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Patented Aug. 26, 1902.

D. T. OWEN.

COMBINED COUCH AND FOLDING BED.

(Application filed Aug. 24, 1901.)

(No Model.)

2 Sheets—Sheet 2.

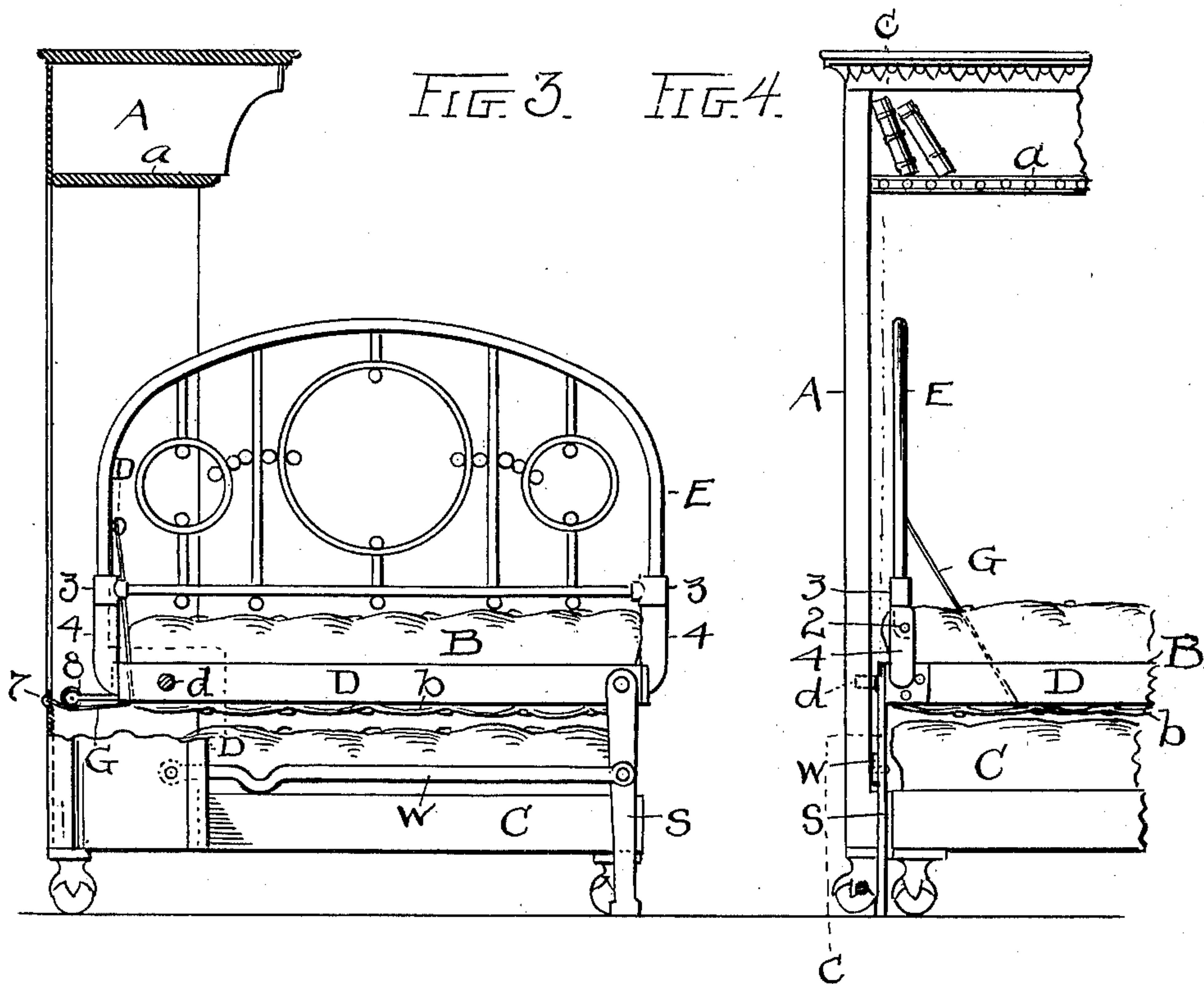
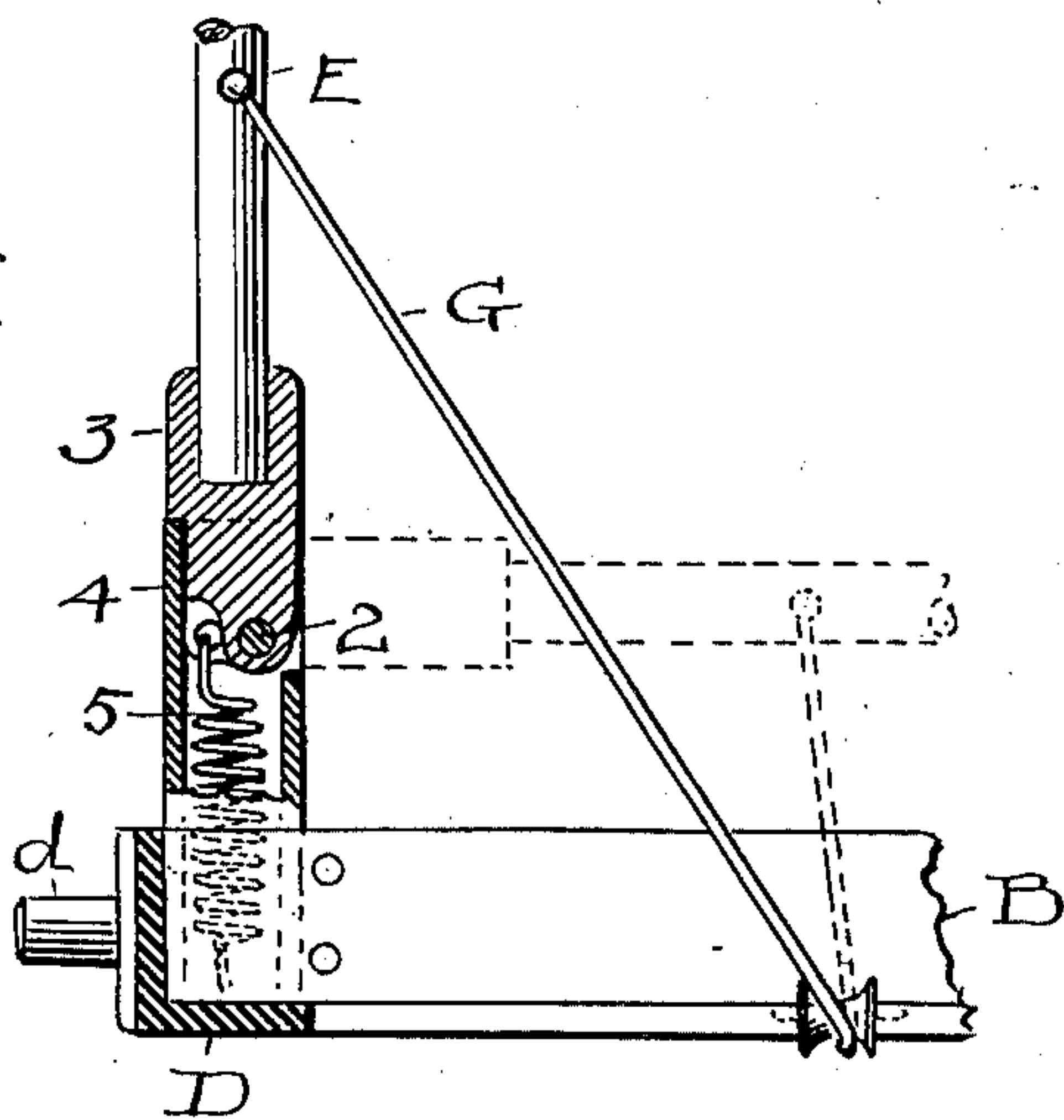


FIG. 5.



ATTEST
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COMBINED COUCH AND FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 707,628, dated August 26, 1902.

Application filed August 24, 1901. Serial No. 73,168. (No model.)

To all whom it may concern:

Be it known that I, DAVID T. OWEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in a Combined Couch and Folding Bed; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a combined couch and folding bed; and the invention consists in the construction and combination of parts, substantially as shown and described and particularly as pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional elevation of my invention on a line corresponding to A A, Fig. 2, and Fig. 2 is a plan view on line B B, Fig. 1. Fig. 3 is a cross-section on a line corresponding to C C, Fig. 4, which gives practically an end view of the bed and of the couch and casing or supporting-frame. Fig. 4 is a front elevation of one end of the entire structure, showing the bed as down in use and in this position resting over and above the couch. Fig. 5 is a sectional elevation on line D D, Fig. 3, and designed to show the spring-tension mechanism for holding the end frames of the bed in raised position and the associated mechanism for lowering the said end frames upon the bed, all as hereinafter fully described.

In this instance I have combined the idea of a permanent couch with a folding bed, so that when the bed is folded it is turned up into a perpendicular position within the casing, cabinet, or frame A, as seen in Fig. 1, and having the bottom *b* of its mattress B upholstered to form the back of the couch, as likewise is disclosed in Fig. 1. The couch C therefore constitutes a permanent part or portion of the general framework of the structure comprising the casing A, and it has a length conforming to the length of said casing and is adapted to afford a couch for every-day use after the manner of couches ordinarily. The mattress B and its frame D are of substantially corresponding length to the couch and so completely fill in the space at their ends within the ends of the casing A that to all appearances the back *b* of the couch is per-

manently built into said casing, so that upon the whole when the bed is folded there is the appearance simply of a couch and nothing more in so far as the couch portion C, the back *b*, and the casing A are concerned. There is, however, this element of novelty and of originality, as I believe, of having the casing A provided with a book or bric-a-brac shelf *a* in its top, which likewise presumably runs the entire length of the casing. I can therefore place either books or bric-a-brac upon this shelf or I can construct this top portion of the casing with different fanciful designs, so as to completely divest it of its real character of a casing or support for a folding bed, and thus make it both useful and ornamental for purposes wholly disassociated from its character as a bed-frame.

The bed or mattress frame D is pivoted at *d* in the ends of the main frame or casing A on plain pivots of any suitable kind, and what are here denominated the "head" and "foot" frames E and F of the bed are adapted to fold down upon the bed on pivots 2, as seen most clearly in Fig. 5. I might construct these parts so that the said end frames E and F would be both raised and lowered exclusively by hand with suitable provision for locking them in raised position; but I prefer to so construct them that they may be automatically controlled at least in part, and thus be raised and lowered when the mattress-frame and mattress are raised and lowered for use. To these ends I provide the said frames with socket and pivot members 3, which are pivoted in the tubular standard 4, fixed upon the base-frame D of the bed and containing strong spiral springs 5, one at each corner of each frame. One end of these springs is fastened down in the post 4, and the other is engaged to the socket part 3 of the frame at one side of its pivot 2, and the said springs are so arranged that they normally pull and hold the frames E in erect or raised position. Hence they serve the purpose also of holding the said frames up, as shown in Fig. 5, when the bed is down in use. Then in order to automatically fold the end frames E and F down upon or against the bed-mattress, as seen in Figs. 1 and 2, I provide a wire or suitable cord G, fixed at one end to the post on each of said frames E and

F some distance above its pivot and at the other end 7 to the rear of the main frame or casing A, and an arm 8, with a sheave in its end, is fixed upon the end of mattress-frame D and bears upon the said wire or cord G to cause it to draw down upon the frame E or F, to which it is attached, and thus compel said frame to fold inward against the tension of spring 5 when the mattress is being raised. The two working positions of the arm 8 are shown in Figs. 1 and 3, respectively, and when said arm projects downward, as in Fig. 1, the pull upon the wire G has been such as to draw the corresponding end frame E or F against the mattress. Then as the mattress and its frame are lowered for use and the pull upon wire G by arm 8 is relaxed toward the position in Fig. 3 the spring 5 asserts its tension and automatically raises the frame E or F to an upright position, as in Fig. 5.

It will be understood that both end frames are occupied alike in all the foregoing particulars, so that the description of one serves for both, and they both operate in like manner at the same time.

The foregoing simply describes one way of automatically controlling the end frames E and F through the operation of raising or lowering the bed-mattress; but I do not consider myself as at all limited to these, but may substitute any equivalent therefor if I desire to use any automatic mechanism at all for this purpose. I might, as I have already stated, omit this mechanism and raise and lower said frames by hand; but I very much prefer automatic means for doing this work.

When the bed is down in use, I support its outer edge by means of a leg S, pivoted thereon and adapted to be raised and lowered automatically through bar W, pivotally secured at its other end to the main frame or casing. When the bed is raised, said bar draws the leg to the side and in line with frame D, and when it is lowered it fixes the leg upright.

The foregoing description covers a single bed overreaching the couch. I might on the same principle construct a double couch and bed, or a double couch and single bed, or a double bed and single couch, and not depart from the spirit and character of my invention.

What I claim is—

1. In a combined couch and bed, a rigid right-angled couch and bed frame having a

fixed couch in the horizontal portion thereof and a mattress pivoted in the upright portion above the plane of the couch and having its bottom upholstered and provided with independent folding supports at its outer edge, whereby the top side of the mattress is adapted for use as a bed and its bottom as a back for the couch, and the bed folds over the couch and is supported, substantially as described.

2. A couch and bed frame having a horizontal portion for a couch and an upright portion for a bed, in combination with a bed-mattress having a spring-cushioned top and upholstered bottom and pivoted in said upright portion to be raised and lowered and legs pivoted to its outer edge, and a couch-seat having a fixed rest in the horizontal portion of said frame, whereby the bed is adapted to fold over the couch in use, substantially as described.

3. A combined couch and bed frame having an upright portion for the bed and a horizontal portion for the couch, in combination with a bed-frame adapted to be lowered over the couch, head and foot frames for the bed and mechanism connecting said frames with the bed-frame and constructed to fold said frames when the bed-frame is raised, substantially as described.

4. A rigid right-angled frame for a combined couch and bed, in combination with a folding bed pivoted in said frame and constructed to be lowered over the couch for use as a bed and to be folded up in said frame when out of use as a bed and having its bottom finished to form the back of the couch, head and foot sections of the bed pivoted in said frame and arranged to rest behind the bed when in a raised position, and means to fold said head and foot sections automatically when the bed is folded, substantially as described.

5. The combined couch and bed comprising a bed adapted to be separately folded down over the couch, head and foot frames independently pivoted and mechanism between said frames and said bed to fold and unfold the frames when the bed is raised and lowered, substantially as described.

Witness my hand to the foregoing specification this 14th day of August, 1901.

DAVID T. OWEN.

Witnesses:

R. B. MOSER,

H. T. FISHER.