

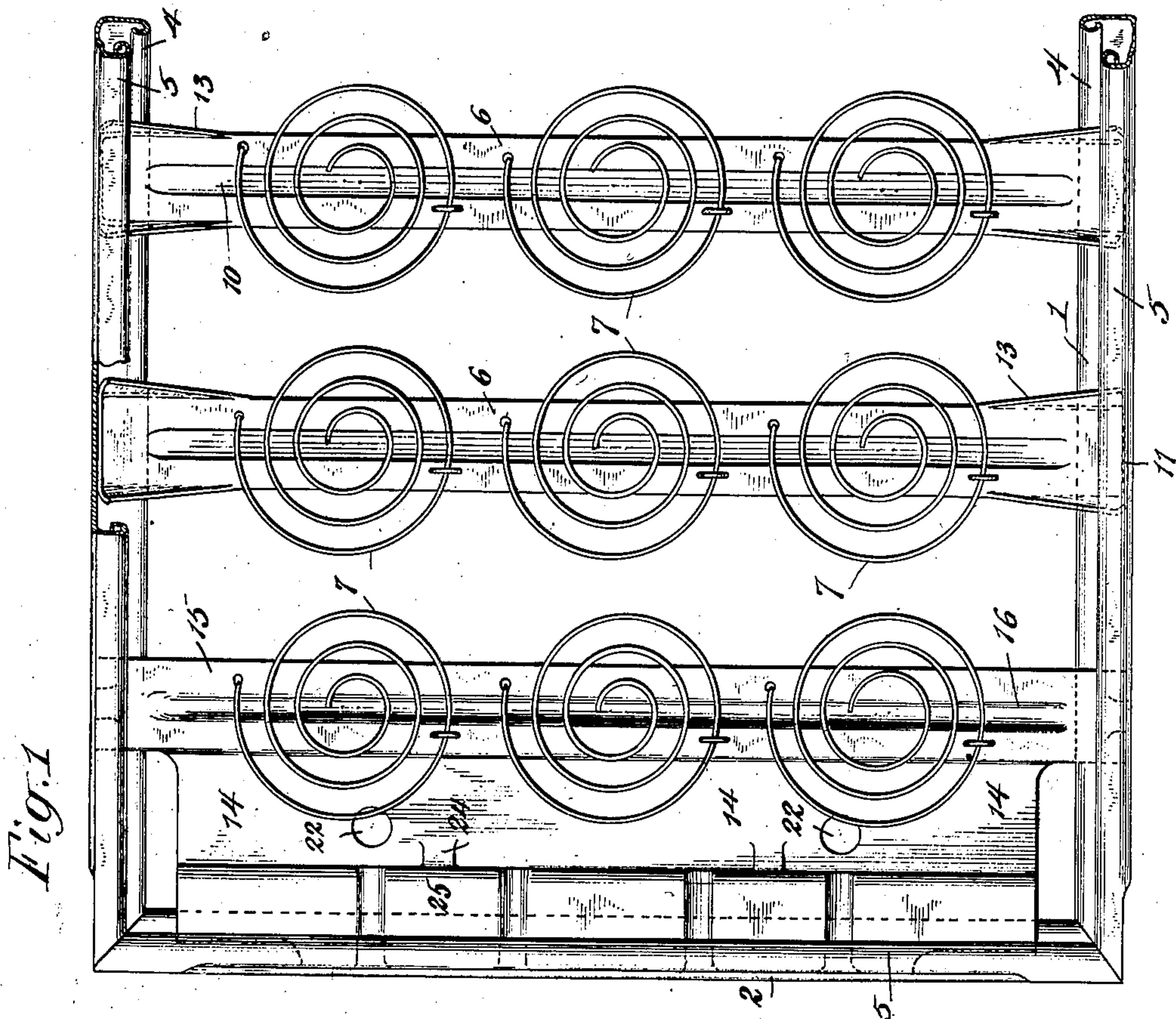
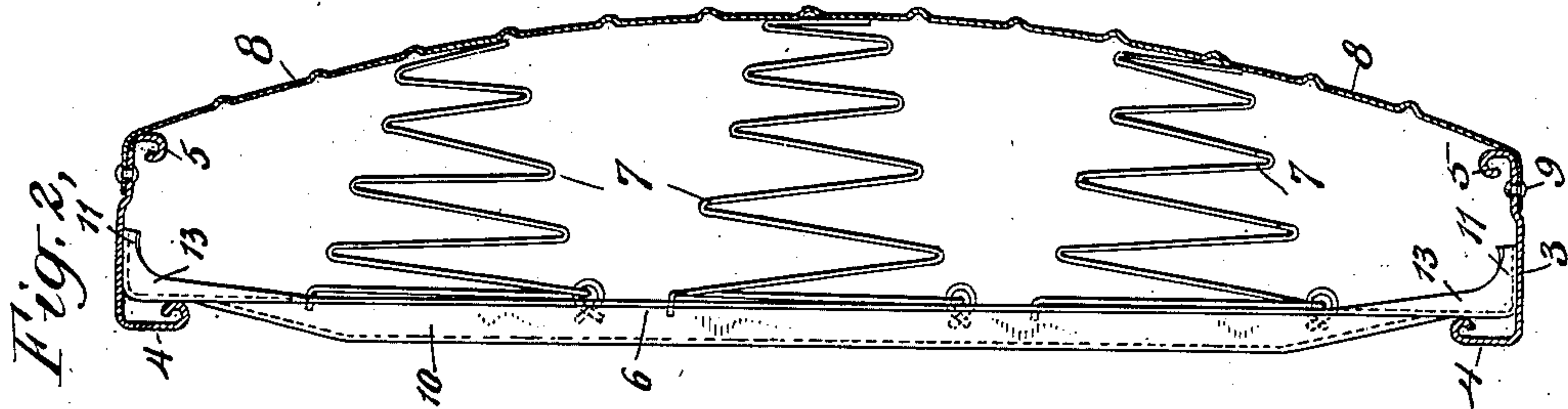
No. 862,538.

PATENTED AUG. 6, 1907.

E. G. BUDD.
CUSHION.

APPLICATION FILED APR. 7, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR

E. G. Budd
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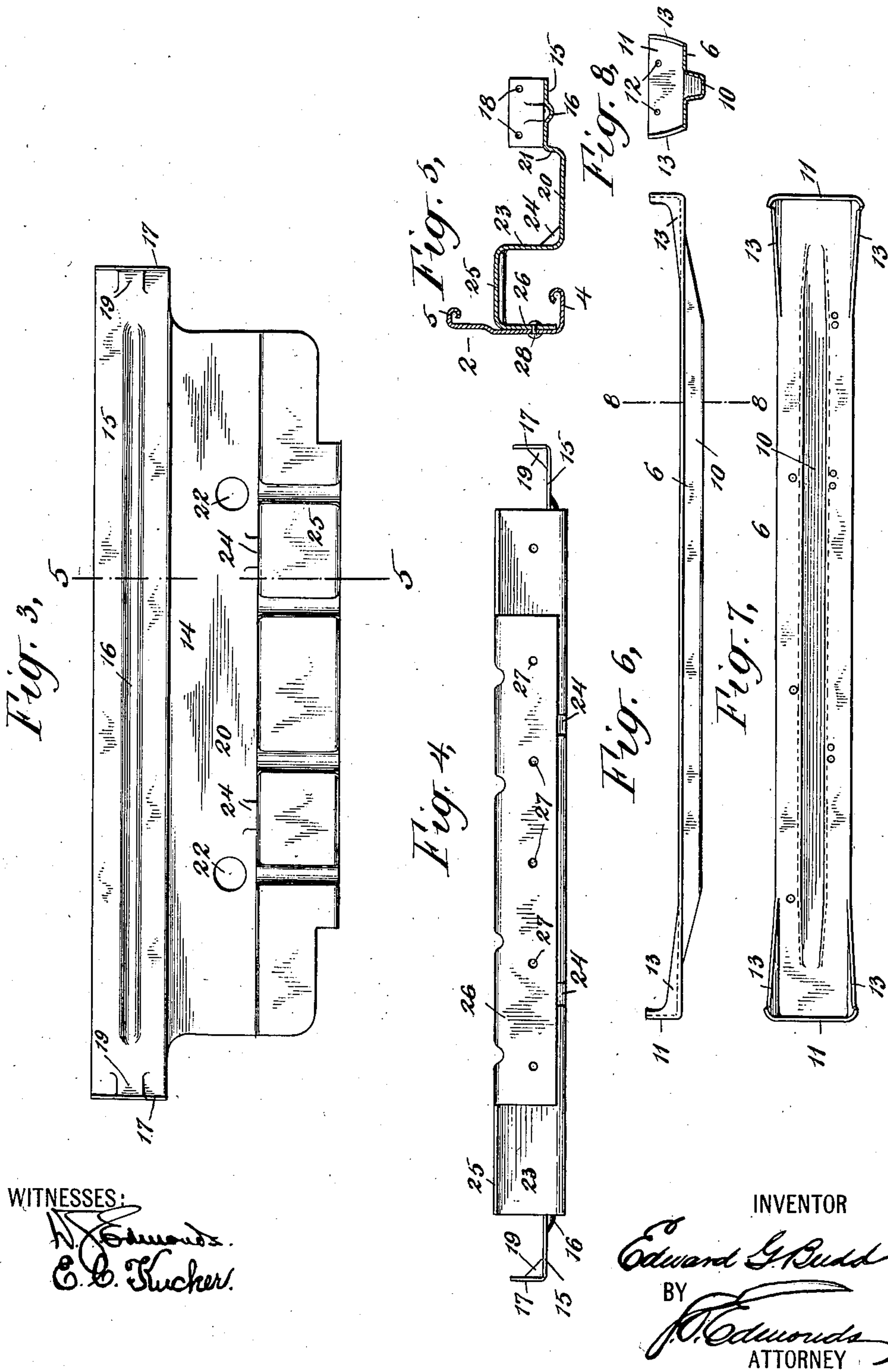
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UNITED STATES PATENT OFFICE.

EDWARD G. BUDD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HALE-KILBURN METAL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CUSHION.

No. 862,538.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed April 7, 1906. Serial No. 310,460.

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 certain new and useful Improvements in Cushions, (Case B), of which the following is a specification.

This invention relates to cushions and more particularly to that class employed as seat cushions for seats of the type commonly used in cars.

The object of the invention is to effect certain improvements in cushions of this type whereby maximum strength is obtained, and moreover, a simple and inexpensive construction is provided.

In accordance with my invention I construct a cushion having a frame formed of sheet-metal frame sections which may be pressed to the desired form at relatively small expense; extending across between opposite members of this frame are a plurality of transverse rails or slats which serve to prevent the distortion of the cushion frame and also support the springs which yieldingly position the covering material of the cushion. These transverse slats are peculiarly formed to give greater strength and in order that they will better withstand the strain to which they are subjected. At the ends of the frame I provide rocker plates which co-act with the rockers ordinarily employed in car seats to support the cushion and these rocker plates may be so formed that they also serve as slats at the ends of the cushion for supporting sets of springs. In order that these rocker plates may be more firmly secured to the frame of the cushion I provide them with integral portions which may be secured to the end members of the cushion frame, and these end portions are shaped so that they do not in any way interfere with the flanges provided at the lower edges of the end members of the frame to which the covering material of the cushion is secured.

I have illustrated the preferred embodiment of my invention in the accompanying drawings, in which Figure 1 is a top view of one end of the cushion with the covering removed, Fig. 2 is a section of the same, Fig. 3 is a top view of one of the rocker plates, Fig. 4 is a side view of the same, Fig. 5 is a section on line 5—5 of Fig. 3, Fig. 6 is a side view of one of the transverse slats, Fig. 7 is a top view of the same, and Fig. 8 is a section on line 8—8 of Fig. 6.

Referring to these drawings, the frame of the cushion is of rectangular shape and consists of a plurality of frame sections secured together at their ends in any suitable manner as by mitering the ends and riveting right angle braces thereto. Both the side members 1 and the end members 2 of the frame are preferably formed of sheet-metal, pressed to the desired form. Their cross-sectional shape may be that shown in Fig. 2, that is, they may have a body portion 3 and inwardly

extending flanges 4 and 5 at the lower and upper edges respectively. The flange 4 may be curled at its end to facilitate attaching the covering material thereto, and the upper flanges 5, may also be curved to give a rounded upper edge to the cushion.

Extending across between the side members 1 and the frame are a plurality of transverse rails or slats 6, secured at their ends to the side members 1, and each of these slats is arranged to carry a series of spiral springs 7, which at their upper ends support flat springs 8, extending across the cushion and secured at their ends by rivets 9 to the side members 1. The covering material, not shown in the drawings, is drawn tightly over these flat springs 8 and secured to the flanges 4 in any suitable manner. Each of the slats 6 is provided with a lengthwise corrugation 10, as shown in Figs. 6, 7 and 8, which serves to stiffen the slat, and each slat has integral angular feet 11, preferably bent at right angles to the body portion of the slat and provided with openings 12 for the reception of rivets by which the feet are secured to the side members 1 of the frame intermediate the flanges thereof. In order to hold the angular feet 11 more securely relatively to the body portion of the slats 6, side flanges 13 are formed integral with the body portions of the slats and the feet thereof, the ends of these side flanges 13 extending beyond the ends of the corrugations 10 so that the slats are stiffened throughout their length and bending thereof except under unusual strain is prevented.

At the ends of the frame are rocker plates provided with openings to receive the dowel pins ordinarily provided on the rockers of car seats. These rocker plates are so formed that they not only serve to support the cushion upon the rockers but also support a series of springs so that the employment of slats at the ends of the frame is avoided. The construction of the rocker plates is best shown in Figs. 3, 4 and 5, from which it will be seen that each plate 14 is formed from a stamping of sheet-metal, pressed to the desired shape. Each of the plates has an integral slat portion 15 provided with a lengthwise corrugation 16 and integral angular feet 17 having openings 18 therein by which connection to the frame members 1 is effected. The feet 17 are sustained in position by gussets 19. Adjacent to and integral with the slat portion 15 is a rocker portion 20 connected to the slat portion 15 by a web 21, so that the rocker portion 20 will be at a lower level than the slat portion 15, and this rocker portion has openings 22 therein for the dowel pins of the rocker. On the other side of the rocker portion 20 is an integral extension which is adapted to be secured to the end member 2 of the cushion frame to support the rocker plate thereon, but in order to leave a clearance around the flange 4 of the end member, this

extension is bent in such a way as to leave free space between it and flange 4. This will be best understood from Fig. 5, which shows the extension as consisting of a portion 23, bent at right angles to the rocker portion 20, strengthening gussets 24 being provided to stiffen the construction, a portion 25, extending in a plane parallel to the rocker portion 20 and a downwardly turned flange 26 at the end of the portion 25, which is provided with openings 27 for rivets 28, by which the rocker plate is secured to the end member of the frame. The horizontal portion 25 of the extension of the rocker plate may be provided with transverse corrugations to prevent twisting thereof. The rocker plate is secured in position at the end of the frame, as shown in Fig. 1, and is supported both by the side members of the frame and the end member and when thus held in position the springs 7 are mounted on the slat portion of the rocker plate.

It will be seen more particularly from Fig. 5 that the construction of the rocker is such that while it is supported by the end member of the frame, an ample clearance is provided around the flange 4 of the end member so that the covering material of the cushion can be readily drawn over this flange and secured thereto.

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

1. In a cushion, a frame formed of sheet-metal frame sections secured together at their ends and each pressed to provide a body portion and inwardly turned flanges at the lateral edges thereof, metallic slats extending across said frame having integral feet bent at substantially a right angle to the body thereof, means for securing the feet of each slat to the body portions of opposite frame sections intermediate the flanges thereof with the feet extending from the slats toward the flanges at the top of the frame, spiral springs mounted upon said slats, and metallic flat springs supported by said spiral springs, substantially as described.

2. In a cushion, a frame formed of sheet metal frame sections having flanges at their edges and secured together at their ends and metallic slats extending across said frame, said slats having angular feet at the ends thereof, means for securing said feet to the frame sections intermediate the flanges thereon, and side flanges lying at an angle to said feet and serving to strengthen the same, said feet and flanges being formed integral with said slats, substantially as described.

3. In a cushion, a frame formed of metallic frame sections secured together, and metallic slats extending across said frame, said slats having angular feet at the ends

thereof, means for securing the same to the frame sections and side flanges lying at an angle to said feet and serving to strengthen the same, both said feet and flanges being integral with the slats and each of said slats having a lengthwise corrugation overlapping said side flanges at its ends, substantially as described.

4. In a cushion, a rectangular frame formed of four metallic frame sections each having a vertically-disposed body portion and integral flanges extending horizontally inward from the upper and lower edges thereof, metallic slats extending across said frame, said slats having integral upwardly turned feet at their ends, and means for securing said feet to the side sections of the frame intermediate the flanges thereon, substantially as described.

5. In a cushion, a metallic frame the members whereof are flanged at the lower edge and a rocker plate extending across the end of the frame and secured to the end member thereof above the flange thereon, substantially as described.

6. In a cushion, a metallic frame the members whereof are flanged at the lower edge, a rocker plate extending across the end of the frame and a portion formed integral with said plate and securing the same to the end member of the frame, said portion being shaped to provide a clearance between it and the flange on said end member, substantially as described.

7. In a cushion, a frame formed of metallic frame sections secured together and each having a flange at its lower edge, a rocker plate extending across the end of the frame at the bottom thereof and means for securing the plate to the end member of the frame leaving free space about the flange at the lower edge of said end member, substantially as described.

8. In a cushion, a metallic frame, a metallic rocker plate extending across the end of said frame said plate having an integral flange and means for securing said flange to the end member of the frame, substantially as described.

9. In a cushion, a rectangular metallic frame, a metallic rocker plate extending across the end thereof said plate having integral feet at the ends thereof and an integral flange at one side and means for securing said feet to the side members of the frame and said flange to the end member of the frame, substantially as described.

10. In a cushion, a frame formed of metallic frame sections secured together and each having a flange at its lower edge, a rocker plate extending across the end of the frame at the bottom thereof, a portion integral with said plate and extending upwardly therefrom and a flange on said upwardly extending portion secured to the end section of said frame, substantially as described.

This specification signed and witnessed this 31st day of March, 1906.

EDWARD G. BUDD.

Witnesses:

MEYER GETZ,
R. M. FRIES.