

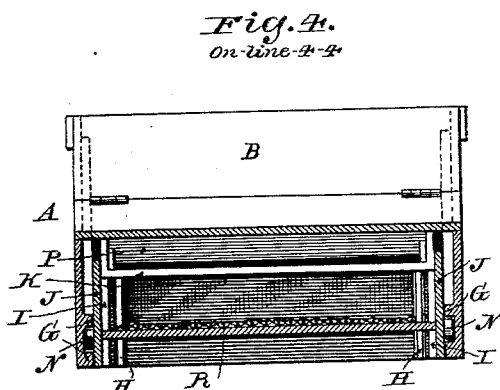
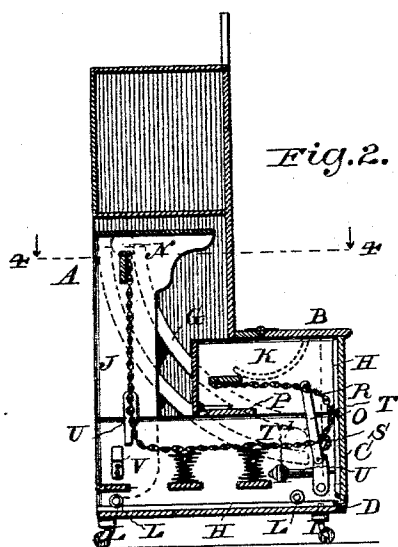
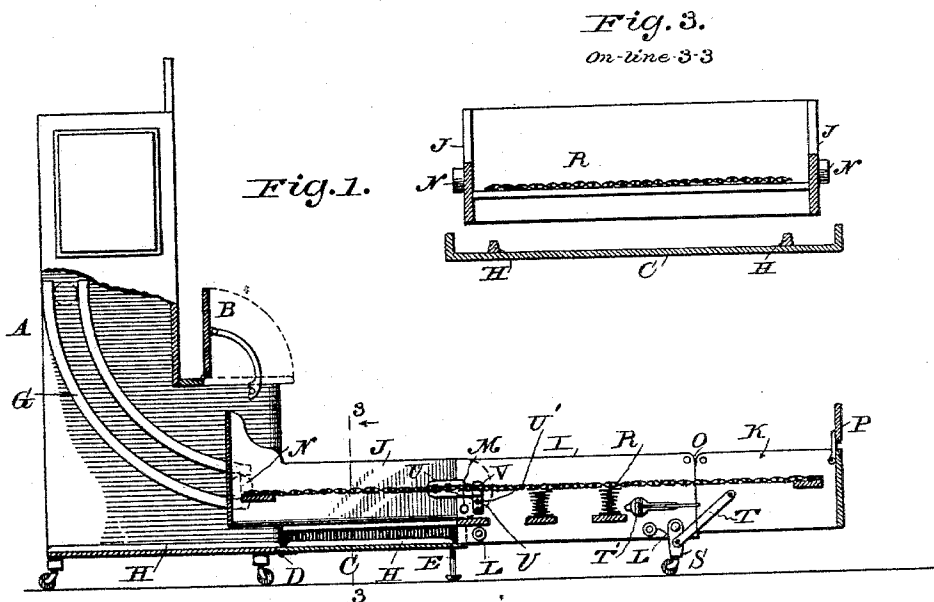
(No Model.)

2 Sheets—Sheet 1.

L. W. WELCH.
FOLDING BED.

No. 584,101.

Patented June 8, 1897.



Witnesses:
Arthur Ashley
P. J. Elmore

Inventor:
L. W. Welch
B. P. Lodge
Atty.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

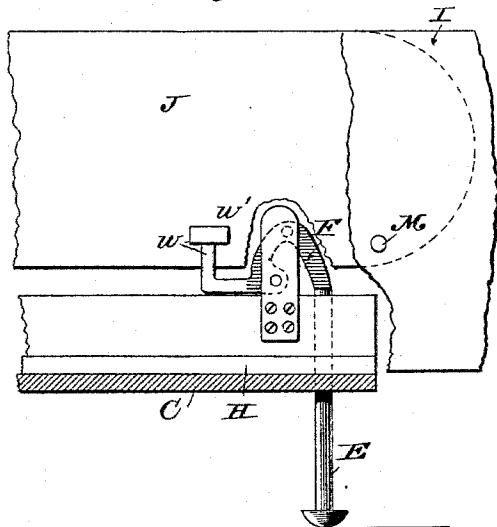


Fig. 6.

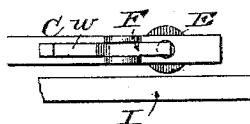


Fig. 7.

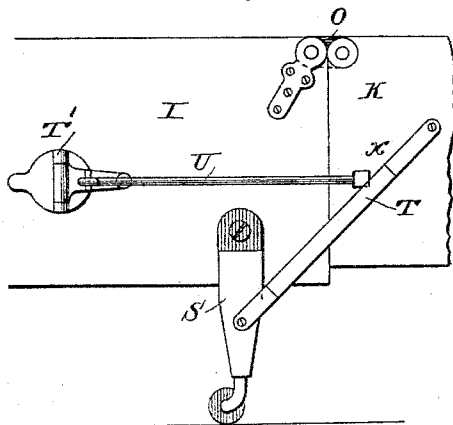


Fig. 8.

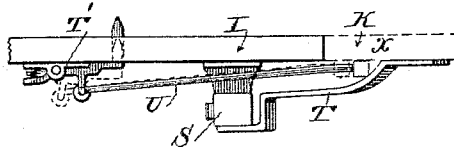
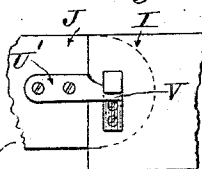


Fig. 9.



WITNESSES:

Arthur Ashley
J. S. Elmore

INVENTOR

L. W. Welch

BY

P. T. Lodge
ATTORNEY.

UNITED STATES PATENT OFFICE.

LYMAN W. WELCH, OF GRAND RAPIDS, MICHIGAN.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 584,101, dated June 8, 1897.

Application filed May 22, 1896. Serial No. 592,518. (No model.)

To all whom it may concern:

Be it known that I, LYMAN W. WELCH, of Grand Rapids, State of Michigan, have invented a new and useful Improvement in Folding Beds, of which the following is a specification.

My invention has as its object the production of a simple and inexpensive bed which may be quickly and easily folded into very compact form.

To this end the invention consists in the peculiar arrangement and construction of the parts, as hereinafter more fully described and claimed.

In the accompanying drawings I have represented my invention embodied in the form which has been found generally acceptable, but it is to be understood that so long as the essential features above mentioned are retained the form and arrangement of the parts and the construction of the details may be modified to any reasonable extent within the limits of mechanical skill.

Referring to the accompanying drawings, Figure 1 represents a longitudinal vertical section through my bed as it appears when extended for use. Fig. 2 is a similar section showing the bed in its folded condition. Figs. 3 and 4 are cross-sections on the correspondingly-numbered line of Figs. 1 and 2. Figs. 5 and 6 are respectively a side view and a top plan view, showing the outer end of the head-section and adjacent parts as they appear when the bed is extended. Figs. 7 and 8 are respectively a side view and a top plan view of the adjoining ends of the middle and foot sections as they appear when extended.

Referring to the drawings, A represents the case or cabinet, which may be of any external form or configuration desired, provided only it is adapted to receive the sections of the folding frame and the guides therefor, as hereinafter explained. The case is preferably made, however, as shown in the drawings, in the form of a dressing case or bureau, the upper part of which may contain compartments, drawers, or cabinets. The case is constructed with a front shelf B, adapted to turn upward and form a head-board, and with a front C, hinged at D, that it may turn outward and downward to a horizontal position, thus leaving the front of the case open

for the inward and outward passage of the bed-frame.

In order to support the front C when it is turned downward, sliding legs E are extended therethrough and a gravitating weight F is mounted between ears or plates on the front, as shown in Figs. 5 and 6, so that when the front is turned down the leg will fall through it to the floor, while at the same time the weight or latch will swing forward over the top of the leg to give it support. This feature in itself forms no part of the present invention.

The case is provided on the inside of its two vertical ends with curved tracks or rails G, extending from an elevated point at the rear downward and forward. The case is also provided on the bottom with two rails or tracks H, extending in a fore-and-aft direction and arranged to aline with similar rails secured to the inner or upper surface of the hinged front in order to give support to the bed-frame while being adjusted, as will be presently explained.

The bed-frame consists of three transverse sections I, J, and K. The middle section I is provided on its under side with rollers L, intended to ride on the rails and give it support while it is moving into and out of the case. The head-section J is jointed at its outer end to the middle section by supporting-pivots M, and is supported at its head by rollers or projections N, riding in the grooved guides G, so that when the middle section I is pushed horizontally backward into the bottom of the case, carrying the head-section before it, the latter is caused to assume an upright position within the case, as represented in Fig. 2.

The foot-section K is hinged to the middle section at O, that it may be folded over thereon, and is provided with a hinged folding foot-board P. R represents a wire mattress extending lengthwise within the bed-frame and secured at its extremities to cross-bars in the ends of the foot-frame and head-frame, respectively. When the bed is extended, this mattress is under tension and lies below the connecting joints or pivots, so that, although it tends to hold the frame in its extended position, it also aids when closing the bed to turn the head-section upward.

In order to give the middle section support at the outer end when the bed is extended, I

pivot legs S to the sides of the frame and connect them by links T to the foot-section, as clearly shown in Fig. 7, so that when the foot-section is folded it will turn the legs upward
5 against the sides of the middle section and into position to enter the case.

In order to prevent the middle section from sliding outward prematurely, I provide it on one or both sides of its interior with a horizontally-swinging pivoted latch T', adapted
10 to engage the side of the casing. From this latch a rod U is extended outward in position to be encountered by a projection t on the foot-section when the latter is turned down, so that
15 the latch will be thereby released automatically, so that the frame may be fully extended.

In order to prevent the possibility of the connected edges of the head and middle sections being thrown upward, I attach to the
20 head-section J a rigid stop-arm U', having one end extended to bear beneath a fixed stop V on the middle section, as shown in Fig. 7.

In order to give more solid support to the outer end of the head-section when extended,
25 I propose to provide the same with a projecting lip or lips w, adapted, when the front board is turned down and the head-section pulled out, to rest on a projection w' on the sides of the arms rising from the hinged front,
30 or the front board may be provided with a support, in any other suitable form, upon which the head-section may rest.

In closing the bed the frame is pushed horizontally toward the case, causing the head-
35 section to turn upward. After this has progressed a reasonable distance I fold the foot section upon the middle section and push the two entirely into the case, after which the hinged front is turned up and the head-board
40 turned down. The extension of the bed is effected by a reverse movement of the parts.

It will be understood that although the rollers under the middle section are advantageous they are not necessary, and that in
45 place of the guides G in the particular form shown any other equivalent contrivance

which will cause the head-section to turn upward as it is driven into the case may be employed.

Having thus described my invention, what I claim is—

1. In a folding bed the case having the falling front, and hinged head-board, in combination with the inclined guides, the horizontal rails or tracks, the bed-frame consisting
5 of the three jointed sections arranged to engage the guides and track, and the mattress, mounted within said frame.

2. In a folding bed the combination with the casing provided with the horizontal
10 tracks, of the falling front provided with horizontal tracks forming a continuation of those on the casing, and the bed-frame consisting of the head-section arranged to turn upward
15 in the casing, the middle section jointed to the head-section and arranged to slide on the tracks, and the foot-section jointed to the middle section and adapted to fold within the casing.

3. In a folding bed, the combination of a horizontally-movable section I, the section K
20 hinged thereto, a latch to control the outward movement of the first-named section, and connections substantially as shown, through which the folding section releases said latch
25 when extended.

4. In a folding bed the case or cabinet, having the inclined guides, the falling front and the tracks or rails thereon, in combination
30 with the bed-frame, comprising the middle section, provided with supporting-rollers arranged to travel on the tracks, the head-section jointed to the middle section, having rollers or projections to traverse the inclined guides, and the folding foot-section.

In testimony whereof I hereunto set my hand, this 14th day of April, 1896, in the presence of two attesting witnesses.

LYMAN W. WELCH.

Witnesses:

W. A. MARTINDALE,
R. K. HOYT.