterally-movable cross-bar rotatably securing said members, a spring coiled upon and secured to the bar at one end and free at the other end to contact with the stationary member and means for locking the bar rigid with the movable member after it has been turned sufficient to secure the desired tension of the spring.

6. In a folding bedstead having stationary and movable members, a laterally-movable cross-bar rotatably securing said movable member, a spring coiled and secured to the bar at one end and free at the other end to contact with the stationary member, means for locking the bar rigid with the movable member after it has been turned sufficient to secure the desired tension of the spring, and a projection on the movable member adapted to engage with the spring near its free end to prevent its engaging with the fixed member until after the required preliminary movement of the movable member.

7. In a folding bedstead having fixed and movable members a spring-balance therefor and means for permitting the preliminary movement of the movable member from the closed toward the open position before the spring-balance exerts its resistance thereto.

8. In a folding bedstead having fixed and movable members, a spring-balance therefor, and means for permitting the preliminary movement of the movable member from the closed toward the open position before the spring-balance exerts its resistance thereto, and means for winding up or unwinding said spring to secure the proper adjustment thereof.

JAMES WELSH PEPPER.

Witnesses:
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