(No Model.) 2 Sheets—Sheet 1.

O. D. REICHARD.

FOLDING BED.

No. 579,841. Patented Mar. 30, 1897.

Fig 1

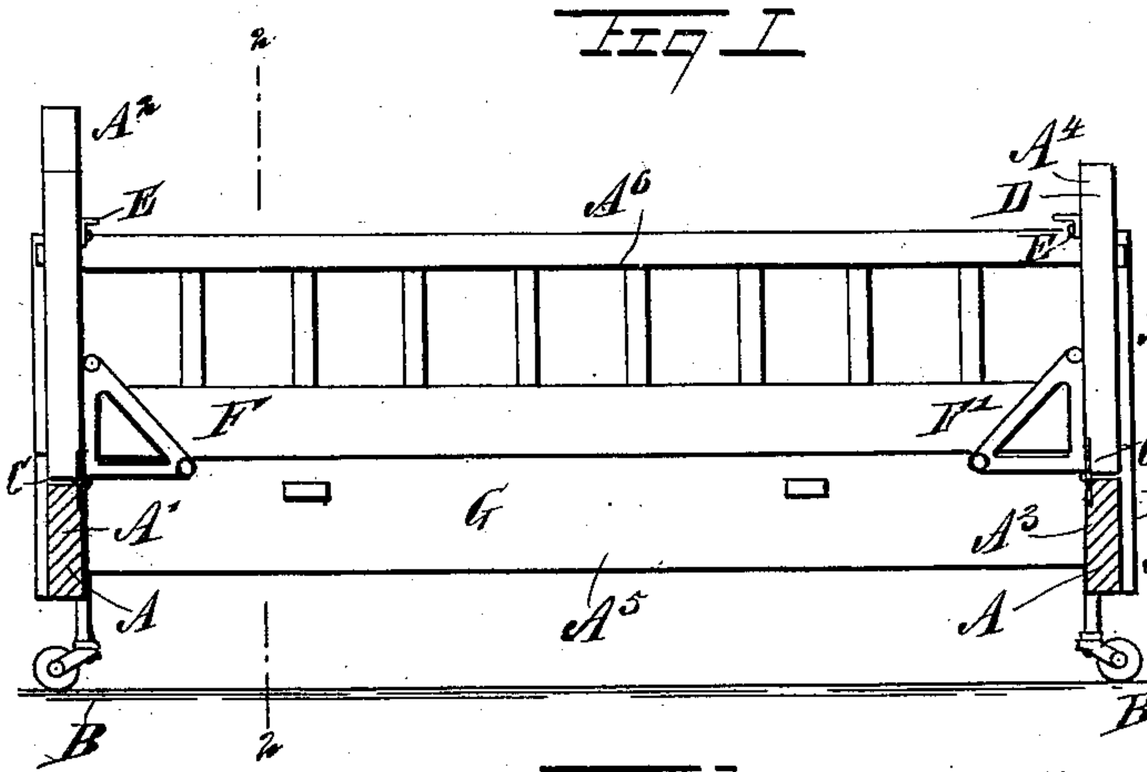


Fig 2

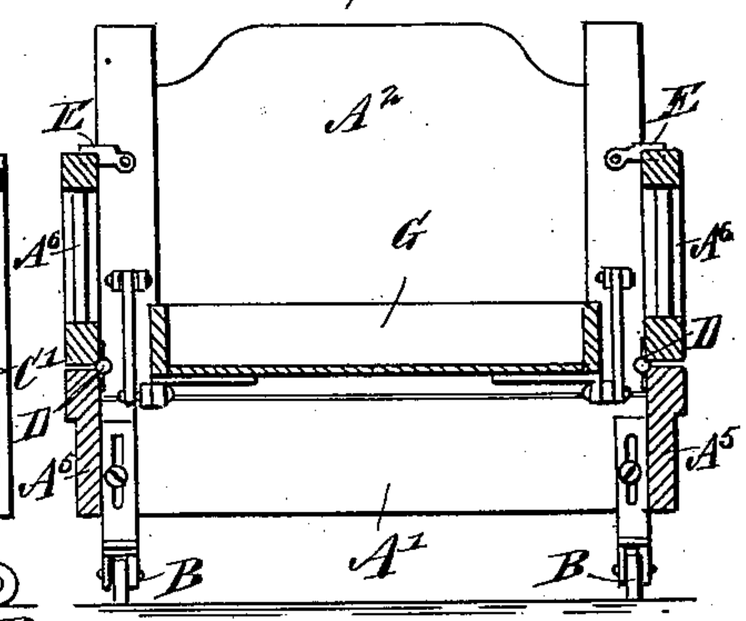


Fig 3

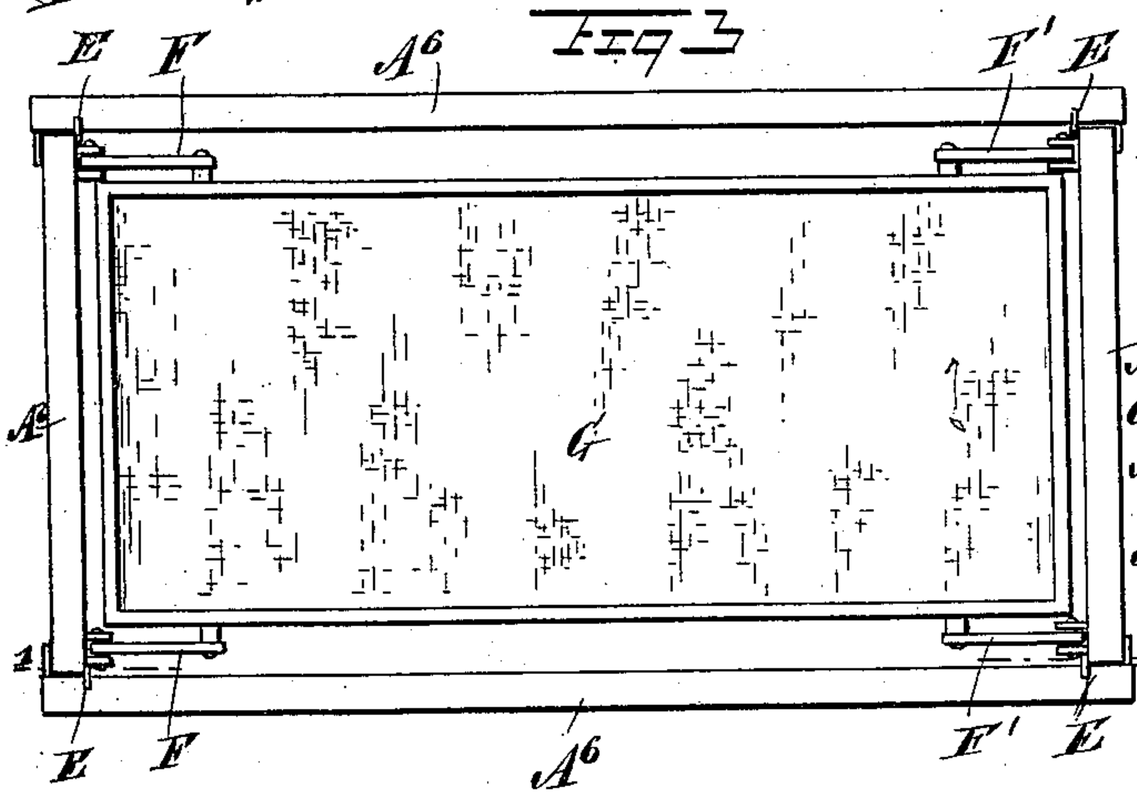


Fig 4

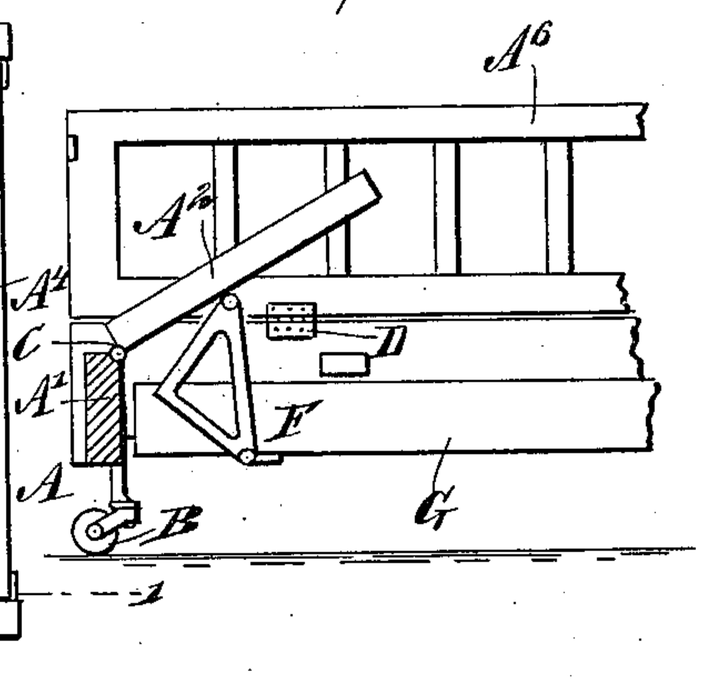


Fig 5

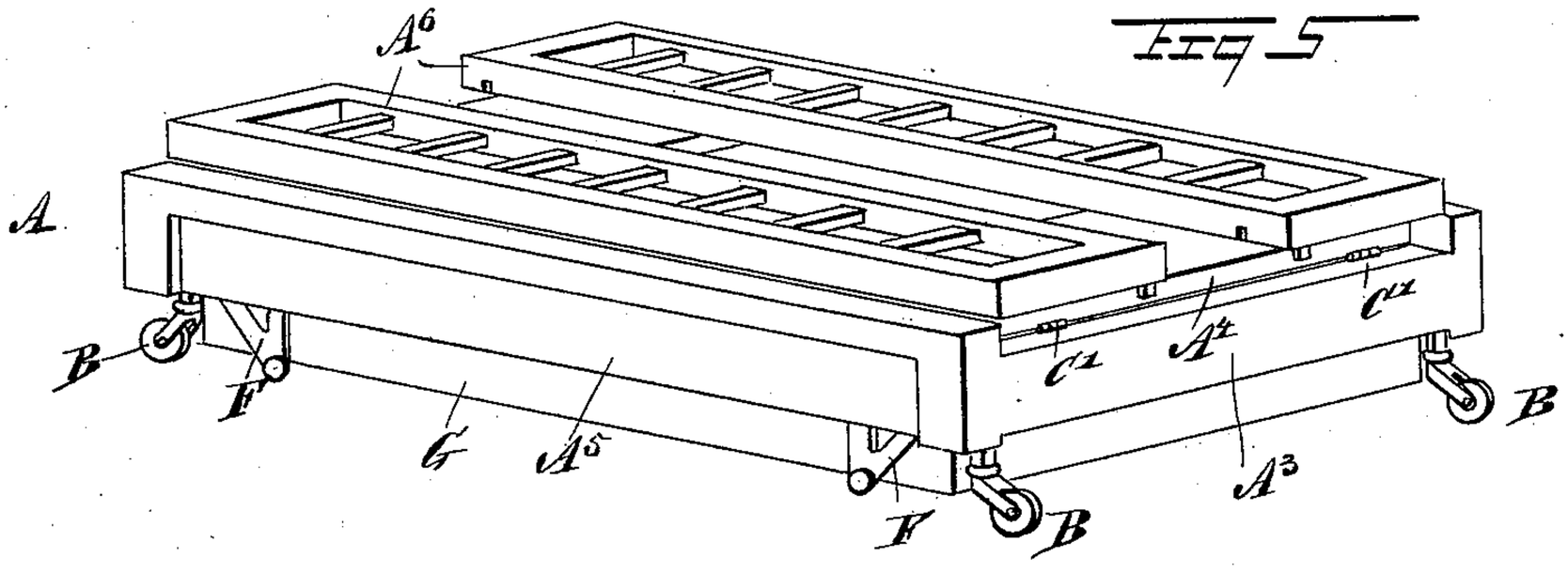
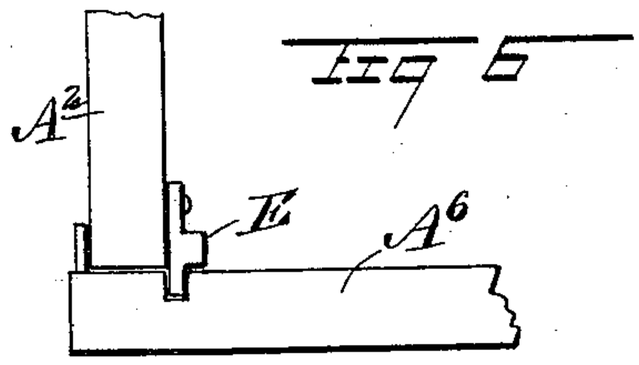


Fig 6



WITNESSES:

H. Walker

Rud. G. Hoster Jr.

INVENTOR

O. D. Reichard

BY Munn & Co.

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

O. D. REICHARD.

FOLDING BED.

No. 579,841. Patented Mar. 30, 1897.

Fig 7

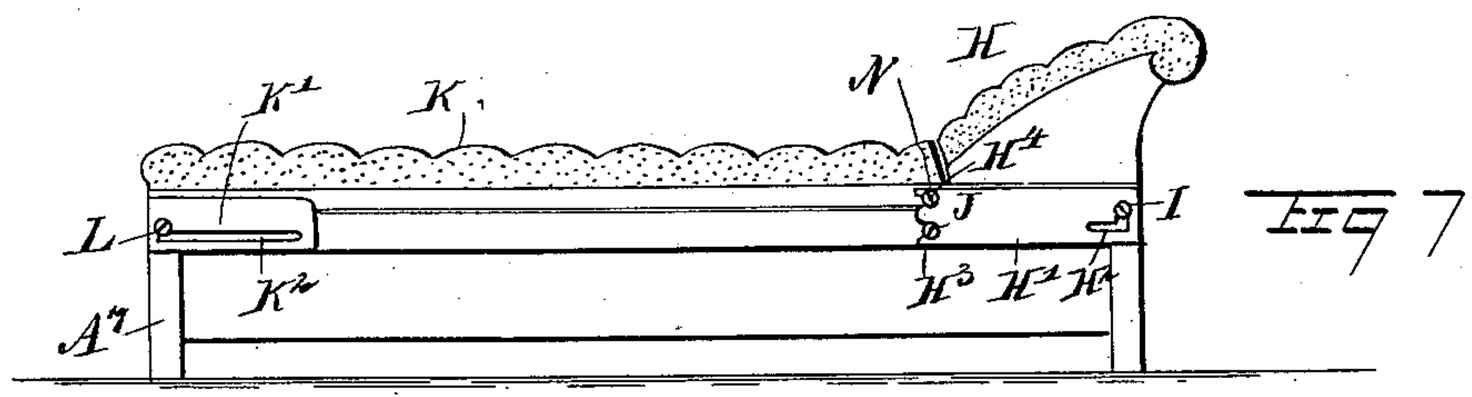


Fig 8

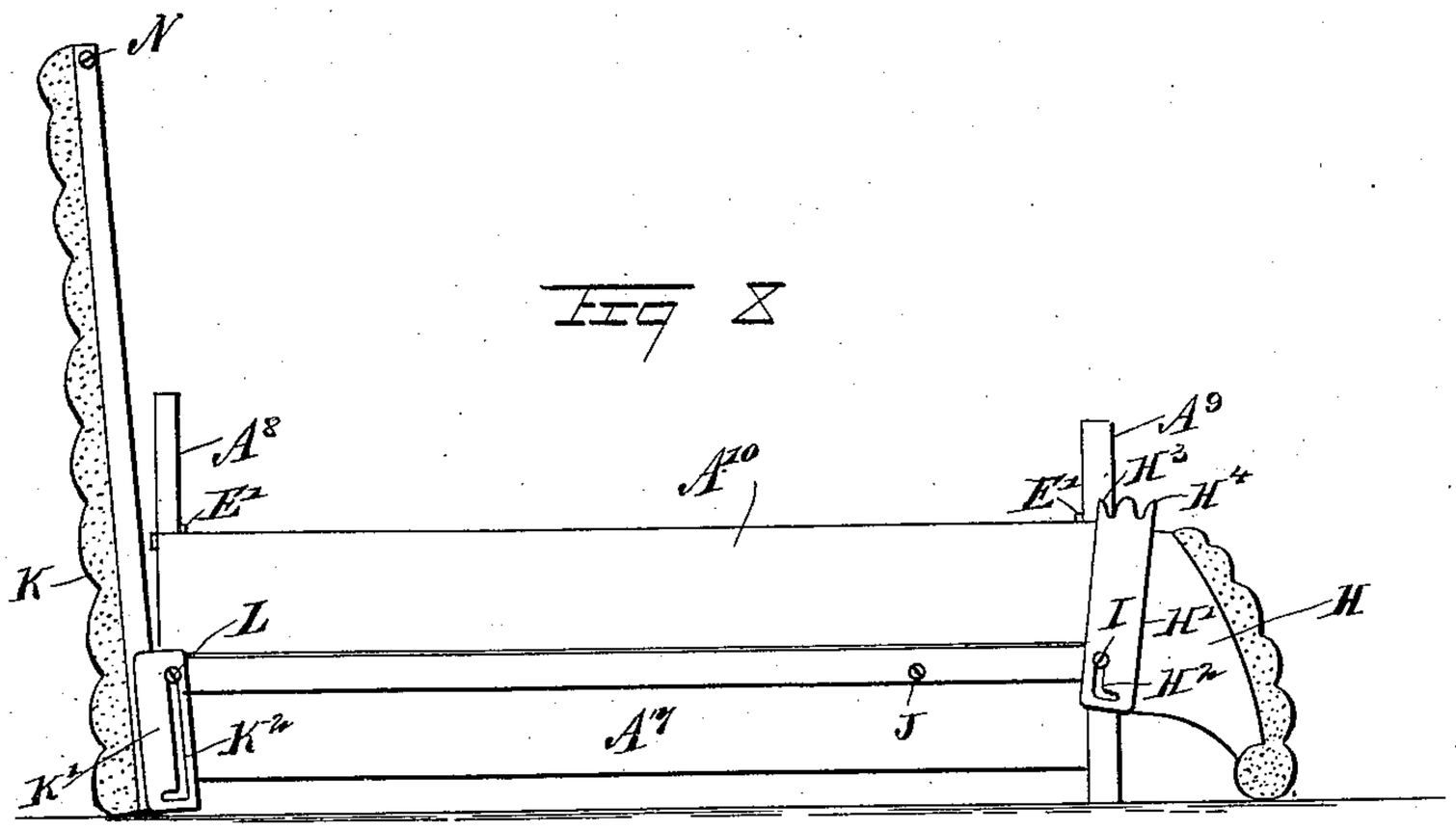


Fig 9

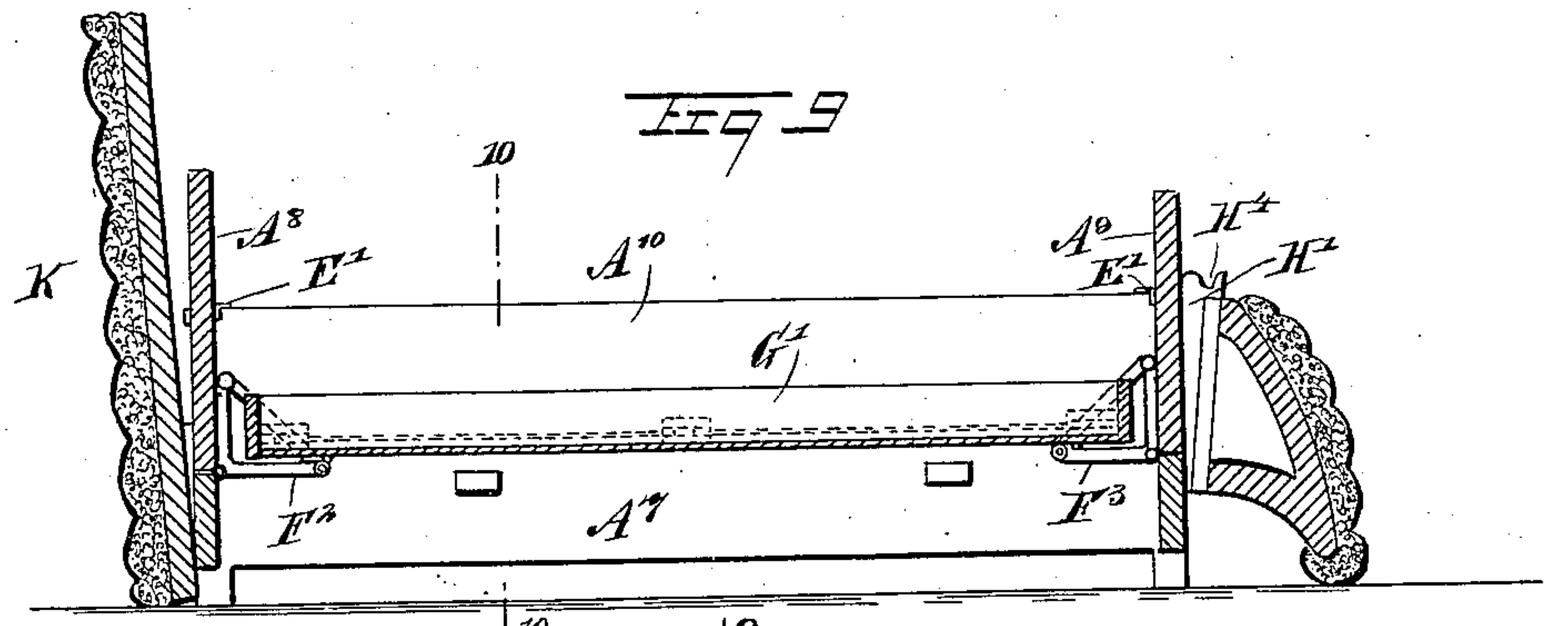
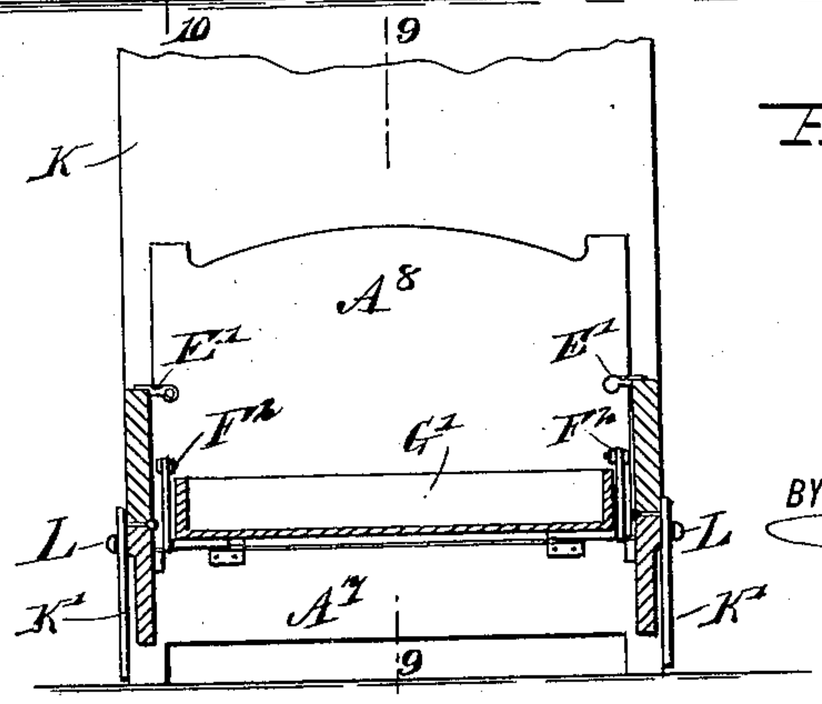


Fig 10



WITNESSES:

H. L. Walker

Rev. J. Hoster Jr.

INVENTOR

O. D. Reichard

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

OSCAR D. REICHARD, OF PHILADELPHIA, PENNSYLVANIA.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 579,841, dated March 30, 1897.

Application filed July 14, 1896. Serial No. 599,116. (No model.)

To all whom it may concern:

Be it known that I, OSCAR D. REICHARD, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Folding Bed, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved folding bed which is simple and durable in construction and designed for use as a crib or used in connection with a couch or the like, the bed being arranged to permit of conveniently folding it up to reduce its height to permit of storing the crib under an ordinary bedstead or to readily change the couch into a bed.

The invention consists principally of a holder or platform adapted to receive the mattress, bedclothes, or the like, the holder being hung at its ends on links connected with hinged parts of the head and foot boards of the frame.

The invention also consists of certain parts and details and combinations of the same, as will be described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement arranged as a crib. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the same. Fig. 4 is a sectional side elevation of the same with parts in a different position. Fig. 5 is a perspective view of the folded crib. Fig. 6 is an enlarged plan view of the fastening device for the hinged parts of the bed-frame. Fig. 7 is a side elevation of the improvement arranged as a couch. Fig. 8 is a similar view of the same with parts in a different position. Fig. 9 is a sectional side elevation of the same with parts in a different position and on the line 9 9 of Fig. 10, and Fig. 10 is a cross-section of the same on the line 10 10 of Fig. 9.

The folding bed, as illustrated in Figs. 1 to 6, inclusive, is arranged as a crib and is provided with a rectangular bed-frame A, mounted on casters B of any approved construction, the said bed-frame being connected at the head A′ by hinges C with a head-board A^2, and similar hinges C′ connecting the foot A^3 with the foot-board A^4.

The side rails A^5 of the frame A are connected by hinges D with the railings A^6, the said hinges C and C′ being arranged to permit of folding the head-board A^2, the foot-board A^4, and the side railings A^6 inwardly, as indicated in Fig. 5. On the head-board A^2 are fulcrumed two links F of triangular shape and normally resting with one edge against the inner face of the said head-board, as plainly indicated in Fig. 1. The links F are pivotally connected with the sides of a mattress holder or platform G, fitted loosely within the bed-frame A, the said holder being adapted to receive the mattress, bedclothes, or the like. The lower end of the holder G is similarly connected at its sides with triangular links F′, fulcrumed on the inside of the foot-board A^4, so that when the said head-board and foot-board are swung inwardly into a horizontal position then the said links F and F′ move the mattress holder or platform into a downward or a lowermost position to bring the bottom of the holder close to the floor, on which the casters B rest.

Now it will be seen that when the head-board A^2 and the foot-board A^4 are in an uppermost position the said boards are locked in place to the railings A^6 by suitable devices E, so that the several parts of the bedstead are held in a rigid position, and the mattress-support G is likewise held in a stationary position, owing to the ends of the triangular links F and F′ resting against the inner faces of the head and foot boards A^2 and A^4, as previously explained. The holder is thus prevented from swinging laterally, and at the same time the holder is held or supported a suitable distance above the floor, the same as the ordinary slats now in use in the ordinary cribs.

It is evident that when it is desired to fold the crib the several parts are folded, as indicated in Fig. 5, to bring the mattress-holder G into a lowermost position with the mattress, bedclothes, &c., held in proper position on the said holder, and consequently the folded crib can be readily pushed under an ordinary bedstead, so as to be completely out of the way during the time the crib is not in use.

The folding bed, as illustrated in Figs. 7 to 10, is arranged as a couch and is provided with a rectangular frame A^7, in which is held the mattress-holder G′, similar to the mattress-holder G, and likewise hung on links F^2 and F^3, fulcrumed on the head and foot boards A^8 and A^9, hinged on the ends of the frame A^7. As shown in Fig. 9, the head and foot boards A^8 and A^9 are adapted to be locked in place when extended by suitable catches E′, connected with the side railings A^{10}. The operation of the several parts, so far as described, is the same as the ones above referred to relative to Figs. 1 to 6.

The head H of the couch is provided on its sides with longitudinally-extending plates H′, formed near their outer ends with L-shaped slots H^2, each engaged by a pin I, held in the side of the frame A^7 to form a fulcrum for the said head H. The free end of each plate H′ is formed with two notches H^3 and H^4, of which the notch H^3 is adapted to engage a pin J, secured to the side of the frame A^7, so as to lock the couch-head H in place, as plainly shown in Fig. 7. In order to swing this couch H into an open position when the device is to be used as a bed, the operator lifts the said head H slightly to move the vertical portion of the slots H^2 up on the pins I to permit of sliding the head H outwardly, the horizontal portion of the said slots traveling over the pins I. By this movement the notches H^3 of the plates H′ are disconnected from the pins J, and the head H can then be turned over on the pins I as a fulcrum to the position shown in Figs. 8 and 9.

The body K of the couch is provided on its outer end with two plates K′, formed with L-shaped slots K^2, engaging pins L secured to the side of the frame A^7. The inner end of the body K is provided on its sides with pins N, adapted to engage the notches H^4, previously mentioned, so as to lock the said body K and head H together, as plainly indicated in Fig. 7.

When it is desired to use the folding bed, the operator first lifts the outer end of the body K, so as to carry the vertical portion of the L-shaped slot K^2 upward on the pins L, and then a pull on the body K will cause the horizontal portion of the slots K^2 to slide longitudinally on the pins L. By this arrangement the pins N are disengaged from the notches H^4, and the body K can then be swung over on the pins L as a fulcrum and then let down into a nearly vertical position, the outer end of the body then resting on the floor, as indicated in Figs. 8 and 9. When the head H and the body K are in this outermost position, the head and foot boards A^8 and A^9 and railings A^{10} can be swung upward and outward and fastened together to bring the mattress-holder G′ into a raised position the same as an ordinary bed.

It will be evident from the foregoing description that the device may be used for other purposes than a couch and crib, and therefore I do not limit myself to the particular construction of the device described.

It is to be expressly understood that by the arrangement described the mattress-holder and its contents are held in a horizontal position whether raised or lowered, and consequently the bed clothes, &c., are not disturbed in the slightest during the folding or extending operations. Furthermore, no springs or weights are required, the whole arrangement being very simple and secure and not liable to get out of order or fold or close up when occupied by a sleeper.

From the foregoing it will be seen that the folding bed is constructed to fold up and slide under an ordinary bed when not in use to economize space in the room; and when it is to be used it can be drawn from under the bed and opened for use. In opening, the bed will be raised to the height of an ordinary bed. This feature is introduced by means of the triangular pieces in each corner of the bed, crib, or couch, as the case may be; and by this it can be seen that two beds or bed and crib or couch can be in a small bed-room, and when not in use and folded the bed will be out of the way and the room will have the appearance of only having one bed in it.

With reference to the triangular links it will be seen that these links, when the mattress-support is raised, have each a plane side bearing against the respective head and foot board and that by these means the weight of the mattress-support is borne by the links and head and foot boards and the mattress-support is prevented from binding against the head and foot boards of the bed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bed having a frame, a mattress-support vertically movable within the frame, a head and foot board pivoted to the frame, links respectively connecting the mattress-support with the head and foot boards, and a couch-cover comprising a head and foot section, such section being respectively slidably and pivotally connected with the ends of the bed and having means by which they may be connected to each other when in operative position, substantially as described.

2. A bed having a frame, a vertically-movable mattress-support within the frame, head and foot boards respectively hinged to the ends of the frame, links respectively connecting the head and foot boards with the mattress-support, a cover comprising a foot and head section and respectively having sliding and pivotal connection with the ends of the frame, and a locking device for the couch-sections by which they may be held over the frame when the head and foot boards have been folded downward, substantially as described.

3. A bed having a frame, a mattress-support held by the frame, two couch-sections, a slotted plate on each couch-section, pins projecting from the frame and respectively passing

through the slots of the plates, whereby the couch-sections may have sliding and swinging movement, one of said plates having two notches at its inner end and two additional pins respectively carried by the frame and by one couch-section, the notches of the said notched plate respectively receiving said additional pins, substantially as described.

4. A bedstead having a frame, two members hinged to said frame, a vertically-movable mattress-support within the frame and two triangular links each having one angle pivoted to the respective hinged members and a second angle pivoted to the mattress-support, the third angle of each link engaging the respective hinged members, as said members swing to lift the mattress-support whereby the weight of the mattress is borne between the links and the hinged members and whereby the mattress-support is prevented from binding against the hinged members when the mattress-support is raised, substantially as described.

OSCAR D. REICHARD.

Witnesses:
E. B. CORNELL,
EDWIN G. MAJOR.