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EASY CHAIR OR THE LIKE CONVERTIBLE INTO COUCH, DIVAN, BED OR THE LIKE

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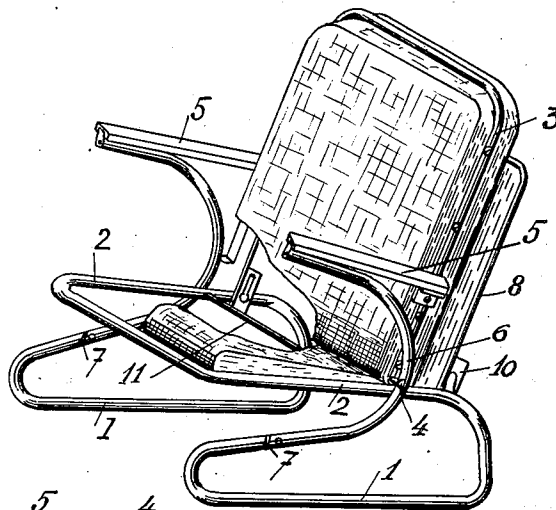


Fig. 1

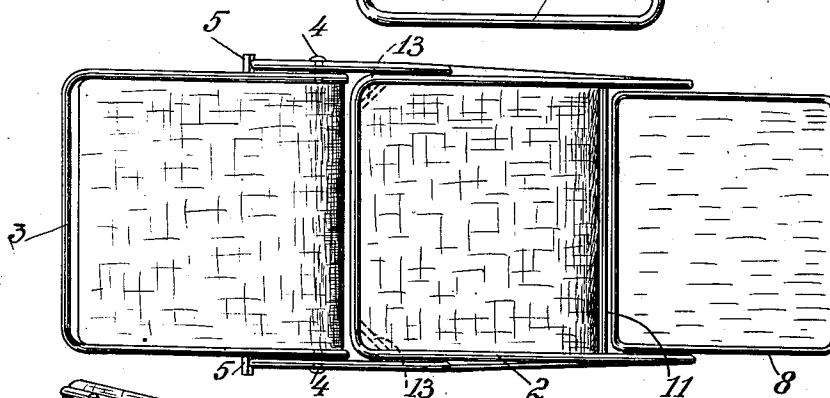


Fig. 2

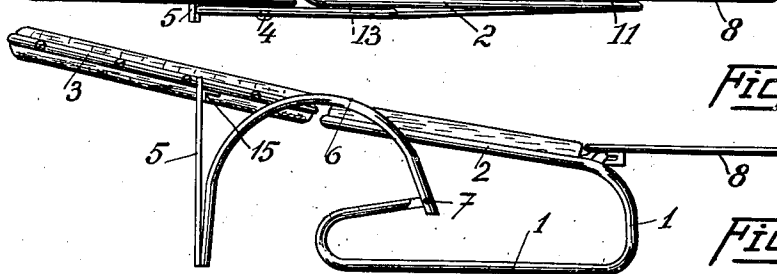


Fig. 3

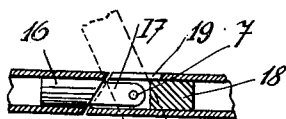


Fig. 4

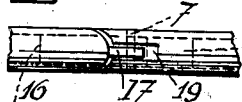


Fig. 5

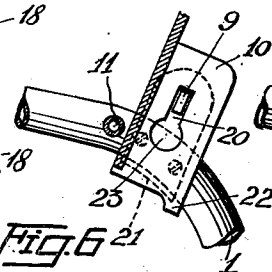


Fig. 6

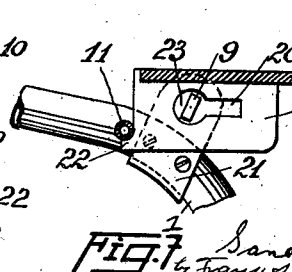
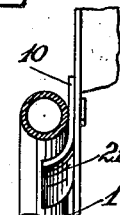


Fig. 7

Fig. 8



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UNITED STATES PATENT OFFICE

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EASY CHAIR OR THE LIKE CONVERTIBLE
INTO COUCH, DIVAN, BED, OR THE LIKE

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5 Claims. (Cl. 155—45)

The present invention relates to improvements in easy chairs or the like which are convertible into couches, divans, beds or similar pieces of furniture.

5 The present invention consists in an easy-chair or the like characterized by the fact that it is so built out of tubes, for instance out of steel tubes, that it may be opened in a simple way and when opened serves as a couch, divan, bed or the like.

10 For this purpose according to the present invention the sections connecting the base sections of a bent tubular frame with the arm-rests of the easy chair or the like are so articulated as to permit the arm-rests together with the back rest to be folded forwards. When this is done, the free ends of the arm-rests then rest on the floor and the arm rests serve as legs to support the head portion of the couch, divan or the like.

15 To the base-frame of the easy-chair or the like are fastened the seat part of the chair and a foot-rest which is used only in the open position of the chair or the like. The other part of the frame-structure holds the back-support and the arm-rests, the latter as aforesaid serving to support the head part of the couch or the like on the floor when the furniture is opened.

20 The beforementioned two parts of the chair structure, are so jointed together according to the present invention that they may be extended by unfolding in one direction only, and closed by folding in the opposite direction to contact stop shoulders which render superfluous any additional means to hold the back-support in its turned up position.

25 From the base frame, the seat part extends forward freely. This seat part and the base frame are made out of a single tube suitably bent for the purpose whereby the forwardly extending seat part is made comfortably elastic.

30 The tubular structure forms a folding frame. The back of the easy-chair or the like may be manufactured out of a separate frame which may be fastened to the arm-rest holding part. This latter way of manufacturing permits the use of lighter and thinner tubing for the frame of the back-support. This separate frame has the further advantage that this part can be made out of a different material as the other parts of the frame structure, for instance, out of hard wood which may be concealed under the upholstering.

35 A constructional example of the invention is shown in the accompanying drawing:

Fig. 1 shows a perspective view of an easy chair, the upholstering being partially removed 40 to expose the constructional details.

Fig. 2 is a plan view of the chair when converted into a couch or the like.

Fig. 3 is a side view of the couch or the like.

Figs. 4 and 5 are respectively longitudinal sectional and plan views of the joint between the arm rest sections and the base sections.

Figs. 6 and 7 show side views of the holding arrangement of the foot-rest in two different positions; and Fig. 8 is a view, partially in vertical section, of Fig. 6.

As shown by the drawing, the structure of the easy chair, there illustrated by way of example, consists of a base frame 1, a portion of which is bent back upon itself, to form seat holding frame 2; and a back rest 3. The back rest 3 is made out of a separate frame, which is rigidly connected to the arm rest 5 by means of a steel angle 15, which extends horizontally across the back rest 3. The ends of the angle 15 extend slightly beyond the sides of the back rest and thereby provide seats to which the tethered ends of the arm rests are rigidly secured in any suitable manner. The free ends of the arm rests are connected in any suitable manner to the ends of arm rest supporting arches 6, which latter extend rearwardly and downwardly beneath the rests 5 to pass behind pins 4 which extend laterally from the sides of the back rest 3. From this point, the supporting arches 6 extend forwardly and downwardly to terminate substantially beneath the free ends of the arm rests 5. The ends of the arches 6 are here pivotally connected as at 7, to upwardly and rearwardly curved forward ends of the base frame 1. Both joints 7 are so shouldered or otherwise so fashioned as to make only the forward folding of the back rest 3 possible and to prevent any backward folding thereof. Therefore the provision of any special supporting means for the back rest is superfluous.

For this purpose the jointing may be carried out as follows: The tube ends at the joints 7 are cut as shown at complementary oblique angles and into one tube a cylindrical block 16 having a flat extension 17 is inserted. Into the other tube a forked block 18 is inserted and is connected by a pivot pin 7 with the block 16. The tube on the right side has above the fork a slot 19 to receive the flat extension 17 when the joint is actuated.

The foot rest 8 is fastened to the structure of the easy chair in a foldable manner by means of pegs 9 fitted into slots 20 of plates 10 fixed to the foot rest 8. The peg 9 is borne by a plate 21 fastened to the tube 1. The foot rest 8 in the open position of the structure is supported by the

engagement with a tie-rod 11 of extensions 22 of the plates 10.

For converting the easy chair or the like into a couch or the like, the back rest 3 is turned forwards over the seat around the joint 7. The turned down back rest is supported by the arm rests 5 and the arch 6. It is advantageous to have the distance between the joint 7 and the lower edge of the foot rest about the same as the length of the arm rest. Besides this an optimum arrangement of the joints is one so determined as to cause the lower edge of the upholstering of the back rest, after it is turned down, to fit as close to the front edge of the seat as possible with little or no gap therebetween.

The pegs 9 holding the foot rest 8 to the frame structure 2 have an oblong shaped cross-section. The pegs 9 slide in the slots 20 of the plates 10 fastened to the foot rest 8. The pegs 9 together with the slots in the plates 10 hold the turned up foot rest parallel with the back rest 3. The slots in the plates 10 have a key-hole enlargement 23, which enables the foot rest after being raised a little, to be folded downwards. In the turned down position of the foot rest the extensions 22 of the plates 10 abut against the tie-rod 11.

The easy chair or the like according to the present invention may be provided either with upholstering, or instead of that, with strapping. In the constructional form shown cushioned upholstery is provided. In this case it is expedient to cushion the back rest on both sides, as its one side serves as a back rest while its other serves as a reclining surface, according as the furniture is used as an easy chair or the like or a couch or the like.

The upholstering of the seat may be a cushion which can be lifted out of the frame and which rests partly on diagonal strips 13, and partly on the tie-rod 11.

It is very easy to convert the herein described easy chair or the like to a couch or the like and the conversion requires a very little personal exertion. To do so, the back rest 3, together with the arm rests 5 and arches 6 are swung forwardly on the joints 7 until the free ends of the arm rests and arches engage the floor. Then, the foot rest 8 is let down to complete the conversion from a sitting to a reclining article of furniture.

What I claim is:

1. An easy chair or the like convertible into a couch or the like, said chair including a tubular base frame, portions of said frame being formed to rest flat upon a supporting surface, rear portions of said first portions being upwardly and forwardly bent to provide a seat supporting portion, a back rest having forwardly extending arm rests rigidly secured thereto, arched tubular members rigidly attached to the forward ends of said arm rests, pivotal connections between said last named tubular members and the forward ends of said first named frame portions whereby to permit said back rest, arm rests and arched members to be swung forwardly to bring the forward ends of said arm rests into contact with the supporting surface and to position said back rest forwardly of and in substantially the

same plane as said seat, a foot rest forming member carried by said seat supporting portion of said frame rearwardly of said back rest, said foot rest being normally positioned vertically along the rear of said back rest but being adapted to be let down into the plane of said seat when said back rest is swung forwardly, and means for maintaining said foot rest in the last named position.

2. An easy chair convertible into a couch or the like comprising a tubular frame, said frame being bent to provide means for supporting a seat cushion above a floor, a back rest having an arm rest rigidly secured thereto at either side thereof, back rest supporting members comprising a pair of arched tubular members rigidly secured to the forward ends of said arm rests, ends of said arched members being pivotally secured to portions of said frame member whereby to support said back rest, said pivotal connection permitting said back rest to be swung forwardly only over said seat until the forward ends of said arm rests contact said floor and said back rest is positioned in substantially the same plane as said seat, whereby to form a head rest for a couch or the like, and a foot rest forming member carried by said frame rearwardly of said back rest and adapted to be moved to foot rest forming position when said back rest has been swung forwardly as aforesaid.

3. An easy chair or the like convertible into a couch or the like comprising a seat supporting frame, a back rest, and a foot rest forming portion, said back rest having arm rests rigidly secured thereto, said back rest having a one way pivotal connection with said frame whereby to permit said back rest to be swung over and in front of said seat to be supported on the floor by the ends of said arm rest in substantially the same plane as said seat, and said foot rest forming portion normally being carried by said frame rearwardly of said back rest in a vertical position but being adapted to be swung into foot rest forming position when said back rest has been swung forwardly as aforesaid.

4. A chair having a seat and a seat supporting frame, a back rest having a pivotal connection with a portion of said frame whereby to permit the swinging of said back rest over and forwardly of said frame, means for supporting said back rest in the same plane as said seat, and a rest forming member normally carried by said frame in a vertical position behind said back rest, said last named member being swingable into the same plane as said seat.

5. A chair having a seat and a seat supporting frame, a back rest carried by portions of said frame in back rest defining position, a rest forming member carried by said frame rearwardly of and flush against said back rest when the latter is in the back rest defining position, said back rest being swingable in a forward direction to provide a forward extension of said seat, said rest forming member being swingable downwardly and rearwardly to form a rearward extension of said seat, and separate means for supporting both said back rest and said rest forming member in the extension forming positions.

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