Nov. 23, 1943. A. E. THOMPSON 2,334,966

FURNITURE

Filed April 3, 1939 2 Sheets-Sheet 1

Fig. 1.

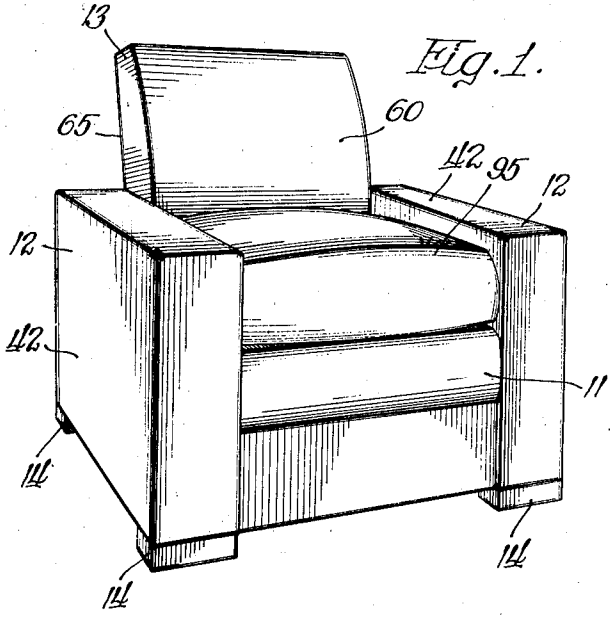


Fig. 3.

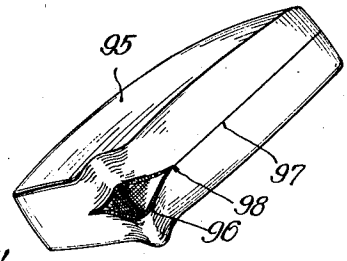


Fig. 4.

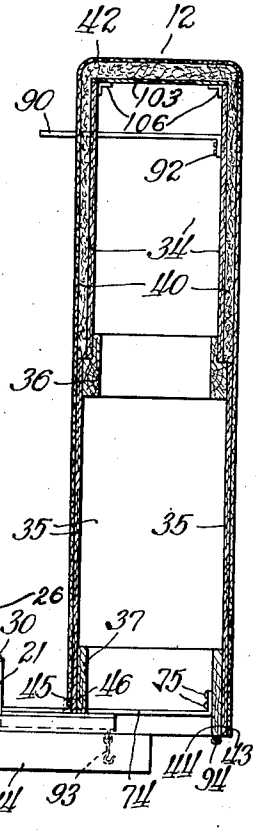
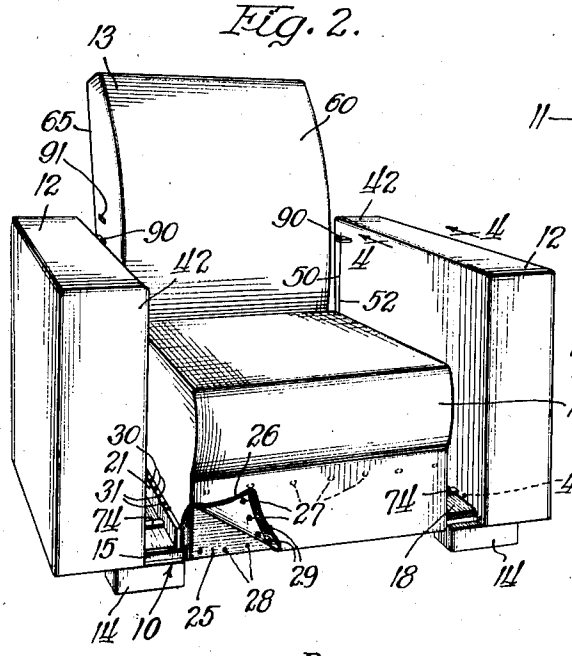
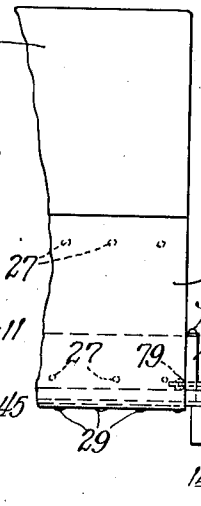


Fig. 2.





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Fig. 5.

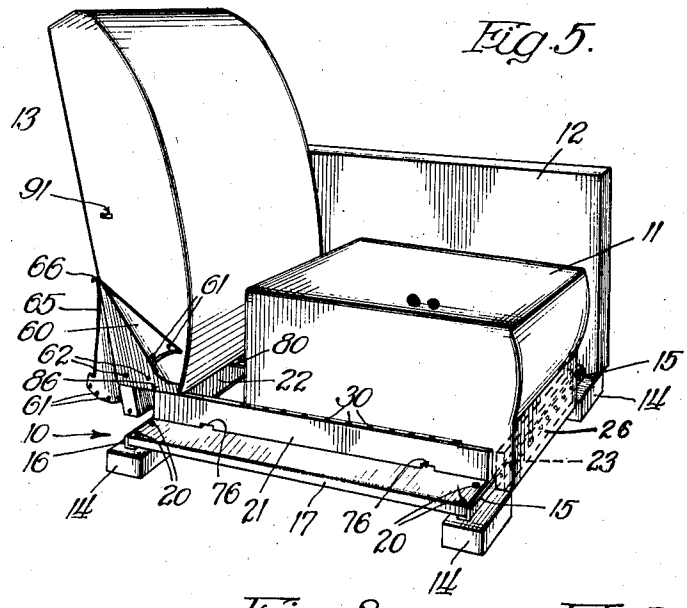


Fig. 8.

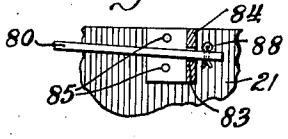


Fig. 7.

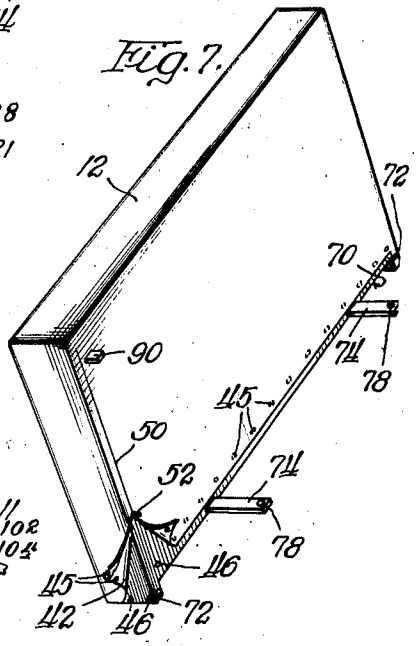


Fig. 6.

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Patented Nov. 23, 1943

2,334,966

UNITED STATES PATENT OFFICE

2,334,966

FURNITURE

Arthur E. Thompson, Chicago, Ill.

Application April 3, 1939, Serial No. 265,665

2 Claims. (Cl. 155—184)

My invention relates to furniture, and more particularly to upholstered furniture of the character which is fitted with coverings of fabric or other suitable material.

While the particular piece of furniture which I shall describe hereinafter in connection with the drawings is in the form of a chair having a seat, back, and arms, it is to be understood that the invention is not limited to the particular form of chair shown in the drawings, nor to any particular piece of furniture, but may be applied to davenports, couches, other forms of chairs, and elsewhere as suitable and desired.

The present invention may be characterized as an improvement upon the invention illustrated and described in my Patent No. 2,145,669, issued January 31, 1939.

With the usual upholstered and covered furniture prior to my inventions, the matter of cleaning or replacing the coverings, i. e., the original or main coverings of the furniture as distinguished from so-called slip covers, presented a difficult practical problem. The usual form of upholstering made it impossible to replace the covering or to effect more than a mere surface cleaning thereof without requiring what amounted to practically a rebuilding of the upholstering by skilled upholsterers. If it were desired to remove the covering of a couch, davenport, chair, or other piece of furniture, it was necessary to transport the entire piece of furniture to and from an upholstery establishment equipped practically to rebuild the piece of furniture, and cleaning of the covering while the same remains in place upon the piece of furniture is laborious and not satisfactory.

As a result, cleaning or replacement of the coverings of furniture according to old practices was accomplished at great expense, and the results were usually not satisfactory. Where replacement of the covering was required, it was common practice to discard the entire piece or pieces of furniture and purchase a new piece or set of furniture.

One of the main objects of my invention is to provide an improved form of furniture construction which will make it possible for a housewife or other person unskilled in the art of upholstering to remove and replace the fabric coverings conveniently and expeditiously, so that these coverings may be cleaned in an inexpensive manner as are curtains, drapes, clothing and the like, or replaced with other coverings.

It is also an object of my invention to provide an improved form of furniture construction which will not only enable convenient and expeditious removal and replacement of the coverings, but which, at the same time, is of simple and inexpensive character and may be handled conveniently and effectively; also, an improved and lasting and durable form of construction composed of few parts.

According to my invention, I so construct the piece of furniture that the back and arms, for example, may easily be shifted into positions which leave them clear of each other and clear of the seat member, so that the coverings for the respective parts of the piece of furniture are freed of each other and rendered entirely accessible for convenient removal and replacement.

The coverings for the respective parts of the piece of furniture may be provided with slide and snap fasteners or other suitable easily detachable fasteners as will hereinafter appear, in order that each covering may be easily removed and replaced, and when in place, will present a neat and finished appearance.

In addition to making the arms, backs, and seats movable relative to each other, I provide, where desired, for completely detaching these parts from each other so that they may be packed more compactly for shipment, storage, or the like than could the piece of furniture set up for use and comprising the same parts.

Where the parts of the piece of furniture are adapted to be completely detached from each other, these parts are at the same time adapted to be readily assembled at the destination, or elsewhere as desired.

The particular manner in which the parts of the piece of furniture are mounted for movement into position which leaves them clear of each other and clear of the seat member is an important aspect of the present invention.

Another object of my invention is to provide improved means for locking the parts of the piece of furniture in the positions normally occupied by said parts when the furniture is in use, which locking means is simple and effective for the intended purpose and, at the same time, is adapted to be readily released to permit the parts to be separated for removal and replacement of the coverings.

Another object of my invention is to provide means for limiting the movement of the arm and back members to the positions which leave them clear of each other and clear of the seat member.

Further objects and advantages and numerous adaptations of my invention will be apparent from the following detailed description taken in

connection with the accompanying drawings, in which:

Figure 1 is a perspective view of a chair embodying my present invention;

Figure 2 is a similar view, showing the arms shifted into positions which leave them clear of the back and seat members, and partially broken away to show the padding inside the seat cover and the means for detachably fastening the seat cover in place;

Figure 3 is a perspective view of the loose cushion for the seat member of the chair;

Figure 4 is a transverse section through one of the arm members, taken substantially on the line 4—4 of Figure 2, with a fragmentary showing of the seat member;

Figure 5 is a perspective view of the chair, with one of the arms removed and showing the back member shifted into position to leave same clear of the seat member;

Figure 6 is a fragmentary side view of the chair, with one of the arms removed, showing the back member shifted into position to leave same clear of the seat member, and also showing the means for guiding and stopping the rearward shifting movement of the back member of the chair;

Figure 7 is a perspective view of one of the arm members of the chair; and

Figure 8 is an enlarged detail sectional view of the means for stopping the rearward movement of the back member of the chair.

Referring to the drawings, the chair selected for illustration comprises a horizontal bed or base 10, a seat member 11, a pair of arm members 12, and a back member 13.

The base 10 may be provided with suitable blocks or feet 14, one at each of the four corners of the base, these feet being adapted to rest upon the floor or other support. An angle iron bar 15 extends transversely across the two front feet 14 and a corresponding but reversely disposed angle iron bar 16 extends across the two rear feet 14. A horizontally disposed board 17, preferably of plywood, extends longitudinally across the two feet 14 at one side of the chair, and a similar board 18 extends longitudinally across the two feet 14 at the opposite side of the chair. The ends of the boards 17 and 18 fit in the angular portions of the bars 15 and 16 and are secured at 20, preferably by bolts or other suitable means, to the ends of the bars 15 and 16, and with these bars 15 and 16 to the feet 14 to make up a firm supporting base for the chair or other article of furniture.

Boards 21 disposed in upright position along the inner edges of the boards 17 and 18 and extending along the outer sides of the seat member 11, with the rearward and forward transverse boards 22 and 23, complete the main frame or base 10. The boards 21, 22 and 23, like the boards 17 and 18, are preferably of plywood, and the boards 21 are suitably secured one each to the boards 17 and 18 and the boards 22 and 23 are suitably secured to the angle irons 16 and 15, respectively, to make up a firm and solid frame. The details of the frame may, of course, vary within the scope of my present invention.

The seat member 11 contains a plurality of upholstering coil springs 100 which are suitably supported in a vertical position and preferably are arranged in rows extending transversely of the frame. In Figure 6 the transverse metal bar 101 extends transversely between the upright side boards 21 and opposite ends of bar 101 are suitably secured thereto. It will be understood that a metal bar 101 is provided for each row of springs, these bars each being fixed to the side boards 21 as noted. Each spring 100 is suitably fixed to the transverse bar 101 lying beneath it. If desired the springs 100 may also be fixed intermediate their ends to an intermediate frame member 102 to provide additional support for the springs to prevent sidesway thereof. If desired, the spring assembly may be covered by suitable padding 25, which covers and is suitably secured to board 23, as shown in Figure 2. The spring structure constitutes no part of the present invention, and therefore disclosure of the same has been omitted from the present application. One suitable spring structure is shown and described in my copending application, Serial No. 265,666, filed April 3, 1939. In my prior application the intermediate frame 102 is supported by means of diagonally extending arms 104 one each being disposed adjacent each of the edges of the seat, and each arm 104 is pivotally connected at end 105 to the intermediate frame 102 and at the other end to bracket 107 (one of which is shown in Figure 6) so that the several arms 104 cooperate to prevent sidesway of the seat structure in all directions. The pivotal movement of both ends of the arms 104 permit compression of the springs 100 upon imposition of a load upon the seat member.

The seat member 11 is provided with an individual outer covering 26 which is formed of fabric or other suitable or preferred material, plain or figured, or of any desired pattern, to provide the desired appearance. This covering 26 constitutes the original or main covering of the piece of furniture, as distinguished from a so-called slip cover. The covering 26 is formed to fit down over the seat structure, and the lower portion of the front of the covering has snap fastener elements 27 which are adapted to engage with complementary snap fastener elements 28 which may be disposed on the internal padding 25 as shown in Figure 2. If desired, the lower marginal edge of the front of the seat covering 26 may be turned under the board 23 and provided with snap fasteners 29 adapted to engage complementary snap fasteners along the front edge of the bottom of the forward transverse board 23 of the base or frame member 10.

The lower marginal side edges of the covering 26 are adapted to be turned out along the upper edges of the upright boards 21, and has snap fastener elements 30 which are adapted to engage with complementary snap fastener elements 31 disposed in spaced relation along the upper edges of these upright boards 21. When the snap fastener elements are engaged, they hold the seat cover in place over the seat structure. When the arm and back members are shifted into the positions which leave same clear of the seat member, as will hereinafter appear, the snap fasteners may be disengaged and the seat covering readily removed from the seat structure for cleaning or replacement.

Each arm member 12 comprises a generally box-like structure open at the bottom, and having its sides formed of boards, also preferably plywood. The upper portions of the arm members 12, which upper portions are formed by the boards 34, are narrower than the lower portions of the arm members, which lower portions are formed by the boards 35. Frame 36, also preferably of plywood, join the upper and lower portions

of the arm members 12, and internal board frames 37, also preferably of plywood, may be provided at the lower ends of the arm members as shown in Figure 4. A horizontal board 103 preferably of plywood is secured to the upper ends of the boards 34 by angle members 106.

The narrower upper portion of each arm member 12 is preferably padded at 40, and each arm member is provided with an individual outer covering 42 which, like the seat covering 26, is formed of fabric or other suitable material, and constitutes the original or main arm covering, as distinguished from slip covers commonly applied over the main coverings. The coverings 42 may be plain or figured, or of any desired pattern, to provide the desired appearance, and these coverings are formed to fit down over the respective arm members, as shown. The lower marginal edge of the outer side of each arm covering 42 has snap fastener elements 43 which are adapted to engage with complementary snap fastener elements 44 disposed along the lower margins of the outer sides of the arm structures. While no padding is shown on the lower portions of the arms 12, it is to be understood that these lower portions of the arms may be padded as and where desired. The lower edges of the ends and inner sides of the covering 42 may have similar snap fastener elements 45 adapted to engage complementary snap fastener elements 46 on the adjacent portions of the arm members.

The inner side of each arm covering 42 is slit vertically at 50 along the positions where the arms 12 abut the opposite sides of the back 13 when the arms and back are in their normal positions. These slits 50 are provided with zipper or slide fasteners 52 well known in the art. When the fasteners 52 are closed, they bind the coverings 42 firmly in place upon the respective arm structures where the coverings are held by the other fasteners already described. By opening the slide fasteners 52 and the snap fasteners, the coverings 42 may be readily removed from the arm structures for cleaning or replacement, for example with new coverings or with coverings of different material or of different design. When the arms 12 and back 13 are in their normal positions, the fasteners 52 are covered and concealed by the opposite sides of the back 13.

The back member 13 preferably contains upholstering springs, or an upholstering spring structure, and may be padded as suitable or desired. As with the seat member, where the back 13 is provided with a spring structure, this spring structure constitutes no part of the present invention and therefore disclosure of the same has been omitted.

The back 13 has an individual outer covering 60 which, like the seat and arm coverings, is formed of fabric or other suitable material and constitutes the original or main back covering. The covering 60, like the seat and arm coverings, may be plain or figured, or of any desired pattern to provide the desired appearance, and this covering is formed to fit down over the back structure. The lower marginal edge of the covering 60 has snap fastener elements 61 which are adapted to engage with complementary snap fastener elements 62 disposed on the adjacent portions of the back structure as shown in Figure 5. The covering 60 is slit vertically, preferably along one rear edge of the back structure as indicated at 65, and this slit 65 is provided with a zipper or slide fastener 66.

When the fastener 66 is closed, it binds the covering 60 firmly in place upon the back structure where it is held by the other fasteners already described. By opening the slide fastener 66 and the snap fasteners 61, the back covering may be readily removed from the back structure for cleaning or replacement with a new covering or with a covering of different material or of different design. The disposition of the slide fastener 66 along one of the rear corners of the back 13 places it where it is substantially concealed, or at least where it does not in anywise detract from the appearance of the piece of furniture.

The bottom of each arm member 12 is formed, as shown at 70 in Figure 7, to fit for sliding movement over the boards 17 and 18, respectively, and the angle iron bars 15 and 16. The depending end portions 72 of the arm members rest for sliding movement on the blocks 14, one forwardly of the angle iron bar 15 and the other rearwardly of the angle iron bar 16 at each of the opposite sides of the chair.

In addition, each arm member 12 has a pair of metal tongues 74 secured to the respective arm structures at 75 and extending laterally inwardly in parallel relation from the inner sides of the lower margins of the arms. These tongues 74 have sliding movement in openings 76 in the upright boards 21 as the arms 12 are shifted out laterally from the seat and back members, and back into their normal positions. The inner ends of the tongues 74 have openings 78 in which headed pins 79 (Figure 4) or other stops may be inserted, these pins or stops 79, by abutment with the inner sides of the upright boards 21, limiting the outward movement of the arm members 12. Removal of the pins or stops 79 permits the arms 12 to be completely detached, so that they may be packed more compactly for shipment, storage, or the like.

A metal tongue 80, secured to the back members 13 centrally between its opposite sides at 81, mounts the back member 13 so that it may be shifted into normal position against the rear of the seat member 11 as shown in Figure 1 and rearwardly into position spaced from and clear of the seat member 11 as shown in Figures 5 and 6. The tongue 80 has sliding movement in a notch 82 in the upper edge of the transversely disposed rear frame board 22, and also has sliding movement through and is guided in an opening 83 in a metal bar 84 which extends transversely between the frame boards 21 and is secured at its opposite ends thereto as indicated at 85 in Figure 6. The shoulder 86 at the lower part of the back 13 preferably has sliding movement upon the upper edges of the side boards 21 to provide suitable support for the back 13. The inner end of the tongue 80 has an opening in which a headed pin 88 (Figure 8) or other stop may be inserted, this pin or stop 88, by abutment with the transverse bar 84, limiting rearward movement of the back 13. Removal of the pin or stop 88 permits the back 13 to be completely detached so that it may be packed more compactly for shipment, storage, or the like.

For the purpose of locking the back 13 in its normal position up against the back of the seat member 11, the rearward portion of each arm 12 has a metal tongue 90, which tongues, when the arms 12 are moved to normal positions against the sides of the seat 11, engage in slots or recesses 91 in the opposite sides of the back 13. The tongues 90 are secured to the arm structures

12 in any suitable manner—for example, as indicated at 92 in Figure 4.

With the arms 12 extended laterally as shown in Figure 2 and the back 13 shifted to its rearward position, the back, seat and arms are freed of each other, and the various fasteners for the back, seat and arm coverings are rendered entirely accessible for convenient removal and replacement. When the coverings are in place and the arms 12 are extended, it will be apparent that the back 13 may be shifted to its normal position against the back of the seat 11. The arms 12 are then shifted inwardly to their normal positions against the sides of the seat 11, and as they are moved inwardly the tongues 90 engage in the recesses 91 and lock the back 13 in normal position as long as the arms are in their normal positions. Movement of the arms 12 to their extended positions frees the back 13 for movement to its rearward position.

Now, in order to lock the arms 12 in their normal positions against the sides of the seat member 11, the opposite sides of the main frame or base 10 are provided with pivoted hooks 93 (Figure 4) which are adapted to be hooked into engagement with cooperating eyes 94 on the bottom portions of the arms 12 when the arms are in their normal retracted positions to lock the arms in such positions. The eyes 94 are preferably disposed for movement into and out of position to be engaged by the hooks 93 along paths between the front and rear blocks 14 so as not to interfere with the sliding movement of the arms 12 on these blocks. Other forms of fasteners or locking means may, of course, be employed for locking the arms 12 in their normal positions.

The seat member 11 may be provided with a removable, loose cushion 95, shown in Figures 1 and 3. This cushion has a covering 96 formed of fabric or other suitable material and constituting the main covering of the cushion. The covering 96 is provided with a slit 97 extending, for example, across the back of the cushion and forwardly partially along the sides. The slit 97 may be closed by a zipper or slide fastener 98. When the fastener 98 is closed, it closes the slit 97 and holds the covering 96 in place upon the cushion 95, and opening of the fastener 98 permits the covering 96 to be readily removed from the cushion 95 for cleaning or replacement with a new covering.

I have described the invention in connection with the details of a particular embodiment, but I do not intend thereby to limit the invention to such details, nor do I intend to be limited to the particular embodiment and relation of the essential features shown and described.

I claim:

1. An article of furniture comprising in combination, a supporting base including blocks at the corners of said base, parallel bars, one connecting the front blocks and the other connecting the rear blocks, horizontally disposed boards, one extending across the blocks at one side of the base and the other disposed across the blocks at the other side of the base, upright side boards extending along the inner margins of said last boards, upright front and back boards extending along said parallel bars to form a frame, a seat mounted within said frame, a back member mounted for sliding movement upon the upper edges of said side boards for movement into normal position against the back of said seat member and into position spaced rearwardly from said seat member, and a pair of arm members mounted for sliding movement upon said horizontal boards for movement into position against the sides of said seat and back members and into positions spaced laterally from the sides of said seat and back members, the bottom portions of said arm members being formed with cut outs for sliding movement over the horizontally disposed boards and the adjacent ends of the bars at opposite sides of the base.

2. An article of furniture comprising in combination, a supporting frame, a seat member mounted on said frame, a pair of arm members supported on said frame in normal position against opposite sides of said seat member and shiftable upon said frame laterally of said seat member into positions spaced away from the sides of the latter, removable coverings for each of said arm members, means for limiting the lateral movement of said arm members away from said seat member a distance sufficient to dispose them clear of said seat member for convenient removal and replacement of said coverings, said arms in their extended positions being supported solely by said frame, said means being adapted to maintain said arms substantially vertical when they are disposed in their laterally spaced positions, a back member supported on said frame member for sliding movement horizontally on said frame into normal position against the back of said seat member, and into a position spaced rearwardly of said seat member, a removable covering for said back member, and means for limiting the backward movement of said back member a distance sufficient to dispose it clear of said seat member for convenient removal and replacement of said covering, said back member in its extended position being supported solely by said frame, said means being adapted to maintain said back member substantially vertically when it is disposed in its rearwardly spaced position.

ARTHUR E. THOMPSON.