

E. G. BUDD.

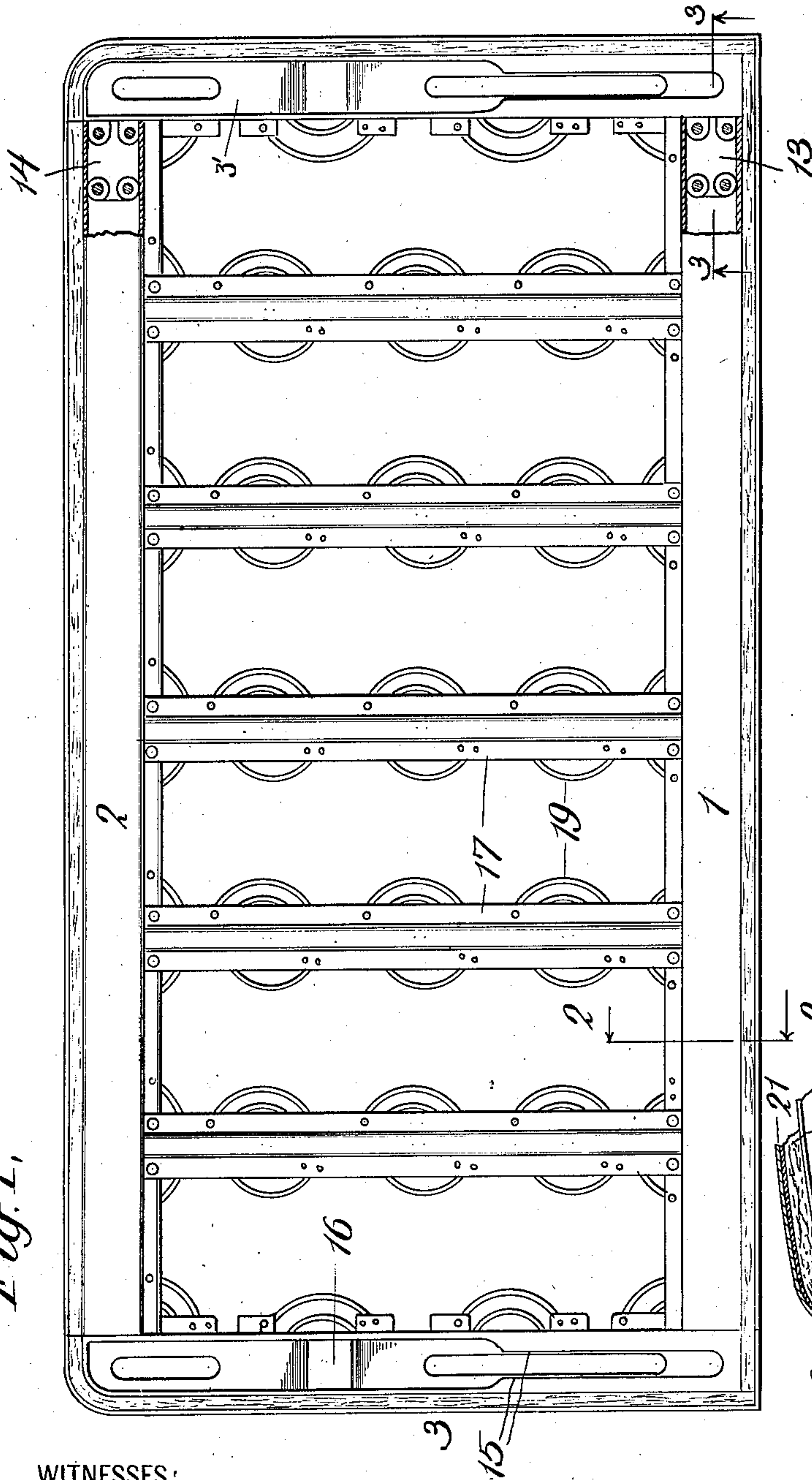
CUSHION.

APPLICATION FILED MAR. 14, 1907.

944,662.

Patented Dec. 28, 1909.

Fig. 1.



WITNESSES:

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Fig. 3.

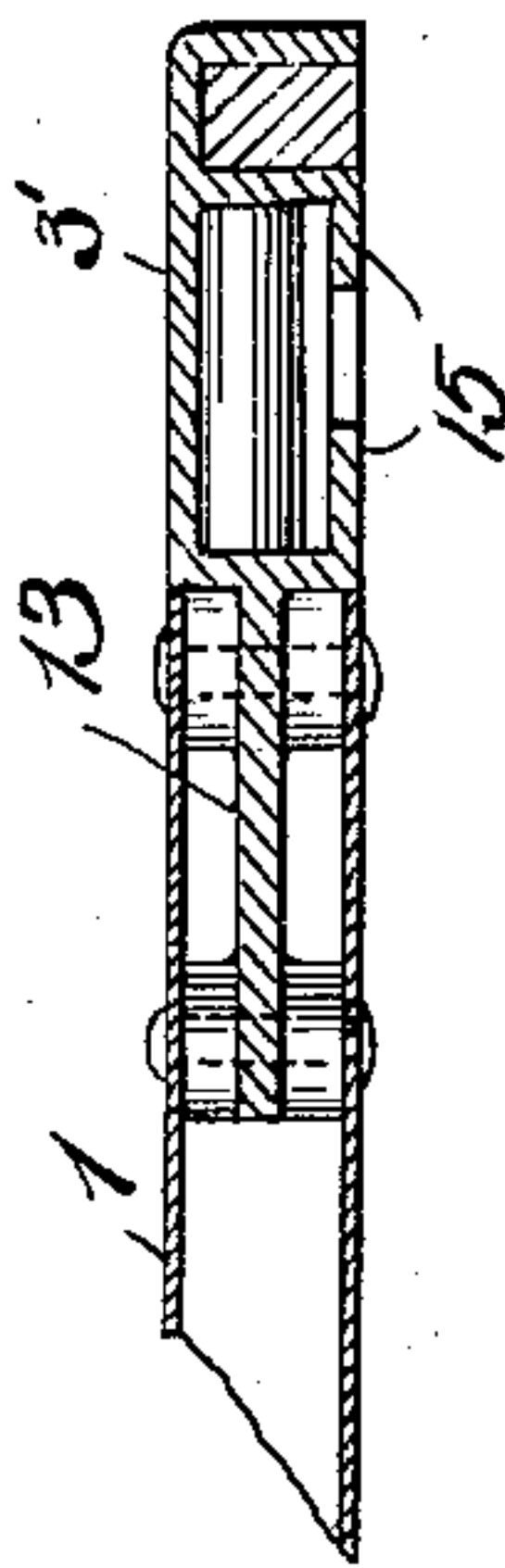
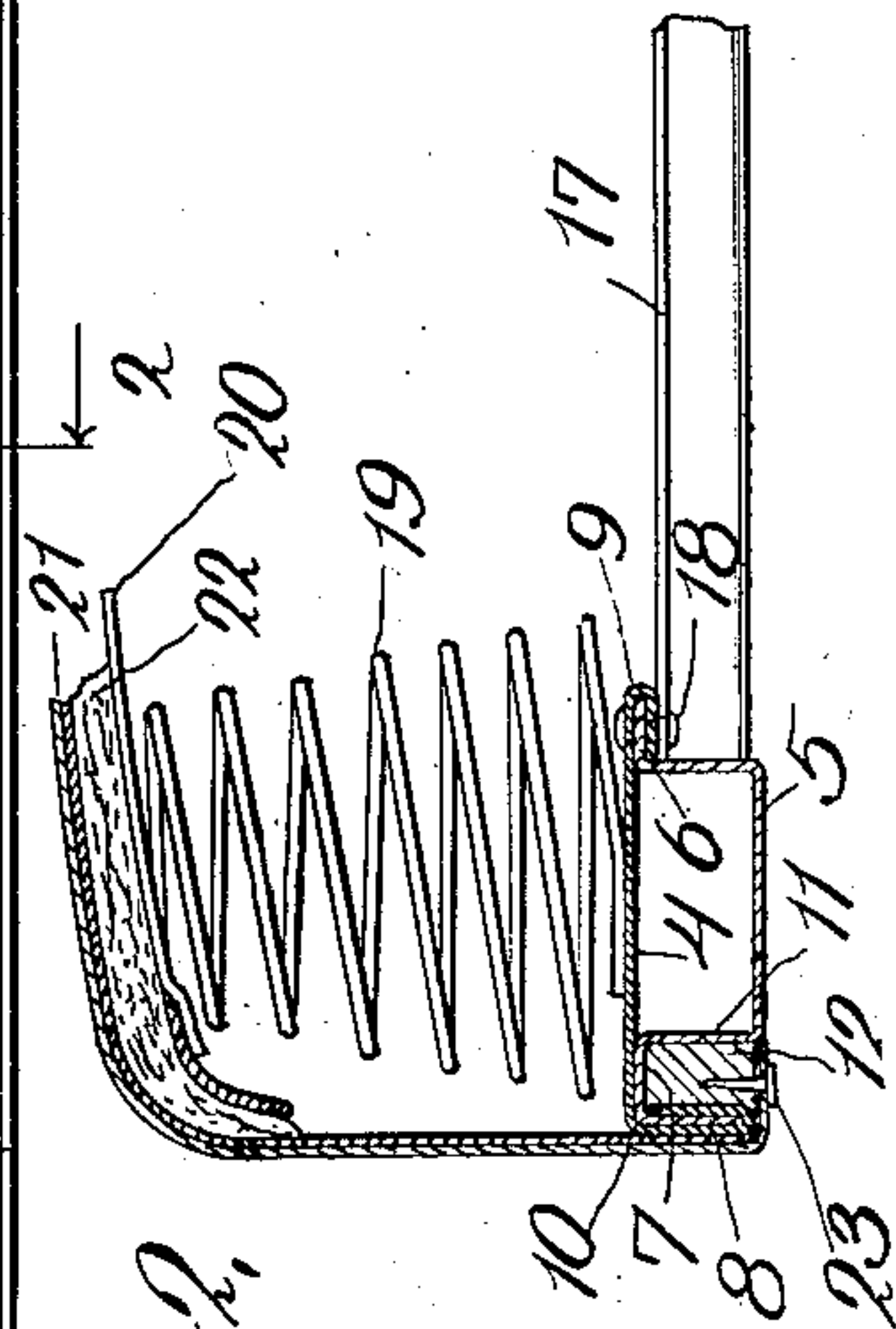


Fig. 2.



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CUSHION.

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Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, EDWARD G. BUDD, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Cushions, of which the following is a specification.

This invention concerns cushions for various uses and adapted particularly for use as seat-cushions for seats of the type commonly employed in railway cars.

The object of the invention is to effect certain improvements in the construction of cushions for these uses, to the end that a cushion is provided which possesses great strength, which can be manufactured at small cost, which is provided with means for facilitating the attachment of the covering material of the cushion to the frame, and which is constructed largely or entirely of metal, so as to be substantially or entirely fireproof.

In accordance with my invention, the cushion consists of a metallic frame, on which are mounted spiral springs for yieldingly supporting the covering material. The longitudinal or side members of the metallic frame are made from sheet-metal strips pressed into form so as to provide open space between the opposite sides thereof and thus secure great strength. The end members of the frame are metallic castings, the ends of which are specially formed, in order that they may be readily secured to the ends of the sheet-metal side members. Both the castings for the end members and the sheet-metal side members have grooves formed therein to receive strips to which the edges of the covering material may be tacked, these grooves being open only at the bottom of the cushion, so that the tacking strips are protected by the metal on all sides except that to which the covering is secured.

The preferred embodiment of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a bottom view of the cushion; Fig. 2 is a section on line 2—2 of Fig. 1; and Fig. 3 is a section on line 3—3 of Fig. 1.

Referring to these drawings, the frame of the cushion is of rectangular shape and consists of the side members 1 and 2 and the end members 3 and 3'. Each of the side members 1 and 2 is formed of two sheet-metal

strips 4 and 5, pressed to the cross-sectional shape shown in Fig. 2, so as to provide open space between the opposite sides thereof, in order to secure greater strength. The strip 5 is bent longitudinally to form three sides of the rectangle of the frame-piece, and at one edge has an outwardly extending flange 6. At its other edge, the strip 5 is bent outwardly as shown at 7 and then downwardly to provide a flange 8 parallel to the side members of the rectangle. The strip 4 has a fold 9 at one of its lateral edges, inclosing the flange 6 on the strip 5. At its other lateral edge, it is provided with a downwardly extending fold 10 inclosing the flange 8 at the other edge of the strip 5. The two strips thus constructed constitute a frame-member possessing great strength, and the flange 8 and fold 10 and the side 11 of the strip 5 provide a groove open at the bottom of the frame-member, in which is received a strip 12 of paper, wood or any other suitable material, to which the covering material of the cushion may be tacked. The strip 12 may be impregnated with a fireproofing compound, if desired.

The end members 3 and 3' of the frame are castings, each having at its end offsets 13 and 14 adapted to enter within the ends of the side members 1 and 2. Rivets or bolts may then be inserted through openings in the side members and these offsets to secure the ends of the frame members together. One end of each of the end members 3 and 3' may be rounded off, as shown in Fig. 1, and each of these members has a groove formed therein, corresponding in size to the grooves in the side members 1 and 2 and alining therewith. The cushion shown in the drawings is adapted particularly for use in seats of the type employed in sleeping cars, and the end members 3 and 3' are therefore formed to facilitate moving the cushion to a forward position, in which, with the back-cushion and the seat- and back-cushions of an adjacent seat, it forms a bed. For this reason, the end members 3 and 3' have grooves formed in the under side thereof, with inwardly extending ribs 15 at their lower edges, adapted to coact with the head of a stud on the frame which supports the cushion. Also, these end members have depressions 16 formed therein to receive the heads of these studs when the cushion is in the rearward position.

The flange 6 and fold 9 on each of the side members 1 and 2 constitute a flange extending inwardly of the frame, and a plurality of channeled metallic slats 17 extend across the frame and are secured at their ends by rivets 18 to these flanges. These slats 17 support a plurality of spiral springs 19, and flat springs 20 extend across and are supported by the upper ends of these spiral springs 19. The covering material 21 and, if desired, a sheet of felt or other upholstery material 22, are drawn over the flat springs 20, the edges of the covering 21 being carried down over the sides of the cushion and under the edge of the frame, where they are secured to the strips 12 by tacks 23.

The cushion thus constructed is of great strength, both because of the construction of the members of the frame and because of the manner in which the ends of these members are connected together. The tacking strips 12 afford means for readily securing the covering material to the frame, and these strips are amply protected by the metallic parts inclosing them. The cushion thus constructed can be manufactured at comparatively small cost. If desired, the covering material of the cushion may be formed of woven metallic strands, the upholstery material 22 omitted or replaced by a woven fabric of flat spring strips and the strips 12 impregnated with a fireproofing compound, so that the structure is entirely fireproof.

Having now described my invention, what I claim as new therein and desire to secure by Letters Patent is as follows:—

1. In a cushion, a frame consisting of frame members secured together at their ends, certain of said members being of sheet-metal pressed to form a rectangular cross-section with open space between the opposite sides of the member and to provide an integral portion extending outwardly from the upper edge of the member and then downwardly to form a lengthwise groove open at the bottom of the member, substantially as set forth.

2. In a cushion, a frame consisting of frame members secured together at their ends, certain of said members consisting of two sheet-metal strips one having flanges at its lateral edges and the other having folds inclosing said flanges, said strips being bent

longitudinally intermediate their edges to provide open space between them, an integral flange extending inwardly of the frame, and an integral flange extending outwardly from the upper edge of the member and then downwardly to form a lengthwise groove open at the bottom of the frame, substantially as set forth.

3. In a cushion, the combination of a frame consisting of side and end members secured together at their ends, said end members being metallic castings each having a lengthwise groove and a depression in the under side thereof, springs supported on said frame, and a covering extending over said springs and secured at its edges to said frame, substantially as set forth.

4. In a cushion, the combination of a frame consisting of side and end members secured together at their ends, said side members being of sheet-metal and said end members being metallic castings each having a lengthwise groove and a depression in the under side thereof and ribs extending inwardly at the bottom of said groove, springs supported on said frame, and a covering extending over said springs and secured at its edges to said frame, substantially as set forth.

5. In a cushion, a rectangular frame consisting of side and end members, said side members being formed of sheet-metal strips pressed to provide open space between opposite sides thereof and said end members being castings each having integral offsets on one side thereof, one adjacent to each end, entering within and secured to the ends of said sheet-metal members, each of said members having a lengthwise groove therein for a tacking strip and each of said end members having a lengthwise groove and a depression in the under side thereof, tacking strips located in the grooves therefor, metallic slats extending across the frame and secured thereto, springs mounted on said slats and a covering yielding sustained by said springs and secured at its edges to said strips, substantially as set forth.

This specification signed and witnessed this 4th day of March, 1907.

EDWARD G. BUDD.

Witnesses:

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P. J. TUCKER.