(No Model.) 2 Sheets—Sheet 1.

N. ODEGAARD & G KUHNLE.

FOLDING BED.

No. 505,477. Patented Sept. 26, 1893.

Fig. 2.

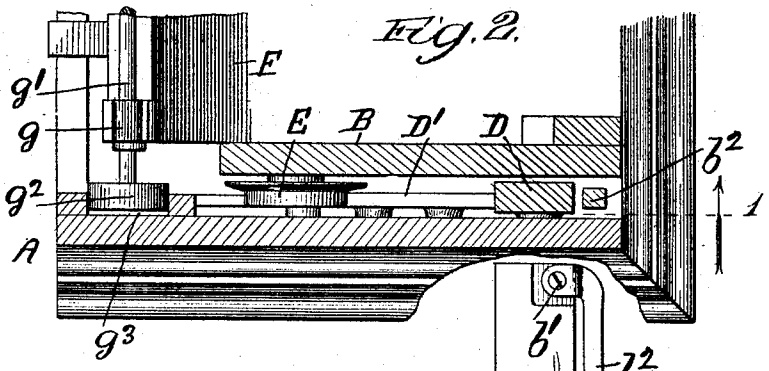


Fig. 1.

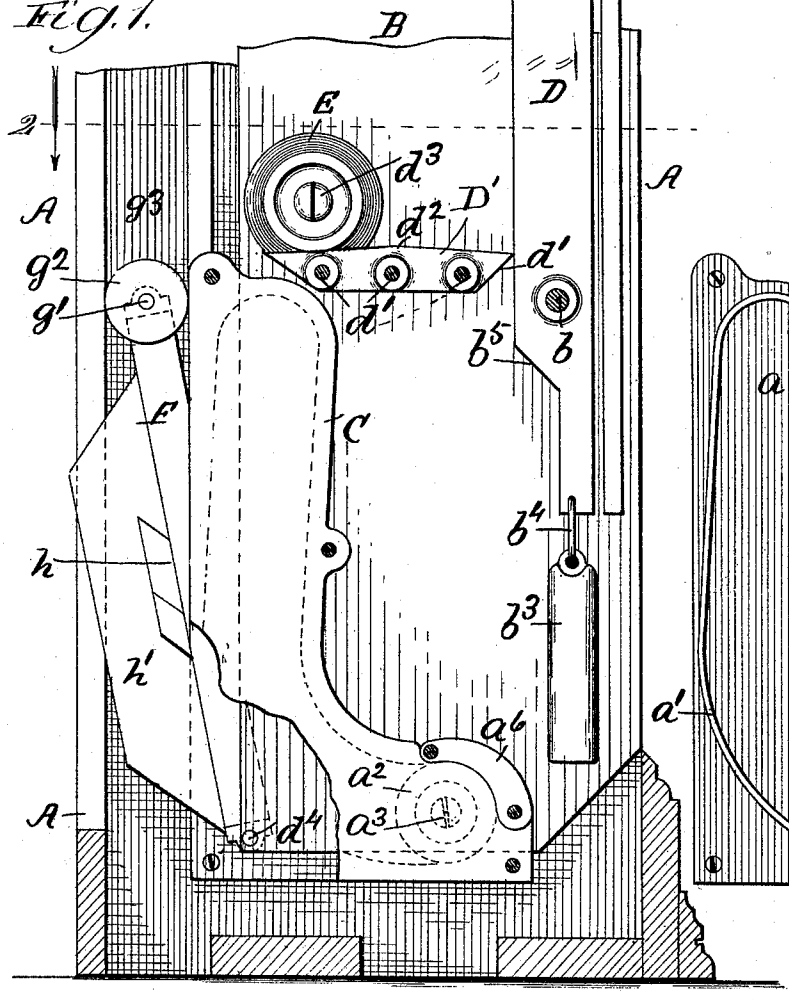
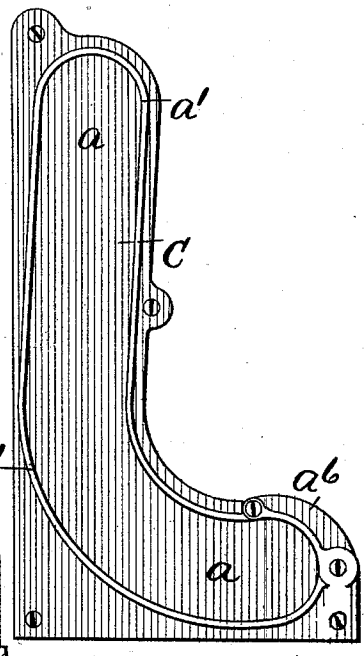


Fig. 3.



Witnesses:
Chas. E. Gaylord.
Clifford N. White.

Inventors:
N. Odegaard.
G. Kuhnle.
By G. B. Coupland & Co
Attys.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 5.

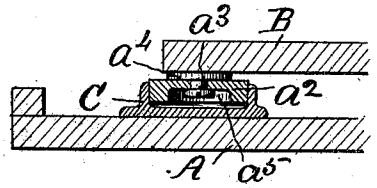

Fig. 4.

Witnesses:
Chas. E. Gaylord
Clifford N. White.

Inventors
N. Odegaard.
G. Kuhnle
By G. B. Coupland & Co
Att'ys

UNITED STATES PATENT OFFICE.

NIELS ODEGAARD AND GOTFRED KUHNLE, OF CHICAGO, ILLINOIS.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 505,477, dated September 26, 1893.

Application filed September 15, 1892. Serial No. 445,937. (No model.)

To all whom it may concern:

Be it known that we, NIELS ODEGAARD and GOTFRED KUHNLE, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Beds; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Reference is had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in folding-beds, and consists of certain novel features in the general construction, combination, and arrangement of the several parts, as will be hereinafter set forth.

Figure 1 is a broken-away section on line 1, Fig. 2, looking in the direction indicated by the arrow; the parts being represented in a folded position; Fig. 2, a broken-away transverse section on line 2, Fig. 1; Fig. 3, a detached plan of one of the cam-plates in which the pivot-rollers have their bearing and movement. Fig. 4 is a similar view to that illustrated in Fig. 1, with the difference that the parts are shown in their opposite or unfolded position; Fig. 5, a broken-away section on line 5, Fig. 4.

In the drawings, A represents the inclosing case and B the side-rails of the bed proper.

To the respective inner sides of the case are rigidly secured companion cam-plates C; the location and position of which are illustrated in Figs. 1, 4 and 5. A plan or face-view of one of these plates is shown in Fig. 3. These cam-plates are provided on their faces or bearing-sides with the wide groove or pathway, a, curving from a horizontal to a perpendicular plane. The rim or inclosing border a', (shown in Figs. 3 and 5, and indicated by dotted lines in Figs. 1 and 4,) forms a track for the pivot or movement-rollers, a^2, the peripheries of which bear against the rim a', as shown in Fig. 5. These rollers are attached to the outer sides and head-ends of the bed-rails by the axial-pins a^3. A friction washer a^4 is interposed between the rollers and the adjacent surfaces of the rails, as shown in Fig. 5. The movement rollers are recessed on their inner sides, as at a^5, Fig. 5, so that the head-ends of the axial-pins may be countersunk out of contact with the adjacent surfaces of the cam-plates. The segment part, a^6 of the cam-plates is removable so that the folding or bed-part proper may be disengaged from or connected with the inclosing case. The opposite positions of the movement-rollers are indicated by dotted lines in Figs. 1 and 4, showing the bed, respectively, in a folded and unfolded position.

Companion track-bars, D, are secured to the respective inner sides of the casing by a pivot-bolt b. To the front ends of these bars are pivoted, as at b', the additional supporting-legs b^2. When the bed is folded, these legs fold parallel with the respective bars, (Fig. 1) and drop down to the supporting right-angle position (Fig. 4) when the bed is unfolded.

To the rear ends of the respective track-bars are attached weights, b^3, in a suspended position by means of a ring b^4, which permits of the weights always remaining in a vertical position and serves to keep this portion of the track in its proper position when folding up the bed. By this arrangement the inclosing case may be of a less depth than the ordinary form, and the supporting center moved farther out in the direction of the foot-end when the bed is unfolded.

The track-bars, D, are cut away at their back ends and are provided with the beveled shoulders b^5.

The bars D′ are rigidly secured to the respective inner sides of the casing by a number of screws d. These bars are located in line with and form a continuation of the tracking-surface of the bars D. The joining ends of the track-bars D are beveled, as at d', to closely engage the correspondingly beveled shoulders b^5 of the larger track-bars, so that the track sections are kept in line when the bed is in its open position.

The tracking surface of the bars D′ is raised as at d^2, so that when the bed is closed it will remain in a perpendicular position and not incline outwardly away from the case.

The companion rollers E are secured to the respective side-rails by axial-pins d^3. These rollers track on the bars D D′.

The lower corner ends of the head-board F are pivoted, as at d^4, to the respective upper corners of the side rails. The upper corner ends of this head-board are provided with bearing-lugs g (Fig. 2), mounted on the supporting-rod g', which extends from side to side in the back part of the case. The rollers g^2 are mounted on the respective ends of the rod g', and travel in rabbeted grooves g^3.

A transverse bar h is attached to the rear side of the head-board and supports the usual counterweights h'.

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

1. In a folding-bed, the combination with the inclosing case, of the companion track-bars pivoted thereto and adapted to assume a vertical or a horizontal position, the track-bars or sections rigidly secured to the case in line with the pivoted bars, the legs pivoted to the front ends of the pivoted bars, and the weights suspended from the rear ends of the latter bars, substantially as set forth.

2. In a folding-bed, the combination with the inclosing case, of the companion track-bars, pivoted thereto and adapted to assume a vertical or horizontal position, the legs, pivoted to the front ends of said bars, and the weights, suspended from the rear ends thereof, substantially as set forth.

3. In a folding-bed, the combination with the case, of the track-bars pivoted to the respective inner sides thereof, the legs pivoted to the front ends of said bars, the track-bars or sections rigidly secured to the case in line with and forming a continuation of the pivoted bars, the side-rails and the rollers pivoted thereto and tracking on said bars, substantially as set forth.

4. In a folding-bed, the combination with the case, of the cam-plates having a curved pathway therein, the side-rails, the movement-rollers moving in the curved pathway of the cam-plates, the track-bars pivoted to the case, the legs pivoted to the front ends of said bars, the track-bars or sections rigidly secured to the case, and the rollers attached to the side-rails and tracking on said bars, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

NIELS ODEGAARD.
GOTFRED KUHNLE.

Witnesses:
L. M. FREEMAN,
J. B. DONALSON.