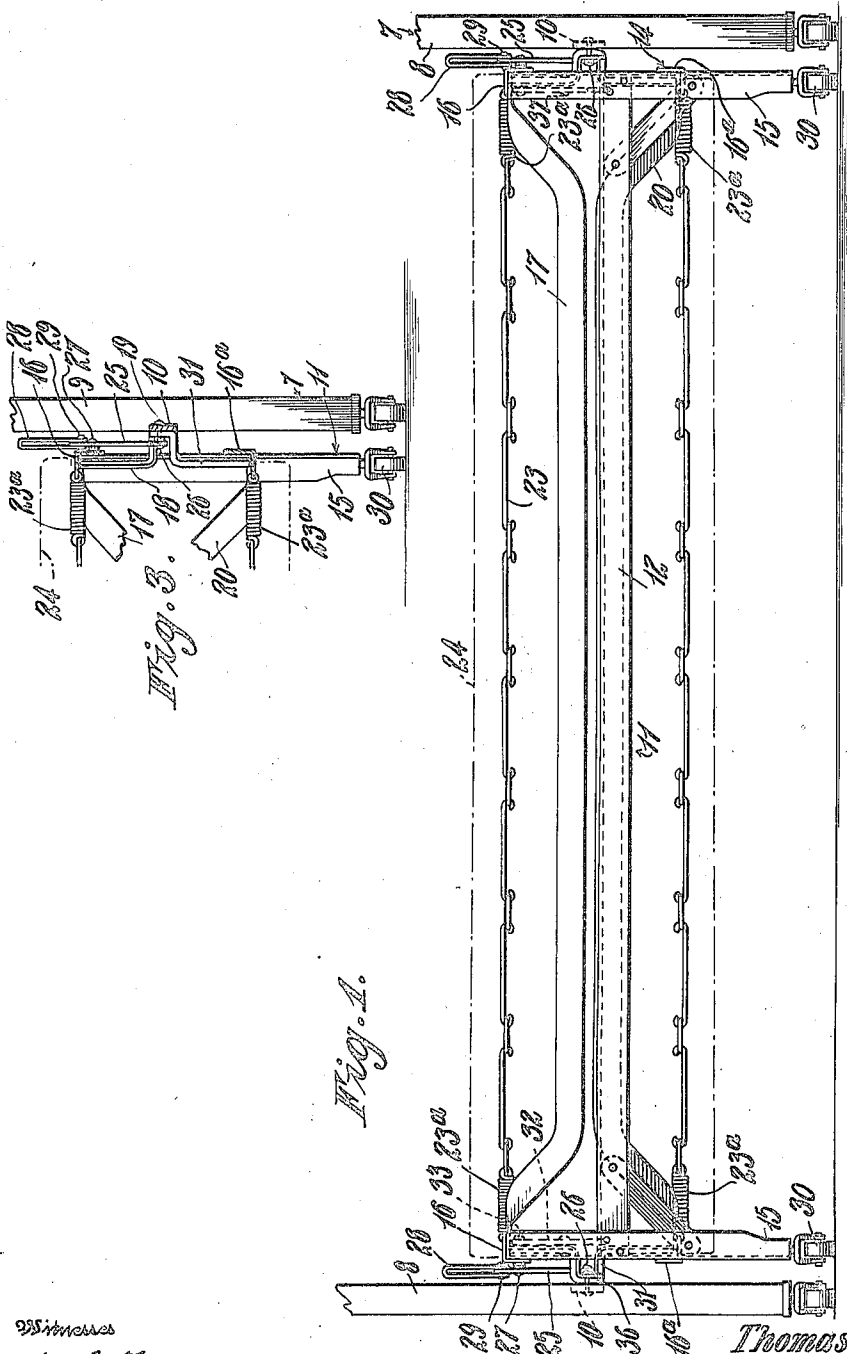


T. J. KELLY.  
 FOLDING BED STRUCTURE.  
 APPLICATION FILED NOV. 4, 1920.

1,386,628.

Patented Aug. 9, 1921.

3 SHEETS—SHEET 1.



Witnesses  
 W. C. Fielding  
 Augustus Klappes

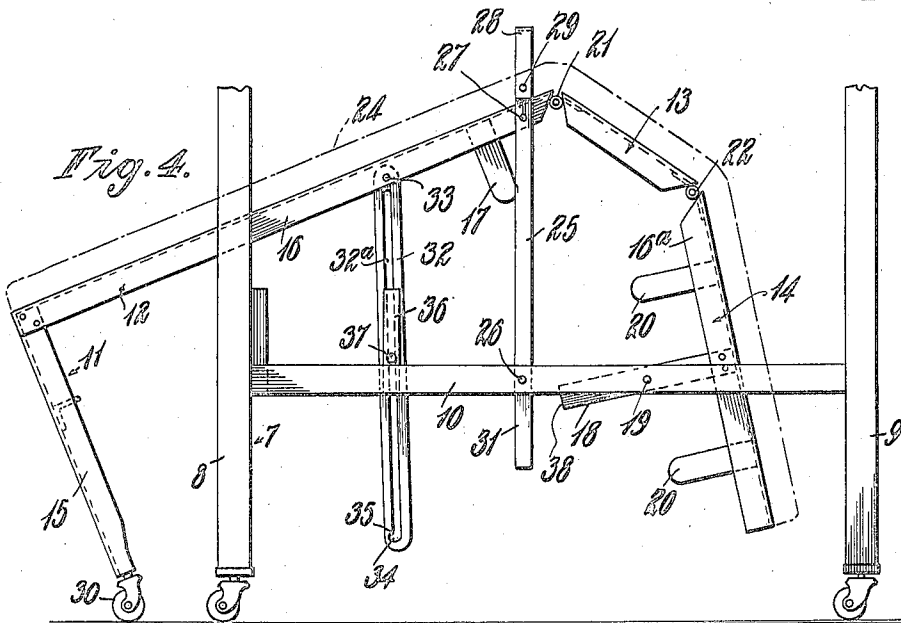
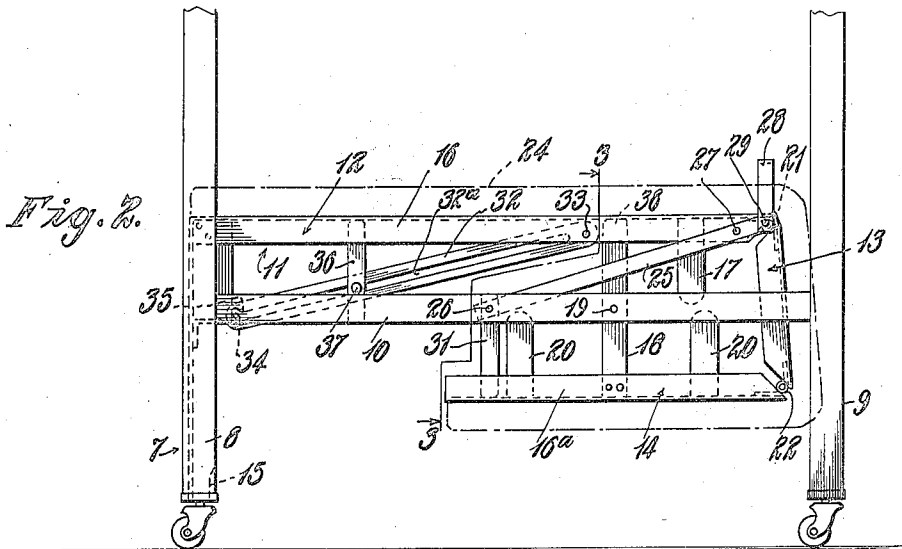
Inventor  
 Thomas J. Kelly  
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

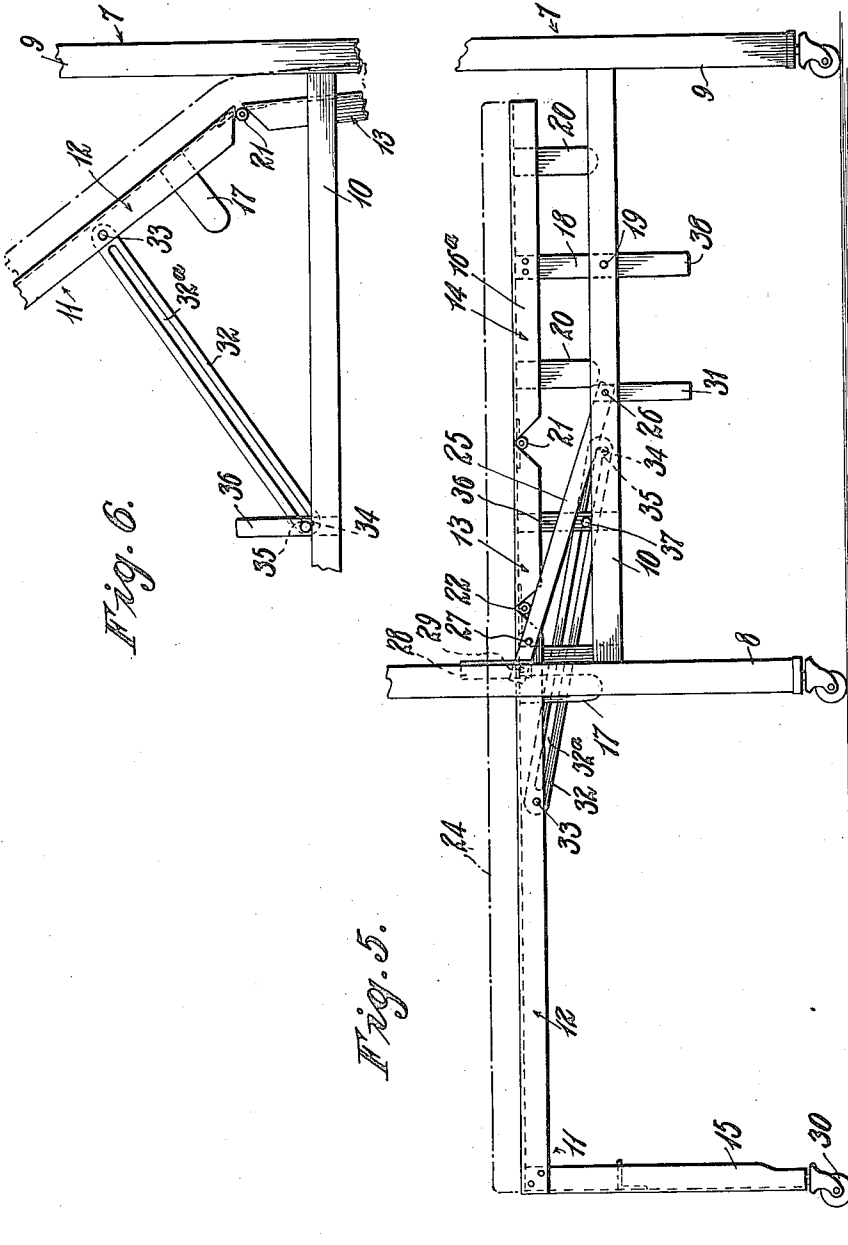


Fig. 6.

Fig. 5.

Witnesses

W. C. Fielding  
 Augustus B. Lopes

Inventor

Thomas J. Kelly

By

Joshua R. H. Tothe

His Attorney

# UNITED STATES PATENT OFFICE.

THOMAS J. KELLY, OF PHILADELPHIA, PENNSYLVANIA.

## FOLDING-BED STRUCTURE.

1,386,628.

Specification of Letters Patent.

Patented Aug. 9, 1921.

Application filed November 4, 1920. Serial No. 421,631.

*To all whom it may concern:*

Be it known that I, THOMAS J. KELLY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Folding-Bed Structures, of which the following is a specification.

One object of my invention is to provide an improved structure which is readily convertible for use as a davenport or couch and as a bed.

Another object is to so construct and arrange the parts that they can be easily and quickly actuated to form either a strong full size bed or a davenport of neat appearance.

A further object is to make my improved structure so that it will include comparatively few sections of simple and strong construction, certain of which, when folded to form a davenport or couch, will provide an underslung shelf for the storage of sheets, blankets or other articles; the other of the sections being pivoted so as to allow free access to the shelf.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a front elevation of my improved structure in a folded position forming a davenport or couch,

Fig. 2 is an end elevation of Fig. 1,

Fig. 3 is a fragmentary section taken on the line 3—3 of Fig. 2,

Fig. 4 is an end elevation showing how the sections can be moved into and out of their folded and unfolded positions,

Fig. 5 is an end elevation showing the sections having been swung into a position forming a full size bed, and

Fig. 6 is a fragmentary elevation showing how the front top section can be swung and held in a raised position to permit access to the shelf formed by the rear and intermediate sections when the structure is in the form of a davenport or couch.

Referring to the drawings, 7 represents a main frame which, in the present instance, is illustrated as being made of metal and having front legs 8 spaced apart and rear legs 9. The front and rear legs at each end of the frame are joined together by side rails 10. A movable bed-forming frame 11

is made up of three principal sections 12, 13 and 14. The front section 12 has auxiliary legs 15 which are adapted, when the parts are folded to be positioned within the space between the front legs 8 as clearly shown in Fig. 1. The side bars 16 of the front section 15 are connected by transverse reinforcing members 17 which may be constructed of metal tubes flattened at their ends and secured to the side bars 16. The rear section 14 includes side bars 16<sup>a</sup> to which are attached arms 18; said arms being pivoted between their ends, as shown at 19, to the side rails 10. The rear section may also be constructed to include transverse reinforcing members 20.

The intermediate section 13 is secured between and to the front and rear sections by hinges 21 and 22. A spring or flexible bed bottom 23, which may be of any well known construction held under tension by springs 23<sup>a</sup>, is secured and extends continuously over the tops of the sections 12, 13 and 14 and when the frame 11 is in its extended position as shown in Fig. 5, the flexible bed bottom 23 assumes a horizontal plane from the front of the section 12 to the rear of the section 14 and if desired a mattress or cushion, as indicated in dot-and-dash lines by the reference character 24, can be tied or otherwise suitably secured upon the top of each of the sections so as to provide a continuous horizontal support.

Lever 25 is pivoted at 26 to the opposite side rails 10 and at 27. Said levers are respectively pivoted to the side bars 16 of the section 12 adjacent the hinges 21 which connect the front section with the intermediate section. The ends of the levers 25 adjacent the pivots 27 have handles 28 pivoted thereon at 29 so that when the sections are folded, as shown in Fig. 2, the handles 28 can assume a vertical position directly adjacent the hinges 21. These handles 28 can be made of loops of leather to permit them to be easily grasped and the arrangement is such that when the parts are folded as shown in Fig. 2 that the lever 25 inclines rearwardly to move the portions thereof adjacent the hinges 21 to a level below the top of the front section 12 and the lower portions of the handles 28 to a level below the top of the front section. The distance between the pivots 26 and 27 of the lever 25 is such that when the handles 28 are grasped and moved upwardly that the arms 18 will freely swing

on their pivot 19 and the intermediate section 13 and rear part of the front section 12 will be raised to a level above that which it will assume when the sections are moved into horizontal alinement as illustrated in Fig. 5.

Fig. 4 shows the parts in their highest raised position and the auxiliary legs 15 are provided with rollers or casters 30 to movably support the forward portion of the front section 12. Thus by providing the structure above described it is not necessary to lift the entire weight of the front section during the folding or unfolding movement of the sections since the rollers 30 are permitted to remain on the floor at all times during the folding and unfolding action. Furthermore, by providing the intermediate section the structure, when in the folded position as shown in Figs. 1 and 2, an underslung shelf will be formed by the rear section 14 with the intermediate section 13 as a back for the shelf. It will be noted that the flexible bed bottom 23 will bend to permit the folding and unfolding action and in actual practice I have found that it is not necessary even to detach the mattress 24 during the folding and unfolding movement of the sections.

I am aware that numerous structures have been provided in which sections have been pivoted together so that when one section is moved inwardly the other section will swing on a pivot but the arrangement is such that the space between the hinged parts does not actually form an extension or a part of the bed structure when the latter is in its straight extended position. Thus by including the intermediate section 13 illustrated, I provide the arrangement of the shelf and the intermediate section forms a part serving to directly support the bed bottom and portion of the mattress when the sections are arranged in a straight line as shown in Fig. 5.

Depending members 31 are detachably connected to the side rails 10 and form abutments for the rear section 14 when the latter swings into its underslung position as shown in Fig. 2. I pivotally connect links 32 to the side bars 16 as shown at 33; said links having elongated slots 32<sup>a</sup> terminating in undercut portions 34 which provide shoulders 35. Abutment members 36 are secured to the side rails 10 and serve to support pins 37 which pass through the slots 32<sup>a</sup>. If, when the structure is folded, it is desired to place any material on the shelf provided by the underslung section 14 or to remove such material therefrom, the front section 12 can be raised on the hinges 21 as a pivot until the portions 34 of the slots 32<sup>a</sup> drop over the pins 37 as shown in Fig. 6. The shoulders 35 will then abut the pins 37 and the front section 12 will remain raised to permit easy

access to the shelf after which by merely swinging the links forwardly on their pivots 33, the front section can be permitted to gravitate into its normal position. The ends 38 of the arms 18 are of such length that when in the folded position these ends are directly above the pivots 19 and serve as supports for the rear parts of the front section 12 as clearly shown in Fig. 2 and thus a very suitable and secure structure is provided.

By having the intermediate section with a portion of the flexible bed bottom 23 passing thereover, said portion of the bed bottom when the structure is folded will form a back for the shelf so that any articles placed on the shelf cannot fall through or slip from the rear of the shelf.

It will of course be understood that the structure as illustrated is of a skeleton character in order to more clearly illustrate the parts but if desired the main frame 7 may be formed with panels in the end or back and used as an article of furniture to correspond with other articles in the room in which it is placed.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A structure of the character described including a main frame; a bed supporting frame having a front section, a rear section and an intermediate section in which the intermediate section is hinged both to the front section and to the rear section, said rear section having portions pivoted to the side of said main frame; means for swinging said rear section on said pivots whereby the sections can be moved into a common plane and can also be swung into a folded position with the rear section under the front section; pins secured to the sides of said main frame; and links pivotally connected to said front section forward of its hinges, said links having undercut slots through which said pins freely extend whereby when the parts are in said folded position the front section can be raised on its hinge connection with the intermediate section as a pivot, said movement serving to bring the undercut portions of the slots over said pins so as to retain said front section in its raised position; substantially as described.

2. A structure of the character described including a main frame; a bed supporting

frame having a front section, a rear section and an intermediate section in which the intermediate section is hinged both to the front section and to the rear section where-  
5 by said sections can be moved into the same plane, said rear section having arms projecting therefrom pivoted between their ends to the sides of said main frame; means for swinging said rear section on said pivots  
10 whereby the sections can be moved into a common plane and can also be swung with the rear section under the front section with the intermediate section in an upright position; and a flexible bed bottom covering said sections, the free ends of said arms serving 15 as abutment members for the rear part of said front section; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS J. KELLY.

Witnesses:

ELIZABETH GARBE,  
CHAS. E. POTTS.