No. 638,466. Patented Dec. 5, 1899.

W. J. KELLY.

SOFA BEDSTEAD.

(Application filed Sept. 30, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

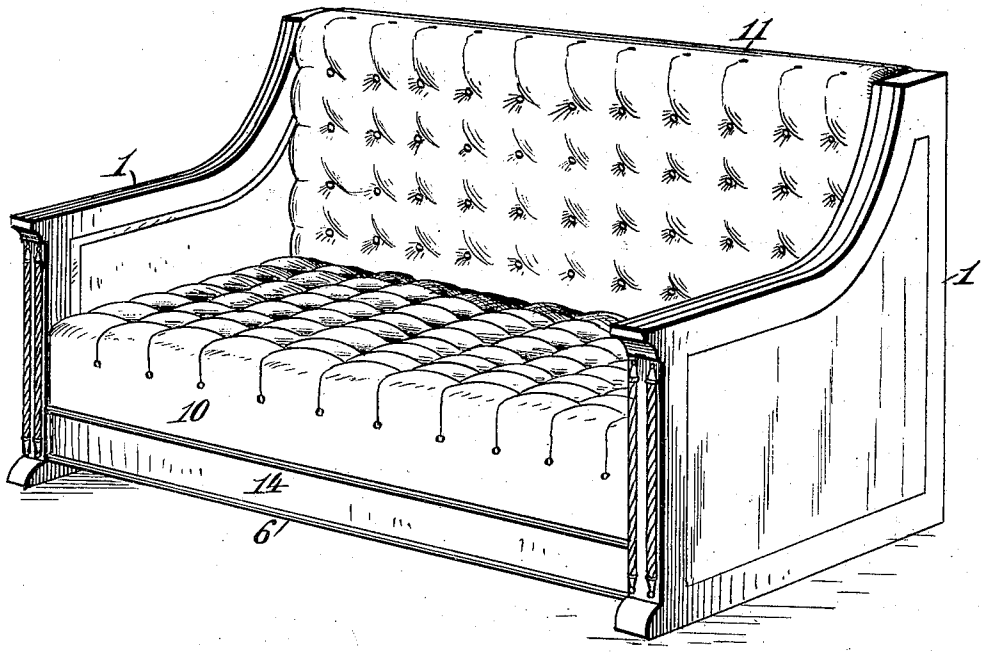

Fig. 2.

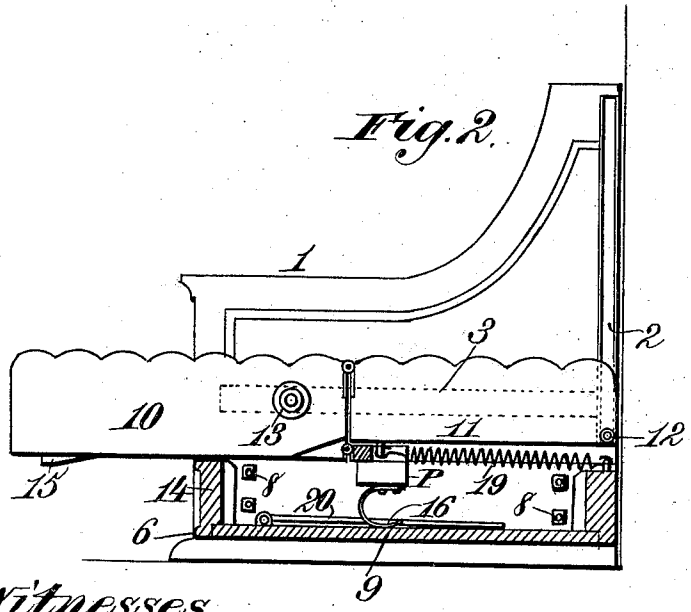

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Fig. 3.

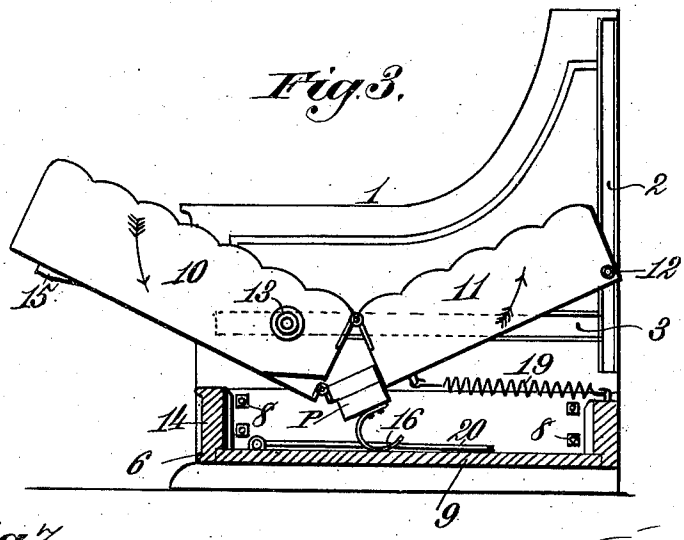


Fig. 7.

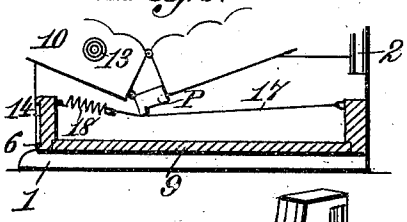


Fig. 4.

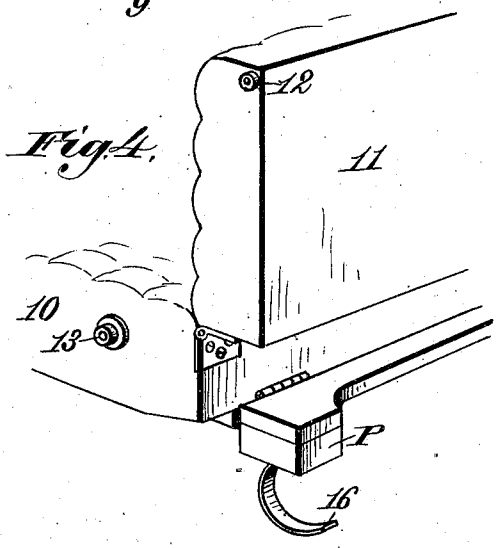


Fig. 5.

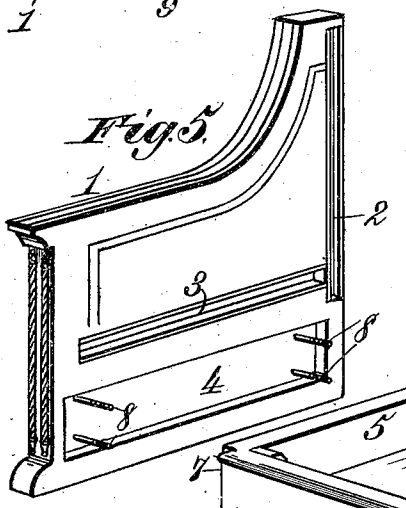
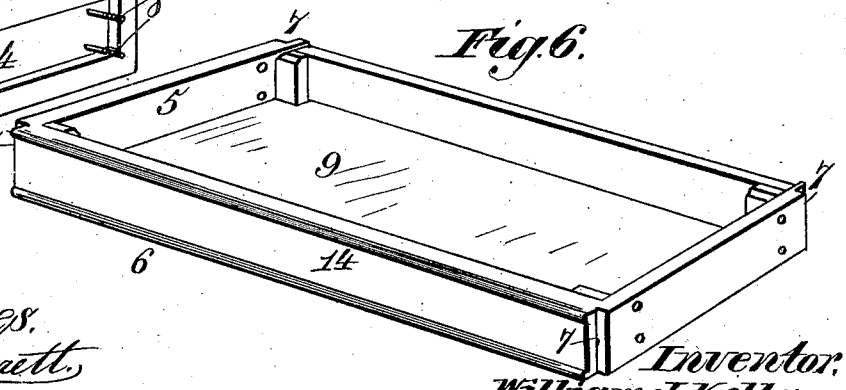


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM J. KELLY, OF CLINTON, IOWA, ASSIGNOR TO THE J. A. KELLY & BROS., INCORPORATED, OF SAME PLACE.

SOFA-BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 638,466, dated December 5, 1899.

Application filed September 30, 1899. Serial No. 732,216. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. KELLY, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, whose post-office address is Clinton, Iowa, have invented new and useful Improvements in Sofa-Bedsteads, of which the following is a specification.

My invention relates to sofa-bedsteads, and has for its object to provide such an article of furniture of novel, simple, and economical construction so arranged that it may be easily converted from a sofa into a bed and from a bed into a sofa without drawing the structure away from a wall or other object against which it may be placed.

It is common in the use of sofa-bedsteads to dispose them in a room with the back of the article of furniture against a wall, and in many previous constructions of sofa-bedsteads it has been necessary before the article can be converted from a sofa into a bed, or vice versa, to remove it from the wall, because when it is to be adjusted to serve as a bed that upholstered section which formed the back of the article when adjusted as a sofa would project out beyond the normal back of the article. In such constructions it was impossible to convert the sofa into a bedstead without first removing it a suitable distance away from the wall. By my invention I provide a novel construction and arrangement of parts whereby the article may be converted from a sofa into a bedstead without such removal.

The invention has for its object, also, to improve in a novel manner the general construction of sofa-bedsteads.

To the ends stated the said invention consists in the novel construction, combination, and arrangement of parts hereinafter set forth, and particularly pointed out in the claims, reference being made to the accompanying drawings, in which—

Figure 1 is a view of the sofa-bedstead in the position of a sofa. Fig. 2 is a view showing the parts converted to form a bed. Fig. 3 is a transverse section showing the operation of the parts when converting the article from a bed into a sofa. Fig. 4 is a detail perspective view, the outside framework being removed. Fig. 5 is a perspective view of one of the end pieces. Fig. 6 is a perspective view of the base-frame, and Fig. 7 is a detail of a different arrangement.

In the said drawings the reference-numeral 1 designates the end pieces, each of which is provided on its inner surface with intersecting vertical and horizontal grooves or raceways 2 3, and beneath the horizontal raceways each frame is channeled, as at 4, to receive the end bars 5 of the base-frame 6, said end bars being rabbeted, as shown at 7, to accurately fit into the channels 4. Lag-screws 8 pass through the end pieces 1 into the end bars of the base-frame for holding the parts together in such a way that they may be readily separated to provide a simple knock-down structure the several elements of which may be arranged together in a very compact manner for transportation. The base-frame is closed at its bottom, as shown at 9, whereby it serves as a receptacle for the usual appurtenant coverings of a bed during the time the article is not in use as a bed.

The numerals 10 and 11 indicate two suitably-upholstered sections hinged together and which serve as the seat and back of the article when it is in use as a sofa and which together serve as a bed when adjusted to the proper position therefor. The rear section 11 is provided at its opposite sides and near the top with studs 12, which run in the vertical raceway 2 during the operation of converting the article of furniture, and the front section 10, which when the article is adjusted as a sofa forms a seat therefor, is provided in its opposite sides and near its rear end with studs 13, which run in the horizontal raceway 3 when the article is being converted, as above described. The arrangement of these studs 13, as above indicated, is of importance in that when the parts of the article are in proper position to serve as a bed, as shown in Fig. 2 of the drawings, the said studs are located in rear of the front wall 14 of the base-frame 6, so that the front section is supported without the use of legs attached thereto. It will readily appear that when the studs are so positioned in the horizontal raceway the front end of the section 10 will support considerable weight without in any manner

tipping. Practical tests demonstrate that it will support a weight of several hundred pounds without in any manner tipping or being disarranged. The front section 10 is provided with a lug 15 to abut against the front wall of the base-frame when the article is serving as a sofa to prevent any possible disarrangement of the parts.

When the parts are in the position shown in Fig. 1 to serve as a sofa and it is desired to convert the article to a bed, all that it is necessary to do is to slightly raise the front end of the seat-section 11 to release the lug 15 from engagement with the front wall of the base-frame 6 and pull upon it, whereupon it will move forward, the studs 13 thereof moving easily in the horizontal raceway and the studs 12 on the rear section running down the vertical raceway until the parts assume the position shown in Fig. 2 of the drawings. During this operation at no time does the edge of the rear section project beyond the normal rear line of the article of furniture, nor does it when the parts are being reconverted into a sofa. It is therefore wholly unnecessary to draw the article from its accustomed position against the wall of a room, as is necessary in many prior constructions of sofa-bedsteads, and this operation is accomplished in a very simple manner by reason of the novel arrangement of parts set forth.

In those prior sofa-bedsteads which require to be removed from the wall before being converted it is exceedingly difficult to convert them from a bed into a sofa, as it is necessary to pass behind the article of furniture and lift the rear section to its proper sofa position. By my invention I provide an arrangement by which the article may be converted from a bed into a sofa entirely from the front and without the necessity of passing to the rear of the article for that purpose, and this I accomplish in the manner which will now be described.

In the preferred form of my invention (illustrated in Fig. 2 of the drawings) the base of the front section 10 is in a plane slightly below that of the rear section 11, and to the rear lower edge of said front section is hinged a pusher which automatically interposes itself between said sections when the article is to be converted into a sofa. In this instance the pusher comprises a spring 16. In another form of my invention—that shown in Fig. 7 of the drawings—this pusher is yieldingly supported by a cord, wire, or similar element 17, connected to the front and rear walls of the base-frame and having interposed therein a suitable spring 18. This arrangement serves practically the same purpose as the form shown in Fig. 2 of the drawings, though for all purposes not so satisfactory. I have shown two forms of the pusher element; but I wish it distinctly understood that I do not confine myself to either of such forms, as other forms of such element differing more or less in detail therefrom may be employed without departing from the spirit of this part of my invention. The purpose of this pusher, as shown in the drawings, is to engage or come against the front edge of the rear section of the article when it is desired to convert it from a bed into a sofa, as illustrated in Fig. 3 of the drawings, being interposed between the front and rear sections, so that the two sections for the purposes in hand are practically continuous. By merely pushing upon the front section both of said sections are moved back into the proper position to form a sofa. When the parts are in the position shown in Fig. 2 of the drawings, it would be impossible by merely pushing upon the front section to convert the article into a sofa, as will be apparent; but by slightly lifting the front edge of the front section, with the studs serving as pivot-points, the rear edge of said section is slightly lowered and with it the front edge of the rear section, the operation resulting in the rear edge of the rear section being also lifted, as shown in Fig. 3 of the drawings, the studs 12 moving a short distance upward in the vertical raceway. The previously-meeting surfaces of the front and rear sections will now be separated from each other, leaving a gap, and the yielding support of the pusher having been placed under tension by the lowering of the edge of the front section, to which it is hinged, will at once assert its resiliency and force said pusher into the said gap and against the front edge of the rear section, forming, as it were, a bridge between said sections. The parts are now in the position to be converted into a sofa by merely pushing upon the front section and without having to go behind the article of furniture for this purpose. The means by which this desirable result is accomplished are extremely simple and eminently efficient in operation.

While it is not absolutely essential to the proper operation of my invention, I have found that the provision of a suitable coiled spring 19, connected at one end to the base-frame and at the other end to the front portion of the back section, will materially assist the operator in converting the article from a bed into a sofa. The spring being under tension at that time, the exertion of its resiliency will materially assist the operator.

In order to gain access to the base-frame for either placing the ordinary bedclothing or other appurtenances of the bed therein or removing of the same therefrom, the front section is swung upward and pivoted legs or standards 20 are provided to suitably engage the same and retain it in the raised position.

Having thus described my invention, what I claim as new is—

1. In a sofa-bedstead, the combination with sections movably connected together, of a pusher means for interposing the same between said sections when the article is to be converted into a sofa, substantially as described.

2. In a sofa-bedstead, the combination with sections hinged together, one of said sections provided with a hinged, spring-supported pusher which automatically interposes itself between the sections when the article is being converted into a sofa, substantially as described.

3. In a sofa-bedstead, the combination with a back section and seat-section hinged together and having studs guided in vertical and horizontal channels in end pieces, of a pusher hinged to the rear edge of the seat-section, and means for pressing the same upward, substantially as described.

4. In a sofa-bedstead, the combination with end pieces having raceways, of a back section and seat-section having studs running in said raceways, a pusher hinged to the rear edge of the seat-section, and a spring to press the same upward between the seat-section and back section when the article is being converted into a sofa-bedstead, substantially as described.

5. In a sofa-bedstead, the combination with end pieces having raceways, and a base-frame uniting the same, of a seat-section and back section hinged together, studs on said sections running in said raceways, a pusher hinged to the rear edge of the seat-section, and a spring attached to said pusher bearing upon the base-section to press the pusher upward between said seat-section and back section when the article is being converted into a sofa-bedstead.

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

WILLIAM J. KELLY.

Witnesses:
C. M. SMITH,
M. F. ZUGENFUS.