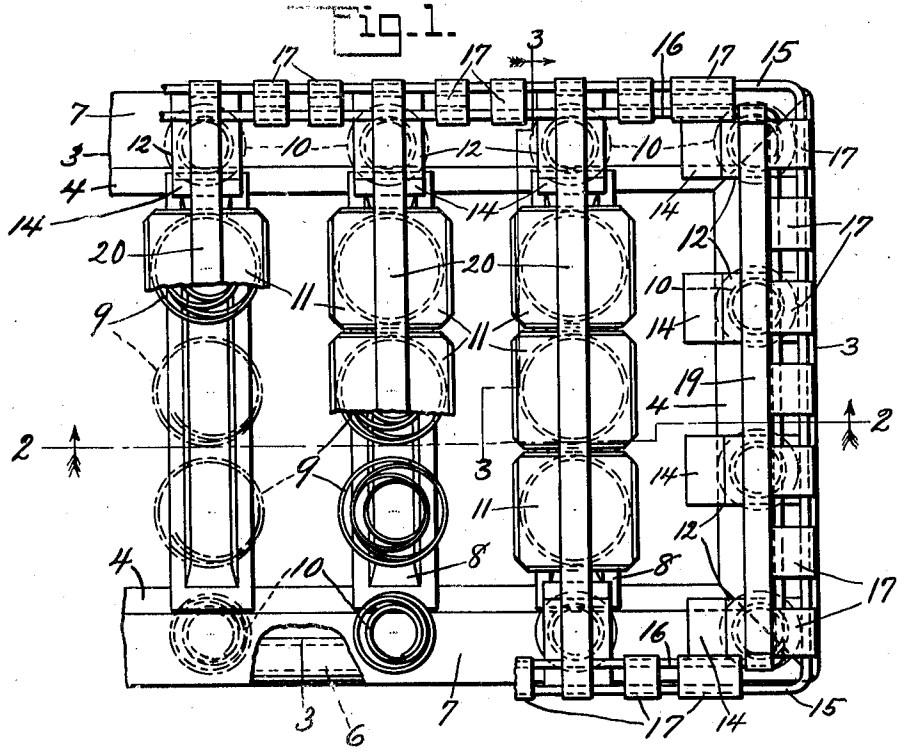
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V. WILLOUGHBY

SEAT CUSHION

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Fig. 1.



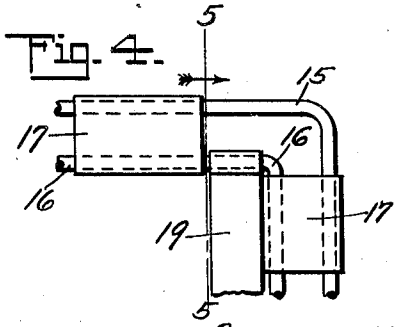


Fig. 4.

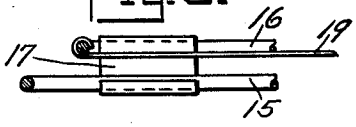


Fig. 5.

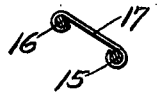


Fig. 6.

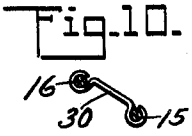


Fig. 10.

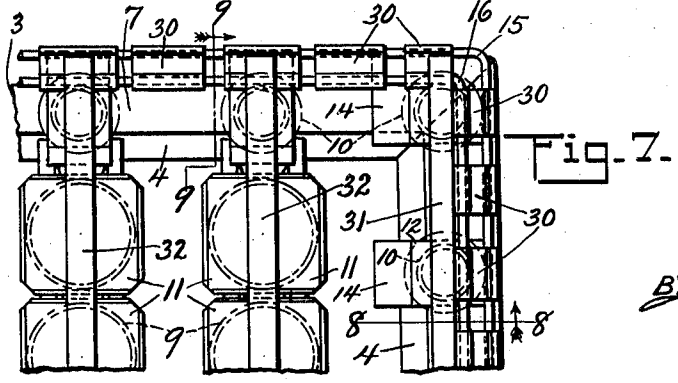


Fig. 7.

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Fig. 8.

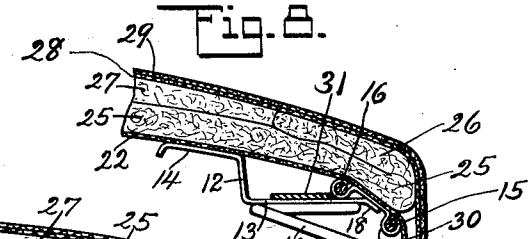


Fig. 2.

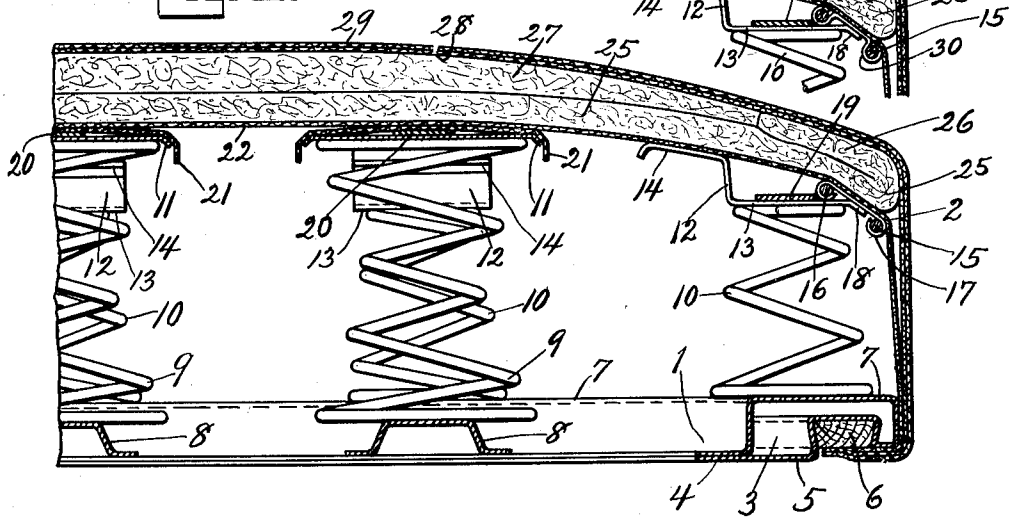


Fig. 3.

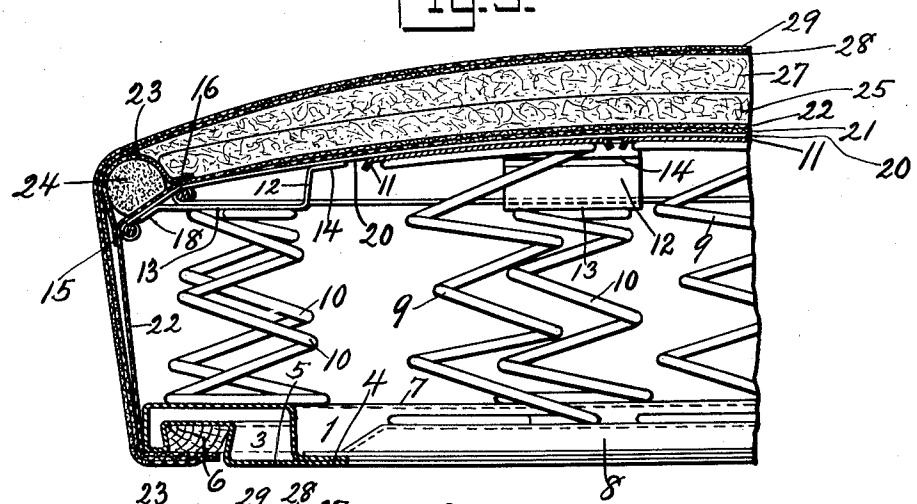
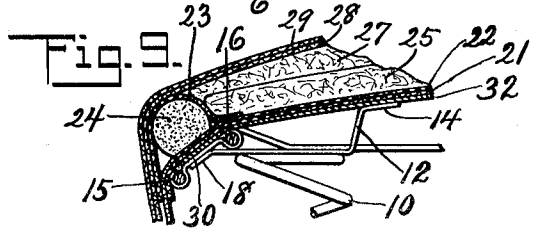


Fig. 9.



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Patented Nov. 2, 1926. 1,605,415

UNITED STATES PATENT OFFICE.

VICTOR WILLOUGHBY, OF RIDGEWOOD, NEW JERSEY, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

SEAT CUSHION.

Application filed January 22, 1923. Serial No. 614,133.

My invention is disclosed in the following full, clear and exact description, such as will enable others skilled in the art to which it appertains to make and to use the same, reference being had to the accompanying drawings which illustrate the preferred form of the invention; though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof within the scope of the claims will occur to persons skilled in the art.

In said drawings:

Fig. 1 is a plan view partly broken away of a portion of a seat cushion constructed in accordance with this invention, the upholstery being removed to show the spring construction;

Fig. 2 is a vertical section of a seat cushion constructed in accordance with this invention, the section being taken on the line 2—2 of Fig. 1;

Fig. 3 is a section taken on the line 3—3 of Fig. 1;

Fig. 4 is a detail view showing a corner of the upper frame of the cushion;

Fig. 5 is a section taken on the line 5—5 of Fig. 4 looking in the direction of the arrow;

Fig. 6 is a section taken on the line 5—5 of Fig. 4 looking in the direction opposite to the direction of the arrow;

Fig. 7 is a view similar to Fig. 1 of a seat cushion of a modified construction;

Fig. 8 is a partial section of a cushion constructed as shown in Fig. 7, the section being taken on the line 8—8 of Fig. 7;

Fig. 9 is a partial section of a cushion taken on the line 9—9 of Fig. 7 looking in the direction of the arrow and

Fig. 10 is a section through the upper frame of the cushion shown in Fig. 7 taken on the line 9—9 of Fig. 7 and looking in the direction opposite to the direction of the arrow.

This invention relates to seat cushions and more specifically to seat cushions for railway car seats and it is an object of this invention to provide a seat cushion of rugged construction which may be economically manufactured. It is also an object of this invention to provide an improved lower frame for a seat cushion having integral pressed frame members and an upper frame having spaced relatively movable frame members formed of spring wire and connected by means which serve to support the edge pieces of the cushion.

As shown in the drawing the cushion comprises a lower frame 1 and an upper frame 2, the lower frame being composed of sheet metal members joined at their ends by mitered joints. Each lower frame member 3 is formed from a single sheet of metal which is folded to form a substantially rectangular tubular member having inwardly extending engaging flanges 4, a lower surface 5, in which there is formed a tapered slot adapted to receive a tacking strip 6, and a flat upper surface 7. On the flanges 4 are secured the pressed metal cross pieces or slats 8 upon which are placed supporting springs 9, while upon the upper surfaces 7 of the framing members 3 are placed springs 10 of less height than the springs 9. Each of the springs 9 is provided with a substantially flat rectangular spring cap 11 and each of the springs 10 is provided with a spring cap 12 having a flat portion 13 which rests upon the spring 10 and a flat portion 14 offset from the portion 13.

The upper frame 2 comprises spaced rectangular members 15 and 16 of spring wire connected by clips 17 which permit relative movement of the members. The clips, in the construction shown in Fig. 1, rest upon the upper surfaces of the members 15 and 16 and have their ends bent around so as to secure the clips in engagement with the members. The clips 17 adjacent to the spring caps 12 are secured by spot welding or otherwise to a flange 18 on the flat portion 13. As shown in Fig. 2 the flange 18 projects downwardly so that when secured to the spring caps 12 the upper frame tilts outwardly with the outer frame member 15 lower than the inner frame member 16. Resting on the spring caps 12 along the side edges are spring strips 19 which are secured to the spring caps 12 and springs 10 in any desired manner as by the rivets (not shown) which secure the springs 10 to the spring caps 12. The spring strips 19 extend to the inner frame member 16 and are secured thereto by being passed beneath and bent around the member 16 as shown in Fig. 5. On the spring caps 11 are placed spring strips 20 which are secured to the spring

caps in any desired manner as by the rivets (not shown) which secure the springs 9 to the caps 11. The spring strips 20 extend over the frame 2 and are secured to the frame 2 by having their end portions bent around the outer frame member 15 as shown in Fig. 3. Where the spring strips 20 pass over the frame 2 the clips 17 are omitted and the spring caps 12 have the flanges 18 and portions 14 in engagement with the spring strip 20 and secured thereto in any desired manner.

The spring strips 20 and caps 11 are covered with the usual webbing covering 21 over which is placed the covering 22 of duck or other suitable material which extends over all the springs and is brought down to the lower frame 1 so as to be secured to the tacking strips 6. To the covering 22 there are stitched a pair of strips 23 which provide spaces in which is placed a stuffing 24 of tow, hemp or other suitable material, the strips 23 being so positioned on the covering 22 that the stuffing 24 will rest upon the clips 17 thus forming edge strips along the front and rear edges of the cushion. Between the edge strips there is placed an upholstery piece 25 of hair felt or other suitable material which is made longer than the length of the seat so that its ends may be lapped or folded back as at 26 in Fig. 2 to form edge pieces resting on the clips 17. The portions folded back at 26 and the stuffing 24 together form edges extending about the entire periphery of the cushion and serve to retain the hair stuffing 27. Over all is stretched the usual muslin cover 28 and outside cover 29 of plush or other material the ends of which are brought down and secured to the tacking strips 6.

In the modified construction shown in Figs. 7, 8, 9 and 10 the upper frame 2 comprises the spaced wire rectangular members 15 and 16 which are joined by the clips 30. The clips 30 may be short as are the clips 17 shown in Fig. 1 or they may be of greater length as shown in Fig. 7 and as shown in Fig. 10 they extend beneath the frame members 15 and 16 and have their outer ends bent around the frame members while their centers are bent up between the frame members to form engaging surfaces upon which rest the spring strips 31 which engage the spring caps 12 of the end rows of springs 10 and the spring strips 32 which are secured to the spring caps 11 on the springs 9. The spring caps 12 have the flanges 18 which engage beneath the upwardly bent portions of the clips 30 and the offset portions 14 which engage with the covering piece 22. As in the previous construction, the offset portion 14 of the spring caps 12 along the front and rear edges of the cushion engage with the spring strips 32. Over the spring strips 32 are placed the coverings 21 and 22, the covering 22 having the strips 23 secured thereto so that the stuffing 24 will rest upon the clips 30, and on the covering 22 is placed the upholstery piece 25, the hair stuffing 27 and the coverings 28 and 29 as in the other modification.

What is claimed is:

1. In a seat cushion, a frame comprising spaced wire rectangles, spring strips connecting opposite sides of said frame and spring caps having flat spring engaging portions and flange portions and substantially flat offset portions secured to said spring strips.

2. In a seat cushion, spaced wire rectangles, clips connecting said wires, spring caps secured to said clips and spring strips connecting opposite sides of one of said rectangles and engaging said spring caps.

3. In a seat cushion, a frame comprising spaced wire rectangles, clips connecting said rectangles, spring caps having inclined flanges secured to said clips and holding said clips inclined and edge pieces carried by said clips.

4. In a seat cushion, spaced wire rectangles, clips connecting said wires, spring strips connecting opposite sides of said rectangles, spring caps secured to said clips and engaging said strips and edge pieces carried by said clips.

5. In a seat cushion, a frame comprising spaced wire rectangles secured together, spring strips connecting opposite sides of one of said rectangles and spring caps having spaced angularly disposed portions secured to said spring strips.

6. In a seat cushion comprising coverings, a frame comprising continuous members forming spaced rectangles and means connecting said members permitting relative movement of said members and spring caps secured to said means and having flat offset portions serving as supports for the coverings.

7. In a seat cushion, a frame comprising continuous members forming spaced rectangles, clips connecting said members permitting relative movement of said members, means connecting opposite sides of said rectangles and spring caps having offset portions engaging said means.

8. In a seat cushion, a frame comprising spaced relatively movable connected wire rectangles, spring strips connecting opposite sides of one of said rectangles and spring caps having spaced portions secured to said spring strips.

9. In a seat cushion, a frame comprising spaced relatively movable wire rectangles, means connecting said rectangles, spring strips connecting opposite sides of said rectangles, spring caps connected to said spring strips and said connecting means, said spring caps holding said connecting means

inclined, and edge pieces supported by some of said strips and said connecting means.

10. In a seat cushion, a frame comprising spaced relatively movable wire rectangles, clips connecting said rectangles, spring strips connecting opposite sides of one of said rectangles, spring strips connecting opposite sides of the other of said rectangles and spring caps having spaced portions secured to the ends of one set of spring strips.

In witness whereof I have hereunto set my hand.

VICTOR WILLOUGHBY.