D. Merrill,

Invalid Bedstead,

No. 41,526. Patented Feb. 9, 1864.

Fig: 1.

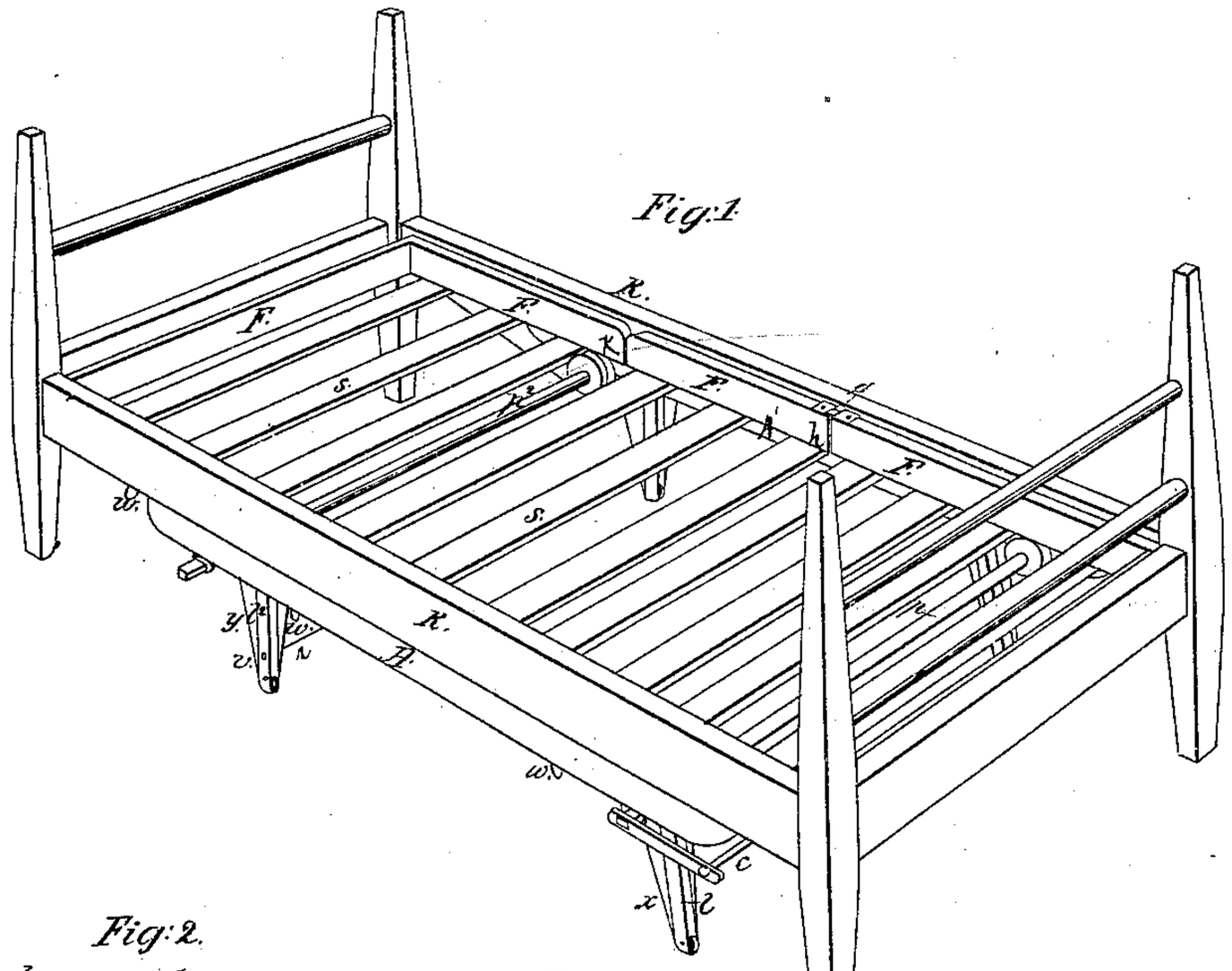


Fig: 2.

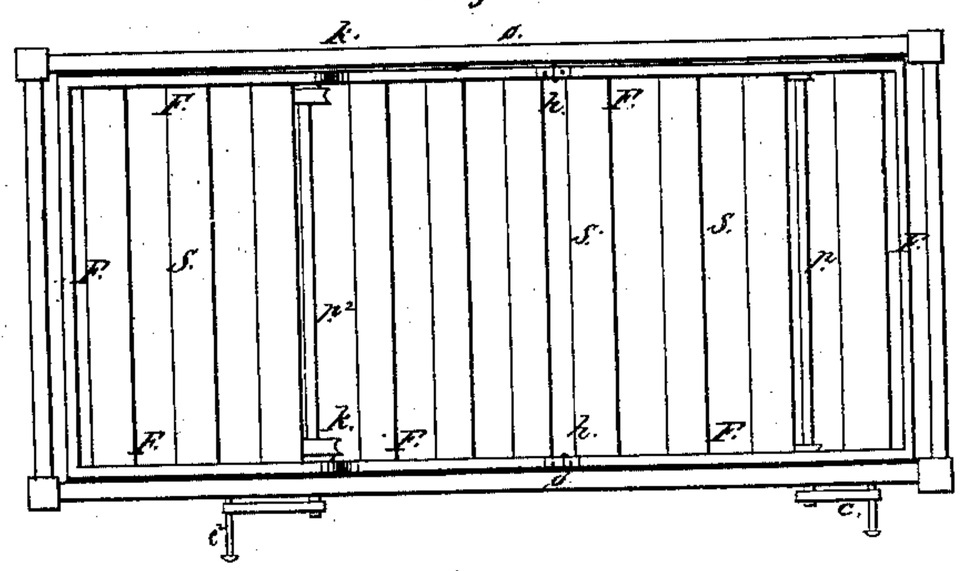


Fig: 4.

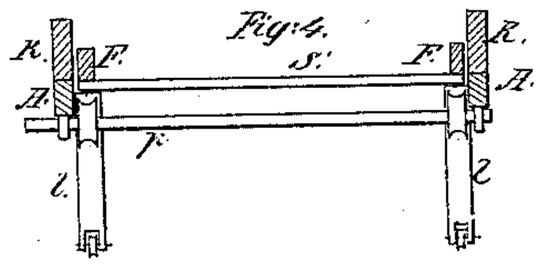


Fig: 3.

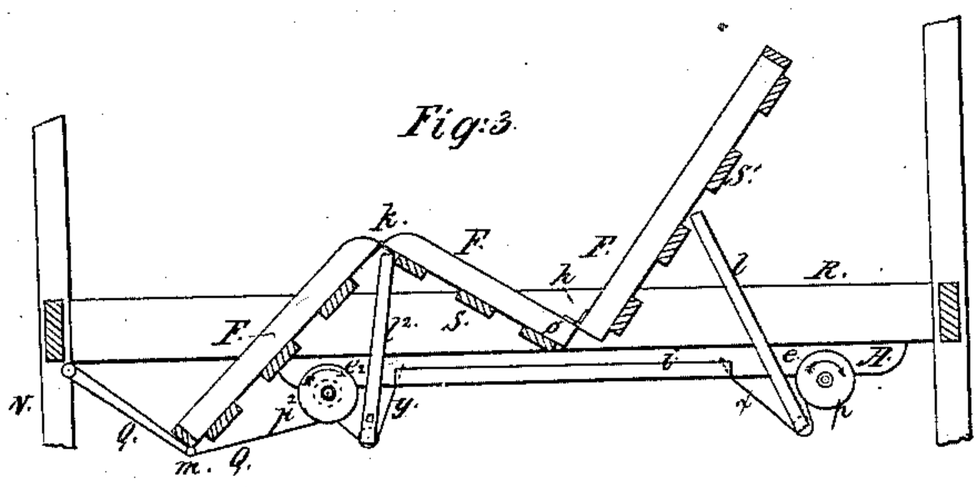
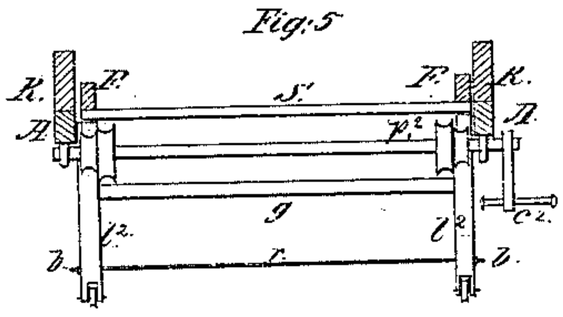


Fig: 5



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

DANIEL MERRILL, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN INVALID-BEDSTEADS.

Specification forming part of Letters Patent No. **41,526,** dated February 9, 1864.

To all whom it may concern:

Be it known that I, DANIEL MERRILL, of the city and county of Worcester, and the Commonwealth of Massachusetts, have invented new and useful Improvements having reference to Invalid-Bedsteads; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 denotes a perspective view of a bedstead with the said improvements. Fig. 2 is a plain view from above of the bedstead and jointed frame. Fig. 3 is a longitudinal section with the jointed frame in an easy-chair position. Fig. 4 is a transverse section showing the combination for elevating the head. Fig. 5 is a transverse section showing the combination for elevating the knees, depressing the feet, and distending the jointed frame.

My improvements consist in a combination for moving the upper or head portion of a jointed frame attached to a bedstead, in a combination by which the simultaneous elevation and depression of the lower sections of the jointed frame is effected, and in a combination by which the frame is distended at the knee-joint when a sacking bottom or its equivalent is used for a bed to rest upon.

I accomplish my object and apply my improvements in the following manner: Attached to each of the side rails, R, Figs. 1 and 3, is an auxiliary rail, A. Within the bedstead is a jointed frame, F, so constructed as to admit of a sacking bottom, or its equivalent, or of slats S, as in the accompanying model. The jointed frame is made in three parts or sections united by hinges *h k*, and resting upon sills *i* attached to the bed-rails A. At the joints *o h* the hinges uniting the frame are connected with the bed-rails R by a pivot screw-bolt. The upper or head section of the jointed frame may be elevated by means of single cords or belts attached at one end to the sills *i*, Fig. 3, and passing thence under the struts *l* connect at the other end with the windlass-pulley *p*. Motion being imparted to the windlass *p* in the direction of the arrow *e*, the head-section will be elevated, and may be retained in any desirable position by pressing the handle of the crank *c*, Fig. 2, under the bed-rail, the handle being constructed so as to slide in the lever of the crank for that purpose.

That portion of the frame upon which rest the feet and legs may be elevated at the knee-joint of a patient while on the bed by means of similar struts, l^2, operated by a crank and windlass, around which pass belts or cords, the end of one of which is attached to the sill *i*, and thence passing under the end of the struts l^2 is attached to the windlass-pulley p^2. The other cord is fastened at one end to the foot of the frame on the under side at *m*, thence passing around a small pulley, *n*, which is attached to the bedstead; returning, passes under a small pulley at *m*, thence to the windlass-pulley p^2, to which it is attached. Rotary motion imparted to the windlass in the direction of the arrow e^2 will cause the end of the strut l^2 so to operate as to produce not only the elevation of the knee-joint *k*, but the simultaneous depression of that portion of the frame upon which rest the feet. The crank c^2, Fig. 5, is also constructed with a sliding handle, which, being pressed into the loops or rings *w*, (seen in Fig. 1,) serves to retain the frame in any position desired.

When a sacking or its equivalent is used for the bed to rest upon, the tendency of the jointed frame to draw together at the knee-joint is overcome by means of a bar, *g*, Fig. 5, connecting the struts l^2, and a rod, *r*, passing through the struts l^2, on either end of which is a nut and screw, *v*. The struts l^2 then act as levers, the bar *g* being the fulcrum, and the rod *r* and nuts *v* being the power to retain the jointed frame in a proper position.

Having thus described my improvements, what I claim therein as original, and desire to secure by Letters Patent, is—

1. The combination for regulating the upper or head section of the jointed frame, the same consisting in one or more struts, *l*, the belt or cord *x*, and windlass with pulley *p*, arranged and combined with the bedstead and jointed frame in the manner specified.

2. The combination by which the simultaneous elevation and depression of the two lower sections of the jointed frame is effected, the same consisting in the windlass and pul-

leys p^2, the two cords or belts y and z, and the struts l^2, arranged and applied at the lower or knee joint of the jointed frame, substantially as specified.

3. The combination for distending the sacking or its equivalent, the same consisting in the struts l^2, which act as levers, the fulcrum-bar g, and the rod r, provided with nuts and screws v, the whole being arranged and combined to operate in the manner set forth.

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