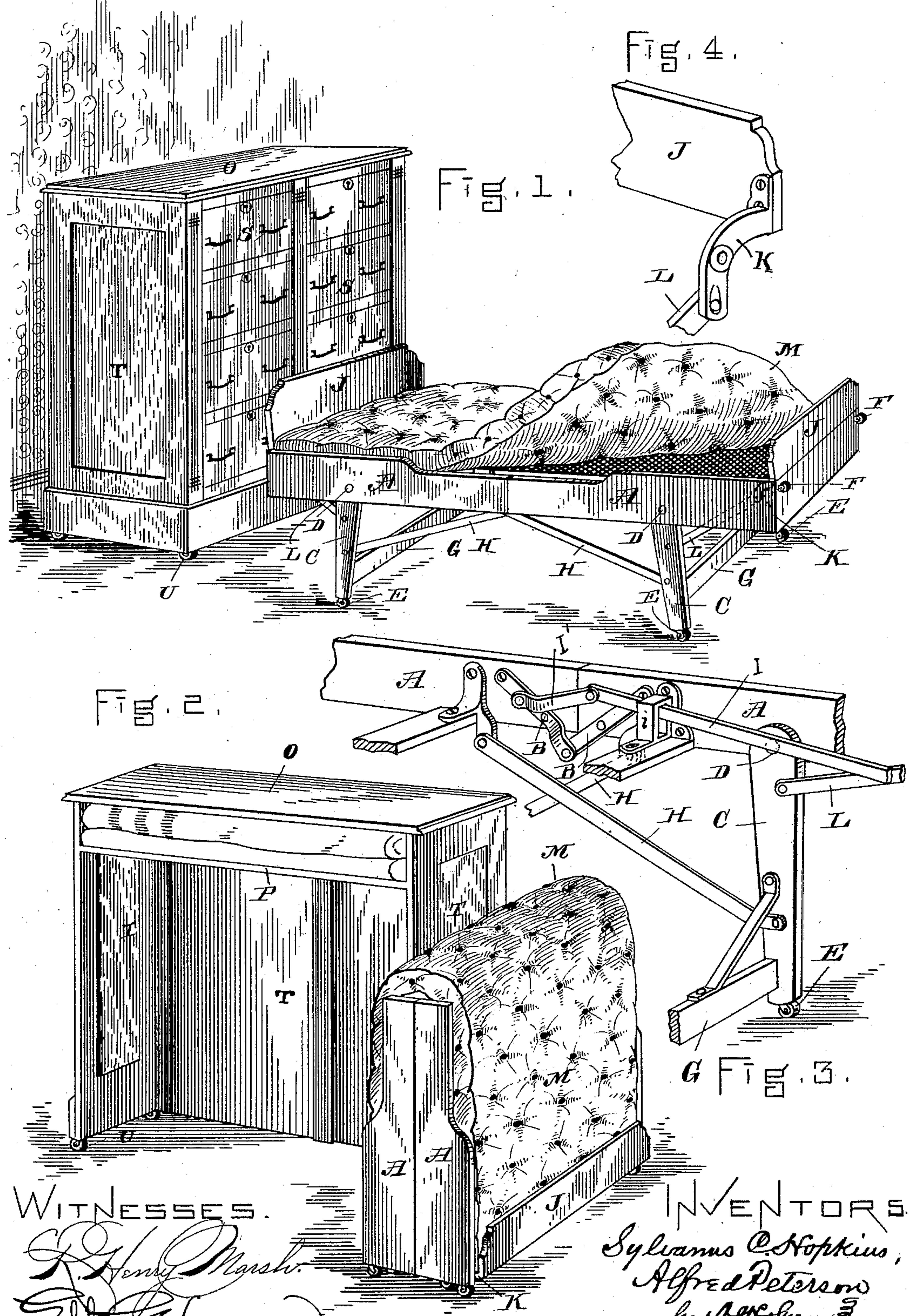


(No Model.)

S. C. HOPKINS & A. PETERSON.
FOLDING BED.

No. 463,124.

Patented Nov. 10, 1891.



WITNESSES.

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SYLVANUS C. HOPKINS, OF BOSTON, AND ALFRED PETERSON, OF JAMAICA PLAIN, MASSACHUSETTS; SAID PETERSON ASSIGNOR TO SAID HOPKINS.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 463,124, dated November 10, 1891.

Application filed July 24, 1890. Serial No. 359,728. (No model.)

To all whom it may concern:

Be it known that we, SYLVANUS C. HOPKINS, of Boston, and ALFRED PETERSON, of Jamaica Plain, both in the county of Suffolk and State
5 of Massachusetts, have jointly invented certain new and useful Improvements in Folding Beds, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention is an improvement in mantle-beds of that class which are detachable from the floor, wall, or casing, and are folded to half-length for compact storage.

Our present improvements include a folding bed having its frame disconnected from its case and made in two parts pivoted to each other, each half of the frame having near its outer end a pair of folding legs with casters, and also a pair of pivoted braces arranged, as shown, extending obliquely to the legs of the other half of the frame. The legs support the bed-frame in its spread position, so that it may be moved away from the case to any part of the room for use, and they
25 are pivoted so near to the outer ends of the side rails that when folded the legs and their casters still give support and portability. The arrangement is such that when the frame is folded its middle portion, where the two
30 sections are hinged to each other, is raised, and the outer ends draw toward each other until the bottoms of the sections meet back to back in a vertical plane, the legs and braces being simultaneously folded within the frame.

Each section carries on its upper or outer surface one-half of the spring bed-bottom or other support for the bedding. The removable mattress may be made in two parts, with a flexible connection over the joint of the
40 frame, or it may be in one to bend over the joint. Pivoted head and foot boards are provided mounted on levers, the short arms of which are connected to the folding legs by pivoted link-bars. The legs being connected
45 each by a pivoted brace with the frame of the opposite section, it follows that lifting the central part of the frame where jointed will fold the legs and the head or foot board linked thereto, and also that folding the head or
50 foot board will fold the legs and the jointed frame. The operation may also be reversed—

that is, when the bed is folded the raising or spreading of the head or foot board will spread the folded legs and open out or extend horizontally the jointed frame.

Our invention consists in the combinations of devices by which these several operations are or may be performed, as specified in the appended claims. Our invention also includes such folding frame, legs, and braces, in combination with a caster or pair of casters on the outer or lower ends of the frame-sections, to facilitate moving the bed when folded and to give it a firmer support at such times. It also embraces a protecting-case disconnected
65 from the bed-frame, open at rear and bottom, and preferably provided with a horizontal shelf below its top to receive the pillows or bedding above the space into which the folding bed fits. This case we ship in a knock-down state, it being in readiness to be speedily put together with screws or detachable fastenings. Like the bed, the case is made portable by means of casters.

The drawings clearly illustrate our invention, Figure 1 being a perspective view of the structure spread for use, the mattress turned up at one end to show the springs. Fig. 2 is a perspective view of the folded bed with its skeleton case moved away from the wall to
80 allow the removal of the bed from the back while in its folded position. Fig. 3 is an enlarged detail of the hinged braces and folding mechanism. Fig. 4 is a like detail of the foot-board.

A A represent the two sections of the frame, united centrally at the level of the lower edges of the side rails by hinged plates B, fixed to the inner faces of the side rails, as best shown in Fig. 3, so that the sections may
90 fold and stand vertically, as in Fig. 2, or spread horizontally to form a bed-bottom, as in Fig. 1.

C C are the supporting-legs, pivoted at D to the inner faces of the side rails of the frame at a distance from the outer ends of the sections equal to the length of the legs, so that whether the frame is spread for use, as in Fig. 1, or folded, as in Fig. 2, it is supported by the two pairs of legs C C, independent of the shell or case, and the legs are concealed when
100 folded. The legs are provided with casters E and the ends of the frame with casters F, so

as to facilitate folding and moving the bed, and to give it a broader support the casters F are placed so as to come to the outer edges of the lower ends of the folded frame. The frame-sections have cross-slats supporting ranges of spiral springs, or some other suitable elastic bed-bottom will be provided.

The legs C are united in pairs by a cross-bar G, and each leg is connected to the inner face of the side rail of the opposite section by a brace-bar H, pivoted at its ends to the leg and rail. These bars and pivots are so located, as shown, that they give efficient support and stiffness to the legs when the bed is spread horizontally for use, and also assist in folding the bed-frame and legs, when desired. They furthermore support the connected inner ends of the frame-sections, preventing undue depression centrally and overstraining of the hinge-joint. These bars are slightly offset to pass each other in folding.

The wire-fabric bed-bottom is relaxed when the bed is folded, and is stretched when it is opened out or spread for use by means of pivoted tension-bars I I', the longer bar passing through a guide or bracket, as in Fig. 3. This feature is not claimed as of our invention.

The head-board and foot-board J are each mounted transversely upon two bent arms K, pivoted near the outer ends of the side rails and on their inner faces. These arms constitute levers the lower ends of which are connected by link-bars L to the legs, so as to actuate them in folding. The construction is such that downward pressure on the head-board or foot-board, when the bed is spread horizontally, raises the connected inner ends of the sections by tilting the side rails on the leg-pivots D as fulcrums, this act, continued, drawing in the lower ends of the legs and causing the entire structure to fold compactly, with the backs of the two sections in contact and the head-board and foot-board pressing upon the upper or outer surfaces of the mattress M, as in Fig. 2. To open the frame and spread it horizontally for use the foot-board is simply pulled outwardly and upwardly on its pivots.

The mattress may be formed in two sections, resting on the springs and connected centrally by flexible straps, or it may be made entire and bent over the top of the jointed frame. In either case it is removable and reversible, folds outwardly, and affords op-

portunity for suitable ventilation when not in use, which are material advantages.

The portable and knockdown case is a peculiar feature of our invention. Beneath its top O is a horizontal and removable shelf P to receive the pillows and any desired part of the bedding during the day. The top, front, and sides constitute a skeleton frame, the parts being readily secured together with screws by angle-irons fixed on the inner faces of the top O and front and end pieces T, which are thereby held in proper relative position. I provide the ends with casters U to make the case when set up readily portable. The front of the case may simulate a chest of drawers with handles or pulls S, thus presenting no appearance of a folding bed. When the bed is to be used, the case is swung or rolled away at one or both ends, its open back and bottom permitting this. The bed-frame is then drawn out and spread horizontally and the bedding applied in place. The frame, being independent of the case, gives a light and easy portability to both. The legs and braces, being placed inside of the side rails of the frame, are protected thereby, and a smaller case will receive the folded structure.

We claim as our joint invention—

1. A mantle-bed frame formed in two centrally-hinged sections folding back to back, in combination with folding legs pivoted to each section, as described, a folding head or foot board mounted on lever-arms pivoted to the side rails, and with link-bars connecting said arms with the folding legs, substantially as set forth.

2. A mantle-bed formed in two centrally-hinged sections, with braced folding legs and a folding head-board connected to such legs by link-bars between the side rails, said link-bars L being each terminally pivoted to one of the legs and to a rigid arm fixed to the head or foot board, in combination with a skeleton case therefor detachable from the bed-frame, substantially as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 14th day of July, A. D. 1890.

SYLVANUS C. HOPKINS.
ALFRED PETERSON.

Witnesses:

N. H. SPENCER,
M. S. FICKETT.