March 18, 1952 R. M. VAN DOREN 2,589,901

SEAT COVER STRETCHING AND SECURING DEVICE

Filed Aug. 30, 1949

Fig. 1.

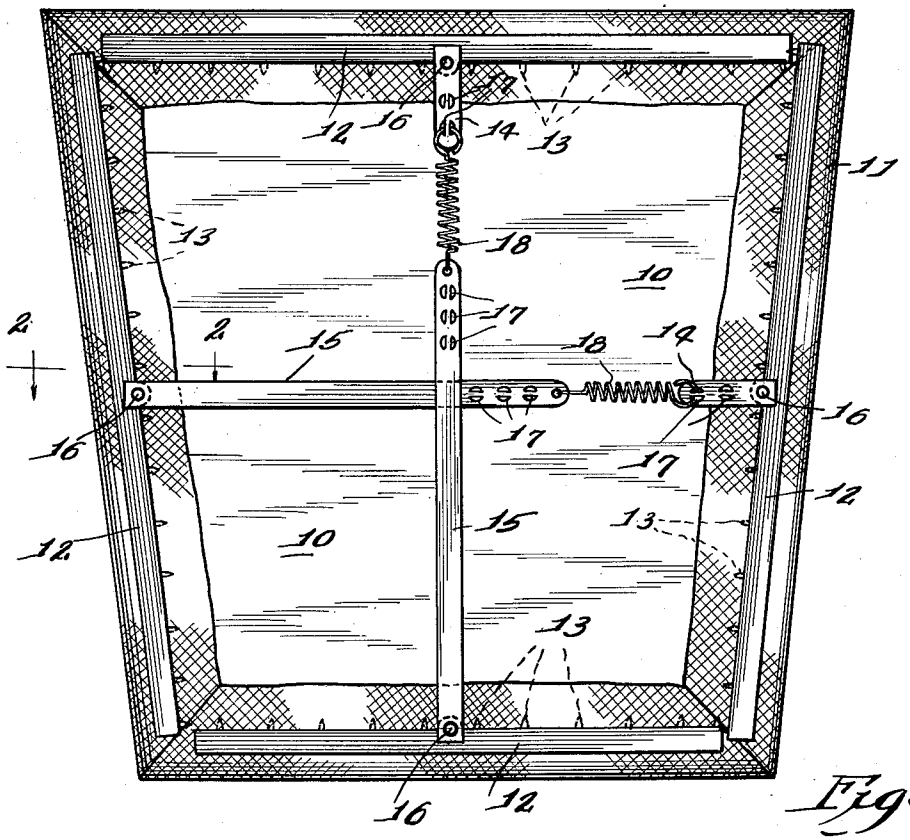


Fig. 4.

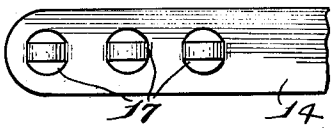


Fig. 2.

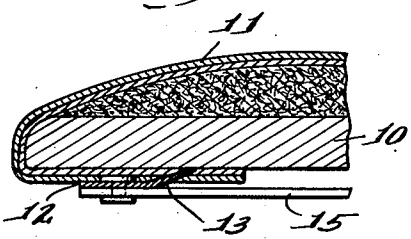


Fig. 5.

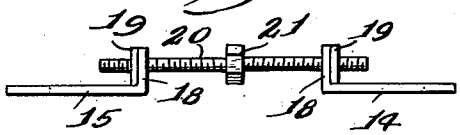
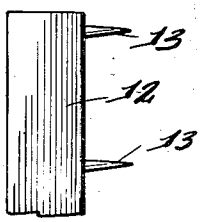


Fig. 3



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SEAT COVER STRETCHING AND SECURING DEVICE

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Application August 30, 1949, Serial No. 113,155

5 Claims. (Cl. 155—182)

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This invention relates to improvements in devices for stretching and securing covers for the seats of chairs and the like.

As is generally known, many types of chairs, such as dining room chairs, are provided with removable seats which are usually covered by decorative fabrics or other materials, which fabrics are usually held in place by ordinary tacks or upholsterer's nails. In the case of dining room chairs, particularly, it is often desirable or necessary to replace the covering material when it has become soiled or if it is desired to change the color scheme of the dining room.

Heretofore, the procedure of changing the seat covering of such chairs has been a laborious and painstaking one. After the seat is removed from the chair frame, it is necessary to pull out a great number of tacks or nails by which the covering material is secured to the bottom surface of the seat. Then the new material is stretched over the seat and nailed down in the same manner as was the old.

My invention aims to provide devices by the use of which seat covers may be rapidly and securely held in place by a very simple structure, operated much more quickly and easily than any device heretofore devised for this purpose.

Essentially, my invention contemplates the provision of fabric-stretching and securing devices which may be readily placed in position to stretch the fabric over the seat and securely hold it in place.

The invention also contemplates the provision of such devices in which, by means of springs or equivalent means, the stretching and securing devices will operate to hold the covering material firmly in place.

Other objects of my invention and the advantages thereof will more fully be brought out as the description of the invention proceeds.

In the accompanying drawings, I have illustrated a practical embodiment of my invention. It is to be understood, however, that the drawings are illustrative merely, and that I do not intend to confine myself to the particular details of construction shown. Once the invention is understood, it will be readily apparent to those skilled in the art that structural modifications may be made without departing from the spirit of the invention or sacrificing any of its advantages.

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In the drawings:

Fig. 1 is a bottom plan view of a chair seat showing the devices of my invention in position;

Fig. 2 is a fragmentary sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary plan view of one of my securing bars;

Fig. 4 is a fragmentary plan view of one end of one of the spring-securing arms; and

Fig. 5 is a fragmentary view in side elevation of a modification of the mechanism for drawing the bars together.

Referring now to the drawings, the reference numeral 10 indicates the bottom of a chair seat. This may be made, as usual, of wood or other rigid material.

In the usual chair construction, the bottom 10 may be provided with a layer of suitable padding material (not shown).

As is customary in chair seats of this sort, the padding material is covered by a layer of upholstery fabric 11, or similar material, either leather, plastic, or the like.

The object of my invention is to provide a device, or devices, by which the covering material 11 may be properly stretched around the edges of the seat member 10 and held securely and tautly in place.

My securing device consists of a plurality of bars 12, each of which is provided with fabric-penetrating points or teeth 13.

The bars 12 are preferably made of metal of relatively light gauge. The points 13 may be formed integrally with the bars 12 by a simple stamping operation, or the said points may be made of wire and spot-welded or otherwise secured to the bars 12.

In actual practice, the bars 12 will be made of a length to conform to the dimensions of the seat. There are not very many different sizes of chair seats, so that it will not be necessary to make the bars in many different sizes.

It is also possible to make the bars 12 of a standard size and simply trim them to fit the particular seat in conjunction with which they are to be used.

In use, the bars 12 are employed in pairs, the members of one pair being located, respectively, at the front and back edges of the seat, and the members of the other pair being located along the side edges.

According to my invention, it is contemplated that the pairs of fabric-securing bars shall be drawn together, more or less firmly, so as to draw the fabric across the seat surface to the desired degree of tautness.

To accomplish this, I provide the bars 12 with connecting arms 14 and 15. As will be seen from an examination of Fig. 1, the arms 14 are shorter than the arms 15, for a purpose presently to be described.

The arms 14 and 15 are secured to the bars 12 by means of suitable pivots 16, which may be in the form of rivets loosely set so as to provide for pivotal movement between the bars 12 and the arms 14 and 15.

This pivotal arrangement is provided so that when the devices are packaged for sale, the bars and arms may be collapsed so as to lie one upon the other. Also, this pivotal arrangement provides for a more uniform distribution of tension when the devices are in place. Each of the arms 14 and 15 is provided with a series of openings 17 for the insertion of the ends of suitable coiled springs 18.

The springs 18 serve to draw the oppositely disposed bars 12 together, and by such movement the fabric-penetrating points 13 will pierce the fabric, thereby stretching the same over the seat.

The arms 14 and 15 are provided with a plurality of such openings 17 so as to provide for adjustment of the springs 18 to any desired or suitable degree of tension.

The spring-receiving openings 17 may be in the form of simple holes punched in the arms 14 and 15, or they may be punched out as shown in detail in Fig. 4 so as to leave a centrally disposed bar of metal around which the ends of the springs 18 may be hooked.

It will be understood by reference to Fig. 1 that two sets of bars 12 are used for one seat. One of the sets of bars is for the front and rear edge of the seat, and the other set of bars is for the side edges. It will be seen, also, that the arms 14 and 15 are of different lengths so that the springs will not cross each other or over-lie one another, as would be the case if said arms were made of equal length.

It will also be understood that when re-covering a seat by the use of my devices, the housewife or workman will fold the covering material at the corners to form a so-called mitre joint. It is desirable to have at least one of the sets of arms 12 long enough to over-lie the mitre fold of the fabric so as to retain it in place.

In Fig. 5, I have shown a modification of the means for drawing the bars 12 together. In this modification, the arms 14 and 15 are provided with upwardly bent lugs or ears 18, to which may be secured, in any suitable way, threaded washers 19. The lugs or ears 18 are provided with holes registering with the holes in the washers 19, and they may also be threaded. Any suitable toggle screw 20, having an operating nut 21, may be turned into the threaded openings in the lugs 18 and washers 19. As is well understood, turning the nut 21 in one direction will serve to draw the arms 14 and 15 together, whereas turning the nut in the opposite direction will serve to separate the arms.

It will be clear to those skilled in the art that I have provided a very simple and effective mechanism for stretching and securing covering materials to chair seats, and the like. By my arrangement, it is no longer necessary to remove large quantities of tacks or upholsterer's nails in order

to re-cover a chair seat, nor is it necessary to nail down the new covering material with large quantities of such tacks or nails.

By my arrangement, the new covering material is simply bent or wrapped around the outer edges of the chair seat, the fabric being folded over at the corners into a so-called mitre joint. Thereupon, a bar 12 is placed in position adjacent opposite edges, and by slight pressure, the fabric-penetrating points or teeth 13 are embedded in the fabric. Then a spring 18 is connected to the arms 14 and 15 by inserting the ends of said spring in the openings 17. This will provide the desired degree of tension so that the fabric is drawn tautly over the edges of the seat. A similar operation is performed by placing bars 12 along the other pair of opposite edges of the chair seat, and these bars are in turn connected by a spring 18.

It will thus be seen that the operation of re-covering a chair seat can be carried out very simply and very quickly. It is evident, also, that a seat covering may be removed from a seat just as quickly and as simply. All that is necessary is to unhook the springs 18 and move the bars 12 outwardly so that the fabric-penetrating points or teeth 13 are disengaged from the cover. This can readily be done by the ordinary housewife, without the use of tools of any sort, which is a great advantage. By my arrangement, the housewife may change the seat covers of dining room chairs, for example, as often as she desires, whether it be because the covers have become soiled or because she wants to change the color scheme of the dining room.

I claim as my invention:

1. Means for stretching and securing covers for chair seats comprising, a pair of bars adapted to be placed adjacent opposite marginal edges of the seat, fabric-penetrating points on said bars, said points on opposite bars extending towards each other, an arm extending from each of said bars, and tension-applying means interconnecting said arms for drawing said bars together and for drawing said fabric penetrating-points into the fabric.

2. Means for stretching and securing covers for chair seats comprising, a pair of fabric-engaging bars adapted to be placed adjacent opposite marginal edges of the seat, an arm extending from each of said bars, said arms being of unequal length, and tension-applying means interconnecting said arms, said last-mentioned means lying off-center with respect to said seat because of the unequal length of said arms.

3. Means for stretching and securing covers for chair seats comprising, two pairs of fabric-engaging members, each member being adapted to be placed adjacent a marginal edge of the seat, an arm connected to each of said members, the arms on oppositely disposed members extending toward each other, and tension-applying means interconnecting said arms in pairs, whereby to draw said fabric-engaging members toward each other, the arms of each pair being of unequal length, whereby said tension-applying means do not cross each other at the center of the seat.

4. A unit of a fabric stretching and securing device comprising a bar provided with fabric-penetrating points, a tensioning bar provided with means for securing a tensioning device, and means pivotally interconnecting said bars whereby for packaging or for storage said bars may be moved to position overlying each other.

5. The combination in a device for stretching and securing covers for chair seats of, a pair of bars adapted to be placed adjacent opposite marginal edges of the seat, said bars having means interlocking with the edge portions of the cover beneath the seat, a pair of arms each attached to a separate one of said bars and extending toward each other in alignment from the opposite bars, and a spring extending between and connecting said arms, said arms being provided with a plurality of openings spaced different distances apart for receiving parts attached to the ends of said spring whereby the tension of said spring may be varied by connecting it to said arms in different spaced openings.

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