W. SPANNER.

INVALID BEDSTEAD.

No. 186,694 Patented Jan. 30, 1877.

Fig. 1.

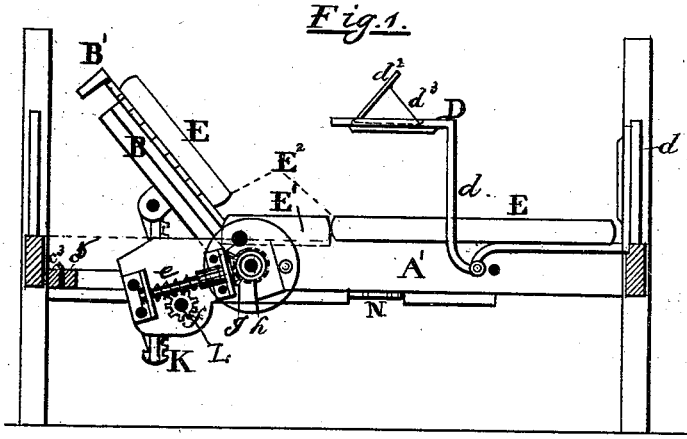


Fig. 4.

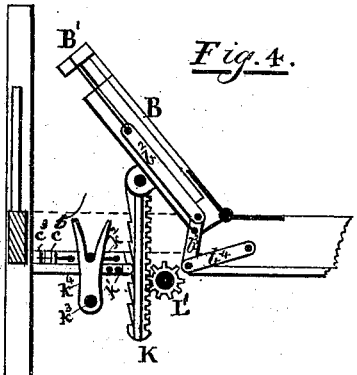


Fig. 2.

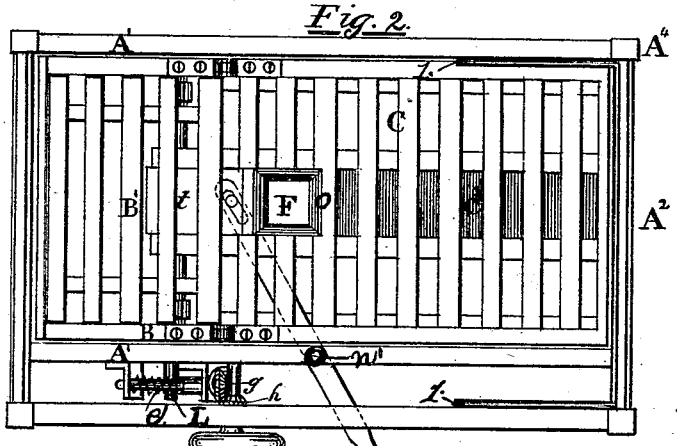


Fig. 5.

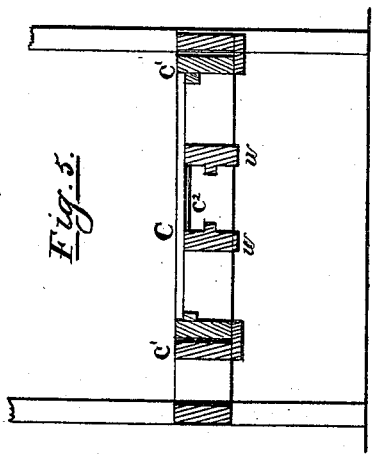
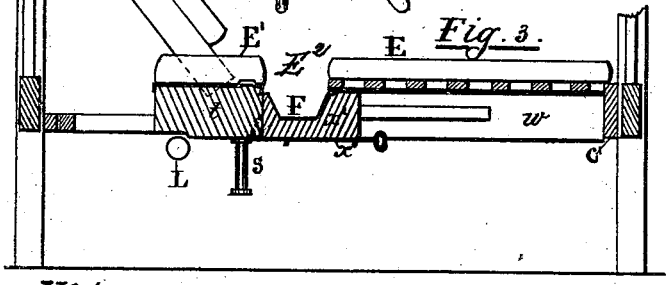


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN INVALID-BEDSTEADS.

Specification forming part of Letters Patent No. **186,694**, dated January 30, 1877; application filed August 19, 1876.

To all whom it may concern:

Be it known that I, WALTER SPANNER, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, carpenter, have invented certain new and useful Improvements on Invalid-Bedsteads; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to those bedsteads which are constructed with certain devices for increasing the comfort and permitting of the better treatment of invalids than they can receive when occupying the ordinary bedsteads. In other bedsteads for this purpose they have been complicated in construction, and are consequently difficult to operate; while my invention is simple in its construction, inexpensive, and can be operated by any ordinary attendant, and in many cases entirely by the invalid, and without getting out from the bed-clothes.

It consists, first, of the mechanism by which the bolster-frame is raised to any desired inclination, when so required for the comfort of the invalid, and either by itself or with the entire bottom, so that the body of the invalid may be placed in an inclined position when such position is found to be necessary; second, in the combination and arrangement of a table which, when not in use, has the appearance of an ornamental panel inside of the foot-board, and being hinged to the side rails of the bedstead, and in such a manner that when folded over for use it affords all the convenience of an ordinary table; third, in the combination of a book-rest attached to and forming a part of the aforesaid table, which, when not in use, the book-rest is sunk flush in the same, and when in use, the book-rest is simply raised on its hinges, and may be adjusted by means of a hinged rod attached thereto; fourth, in the combination and arrangement of a bed-pan, which, in most cases, may be used by the invalid without any assistance and without leaving the bed, which is attained by means of a prepared mattress and suitable apparatus for sliding the pan from its usual position to that of a given position under the mattress, and again from the latter position to its normal position, as hereinafter specified and described.

In the accompanying drawings, the same letters of reference indicate the same parts in all the views, and in this specification.

Figure 1 is a side elevation, showing a portion of the mechanism by which the bolster-frame B and bottom C are raised to any desired inclination, when so required, viz: The bevel-wheels *g* and *h*, endless screw *e*, wheel *f*, portion of the hinged rack K, table D, in two positions, the arm *d* being pivoted to the side rail A′, and, when folded over for use, rests against shoulders 1, (see Fig. 3,) giving the necessary stability to the table when in use. The other position is when it is folded closely up to the foot-board, and appears as an ornamental panel. Fig. 1 shows also the book-rest d^2, and supported by the angular rod d^3, also, the bolster-frame B, and extension-board therein B′, at an inclined position, the mattress E thereon and on the bottom, and a separate piece, E^1, in the form of a pad, which is moved laterally in connection with the bed-pan F, (shown in Figs. 2 and 3,) as hereinafter more fully described.

Fig. 2 is a plan, showing the various parts of the bedstead A, viz., side rails A^1, end rails A^2, posts A^4, bed-bottom C with frame, aperture O, pan F, rubber cover C^2, handle M with axle *m*, bevel-wheels *g h*, endless screw *e*, axle L, and lever N for moving the pad-block *t* and pan-holder *x′*.

Fig. 3 is a side sectional elevation, showing pad-block *t*, bed-pan F with pan-holder *x′*, key *x*, slideways *w w*, cross-bar C^1, stud S for lever N, the key *x* serving to lock together and to unlock the pan-holder and the block *t*, by turning the key and causing its bent end to engage with or be released from the block.

Fig. 4 is a side sectional elevation, with bolster-frame B and extension-board B′, and and the links b^2 b^3 b^4 for operating the same, hinged rack K, pinion L′, guide k^1, sliding stop k^2, axle k^3, arms k^4 for operating the sliding stop k^2.

Fig. 5 is a transverse section, showing bottom C, frame C^1, slideways *w w*, rubber cover C^2, intended to be air-tight above the pan F.

It will be seen from the drawings that on turning the handle M it will rotate the bevel-wheels *g h*, and the endless screw *e*, wheel *f*, axle L, pinions L′ L′, which will give a vertically-reciprocating motion to the racks K K and elevate the outer end of the bolster-frame B, which, after being raised a little, on turning the axle k^3, by means of the arms k^4, will unlock the bottom-frame C^5 from the cross-bar C^3, and will move the catch k^2 into the ratchet on back of racks K; and on turning the handle M the bottom C will rise with the bolster-frame B, and to any inclination that may be required. It will also be seen that by moving the lever N on its fulcrum *n′* it will, by means of the stud S, move in either direction the block *t* with pad E^1, and also the pan-holder *x′* with pan F. When the bolster-frame B is elevated to the position shown in Figs. 1 and 3, it will be seen that the pad E^1, being secured to the block *t*, does not rise with the mattress E. An aperture, E^2, will thus be formed in the mattress E, through which the pad E^1 will be moved by the lever N, without any interruption from the mattress E, as herein shown. It will also be seen that as the bolster-frame B rises the link b^3 acts as a lever, and pushes out and extends the bolster-board B′, which is connected to the outer end of this lever.

Having thus described my invention, I claim—

1. In an invalid-bedstead, constructed with an adjustably-movable extension-bolster, B′, and bottom C, as shown and described, the fold-over table B, with book-rest d^2, arranged in relation to such bolster, as specified and described.

2. In an invalid-bedstead, constructed with an adjustably-movable extension-bolster board B′, the combination of the links b^2 b^3 b^4, bottom C, hinged racks K K, axle L, pinions L′ L′, wheel *f*, enless screw *e*, bevel-wheels *g h*, and axle *m*, and handle M, as and for the purposes set forth.

3. The combination of the block *t*, pan F, and pan-holder *x′*, key *x*, lever N, and slide-ways *w w*, as and for the purpose described.

4. The combination of the catch k^2, axle k^3, and arms k^4, with the bed-bottom and the racks K, as and for the purpose described.

WALTER SPANNER.

Witnesses:
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ALFRED BOYD.