

(No Model.)

T. HOLMES.
INVALID BED.

No. 577,303.

Patented Feb. 16, 1897.

Fig. 1.

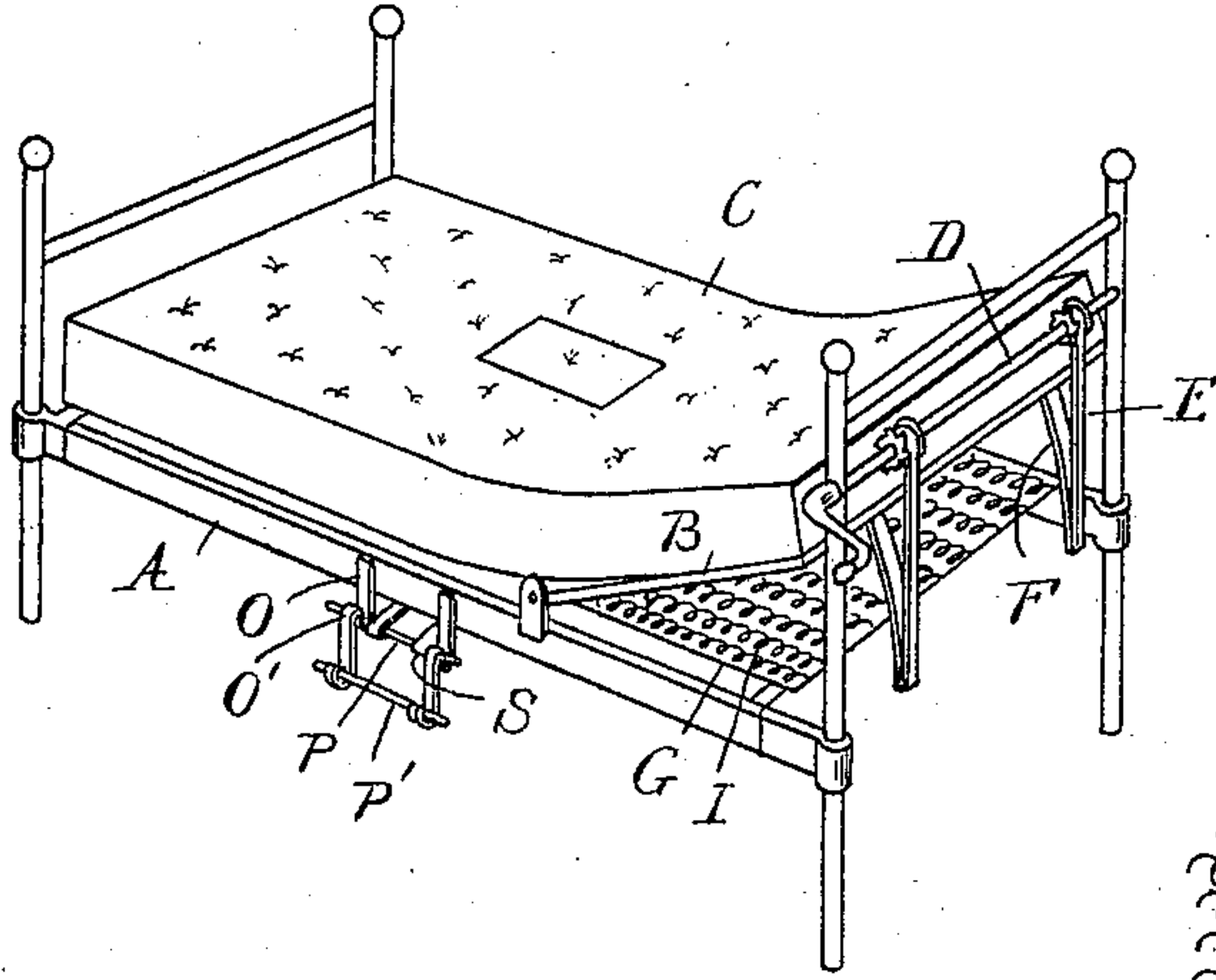


Fig. 7.

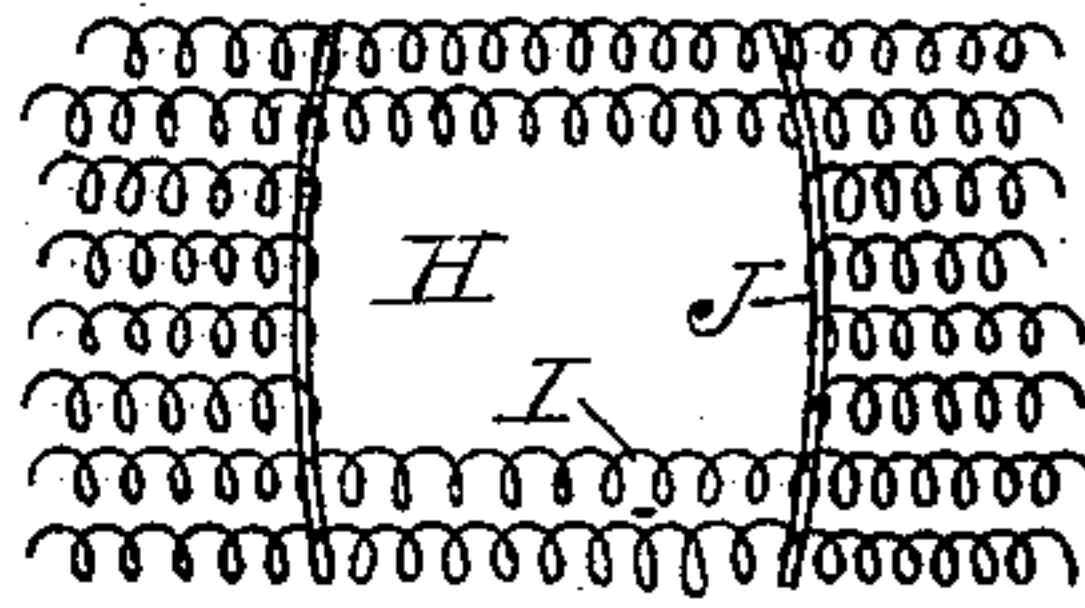


Fig. 2.

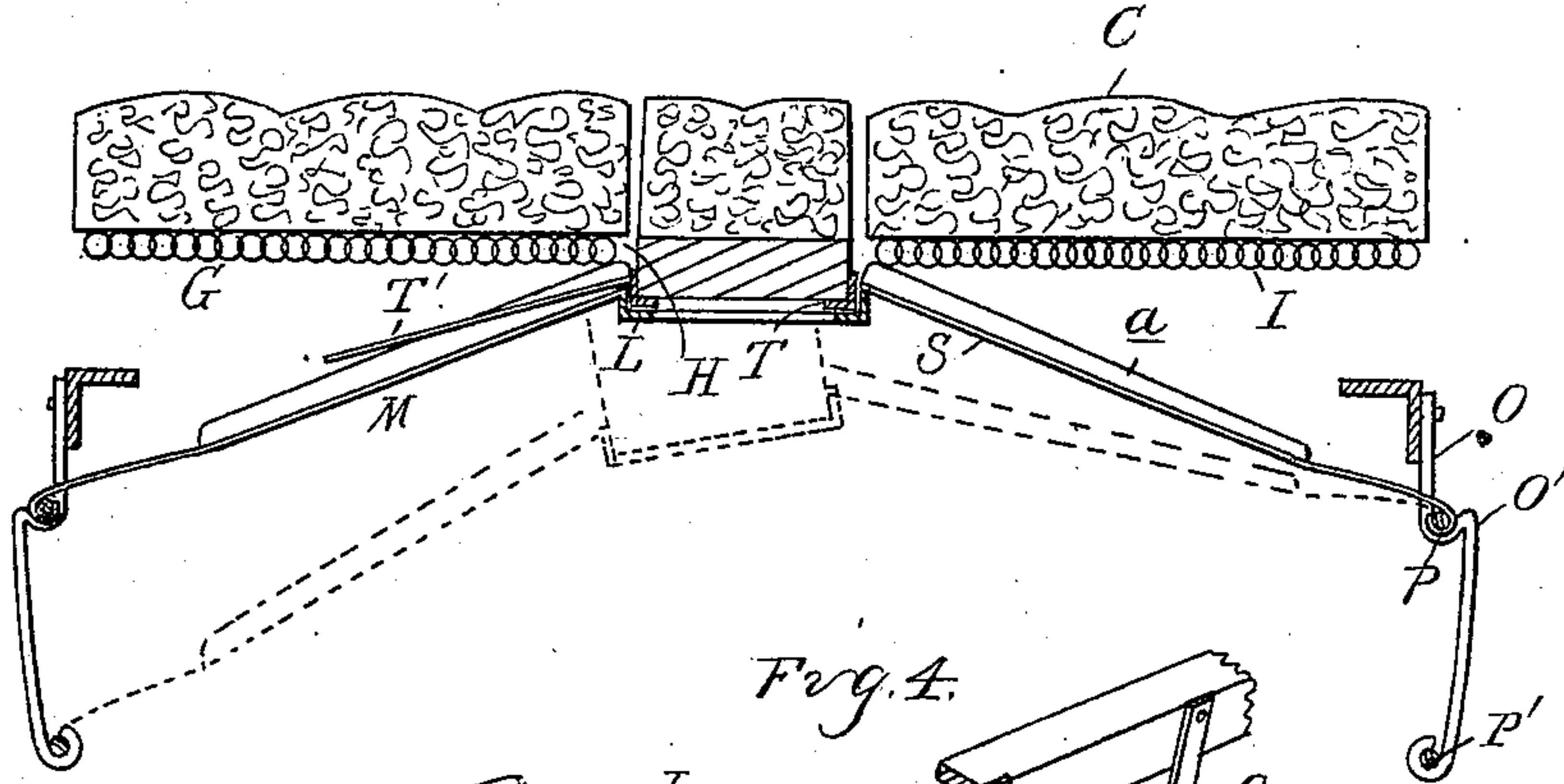


Fig. 4.

Fig. 5.

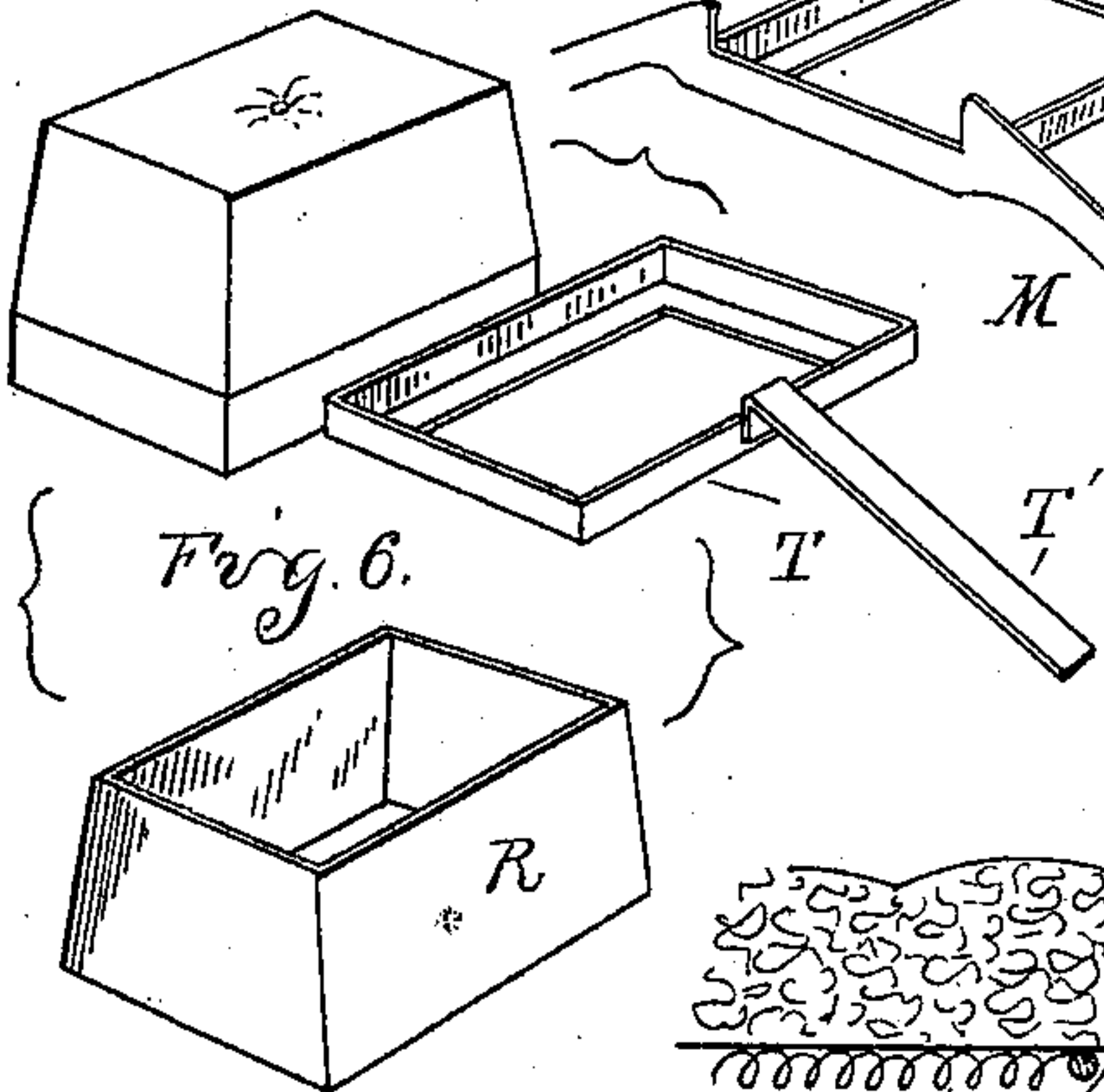


Fig. 6.

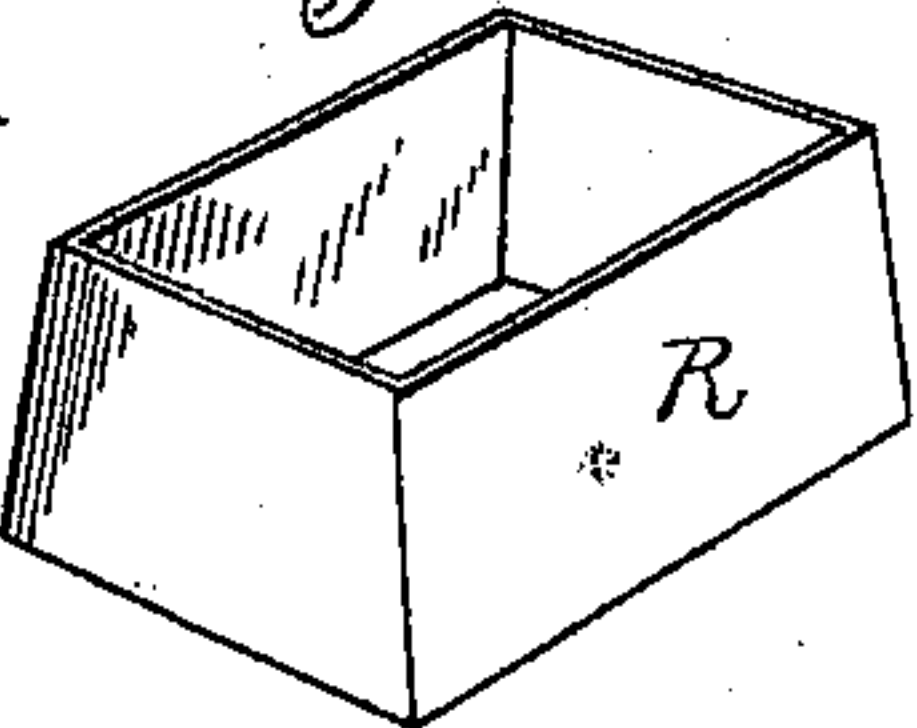
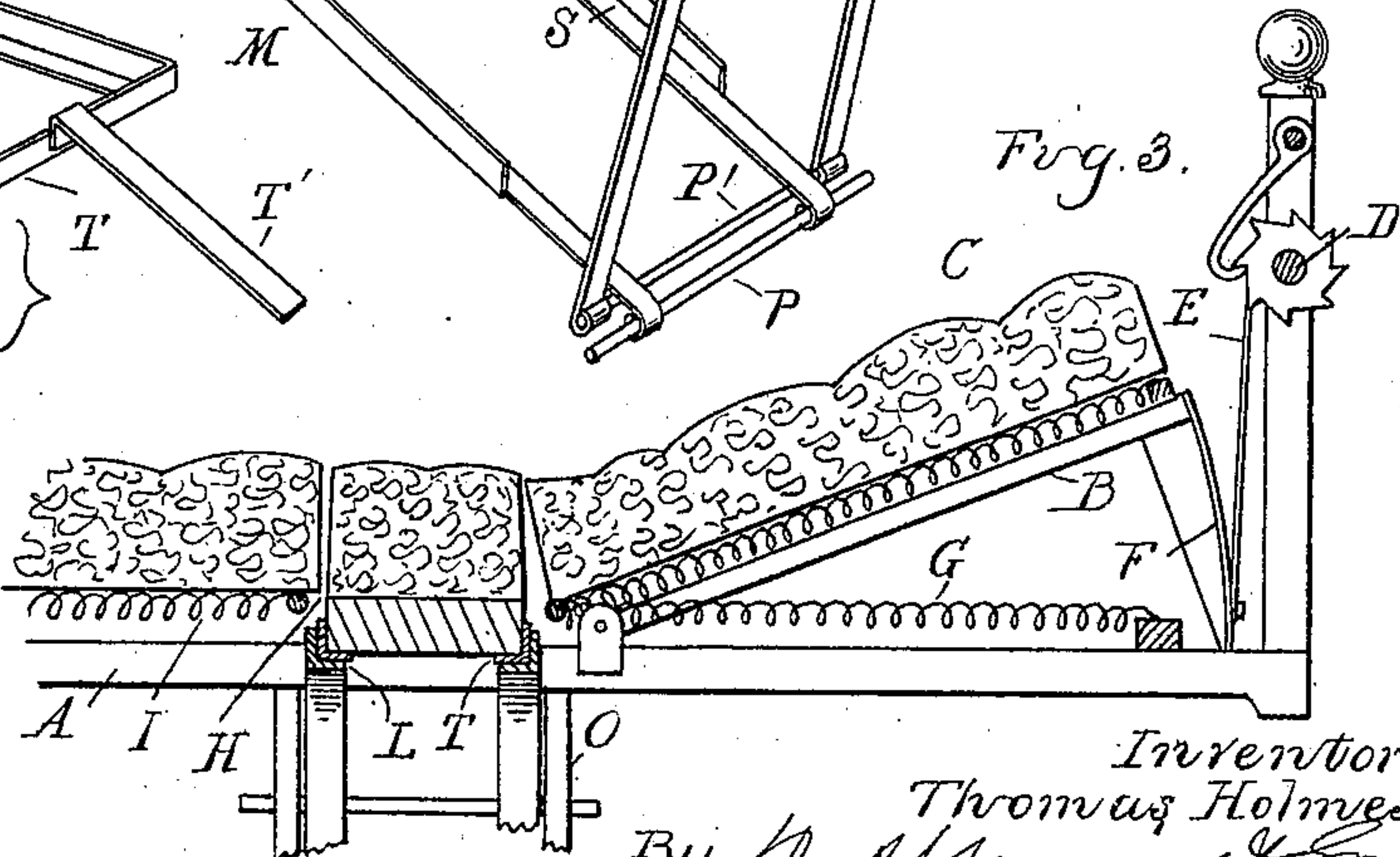


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS HOLMES, OF CHELSEA, MICHIGAN.

INVALID-BED.

SPECIFICATION forming part of Letters Patent No. 577,303, dated February 16, 1897.

Application filed August 5, 1896. Serial No. 601,733. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HOLMES, a citizen of the United States, residing at Chelsea, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Invalid-Beds, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention consists in the construction of an invalid-bed, and relates especially to the construction of the mattress, having a removable section and a bed-pan adapted to be fitted therein, and particularly in the construction of the support for the pan in an opening in a woven-wire mattress, and whereby its removal and insertion are easily effected and the construction simplified and improved, all as more fully hereinafter described.

In the drawings, Figure 1 is a perspective view of a bed, showing my improvement applied. Fig. 2 is a central cross-section through the bed. Fig. 3 is a central longitudinal section. Fig. 4 is a perspective view of the pan-supporting frame. Fig. 5 is a detached perspective showing the detachable mattress-section and the sliding frame by which the detachable portion of mattress and the pan are inserted and removed. Fig. 6 is a perspective view of the pan; and Fig. 7 is a plan view of a portion of the woven-wire mattress, showing the aperture for the pan.

A represents a bedstead of any desired construction. This preferably has the hinged frame B for lifting or inclining one end of the mattress C, as shown in Fig. 1. The means I have shown for this consists of the winding-shaft D, having spools around which wind the cords or straps E, connected to segments F on the frame B, a suitable crank being provided for turning the shaft D and ratchet and pawl for holding it at any adjusted position.

G is a woven-wire mattress. This is provided at the desired point near the center with an aperture H, formed by cutting out a portion of the spirals I in line with such aperture and connecting the ends thereof to cross-bars J, the ends of which project into the spirals of the side coils, as shown in Fig. 7. The mattress C has a corresponding aperture which forms when in position a complementary part of the mattress. This mattress-section is supported on a frame beneath the

bed. This frame I preferably construct as shown in Fig. 4, consisting of the central section L, which holds and supports the mattress-block, and the inclined arms M, which extend outwardly and downwardly to the sides of the bed.

Attached to the sides of the bed are the hangers O, having hooks O' near the top, in which the cross-bar P of the arms engage, and at the lower end a cross-bar P' or other rest for the arms in the lower position thereof.

I preferably provide a spring in the support for the mattress-block. This may be done in any desired manner, but preferably I make the arms M themselves, in whole or in part, of spring metal to provide sufficient elasticity to make the mattress-block equally yielding with the rest.

R is the bed-pan, adapted to replace the mattress-block. To do this, the arms M are detached from their support in the hooks and lowered, as shown in Fig. 4 and in dotted lines in Fig. 2, which permits of the withdrawal of the mattress-block and the insertion of the pan. This is conveniently effected by means of the sliding frame T. The supporting-frame is then raised to replace the block with the pan. When it is desired to remove the pan, the frame is lowered and the pan may be slid down the guides S on the arms M, and the block replaced by means of the sliding frame T, all without disturbing the patient or the bedding.

As shown in the drawings, the frame is adapted to be lowered from either side of the bed for the removal or insertion of the bed-pan, and while I prefer this construction I claim equally as well a frame which can be lowered but from one side. The side flanges prevent the accidental disengagement of the pan or block from the frame in moving it up or down on the guides S.

The sliding frame T has a raised flange or rim for the block or pan to set in, and it is provided with a handle T', by means of which the attendant can remove or insert the block or pan more readily.

The difficulty of making an aperture in a woven-wire mattress is entirely overcome by securing the cross-bars J in the fabric and soldering all the strands thereto which it crosses before cutting out.

What I claim as my invention is—

1. In an invalid-bed, the combination with the bedstead, and mattress having an aperture therein, of a frame extending across and mov-
5 ably suspended from opposite sides beneath the bed, and a mattress block or section fitted in the aperture and detachably supported on the frame.
2. In an invalid-bed, the combination with
10 the bedstead, and woven-wire or other mattress, having an aperture therein, of an elastic supporting drop-frame, hung from and detachably supported by the opposite sides of the bedstead, and a mattress block or section
15 fitted in the aperture and detachably supported on the frame.
3. In an invalid-bed, the combination with the bedstead, and apertured mattress of a detachable block or section fitted in the aper-
20 ture, a drop-frame hinged to the opposite sides of the bedstead and supporting said block or section.
4. In an invalid-bed, the combination with the bedstead, and apertured mattress, of a de-
25 tachable member fitted in the aperture, and an elastic drop-frame hinged at one end to one side of the bedstead to support said detachable member.
5. In an invalid-bed, the combination with
30 the bedstead, and apertured mattress and the detachable member therein, of a vertically-movable drop-frame hinged to the bedstead to support such detachable member and provided with flanges or guides for the member.
- 35 6. In an invalid-bed, the combination with

the apertured bedstead, mattress, and the detachable member therein, of a frame detachably hinged at both ends to the bedstead and supporting said detachable member.

7. In an invalid-bed, the combination with
40 the bedstead, apertured mattress and the detachable member therein, of a movable frame consisting of a central support, and inclined arms extending therefrom in opposite direc-
45 tions and hangers for the arms secured to the sides of the bedstead adapted to support said frame in its upper and lower positions.

8. In an invalid-bed, the combination with the bedstead, apertured mattress, and the de-
50 tachable member therein, of the frame supporting the detachable member comprising the section L, the inclined arms M and a cross-bar, the hangers O having hooks O' near the top and a cross-bar near the bottom, sub-
55 stantially as described.

9. In an invalid-bed, the combination with the bedstead, and apertured mattress, of a drop-frame loosely supported at opposite ends and arranged transversely of the bed beneath
60 the aperture and having guides therein, and the removable frame T adapted to slide in the guides in said drop-frame and adapted to receive the pan or mattress-block for insertion into the aperture in the mattress.

In testimony whereof I affix my signature
65 in presence of two witnesses.

THOMAS HOLMES.

Witnesses:

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GEORGE B. YERKES.