July 16, 1957 G. R. ROLFE 2,799,327

FURNITURE WITH REMOVABLE COVERING

Filed March 30, 1955 2 Sheets-Sheet 1

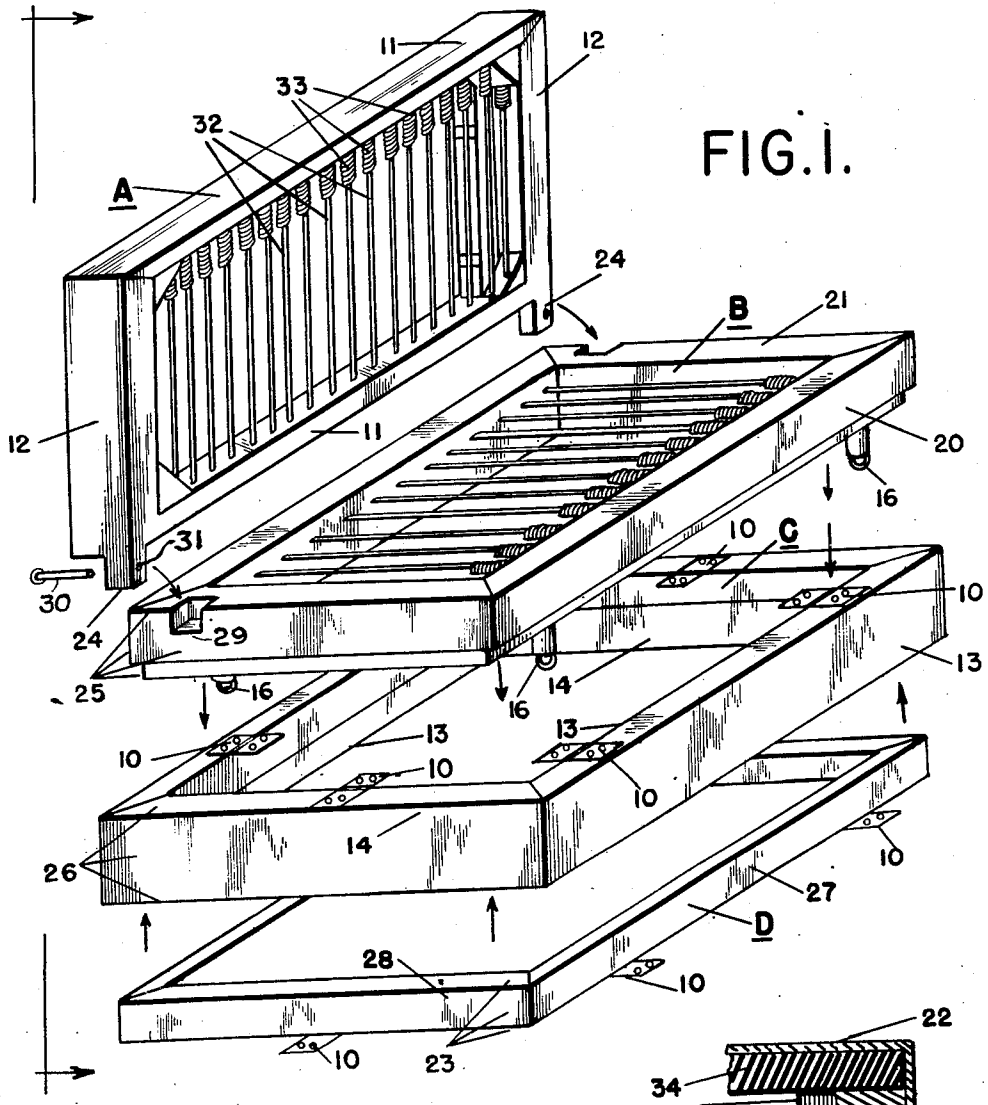


FIG. 1.

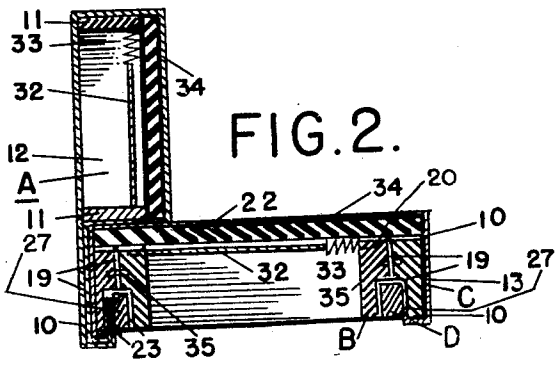


FIG. 2.

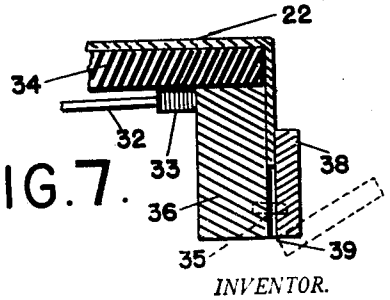


FIG. 7.

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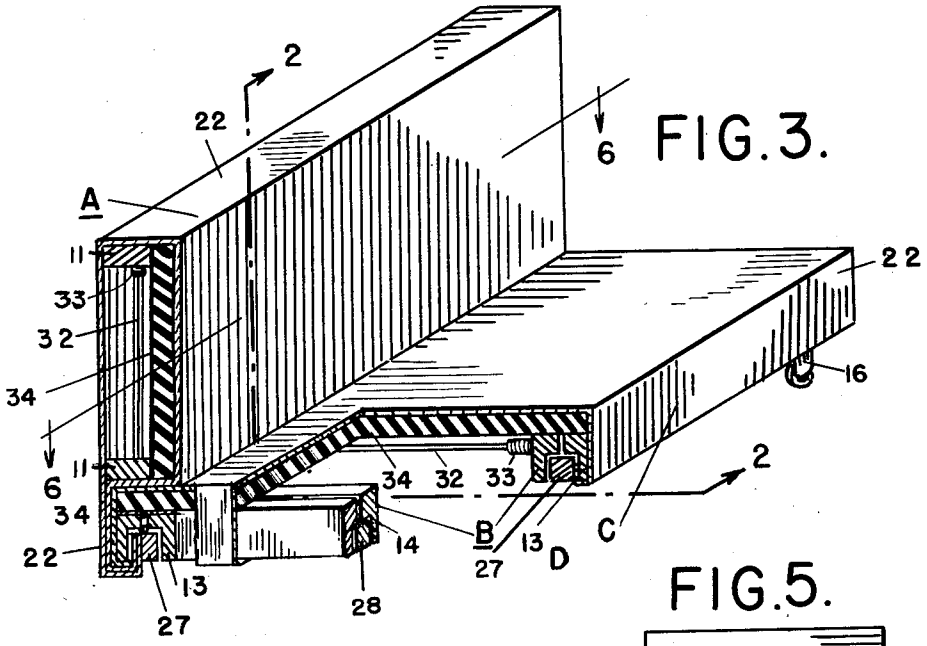


FIG. 3.

FIG. 4.

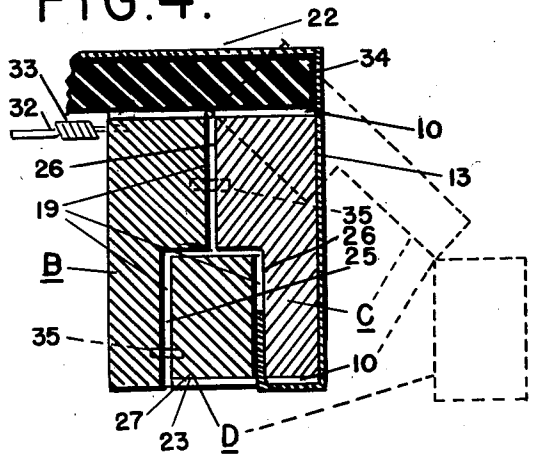
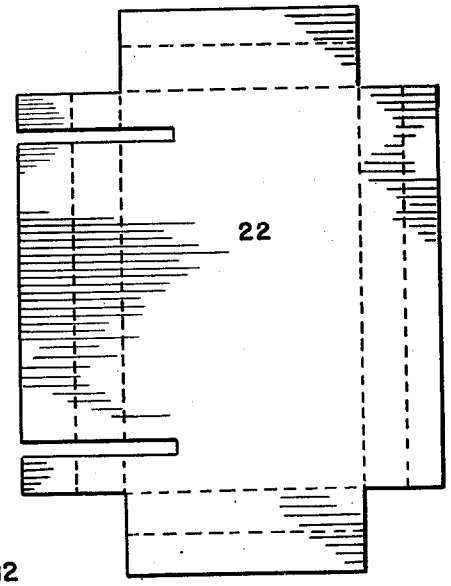


FIG. 5.



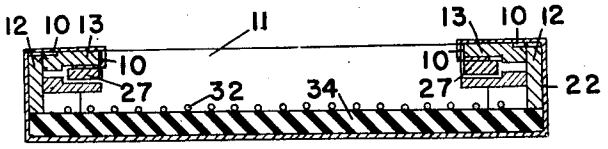


FIG. 6.

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FURNITURE WITH REMOVABLE COVERING

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8 Claims. (Cl. 155—184)

This invention refers to furniture and its upholstery and more particularly to the construction involved where coverings or slip covers are intended to be replaceable. It has among its objects to provide a new and improved arrangement for this purpose that will permit the replacement of coverings to be made conveniently and quickly, without the need for fastenings that require extensive hammering or toolwork to retain the cover in place, and to be tightly impressed to give a smooth usable surface.

There have been methods proposed and employed for convenient fastening coverings and upholstery on sofas, and members of the divan, couch and chair classes, but such, are generally objectionable because they require tacks, staples, nails and other similar items that have to be driven in to hold the upholstery, to the backing or framework. In a particular instance, a seat is made with a separable framework adapted to be covered with fabric which is forced into a peripheral groove provided in a chair frame designed to receive and bind it. This is similar in principle to the common method used by seamstresses in attaching a napkin, handkerchief or the like over an embroidery frame with a flexible hoop. This arrangement requires an endless collar and a body for it to fit in, and therefore is impractical for larger and more complicated requirements, such as occur in the case or sofas and the like.

In this invention, the main structure of the sofa or the like, is modified from that used in conventional lines, to include a framework having hinged components. These components are adapted to separate and permit a fabric sheeting or covering to be drawn over it, lapped and then clamped within their sides. Hinges are employed to swing the components back to their normal position.

For a better understanding of the invention and its objects reference is made to the accompanying drawings. These drawings in conjunction with the following description indicate a particular form of the invention by way of example, while the claims indicate the scope of the invention.

In the drawings:

Figure 1 is a separated view in perspective of a couch framework embodying this invention;

Figure 2 is a sectional elevation of the covered couch taken on the line 2—2 of Figure 3;

Figure 3 is a view in perspective of the couch with portions broken away to show its interior construction;

Figure 4 is a typical sectional elevation of the assembled framework indicating the manner in which the covering is clamped and fastened to it;

Figure 5 is a detail in plan of covering section employed in this embodiment;

Figure 6 is a sectional plan view taken on the line 6—6 of Figure 3; and

Figure 7 is a sectional elevation of a modified form of the front frame used in this embodiment.

Similar reference characters refer to the same parts throughout the drawings.

The drawings are intended to illustrate the invention in the form of a living room couch, and how it is assembled during the process of recovering it with fabric without the need for tools to do it. In Figure 1, the framework is shown with the back, designated by A, separated but in close proximity to its location for placement in the main inner seat frame B. It consists of longitudinal bars **11** and transverse bars **12** mitered and secured at their corners to form a rectangular frame. The frame B is made up of P-shaped bars **20** and **21** mitered at the corners and joined to form a rectangular structure. An outer frame C encompasses the frame B and is held to it by its hinges **10** on their upper sides. The hinges enable the longitudinal quasi-P-shaped bars **13** and transverse bars **14** of the frame C, to open outwardly. Likewise the bars **27** and **28** of the inner middle frame D are held by its hinges **10** on their undersides that allow them to open out when the bars of the frame C are swung out. The manner in which this takes place is shown in Figure 4. Legs **16** located adjacent the corners are provided to support the frame B off the floor at a suitable distance. The legs are made with tongues of rectangular cross-section that fit and are insertable in rectangular recesses (not shown) in the frame B and are kept in position without the use of bolts or other fasteners. It will be noted that the faces of the bars **20**, **21**, **13** and **14** of the frames B and C do not make close contact against each other when in closed position but form a series of narrow spacings **19** in between, certain of the spacings **19** being provided for the fabric covering **22** to fit within them and be clamped by the bars when closed. The cover fabric **22** is cut suitably to fit over the couch framework. It has parts removed where they might interfere with the hinges and other items that project beyond the bars, as indicated in Figure 5.

The bars **20** and **21** of frame B have a quasi-P-like contour formed with their 6-faces **25**, contoured at right angles to each other to provide a large rectangular portion over and integral with a narrow rectangular portion as indicated in Figure 4. Likewise the bars **13** and **14** of the frame C have six similar faces **26**. The faces **25** and **26** of the frames B and C are symmetrical and come into close proximity with each other as shown in Figure 4 when closed. When so closed the respective bars **27** and **28**, of frame D which are of rectangular cross section, have their faces **23**, brought into alignment with those of the faces on the bars of frames B and C as indicated in Figure 4, and is clamped between them.

The back frame A is attached by inserting the lugs **24** in the recesses **29** in the frame B. To keep them from being pulled out, a dowel **30** is passed through each hole **31** in the frame B and the lug. It does not have to be fastened in place because the fabric cover **22** passes over it and retains it there. The frame A has a series of wires, cables or strands **32** crossing it between the bars **11** fastened to in any suitable manner. These strands are kept tensioned by coil springs **33** attached to them and secured to the bar opposite that to which the strands are tied to. These wires, cables or strands **32** serve as a backing against which a pad **34** of thick foam rubber is pressed to form a cushion for the back. This pad is kept in place by the cover **22**. The wires, cables or strands may be of any suitable material of the desired strength and qualities. The same arrangement is employed in the main inner seat frame B, to support its pad **34**. The pads extend across the frames fully.

The bars of the frames are preferably mitered at the corners, in order to keep the bars of the frames together, and yet avoid the use of bolts or other fasteners requiring tools. To tighten and secure them, a series of bayo-

net-and-socket catches **35** are employed. These become attached when the bars are assembled in position with one another. These catches **35** enable the bars to be detached under proper pressure when it is necessary to open up the frames for recovering with the fabric **22**. The catches and hinges are secured permanently in place by screws or bolts in a conventional way, when the frames are made up originally, and are not affected by the process of recovering.

The process of covering the couch is relatively simple. The cover **22** is preferably cut to size and contour, and is laid over the framework assembled from the frames A, B, C, and D, and as indicated in Figure 3. The frames C and D are opened up on their hinges **10** while the cover is lapped over them. See outline in Figure 4. Then these frames are swung back pushing the fabric into the spacings, **19**, wherever they are needed. The disposition of the fabric is indicated in Figure 3, and its general outline when in place is shown in the diagrammatic view Figure 2. After the fabric is in place the frames B, C, and D are pushed together to engage the catches **35** and lock the whole couch assembly together. The hinges **10** are placed at points arbitrarily selected, and the covering slotted to allow for them accordingly.

In Figure 7 a modified construction is shown. In this instance the front exterior frame **36** is made integral, without the main inner frame. The member D is displaced by a front board **38** hinged at **39** to the bottom of the frame **36**. The board **38** is swung upwardly and binds the lower edge of the cover **22** between it and the frame **36**. The board **38** is locked in place with bayonet-and-socket catches **35**. The remaining structure of the frames is as previously described, in the first embodiment.

It will be noted that the fabric can be placed on the frames quickly and made tight, and in doing so, no tools are necessary. The arrangement of hinges and hinged parts provides the necessary tightening tension to bring the fabric taut. The construction is simple avoiding the common slats and interconnected coiled springs and burlap used to provide resiliency to the back and seat cushions, as well as adequate support. In addition the fabric acts not only as a covering but also as a reinforcement to the structural resistance of the assembly. Where the end portions of the covering meet and leave a space, it is covered by a bead trimming or zipper sewed on the edges (not shown).

While the form of the invention shown is that of a couch, it is not desired to limit it to the class of items comprising domestic furniture, but to include seats for various purposes where coverings are subject to considerable wear and tear and require replacement from time to time. In such instances where the same principles are involved, it is appreciated, that other designs could be developed and made that would bring them within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. A couch structure comprising in combination, a main interior seat frame, another frame exteriorly fitting around said first mentioned frame and hinged thereto to permit a swinging out of the bars making up said exterior frame, in one direction and a swinging-in against the said interior frame in the other to bring some of their faces close to one another, an inner frame hinged to the said exterior frame with its bars swingable between the previously mentioned frames, pads of resilient material placeable on the said interior frame, and fabric for covering said frames with its edge portions folded over and clamped between the faces of the frames hinged together.

2. A couch structure comprising in combination, a main interior seat frame, another frame exteriorly fitting around said first mentioned frame and hinged thereto to permit a swinging out of the bars making up said exterior frame in one direction and a swinging-in against the said interior frame in the other to bring some of their faces close to one another, an inner frame hinged to the said exterior frame with its bars swingable between the previously mentioned frames, pads of resilient material placeable on the said interior frame, fabric for covering said frames with its edge portions folded over and clamped between the faces of the frames hinged together, and a series of spaced strands spreading across the space between the bars of the interior frame for supporting said pads.

3. A couch structure comprising in combination, a main interior seat frame, another frame exteriorly fitting around said first mentioned frame and hinged thereto to permit a swinging out of the bars making up said exterior frame in one direction and a swinging-in against the said interior frame in the other to bring some of their faces close to one another, an inner frame hinged to the said exterior frame with its bars swingable between the previously mentioned frames; pads of resilient material placeable on the said interior frame, fabric for covering said frames with its edge portions folded over and clamped between the faces of the frames hinged together, a series of spaced strands spreading across the space between the bars of the interior frame for supporting said pads, and springs incorporated in said strand to provide resiliency thereto.

4. A couch structure comprising a plurality of frames including hinged bars detachable from each other to permit their movements through predetermined arcs so their faces may be spaced apart or brought adjacent each other, a sheet of fabric for covering said frames with its edge portions fitting between said adjacent faces to be clamped and stretched thereby and holding the fabric taut over the frames.

5. A couch structure comprising a plurality of frames including hinged bars detachable from each other to permit their movements through predetermined arcs so their faces may be spaced apart or brought adjacent each other, a sheet of fabric for covering said frames with its edge portions fitting between said adjacent faces to be clamped and stretched thereby and holding the fabric taut over the frames, and means for locking the frames together while holding the fabric as aforesaid.

6. A couch structure comprising a plurality of frames including hinged bars detachable from each other to permit their movements through predetermined arcs so their faces may be spaced apart or brought adjacent each other, a sheet of fabric for covering said frames with its edge portions fitting between said adjacent faces to be clamped and stretched thereby and holding the fabric taut over the frames, means for locking the frames together while holding the fabric as aforesaid, and resilient strands extending across said frames selectively between the bars thereof, and resilient pads mountable on said strands under said fabric and against the bars to cushion the said structure.

7. A couch structure comprising a plurality of frames including hinged bars detachable from each other to permit their movements through predetermined arcs so their faces may be spaced apart or brought adjacent each other, a sheet of fabric for covering said frames with its edge portions fitting between said adjacent faces to be clamped and stretched thereby and holding the fabric taut over the frames, means for locking the frames together while holding the fabric as aforesaid, resilient strands extending across said frames selectively between the bars thereof, and resilient pads mountable on said strands under said fabric and against the bars to cushion the said structure, said bars of the seat being contoured to fit against one another where their faces are brought adjacent and the back frame being removably attached to the side of one of the seat frames and covered by said fabric.

8. A couch structure comprising a plurality of frames including hinged bars detachable from each other to per-

mit their movements through predetermined arcs so their faces may be spaced apart or brought adjacent each other, a sheet of fabric for covering said frames with its edge portions fitting between said adjacent faces to be clamped and stretched thereby and holding the fabric taut over the frames, means for locking the frames together while holding the fabric as aforesaid, resilient strands extending across said frames selectively between the bars thereof, and resilient pads mountable on said strands under said fabric and against the bars to cushion the said structure, said bars of the seat being contoured to

fit against one another where their faces are brought adjacent and the back frame being removably attached to the side of one of the seat frames and covered by said fabric, said fabric being in plural sections fitting the seat and back of the couch independently.

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