Dec. 10, 1929. O. V. KEAN 1,738,831

SEAT SUPPORT

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Fig. 1.

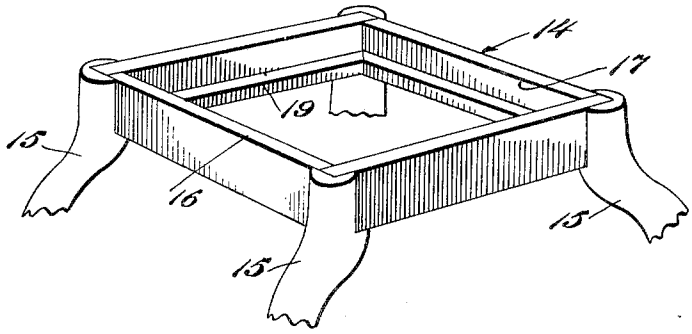


Fig. 2.

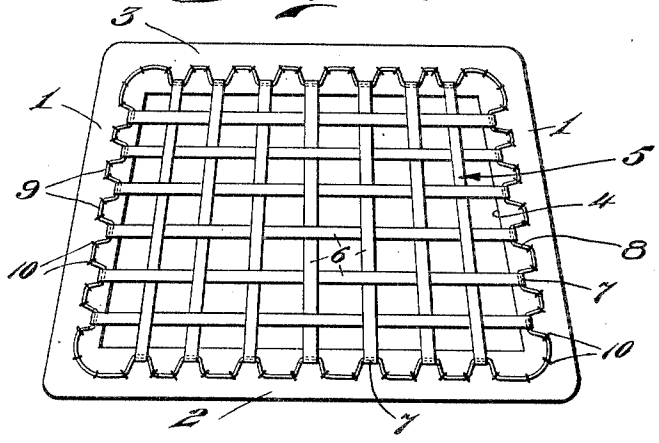


Fig. 3.

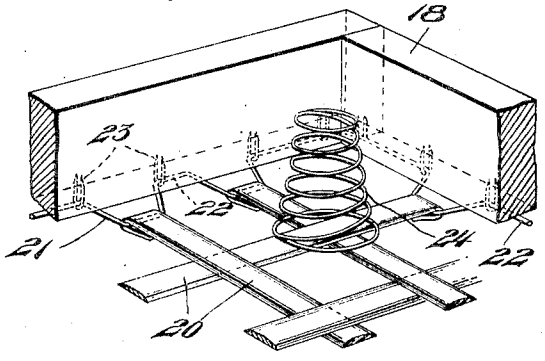
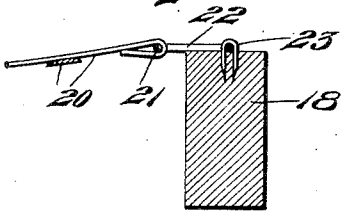


Fig. 4.



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Fig. 5.

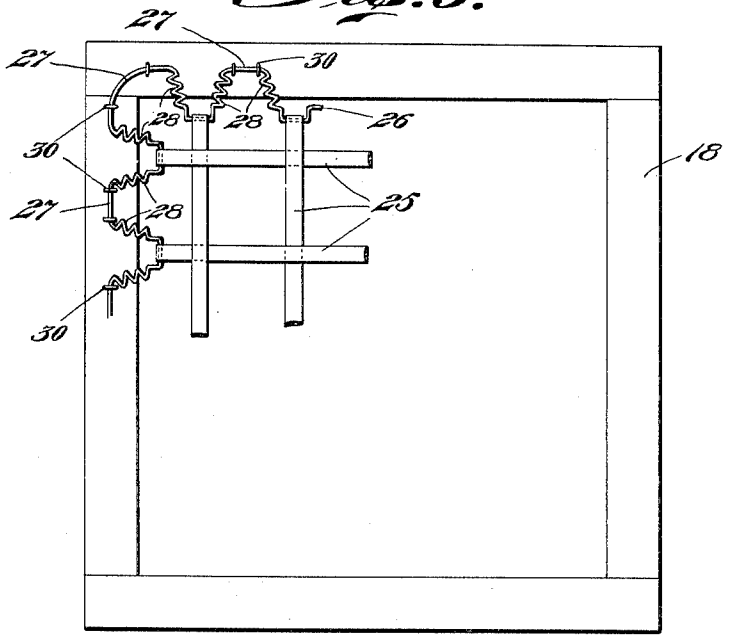


Fig. 6.

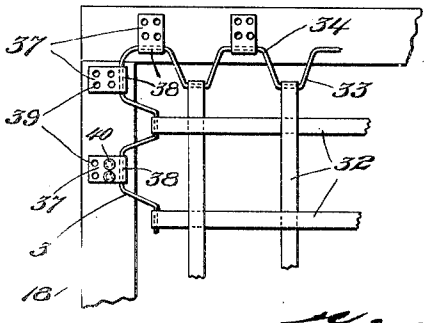


Fig. 7.

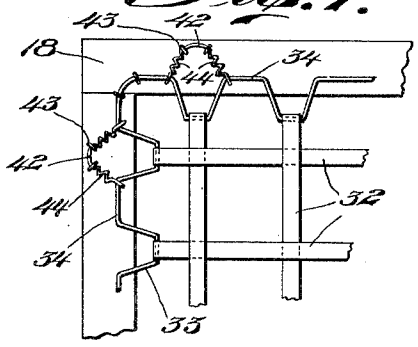
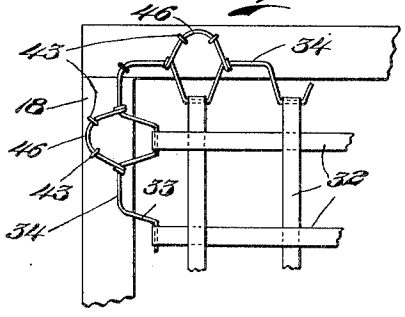


Fig. 8.



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UNITED STATES PATENT OFFICE

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SEAT SUPPORT

Application filed April 25, 1927. Serial No. 186,279.

This invention relates to an improved seat support of the character adapted for use in chairs, sofas, couches, articles of furniture, and the like, wherein a support is employed for the purpose of supporting springs or a pad to provide a yielding or resilient seating surface.

One object of the present invention is to provide a support of the character described which is of simple construction and capable of being made up in standard sizes to fit various sizes of chairs, sofas, etc., and which is provided with loops or extensions adapted to project outwardly from the body of the wire mesh whereby the support may be applied to the usual supporting frame in such a manner as to permit the support to yield slightly or possess a limited degree of resiliency while at the same time the outwardly extending loops or extensions project sufficiently to permit the same to be firmly secured to the frame.

Another object of the invention is to provide a device of this character having loops or extensions for securing the same to the frame so arranged that staples or other securing devices may be placed therein at different places and at varying angles whereby the fastening means may be so positioned as to avoid any defective places in the wooden frame and insure a firm anchorage for the support.

Another object of the invention is to provide a device of this character having loops or extensions extending outwardly from the wire mesh which are capable of considerable variation in length whereby the seat support can be adjusted within considerable limits to fit seats or frames of varying size.

A further object of the invention is the provision of zig-zag portions in the attaching wire between the wire mesh and the points of attachment to the frame whereby slightly increased resiliency is imparted to the support.

Other objects and advantages of the invention relate to certain details of construction and improved methods of operation as will be more fully set forth in the detailed description to follow.

Referring to the drawings:—

Fig. 1 is a perspective view of a chair so constructed as to be adapted to receive a frame to which is secured a seat support,

Fig. 2 is a top plan view of another form of chair seat wherein the removable frame is omitted and one form of the seat support is applied directly to the chair seat,

Fig. 3 is a perspective view of a frame such as is adapted to be applied to the chair shown in Fig. 1, and showing one form of the support applied thereto,

Fig. 4 shows another method of attaching the seat support to the frame,

Fig. 5 illustrates a somewhat different construction of the seat support and the manner of attaching the same to a frame,

Fig. 6 shows a further modified form of the invention, wherein attaching devices are secured to the border wire for attaching the support to the frame, and,

Figs. 7 and 8 disclose further modified forms of the invention.

In the form of the invention illustrated in Fig. 2 of the drawings, 1 designates the seat of the chair of the usual construction wherein the front edge 2 thereof is of somewhat greater length than the rear edge 3, and a central opening 4 is provided to receive a padded cushion which is usually mounted upon some form of support. In the present instance the seat support 5 is formed from a woven wire mesh wherein the wires 6 are of segmental cross-section and have the ends 7 thereof secured to a border wire 8 formed with loop portions 9 projecting outwardly therefrom to overlie a portion of the chair seat 1.

Each of the loop portions 9 may be curved throughout its extent or formed with certain portions thereof straight and certain portions curved to permit the staples 10 or other fastening means to be inserted at varying angles and in different positions on the seat, whereby the fastening means 10 may be so placed as to most effectively hold the seat support against being detached from the frame.

In the form of the invention illustrated in Figs. 1 and 3, the chair 14 is of a conventional construction, being provided with legs 15 and a seat portion 16 provided with an opening

17 within which a frame 18 is adapted to fit, being supported by a rail 19 or in any other suitable manner.

The frame 18, while illustrated in connection with a chair as shown in the drawings, is adapted and intended to illustrate a form of frame which may be used in connection with sofas, couches, and any and all like structures wherein supporting springs or equivalent devices are employed. In the construction illustrated in Fig. 3 the wire mesh is made of separate strands 20 woven together, each strand being preferably of wire of segmental cross-section, although wire of other than segmental cross-section may be employed.

In the use of wire of segmental cross-section, a greater supporting surface is presented to the seat in proportion to the weight of the wire, and the strands 20 may be more readily bent to engage the border wire 21. The border wire 21 is formed with a plurality of loops 22 projecting outwardly therefrom and extending over the inner edge of the frame 18, to the base of which they are secured by staples or other suitable fastening devices 23. In this form of the invention the frame 18 may be formed of such depth as to require the use of a thin pad only, or as shown herein, may be of such depth as to permit the use of a plurality of coiled springs beneath the pad, as illustrated by the coiled spring 24. While only a single spring 24 is shown it is to be understood that this showing is for the purpose of illustration only and that a plurality of springs are to be employed in practice, and that any of the various type of springs now in use may be employed, and the springs may be mounted upon a separate frame or on thin wood slats if desired, the frame or slats in such case being seated upon the spring support.

In Fig. 4 of the drawings the seat support is similar to that illustrated in Fig. 3 except that the same is secured to the top of the frame 18 instead of to the base thereof as shown in Fig. 3. In each case the loops 22 in the border wire 21 may be of such length that the points of attachment of the strands 20 thereto are located somewhat inwardly of the line of staples 23, whereby the length of the outwardly projecting loops imparts a slight resiliency to the support.

In the construction shown in each of the above figures the border wire is preferably formed of a somewhat soft and pliable wire whereby the loop portions may be easily bent in order to adapt the seat support to fit chairs or frames of different size by suitable bending of the loop portions thereof and also allow the placing of the staples at such positions and angles as to provide the most effective holding means.

In the form of the invention illustrated in Fig. 5 of the drawings the seat support comprises a wire mesh formed of separate strands 25 which as shown are of segmental cross-section and have the ends thereof secured to the border wire 26. The border wire is provided with a plurality of outwardly extending loops 27, each of which is provided with a plurality of bends 28 which form zig-zag portions adapted to impart a certain degree of resiliency to the support when the outer portions of the outwardly projecting loops are secured to the frame 18 as by staples 30. In this form of the invention the border wire is preferably of spring tempered steel wire to obtain the desired degree of resiliency for the seat support.

The forms of the invention illustrated in Figs. 6, 7 and 8 each comprises a wire mesh formed of strands 32 and a border wire 33 which is shown as provided with outwardly extending loops 34. The end of each strand 32 is connected to the border wire 33 intermediate the outwardly projecting loops 34, and a frame 18 is shown to which the seat support is attached. In Fig. 6 of the drawings sheet metal clips 37 are secured to the outwardly projecting loops 34, as being bent thereover at 38 and are each provided with a plurality of small openings 39 whereby tacks or small nails 40 may be inserted for securing the same to the frame 18. In Fig. 7 of the drawings separate attaching devices 42 are secured to the loops 34 of the border wire 33 and extend outwardly therefrom a sufficient distance to overlie the frame 18 to which they are secured by staples or other fastening devices 43. The looped attaching devices 42 are each provided with bends or zig-zag portions 44 which give a certain degree of resiliency to the seat support. In Fig. 8 of the drawings, attaching devices consisting of wire loops 46 are secured to the loops 34 of the border wire 33 and project outwardly from the border wire for attachment to the frame 18 by staples or the like 43. In Figs. 6, 7 and 8 the base strands 32 of the seat support have their end portions secured to the border wire 33 at points between the loops 34 found therein. In the forms of the invention shown in Figs. 6, 7 and 8 of the drawings the border 33 may be a straight wire if desired instead of being formed with outwardly projecting loop portions as shown, and the attaching devices 37, 42 and 46 may be secured to the straight border wire at suitable intervals thereon for properly attaching the seat support to the frame 18. The base strands of woven wire mesh are preferably of segmental cross-section in all of the forms illustrated, as such shape of the wire insures an increased bearing surface for the wire on the seat pad and also results in the production of a lighter construction of seat support.

The woven wire mesh may be formed with a triangular, hexagonal, or any other desired

form of weave, as conditions may require or circumstances render expedient.

In the structures shown in Figs. 5 and 7 of the drawings the border wire 26 and loops 42 are preferably formed of spring tempered steel in order to provide an increased resiliency to the support through the provision of the zig-zag portions of the loops.

What I claim is:—

1. A seat support comprising a woven wire mesh formed of flattened wires each provided with a relatively wide supporting surface in proportion to its thickness, a continuous border wire having spaced loops therein surrounding the woven wire mesh and having secured thereto the ends of the separate strands of said wire mesh at points between said spaced loops whereby the spaced loops may be secured to a support in such a manner as to permit flexing of the wire mesh.

2. A seat support comprising a woven wire mesh, a continuous border wire surrounding the wire mesh and having secured thereto the separate strands of said woven wire mesh and a plurality of loop shaped fastening means extending outwardly from the border wire and each provided with zig-zag portions for imparting a limited degree of resiliency to the support.

3. A seat support comprising a woven wire mesh formed of flattened wires each provided with a relatively wide supporting surface in proportion to its thickness, a continuous border wire surrounding the wire mesh, the ends of the separate strands of said woven wire mesh being secured to said border wire, and wire loops provided with zig-zag portions connecting said border wire to a frame whereby a limited degree of resiliency is imparted to the support.

4. A seat support comprising a woven wire mesh formed of flattened wires each provided with a relatively wide supporting surface in proportion to its thickness, a continuous border wire surrounding the woven wire mesh and having secured thereto the separate strands of said wire mesh, and outwardly projecting loops securing said border wire to a frame, each of said loops being provided with an extensible portion for permitting a limited degree of resiliency between the frame and support.

In testimony whereof I have affixed my signature.

OTHO V. KEAN.