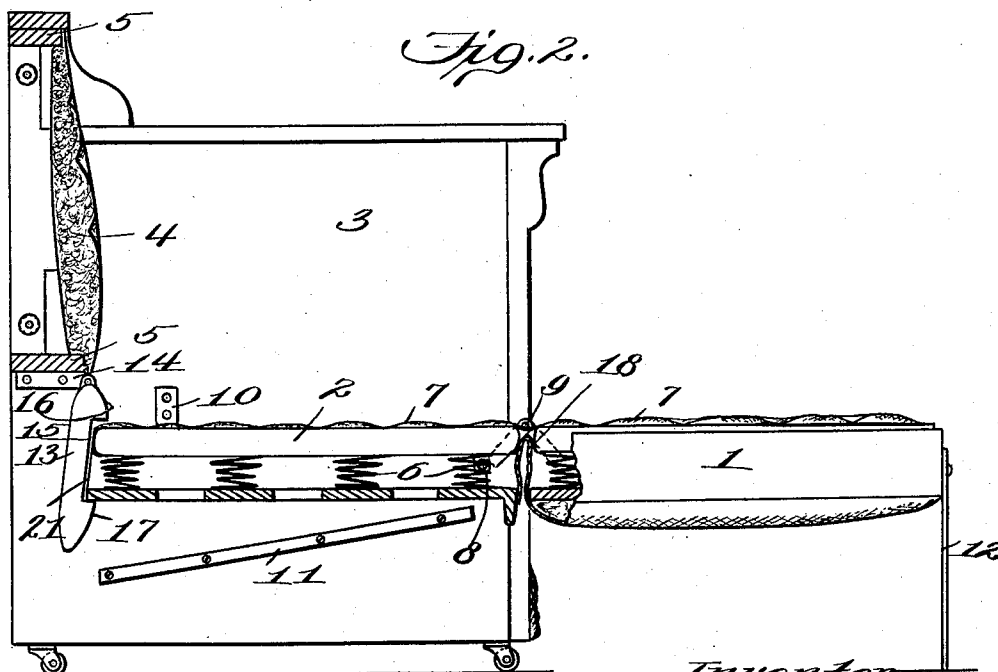
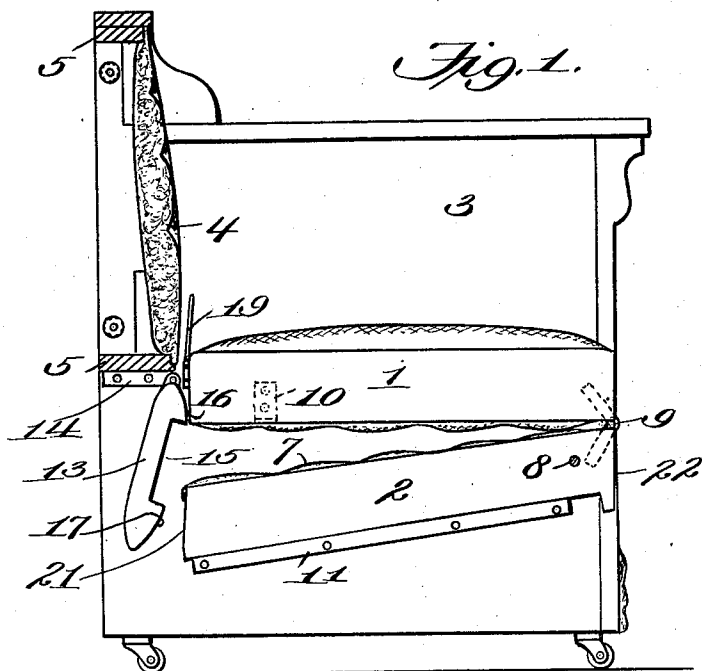


T. F. KELLY.
 COMBINED BED AND COUCH.
 APPLICATION FILED MAR. 25, 1911.

1,014,484.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.



Witnesses:
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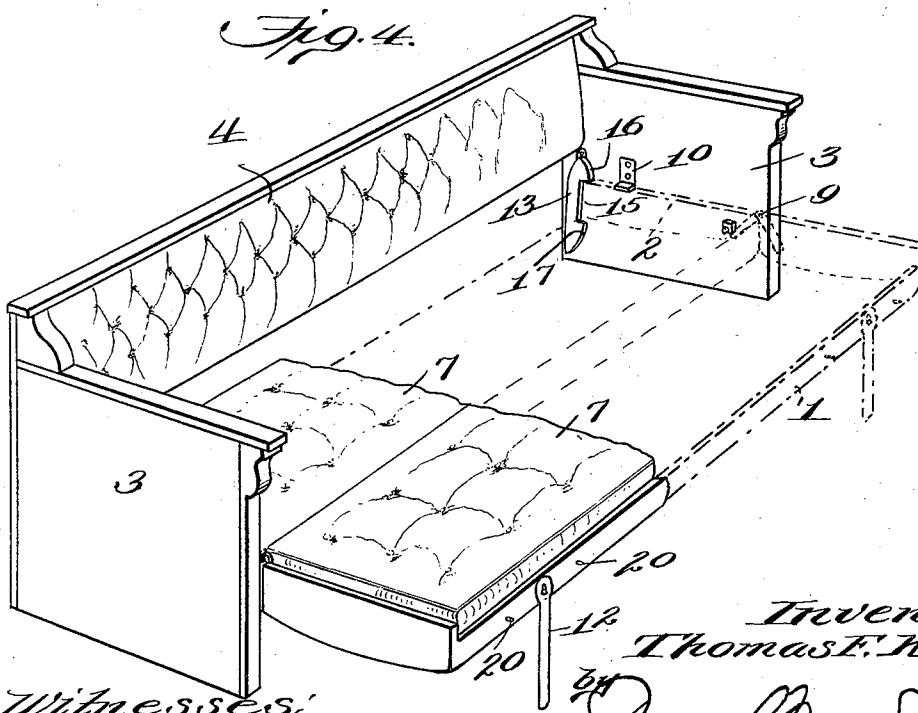
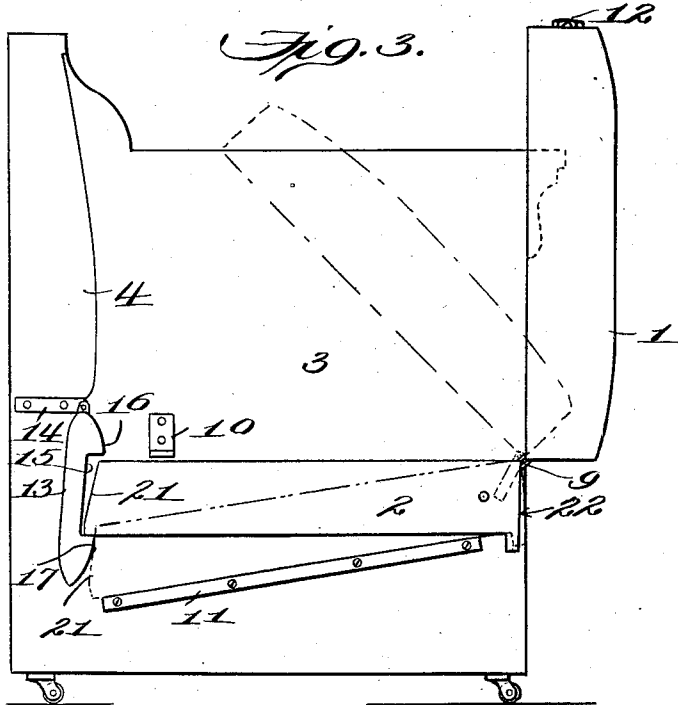
Inventor
 Thomas F. Kelly
 by *[Signature]*
 James L. Morris, Jr., atty.

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UNITED STATES PATENT OFFICE.

THOMAS F. KELLY, OF CLINTON, IOWA.

COMBINED BED AND COUCH.

1,014,484.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed March 25, 1911. Serial No. 616,950.

To all whom it may concern:

Be it known that I, THOMAS F. KELLY, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented new and useful Improvements in Combined Beds and Couches, of which the following is a specification.

This invention relates to improvements in combined beds and couches of that type which embodies a main frame finished and upholstered, for example, as a davenport couch frame, and two companion spring supporting frames which, when the article is used as a couch, are disposed in spaced relation, the one above the other, and when the article is used as a bed, constitute sections of the bed bottom and occupy adjoining positions in a common plane. The space between the companion frames, when the article is used as a couch, is utilized for the storage of the mattress and bedding. One of the companion frames serves also as a seat for the couch and is mounted so that it may be folded between the side sections of the main frame, as when the article is used as a couch, or extended beyond said side sections, as when the article is used as a bed. The movements of the foldable frame in either direction are effective through appurtenant instrumentalities to produce the relations aforesaid of the companion frames.

The object of the present invention is to provide a combined bed and couch of the type stated wherein the organization for effecting and maintaining the relations of the companion frames is of very simple, inexpensive and efficient character.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical cross section illustrating the article as a couch; Fig. 2 is a similar view illustrating the article as a bed; Fig. 3 is a diagrammatic side view with one of the side sections of the main frame removed to show more particularly the features of organization and the mode of operation; Fig. 4 is a perspective view partly broken away and in diagram, illustrating the article as a bed.

Similar characters of reference designate corresponding parts throughout the several views.

The two companion frames to which reference has been made are designated by

the numerals 1 and 2, the numeral 1 indicating the foldable frame and the numeral 2 indicating the companion frame. The frames 1 and 2 are assembled with relation to a main supporting frame which is finished and upholstered in the same manner as a davenport couch frame and which includes the side sections 3, the back section 4, and connecting rails 5.

The frames 1 and 2 are of general box-like form and are preferably fitted with helical coil springs 6 upon which the mattress 7 rests. The said mattress is made in jointed sections which correspond in dimensions to the frames 1 and 2 with which they are respectively associated and are preferably secured by suitable ties to the springs which are mounted in said frames. The frame 1, in view of its function as a seat for the couch, is suitably upholstered. The frame 2 is supported from the side sections 3 by pivot connections 8 which are located adjacent to the front rail of the frame 2 and near the front of the sections 3 about midway the height of the latter. The frame 1 is hinged to the frame 2 as at 9, the hinge pins being coincident with the apex of the varying angles formed by the front rail of the frame 2 and the adjacent rail of the frame 1 in the different positions of said frames.

When the article is used as a couch the frame 1 is folded between the side sections 3, occupying a horizontal plane and having support on angle brackets 10 which are secured to said sections 3 at suitable points and the frame 2 rests in a rearwardly and downwardly inclined position below the frame 1 on correspondingly inclined cleats 11 which are also secured to said side sections 3. It will thus be apparent that the frames 1 and 2 in the relation stated define a V or wedge-shaped inclosure in which the bedding may be stored.

When the article is used as a bed, the frame 1 is positioned in advance of the side sections 3, occupying a horizontal plane and supported from the floor by pivoted legs 12, and the frame 2 is raised on its pivot connections 8 and occupies a horizontal plane which is coincident with the plane of the frame 1. To support the frame 2 in its elevated position, gravity catches 13 are employed, these catches being pivotally hung from plates 14 which are secured to the sec-

tions 3 under the lower rail 5. The catches 13 are provided on their forward faces with recesses 15, the end walls of which are defined by upper and lower cam-faced projections 16 and 17 respectively.

A flexible sheet 18, preferably of the same material as the upholstery, is connected to the adjacent rails of the frames 1 and 2 and, when the article is used as a couch, serves to conceal the springs, mattress and bedding and to give the article a neat appearance.

The relation of the frames, when the article is used as a couch, has been already set forth. To convert the article into a bed, the frame 1 which is provided with a loop or hand-grip 19, is swung forwardly and outwardly on the hinges 9 as a center. When said frame, in the course of its outward swinging movement, reaches a vertical or substantially vertical plane, as shown in Fig. 3, it is forced downwardly and thereby causes the elevation of the frame 2 on the pivot connections 8 to a horizontal plane, the said frame 2 being held in this position by the catches 13. Thereafter the downward movement of the frame 1 is continued until it reaches a horizontal plane which is coincident with the horizontal plane into which the frame 2 has been raised. The frame 1 is considerably heavier than the frame 2 and consequently very slight effort is required to produce the action set forth. If desired, the frame 1 may be specially weighted for the purpose. In the upward movement of the frame 2 from its inclined plane to its horizontal plane, its end rails, which preferably have beveled rear faces, as at 21, are effective, owing to the cam faces on the projections 17, to displace the catches 13 and pass by said projections. Thereafter the catches 13 swing inwardly by gravity and engage their projections 17 under the said rear rail of the frame 2. The latter is thus positively supported in its horizontal plane. The brackets 10 serve, in addition to their function of supporting the frame 1 in the folded relation of the latter, as stops to arrest the upward pivotal movement of the frame 2, and thereby the downward vertical movement of the frame 1, and are positioned to engage the end rails of the frame 2 after the latter has passed the projections 17 and the catches 13 have swung inwardly as explained.

To convert the article from a bed to a couch the frame 1 is swung inwardly, moving on the hinges 9. Just before said frame comes to rest on the bracket 10 its free edge portion engages the cam faces of the projections 16 and thereby effects a rearward displacement of the catches 13. The latter then release the frame 2 which, in turn, drops on its pivot connections 8 until it

comes to rest on the cleats 11. During the inward swinging movement of the frame 1 the legs 12 swing in either direction to a position longitudinally of the rail by which they are carried, such swinging movement of said legs being limited by pins 20.

It is preferred to arrange the front rail of the frame 2 on a slight inward bevel, as at 22, in order that, when the frame 1 is extended, there may be sufficient space between the adjacent rails of said frames to prevent undue creasing or wear of the sheet 18.

It will be apparent from the foregoing description that the organization of the frames and their appurtenant parts is of simple and inexpensive character and that its action is very efficient. It may be noted that the manipulation of the parts may be effected with comparatively slight effort since the frame 1 moves independently of the frame 2, except during the momentary period when it is employed to rock said frame 2 upwardly, and the weight of the frame 1 furnishes a large component of the force necessary for this operation.

Having fully described my invention, I claim:

1. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which serves as a couch seat and is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, and means automatically operable to support the pivotally supported frame in its elevated position, the means also being operable consequent to the inward movement of the hinged frame to release the pivotally supported frame.

2. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which serves as a couch seat and is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, and a pair of pivotally hung catches having upper and lower cam faced projections, the catches being automatically operable after the upward movement of the pivotally hung frame past its lower projections to engage and support said pivotally hung frame and also being operable consequent to the engagement of the hinged frame during its inward move-

ment with the upper projections to disengage and release the pivotally supported frame.

3. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, means operable to support the pivotally supported frame in its elevated position, the means

also being operable consequent to the inward movement of the hinged frame to release the pivotally supported frame, and fixedly mounted angle brackets which serve as supports for the hinged frame in the folded position of the latter and as stops to limit the upward movement of the pivotally supported frame.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS F. KELLY.

Witnesses:

J. A. KELLY,
FENTON JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."