Aug. 26, 1924. 1,506,416

J. A. DEWEY

COUCH BED

Filed March 20, 1920

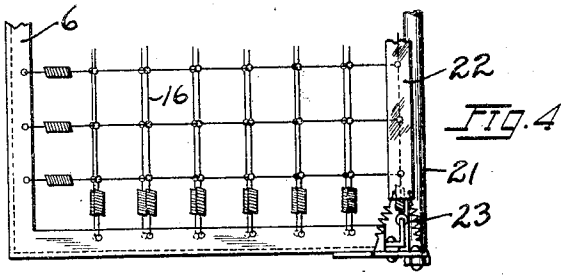
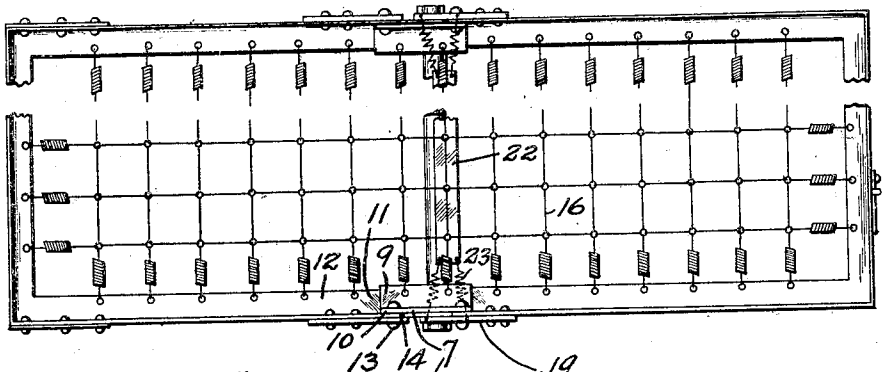


Fig. 4

Fig. 3



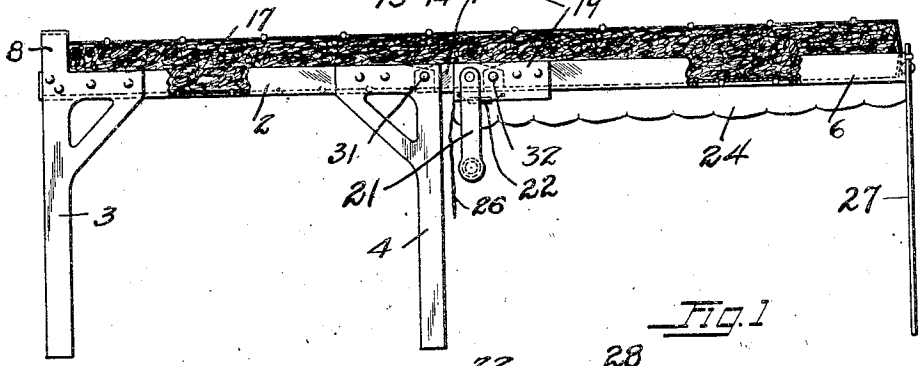


Fig. 1

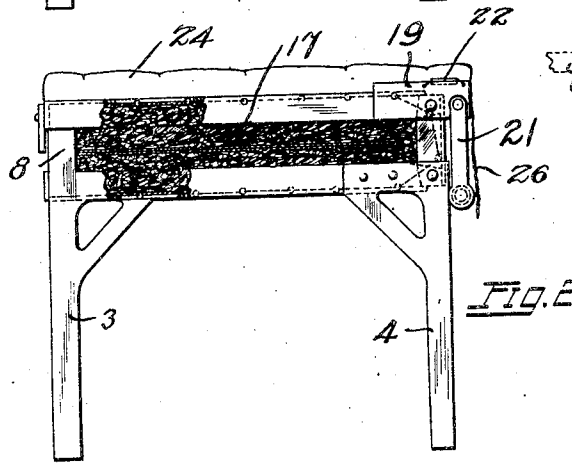


Fig. 2

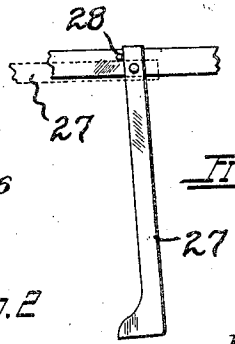


Fig. 5

INVENTOR
Josiah A. Dewey
BY White Root & Evans
his ATTORNEYS.

Patented Aug. 26, 1924. 1,506,416

UNITED STATES PATENT OFFICE.

JOSIAH A. DEWEY, OF OAKLAND, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO MURPHY DOOR BED COMPANY, OF SAN FRANCISCO, CALIFORNIA, A COPARTNERSHIP FIRM CONSISTING OF WILLIAM L. MURPHY AND WILLIAM K. WHITE.

COUCH BED.

Application filed March 20, 1920. Serial No. 367,352.

To all whom it may concern:

Be it known that I, JOSIAH A. DEWEY, a citizen of the United States, and a resident of Oakland, county of Alameda, and State of California, have invented a new and useful Couch Bed, of which the following is a specification.

My invention relates to a device which may be readily converted into either a couch or bed.

An object of the invention is to provide a standard size bed having a wire fabric spring and upholstered mattress which is convertible into a couch having a flexible, formed, upper edge, slightly overhanging the front of the couch. A bed which is soft and resilient enough to sleep on is not firm enough for a seat such as a good couch should provide, and therefore, a further object of the invention is to provide a device of the character described, in which, in the couch form, both the mattress and the wire spring are doubled to provide the seat of the couch, which thus has the totalized resiliency and firmness of a double layer of mattress and spring.

The invention has other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of my invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that I do not limit myself to the showing made by the said drawings and description, as I may adopt variations of the preferred form within the scope of my invention as set forth in the claims.

Referring to the drawings:

Figure 1 is an end view of my device when extended to form a bed. Figure 2 is an end view of the device when folded to form a couch. Figures 3 and 4 are fragmentary plan views of the structures shown in Figures 1 and 2 respectively. Figure 5 is a side elevation of one of the movable legs of the apparatus.

Briefly described, my couch bed comprises a structure which, when extended forms a bed having a full sized spring and mattress of the desired resiliency and softness, and which when folded forms a couch wherein a double layer of the spring and mattress are utilized as upholstery, forming a couch seat having the desired firmness, and a flexible, overhanging, formed upper front edge. This formed edge is accomplished by the use of a flexible metallic edging strip, which is resiliently attached to opposite sides of the frame, and lies below the spring in the bed form of the structure, acting to re-enforce the spring when it sags into engagement therewith. When the bed is folded this strip overlies the folded spring and mattress, and supports and positions an overhanging front upper edge of the couch seat, giving that edge form and flexibility. Since a portion of the spring overlies the upper fold of the mattress in the couch form of the device, I prefer to arrange a thin pad over the spring and the edging strip.

My couch bed comprises a stationary frame 2 provided with rear legs 3 and front legs 4. The frame 2 is preferably formed of angle iron, opening inwardly and upwardly. An invertible frame 6 is pivotally connected to the stationary frame, preferably by an angle iron link 7, at each side, so that the invertible frame may be extended horizontally from the stationary frame to form a bed, or swing upwardly and over the stationary frame to form a couch. The pivotal connections between the links and the frame ends comprise double knuckle joints in which the amount of relative movement between the contiguous members is limited to about 90 degrees. Thus in folding the bed up into a couch the links swing upwardly from a horizontal to a vertical position, and the invertible frame swings into parallelism with the stationary frame, supported at the front of the couch by the links and at the rear by upward extensions 8 of the legs 3. The knuckle joints then being closed on one side prevent lateral movement or racking of the invertible frame. In the extended or bed form the knuckle joints are closed on the other side so that the invertible frame and links are rigidly secured in horizontal extension.

Preferably the knuckle joints are formed by making the angle iron links square across the ends 9 and 10 of both the inwardly and upwardly extending portions, and cutting away to a square shoulder 11, the inwardly extending portion 12 of the frame angle iron.

The end 10 of the link is then pivoted by pin 13 to the upwardly extending portion 14 of the frame, extending beyond the shoulder 11, the end 9 of the link abutting against the shoulder 11, when the knuckle joint is closed on one side. When the link is swung upwardly through about a 90 degree arc, the square end 10 abuts against the portion 12 of the frame, close in the corner, closing the knuckle joint on that side.

Connected to the inwardly extending portions of the frames and links all around, is a wire fabric spring 16, upon which an upholstered mattress 17 is supported. In the bed form, the mattress and spring give the desired softness and resiliency, but in the couch form, as shown in Figure 2, there is a double layer of mattress and spring to support any weight, the combining or totalizing of the two layers giving a firmness and resiliency more in keeping with the uses of a couch.

On the pivotally connected end of the invertible frame on each side is fixed a plate 19, which in the bed form of the device extends toward the stationary frame and a short distance below the horizontal plane in which the spring 16 normally lies. To the end of these plates is pivotally attached the U-brace 21, which prevents lateral spreading or collapse of the spring supporting frames and links. As shown in Figure 2 the U-brace, in the couch form of the structure hangs downwardly from the inverted frame 6, across the front of the couch. It will be noted also in Figure 2 that the plate 19 extends upwardly and forwardly of the couch, overhanging the supporting structure below it.

Means are provided for connecting the overhanging plates so as to provide a flexible, formed upper front edge to the couch instead of the rounded, unformed surface presented by the folded spring and mattress. A flexible metallic edging strip 22 is resiliently connected by springs 23 to the plates 19 adjacent the projecting ends thereof, and near that edge which is above in the folded position of the invertible frame, and below in the extended position. Thus, in the couch, the edging strip flexibly supports and positions, an overhanging upper front edge, materially enhancing the appearance and usefulness of the couch. Overlying the upper layer of the spring and the edging strip, is preferably a thin pad 24 from the front edge of which a short drop or curtain 26 falls to conceal the underlying parts. This pad is preferably attached to the invertible frame hanging from the under side thereof when the frame is horizontally extended, as shown in Figure 1. In addition to the function stated, the edging strip, which, in the bed, crosses the frame a short distance below the spring, as shown in Figure 1, performs the function of re-enforcing the spring. When the spring is loaded beyond the normal amount it sags into engagement with the strip which then takes its portion of the load.

Stability is given to the outer edge of the invertible frame, when in the extended position, by a pair of folding legs 27 pivoted to the edge of the frame as indicated in Figure 5, and adapted to swing up against the side of the frame when it is folded. A stop pin 28 limits movement of the leg both in the folded and extended position of the frame.

I claim:

1. In a couch bed, a stationary frame, an invertible frame pivotally mounted on said stationary frame, a wire fabric spring attached to said frames, and a flexible strip resiliently connected to opposite sides of said invertible frame independently of said fabric spring to support the upper front edge of the couch, and to re-enforce the central portion of said fabric in the bed form of the device.

2. In a couch bed, a stationary frame, an invertible frame pivotally mounted on said stationary frame, a wire fabric spring attached to said frames, a mattress disposed on said fabric and foldable therein when said invertible frame is turned inwardly, to secure the totalized resiliency of a double layer of fabric spring and mattress, a pad arranged on the invertible frame on the side of said fabric opposite said mattress, and a resiliently mounted edging strip underlying said pad for supporting the upper front edge of the couch.

3. A couch bed comprising a stationary frame, an invertible frame pivotally connected to said stationary frame, a wire fabric spring supported in said frames, and an edging strip resiliently connected to opposite sides of said invertible frame adjacent its pivotal connection with said stationary frame and underlying said fabric to re-enforce the same in the bed form of the device and overlying said fabric to support the upper front edge of the seat in the couch form of the device.

4. A couch bed comprising a stationary frame, an invertible frame pivotally connected to said stationary frame, a wire fabric spring supported in said frames, an edging strip resiliently connected to opposite sides of said invertible frame adjacent its pivotal connection with said stationary frame and underlying said fabric to re-enforce the same in the bed form of the device and overlying said fabric to support the upper front edge of the seat in the couch form of the device, a mattress disposed on said fabric and foldable therein when said invertible frame is turned inwardly to secure the totalized resiliency of a double layer

of fabric spring and mattress, and a pad arranged on the invertible frame and overlying said strip.

5. A couch bed comprising a stationary frame, an invertible frame, links pivotally connecting the frames, each pivotal connection comprising a double knuckle joint permitting relative movement of the contiguous members through an arc of substantially 90 degrees, offset portions on the invertible frame extending in the bed form of the device, below and past each knuckle joint, and an edging strip resiliently mounted on said offset portions to support an overhanging upper front edge of the couch.

6. In a couch bed, a stationary frame, an invertible frame pivotally mounted on said stationary frame, and a resiliently mounted edging strip for supporting the upper front edge of the couch and for re-enforcing the central portion of the bed.

In testimony whereof, I have hereunto set my hand.

JOSIAH A. DEWEY.