April 24, 1951 S. LOFGREN 2,550,361

SITTING FURNITURE

Filed Aug. 4, 1947 2 Sheets-Sheet 1

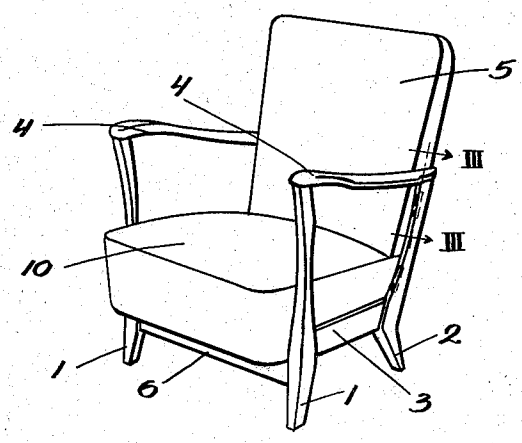

FIG. 1

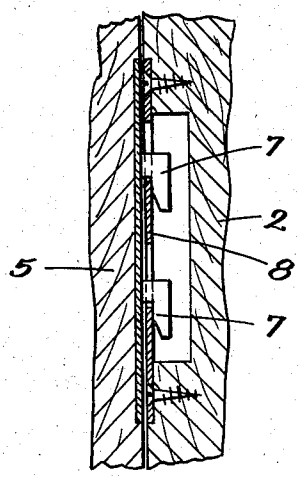

FIG. 3

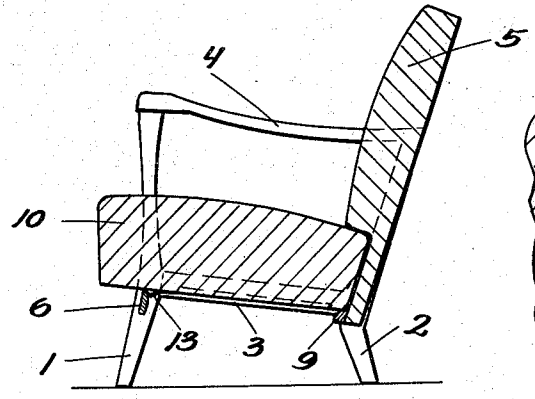

FIG. 2

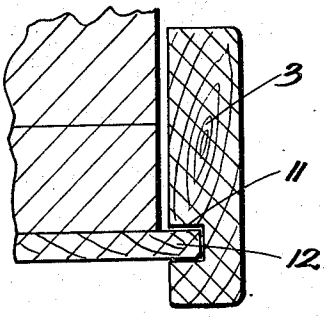

FIG. 5

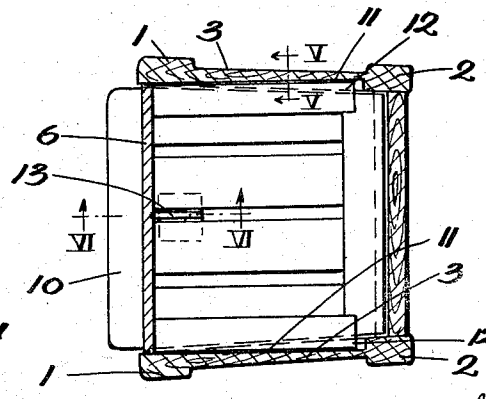

FIG. 4

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FIG. 6

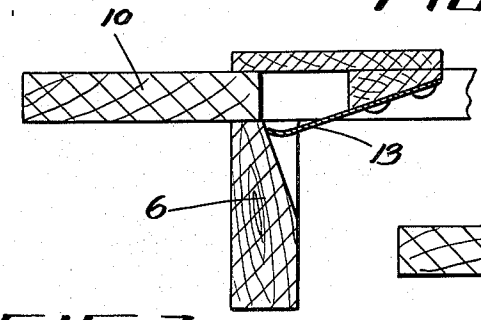


FIG. 8

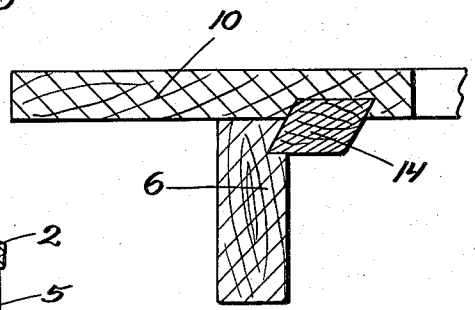


FIG. 7

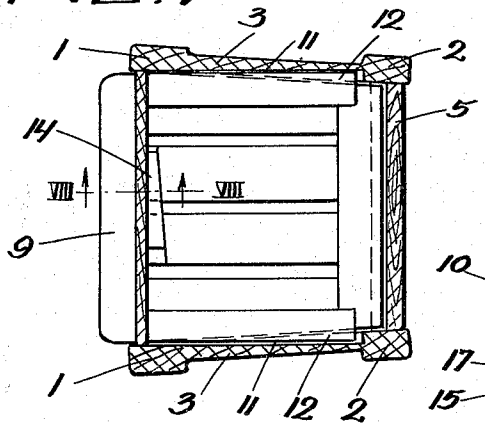


FIG. 9

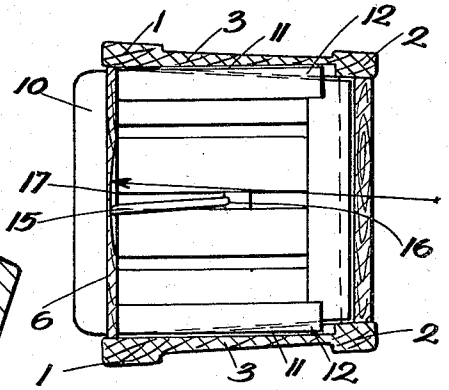
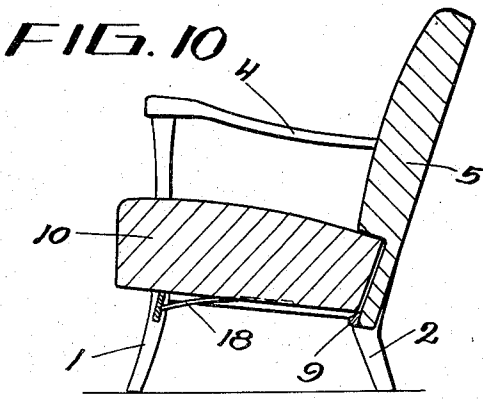


FIG. 10



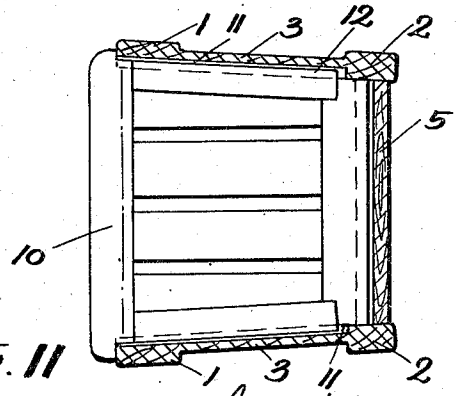


FIG. 11

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UNITED STATES PATENT OFFICE

2,550,361

SITTING FURNITURE

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In Sweden November 16, 1943

Section 1, Public Law 690, August 8, 1946
Patent expires November 16, 1963

3 Claims. (Cl. 155—196)

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The present invention relates to sitting furniture and particularly to easy-chairs and the like. In such sitting furniture the seat is often constructed as a detachable part, but it is also known to construct also the back and a front edging supporting the seat in front as detachable parts, which are hooked on to a pair of separate side frames forming legs and an arm support on either side of the easy-chair. The object of this construction is to enable the easy-chair to be disassembled when stored and dispatched, so that little space is required for its accommodation. In the constructions hitherto known, however, it is necessary on assembly of the easy-chair to secure the side frames and the seat by means of wood screws or the like, which for their application require a solid screw-driver and in any case some practice in handling such a tool. The present invention has for its object to provide such a construction that the easy-chair or the like may easily be assembled by practically anybody without the aid of any tool whatever.

The invention will be more fully described with reference to the accompanying drawings showing some different embodiments thereof.

Fig. 1 is a perspective view of an easy-chair to which the invention is applied.

Fig. 2 shows a vertical section through the easy-chair.

Fig. 3 shows in a detail section along the section line III—III in Fig. 1 how the back and the lateral frame members are hooked on to each other.

Fig. 4 is a horizontal section through the easy-chair seen from below.

Figs. 5 and 6 show detail sections along the section lines V—V and VI—VI in Fig. 4, respectively.

Fig. 7, in the same manner as Fig. 4, shows a somewhat modified embodiment of the arrangement according to the invention.

Fig. 8 shows a detail section along the line VIII—VIII in Fig. 7.

In the same manner as Figs. 4 and 2, respectively, Figs. 9 and 10 show another pair of somewhat different embodiments, and finally

Fig. 11, in the same manner as Fig. 4, shows still another modification of the construction of the easy-chair.

The easy-chair has two side frames, each comprising a fore-leg 1 and a hind-leg 2 permanently secured together by means of a lateral edging 3 and by means of an arm support 4. In the assembled condition of the easy-chair, the two side frames are connected to each other at the back by means of the back 5 and at the front by means

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of a front edging 6. Both the back 5 and the front edging 6 are detachably hooked on in the previously known manner to the side frames by means of hooking devices illustrated as far as the back is concerned in Fig. 3, according to which the hooks 7 are disposed on a fitting attached to one lateral edge of the back and coacting with a fitting 8 which is provided on the side frame and has openings for the said hooks. The hooking of the back 5 and the front edging 6 on to the side frames may be easily carried out by practically anybody without using any tool whatever. Instead of an edging connecting the lateral frame members to each other at the back, there is provided at the lower end of the back a slat 9 (see Figs. 2 and 10), on which the rear edge of the seat 10 rests. In front, the seat rests on the front edging 6.

In the assembled condition of the easy-chair the back 5 must not be displaceable in relation to the side frames, as the hooks 7 would then be disengaged from the fitting 8, so that the easy-chair would come apart. In order to positively hold the back 5 down in its proper position by means of the seat 10 resting with its rear edge against the slat 9, the seat 10 must be secured in its position in relation to the side frames. Hitherto this has been effected by securing the seat to the lateral edgings 3 by means of wood screws, which after assembly of the easy-chair were screwed through the lateral edgings into the wooden frame work of the seat. For this purpose a solid screw-driver was required, which was not always at hand, and in addition there was the risk of the fastening together not being properly carried out or of the easy-chair being damaged, if the work was carried out by a person altogether unaccustomed to the use of tools. According to the invention, the construction is made in such a way that no tool whatever is required for securing the seat in position. According to the invention the lateral edgings 3 are for this purpose provided in their insides with longitudinal grooves 11, and the seat, at the two lateral edges thereof, is provided with projections 12 fitting into the grooves 11, as is best shown in Fig. 5. On application the seat is pushed backwards into its proper position in which the rear edge thereof overlies the slat 9 on the back and thereby locks the same in position due to the projections 12 engaging the grooves 11 and thus preventing the rear end of the seat from rising in relation to the two side frames. The grooves 11 and the projections 12 coacting therewith, however, are not alone sufficient to fulfill the task of effectively

preventing an unintentional falling apart of the easy-chair. There must be provided some means for securing the seat in its proper position, for if the seat could slide forward even very little from this position, it would loose its support on the slat 9 at the lower end of the back, so that the back could come loose from the side frames e. g. when trying to lift the easy-chair by the back. The means of preventing the seat from sliding from the proper position is, according to the invention, a simple stop member, which possibly becomes active automatically when pushing the seat into its proper position and which in any case renders superfluous the use of any tool on assembly of the easy-chair.

According to the embodiment shown in Figs. 2, 4 and 6 the stop member is a stop spring 13 attached on the underneath side of the seat 10 and its wooden frame work, respectively, which on insertion of the seat dodges the front edging 6 when passing the same and then, at that very moment when the seat has reached its proper position, snaps down inside the front edging 6 and supports itself against the inside thereof, possibly in a recess provided in the inside of the edging 6 for this particular purpose, so that the stop spring 13 must thereafter be pressed up again by special action by means of e. g. the thumb, in order that the seat shall again be displaceable forwardly.

According to the embodiment shown in Figs. 7 and 8 the stop member is a stop wedge 14 insertable by hand into grooves provided therefor in the underneath side of the wooden frame work of the seat 10 and in the inside of the front edging 6, as is clearly shown in Fig. 8.

According to the embodiment shown in Fig. 9, the stop member is a stop arm 15, one end 16 of which is rotatably mounted on the underneath side of the seat 10 or rotatably bears on a supporting member provided on the seat and the other end of which coacts with e. g. an arcuate surface 17 on the inside of the front edging 6. The surface 17 should then have a radius which is much longer than the stop arm 15, so that by means of rotation of the same by hand it may be jammed between its bearing on the seat and the said surface 17.

According to the embodiment shown in Fig. 10, the stop member is a detachable stop spring 18 e. g. of wood, which is inserted by hand in jammed condition between supporting notches provided for the same in the inside of the front edging 6 and in the underneath side of the seat 10.

Additional embodiments of the stop member more or less similar to the above are of course conceivable. The grooves 11 for the lateral projections 12 of the seat provided in the insides of the lateral edgings 3 should not emerge so as to be visible at the front of the easy-chair, as the appearance of the easy-chair would thereby be impaired. As shown in Figs. 2, 7 and 9, the grooves 11 and the projections 12 may decrease in depth from the rear ends towards the fore ends, which latter may end at some distance behind the front faces of the lateral frame members. However, it is also possible to let the grooves 11 and the projections 12 extend all the way to the front side of the side frames and to conceal their ends at the front by letting the front edge of the seat 10 project over them, as shown in Fig. 10.

What I claim and desire to secure by Letters Patent is:

1. A piece of sitting furniture comprising a pair of spaced apart side frames, a back between said side frames adjacent the rear edges thereof, a first set of interengaging means on said side frames and said back for supporting said back between said side frames and rigidly interlocking said side frames at the rear by means of said back, said interengaging means allowing disengagement of said back from said side frames by moving said back upwardly in relation to said side frames, a transverse bar extending between said side frames adjacent the front edges thereof, a second set of interengaging means on said side frames and said transverse bar for supporting said transverse bar between said side frames and rigidly interlocking said side frames at the front by means of said transverse bar, said second set of interengaging means allowing disengagement of said transverse bar from said side frames by moving said transverse bar upwardly in relation to said side frames, a seat between said side frames extending substantially in the fore and aft direction of said side frames, a third set of interengaging means on said seat and said side frames interlocking said seat and said side frames for preventing movement of the rear portion of said seat upwards in relation to said side frames, said third set of interengaging means allowing disengagement of said seat from said side frames by moving said seat forwardly in relation to said side frames, a slat on said back, said seat overlying said slat and also said transverse bar for locking said back and said transverse bar against disengaging movement upwards in relation to said side frames, and locking means for locking said seat against movement forwardly in relation to said side frames.

2. A piece of sitting furniture comprising a pair of spaced apart side frames, a back between said side frames adjacent the rear edges thereof, a first set of interengaging means on said side frames and said back for supporting said back between said side frames and rigidly interlocking said side frames at the rear by means of said back, said interengaging means allowing disengagement of said back from said side frames by moving said back upwardly in relation to said side frames, a transverse bar extending between said side frames adjacent the front edges thereof, a second set of interengaging means on said side frames and said transverse bar for supporting said transverse bar between said side frames and rigidly interlocking said side frames at the front by means of said transverse bar, said second set of interengaging means allowing disengagement of said transverse bar from said side frames by moving said transverse bar upwardly in relation to said side frames, a seat between said side frames extending substantially in the fore and aft direction of said side frames, a third set of interengaging means on said seat and said side frames supporting said seat between said side frames and allowing disengagement of said seat from said side frames by moving said seat forwardly in relation to said side frames, said third set of interengaging means locking said seat against movement upwards in relation to said side frames, a slat on said back, said seat overlying said slat and also said transverse bar for locking said back and said transverse bar against disengaging movement upwards in relation to said side frames, and locking means for locking said seat against movement forwardly in relation to said side frames.

3. A piece of sitting furniture according to

claim 2, in which said locking means comprises a leaf spring one end of which is mounted on the underside of said seat and the other free end of which abuts against the back surface of said transverse bar.

SIGFRID LÖFGREN.

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