July 16, 1940. A. M. BANK 2,207,773

UPHOLSTERY CONSTRUCTION

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Fig. 1.

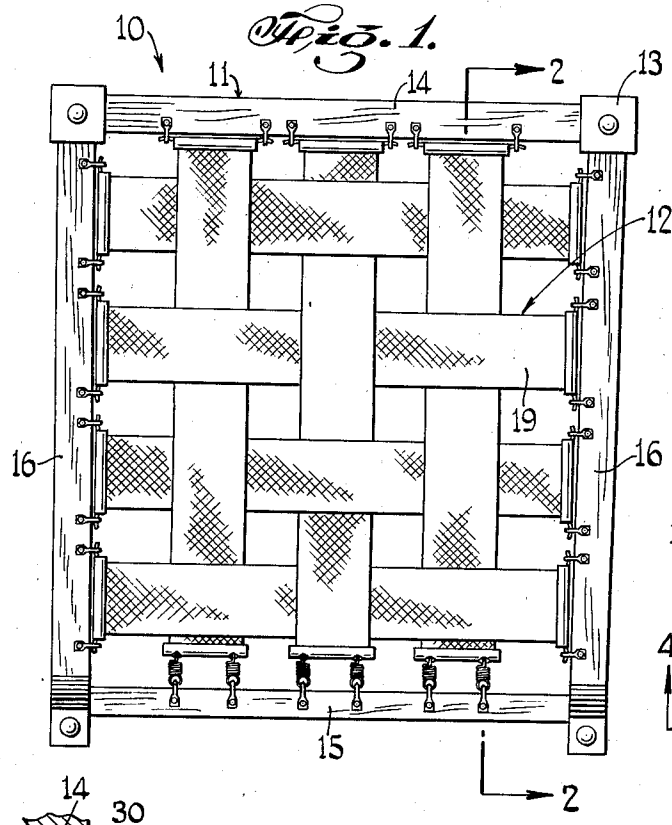


Fig. 3.

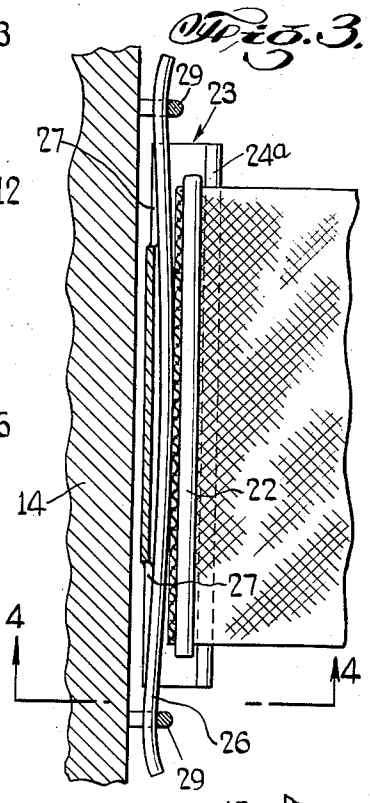


Fig. 2.

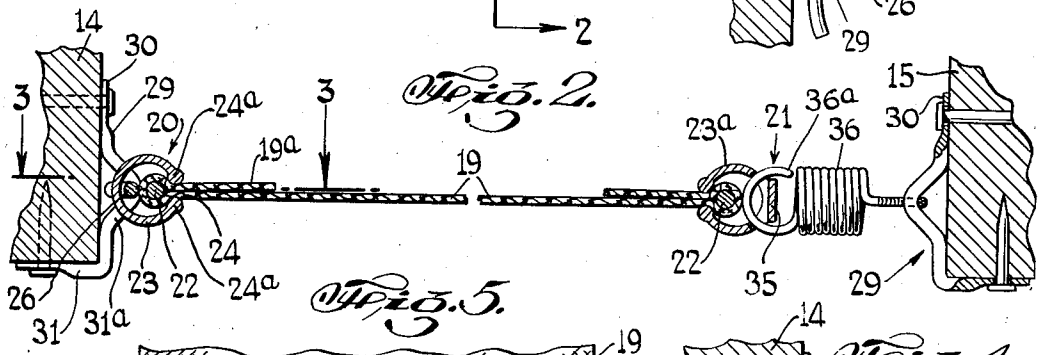


Fig. 5.

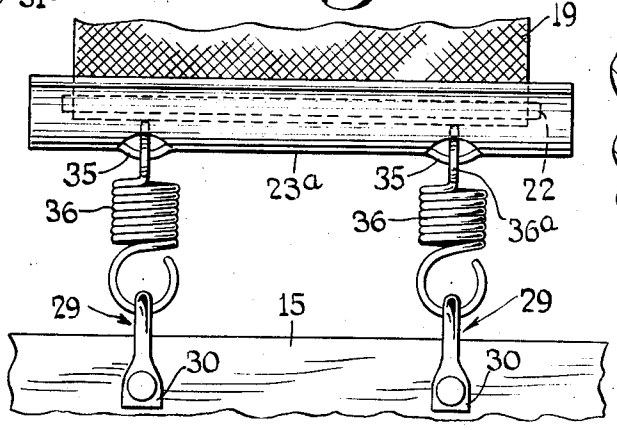
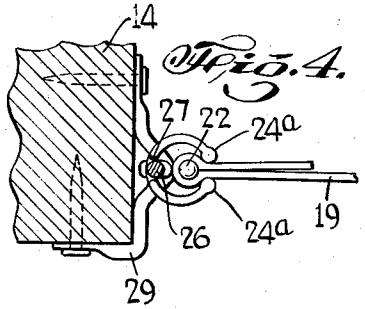


Fig. 4.



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Fig. 6.

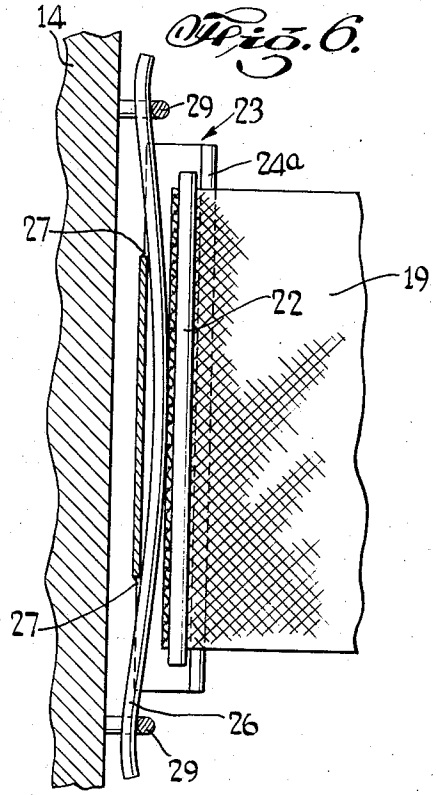


Fig. 7.

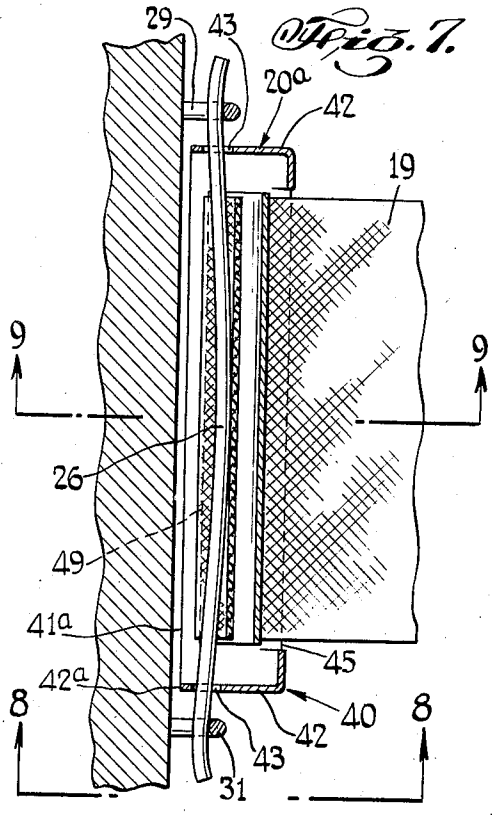


Fig. 9.

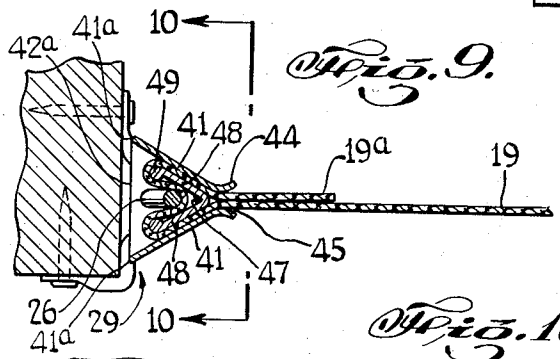


Fig. 8.

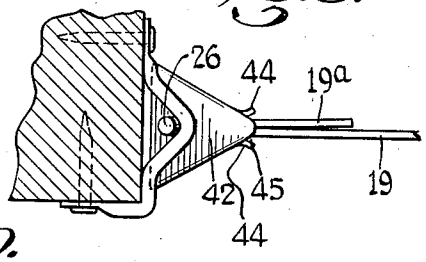
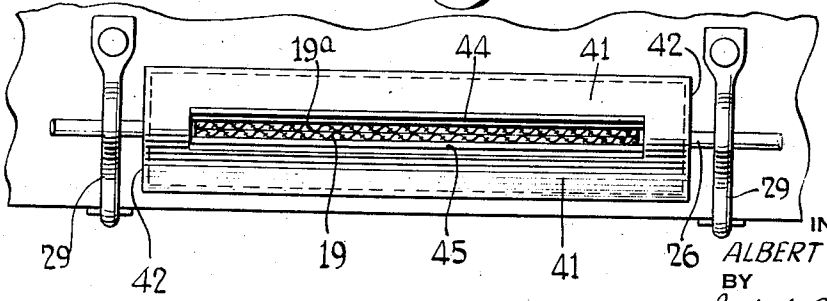


Fig. 10.



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UPHOLSTERY CONSTRUCTION

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Application September 8, 1936, Serial No. 99,729

4 Claims. (Cl. 155—179)

This invention relates to upholstery construction. It is particularly directed to strip webbing for seats and means for fastening the strips to the seat frames, and the like upholstered articles.

An object of this invention is to provide upholstery construction of the character described, having improved frictional gripping means for attaching the ends of webbing strips to a frame and including means to increase the frictional grip on the strips with increase of load on the webbing, the means for increasing the frictional grip on the webbing being resilient to provide a yield between the webbing and the frame.

A further object of this invention is to provide in upholstery construction of the character described highly improved and compact yielding means for attaching the webbing to a frame, which shall be located wholly close to and disposed longitudinally of the frame wall to which it is attached, whereby to permit foundation springs being placed on the webbing also relatively close to the frame walls.

Another object of this invention is to provide strong and durable webbed seat construction of the character described, which may be economically manufactured, easily assembled, which will not tear the webbing, and which shall yet be practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawings, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a bottom plan view of a seat frame provided with webbing embodying the invention;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 2;

Fig. 4 is a cross-sectional view taken on line 4—4 of Fig. 3;

Fig. 5 is a bottom plan view of one end of a webbing strip;

Fig. 6 is a view similar to Fig. 3, but shown in the position of the parts with a greater tension on the webbing;

Fig. 7 is a horizontal, cross-sectional view of one end of a strip of webbing and means for attaching the same to a frame and illustrating another form of attaching means;

Fig. 8 is a cross-sectional view taken on line 8—8 of Fig. 7;

Fig. 9 is a cross-sectional view taken on line 9—9 of Fig. 7; and

Fig. 10 is a cross-sectional view taken on line 10—10 of Fig. 9.

Referring now in detail to the drawings, 10 designates upholstery construction embodying the invention, here shown for the purpose of illustration, in the form of a seat or chair frame 11 provided with strip webbing 12. The frame 11 is supported on legs 13 and has a front wall 14, a rear wall 15 and side walls 16. The webbing 12 comprises crossing, interwoven, broad strips 19, the ends whereof are attached to the frame walls in accordance with my invention, as described hereinafter.

Each of the strips 19 running from front to rear is attached to the front wall 14 by attaching means 20 embodying the invention. The rear ends of the strips 19 are attached to the rear wall 15 by another attaching means 21, likewise embodying the invention.

The attaching means 20 comprises a tube 23 disposed parallel to the bottom edge of wall 14, and having a longitudinal slot 24. Said tube 23 may be formed with a pair of aligned longitudinal slots or notches 27 at the ends thereof diametrically disposed with respect to slot 24. Within said tube is a pin 22 disposed parallel to said slot. One end of strip 19 is folded or looped around pin 22 and passes through slot 24. Tension on the strips 19, due to pressure on the webbing, causes the pins 22 in the tubes 23 to press the folded over portions of the strips against the edges 24a of the tubes at said slots 24, whereby to frictionally fasten or clamp the strips to said tubes. The edges 24a are preferably beaded or rounded so as not to cut into the webbing or tear the same.

Extending through each tube 23 is a spring wire or rod 26 projecting beyond the tube at both ends, the ends of said rod being received in the slots or notches 27 of the tube. Attached to the frame wall 14 on opposite sides of each tube 23, are a pair of angle-shaped brackets 29, each having arms 30 and 31 fixed to the inner surface and bottom edge of the frame wall by nails or other suitable fastening means. The arms 30 of said brackets are formed with humped portions or ears 31a receiving the ends of the wire or rod 26.

As load is increased on the webbing, the middle of the wires or rods 26 become bowed to press the pins 22 toward the slots 24 and thus increase the friction on the webbing. The wires or rods 26 being made of resilient metal will yield to provide resiliency at the ends of the webbing strips. Since the foundation springs on the webbing are tied down to the frame, there is always pressure on the webbing which is hence always under tension to maintain the frictional grip.

It will be noted that the tubes 24 are disposed substantially close to the frame wall somewhat above the lower edges thereof. Said tubes do not

project an appreciable distance inwardly from the walls, and hence foundation spring may be placed on the webbing relatively close to said walls. The webbing strips 19 may be attached to the front frame wall 14 and the side frame walls 16 in the manner described above.

The means 21 for attaching strips 19 to the rear wall 15, as illustrated at the righthand end of Fig. 2 of the drawings, and in Fig. 5 of the drawings, comprises tubes 23*a* likewise provided with longitudinal slots 24. Within tubes 23*a* are pins 22. The rear ends of strip 19 are folded over said pins and pass through slots 24. Each tube 23*a* is provided with a pair of spaced, integral, punched, strap portions 35. Coil tension springs 36 interconnect the strap portions 35 with brackets 29 fixed to the rear frame wall 15. The hooked ends 36*a* of springs 36 may press the pins 22 toward slots 24 to retain a strong frictional grip on webbing.

In Figs. 7, 8, 9 and 10 there is shown a fastening means 20*a*, for attaching the ends of the webbing strips 19 to the frame walls, illustrating another preferred form of my invention. Said means 20*a* comprises an elongated member 40 of angular cross section, disposed parallel to the lower edge of the frame wall and having longitudinal, angularly disposed walls 41 and triangular-shaped end walls 42 formed with apertures 43. The edges 41*a* of walls 41 and edges 42*a* of end walls 42 form a rim for the open side of member 40, which open side is contiguous and parallel to the inner surface of the frame wall. The meeting edge between the walls 41 of member 40 is preferably slit longitudinally and the slit edges bent or curved outwardly as at 44 forming a slot 45 therebetween.

Within the member 40 and adjacent and parallel to slot 45, is an angle-shaped member 47 having angularly disposed walls 48. The angle between the walls 48 is preferably the same as the angle between the walls 41. The outer edges of said walls 48 are preferably beaded or rounded as at 49, for the purpose hereinafter appearing.

The webbing strip 19 enters the slot 45, passes over or around the member 47, and the outer end 19*a* of said strip passes out through the slot 45. Pull or tension on the strip 19 will cause the member 47 to press the folded over portions of said strip against the inner surfaces of the walls 41 to frictionally clamp the strip to member 40. Fixed to the frame wall on opposite sides of the member 40 are a pair of brackets 29. Extending within the member 40 is a resilient wire or rod 26, the ends whereof pass through the apertures 43 and engage within the humped portions or ears 31*a* of said brackets 29. As shown in the drawings, the middle of the wire or rod 26 is bowed inwardly and presses the webbing within the member 47 and into contact with the inner surfaces of the walls 48 thereof. The greater the tension or downward pressure on the webbing, due to increased load on the foundation springs supported by the webbing, the greater will be the pressure of the wire 26 against the webbing to increase the friction on the folded over portions of the strip 19.

Since the portions 44 of the member 40 are rounded and flare outwardly, danger of tearing the strip is eliminated. The angle shaped member 47 may be replaced by a rod or pin such as pin 22. The resilient rods or wires 26, furthermore, resiliently connect the webbing to the frame to aid in supporting loads imposed on the foundation springs.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In upholstery construction, a frame, an elongated strip of webbing, a member having a pair of angularly disposed walls interconnected by triangular end walls and being formed with a slot at the adjacent ends of said angularly disposed walls, a member within said first member and disposed between the end walls, said strip of webbing passing through said slot and around said second member, and means for attaching the first member to the frame, comprising a rod engaging said end walls, and brackets on said frame receiving the outer ends of said rod.

2. In upholstery construction, a frame, an elongated strip of webbing, a member having a pair of angularly disposed walls interconnected by triangular end walls and being formed with a slot at the adjacent ends of said angularly disposed walls, a member within said first member and disposed between the end walls, said strip of webbing passing through said slot and around said second member, a pair of brackets fixed to said frame and disposed on opposite sides of said first member, the end walls of said first member being formed with apertures, and a resilient wire extending through said apertures and engaging said brackets.

3. In upholstery construction, a frame, an elongated member formed with a slot, a second elongated member, a strip of webbing having a looped portion extending through said slot, said second member being received within said looped portion, and means for attaching said first member to said frame, said means comprising a rod parallel to said first member, means for attaching the ends of said rod to said frame, said first member engaging portions of said rod inwardly of the outer ends thereof, the mid-portion of said rod being adapted to press said second member towards said slot to increase the frictional grip on the looped portion of said webbing upon tension being increased on said webbing.

4. In upholstery construction, a frame, a pair of spaced brackets on a wall of said frame, an elongated rod supported on said brackets and disposed substantially parallel to the lower edge of said wall, a member on the portion of the rod between said brackets, formed with a longitudinal slot disposed substantially parallel to said rod, an elongated pin disposed parallelly of said rod, and longitudinally of said slot and between said slot and frame wall, a strip of webbing having one end passing through said slot and being folded over said pin, and the folded over portion of said strip passing through said slot, said rod lying adjacent said pin and bearing thereagainst to effect clamping of the webbing between said rod and pin.

ALBERT M. BANK.