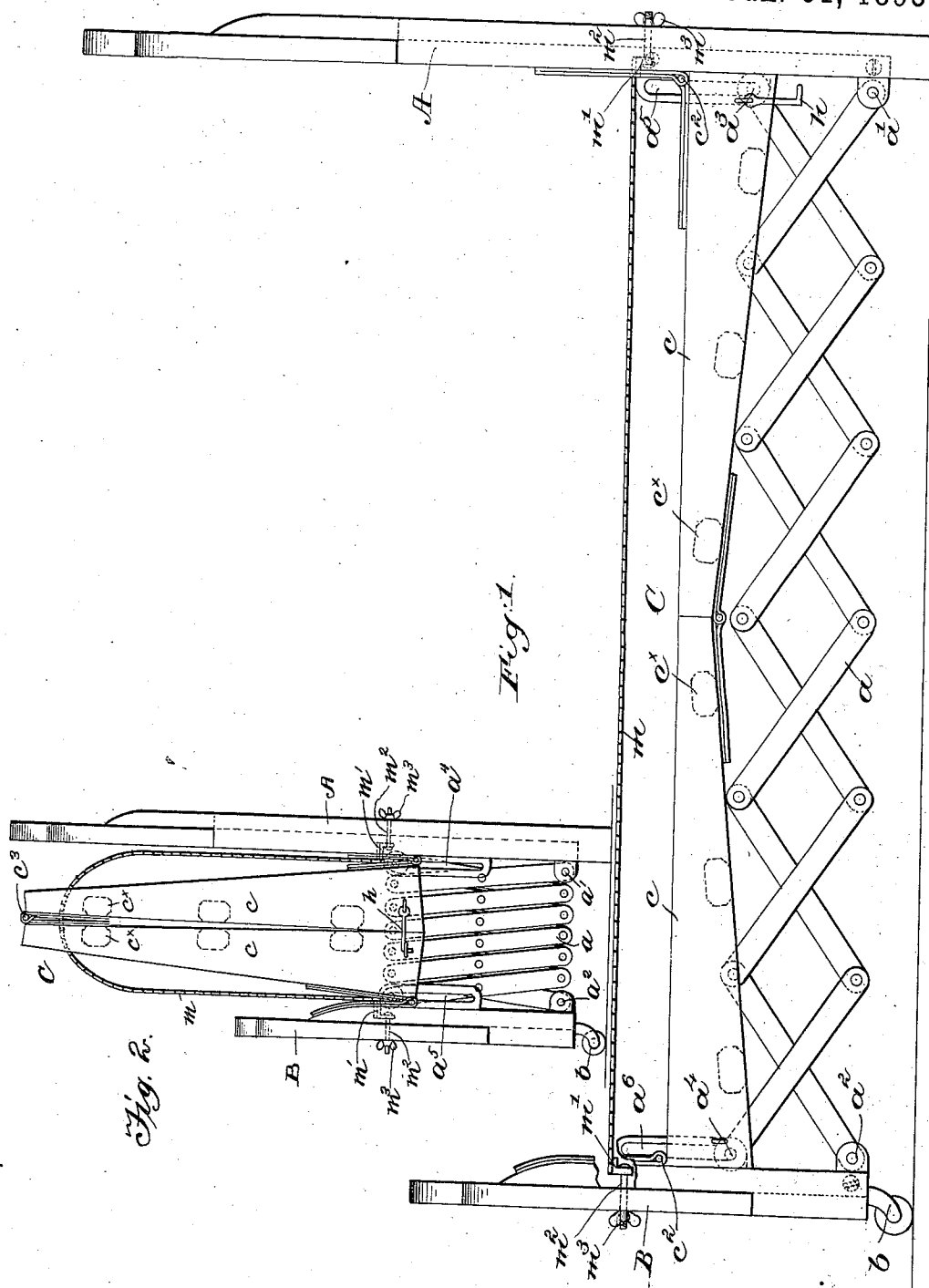


(No Model.)

A. J. MORSE.  
FOLDING BED.

No. 490,832.

Patented Jan. 31, 1893.



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# UNITED STATES PATENT OFFICE.

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## FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 490,832, dated January 31, 1893.

Application filed March 23, 1892. Serial No. 426,092. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW J. MORSE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Folding Beds, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide an improved folding bed.

In accordance with this invention, the head and foot boards of the bed are so connected that one may be moved bodily toward the other while in a substantially vertical position, the side rails of the bed being hinged or otherwise suitably constructed to permit such movement.

In the preferred construction, the head and foot boards are connected at each side by a system of "lazy tong" levers which permit the foot board to be moved toward the head board, each remaining at all times in a substantially vertical position.

One part of this invention, therefore, consists in the combination in a folding bed of a head board and a foot board, "lazy tong" levers connecting the same, and the hinged side rails C, of a mattress held above said side rails and sustained by said head and foot boards alone, retaining the bed open, substantially as will be described. Also in the combination in a folding bed, of a head board and a foot board, "lazy tong" levers connecting the same, the fixed pivots for the lower endmost levers, the guide ways in which the upper endmost levers are pivoted to slide, and the hinged side rails C hinged to the head and foot boards above and independent of said levers, substantially as will be described.

Other features of this invention will be hereinafter described and pointed out in the claims.

Figure 1, represents in side elevation a folding bed embodying this invention, and Fig. 2, a similar view showing the foot board moved toward the head board.

Referring to the drawings, the head board A, and foot board B, are and may be of any usual or desired material, shape or construction.

In accordance with this invention, the head

and foot boards are connected by devices which will permit one to be moved toward the other, both remaining at all times in substantially vertical positions, such connecting devices in the present and preferred construction consisting of "lazy tong" levers  $a$ , a series of which is arranged at each side of the bed, the endmost lower lever of each series being pivoted to the head and foot boards respectively at  $a'$ ,  $a''$ , while the endmost upper levers are fitted with pins  $a^3$  and  $a^4$  which slide in the guideways  $a^5$ ,  $a^6$ , arranged respectively on the head and foot boards of the bed.

The foot board alone, in a light bed, will preferably be provided with casters or rolls  $b$ , so that the said foot board may be rolled bodily and in a substantially vertical position toward the head board as in Fig. 2, the "lazy tong" levers closing up to permit such movement; but in heavy beds, both the head and foot boards may be fitted with casters or rolls.

The side rails C, of the bed are in the present instance each formed of two members  $c$ ,  $c$ , hinged or pivoted, as at  $c^2$ , at their outer ends to the head and foot boards respectively, and hinged or pivoted together at their adjacent ends, as at  $c^3$ , so that as the head and foot boards are moved one toward the other the side rails C will turn on their hinges into the position shown in Fig. 2. If desired, the two outer ends of the members  $c$ ,  $c$ , of the side rails may be hooked together as by hooks  $h$ , when in their closed position, Fig. 2, to thus hold the head and foot boards together against the tendency of the bedding to separate them; or the said head and foot boards may be held together in any other suitable or desired manner.

In my improved bed, the spring or mattress support is not sustained by the side rails, the woven wire or other spring or flexible support  $m$  being sustained entirely at its ends by the head and foot boards, as shown, so that as the two are separated the mattress is bound to assume its proper horizontal position, Fig. 1. The mattress being above the side rails when the bed is open tends to keep the bed in such open position, by exerting a pull upon the head and foot boards above the pivoted points of the side rails.

In the present instance the supporting bars

or plates  $m'$  to which the opposite ends of the support  $m$  are attached are provided with threaded bolts  $m^2$  which are extended through the head and foot boards respectively and are provided outside the same with adjusting nuts  $m^3$  by means of which the tension on the support  $m$  may be varied to render the same more or less flexible.

The side rails  $C$  are preferably connected by cross slats  $c^x$ , represented by dotted lines in the drawings, which slats as the rails fold up will act to properly bend or fold the support  $m$  and the mattress and bedding carried thereby. The under sides of the members  $c$ , of the side rails will preferably be inclined upwardly toward the hinges  $c^3$ , as shown, so that as the foot board is moved toward the head board, the rails will automatically fold up into position Fig. 2.

I claim—

1. The combination in a folding bed, of a head board and a foot board, "lazy tong" levers directly connecting the lower ends of the same, the fixed pivots  $a'$ ,  $a^3$ , for the lower endmost levers, the guide ways  $a^5$ ,  $a^6$ , in which the upper endmost levers are pivoted to slide, and the side rails  $C$ , of equal length hinged to each other and to the head and foot boards above and independent of said levers, substantially as described.

2. In a folding bed, the combination with a head board and a foot board, movable one toward the other, and side rails hinged to each other and to the head and foot boards, and having squared abutting ends, of a mattress support, sustained at its ends by said head and foot boards alone, and above the pivotal points of the side rails, and a flexible connection below the side rails and between said head and foot boards to limit the outward movement thereof, to thereby retain the bed open, substantially as described.

3. In a folding bed, the combination with a head board and a foot board, and the hinged side rails  $C$ , of a mattress held above the pivotal points of said side rails and sustained by said head and foot boards, alone, and the "lazy tong" levers  $a$  connecting said head and foot boards below the pivotal points of the side rails, the mattress drawing the head and foot boards together in a plane above the side rails, and the "lazy tong" levers  $a$  limiting such movement and maintaining said

boards upright, and a locking device on the outer ends of the side rails to hold the side rails together when the bed is closed, and retaining the head and foot boards in their closed position, substantially as described.

4. In a folding bed, the combination with a head board and a foot board, and the hinged side rails  $C$ , of a mattress held above the pivotal points of said side rails and sustained by said head and foot boards alone, and the "lazy tong" levers  $a$  connecting said head and foot boards below the pivotal points of the side rails, the mattress drawing the head and foot boards together in a plane above the side rails, and the "lazy tong" levers  $a$  limiting such movement and maintaining said boards upright, substantially as described.

5. In a folding bed, the combination with a head board and a foot board, movable one toward the other, and side rails hinged to each other and to the head and foot boards, and having squared abutting ends, of a mattress support, sustained at its ends by said head and foot boards alone above the pivotal points of the side rails, and adjusting devices connecting said support to the head and foot boards to vary the tension of said support, and a flexible connection below the side rails and between said head and foot boards to limit the outward movement thereof, and to thereby retain the bed open, substantially as described.

6. In a folding bed, the combination with head and foot boards connected by side rails  $C$ ,  $C$ , hinged together at their inner ends, and at their outer ends to said head and foot boards, of a support  $m$  sustained at its ends by said head and foot boards above the side rails, a connection between said head and foot boards below the side rails, and cross slats  $c^x$  connecting opposite side rails, the support  $m$  and limiting connection being equal in length to thereby retain the head and foot boards in parallelism when the side rails are in alignment, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW J. MORSE.

Witnesses:

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