F. P. D'ARCY.

SEAT CUSHION STRUCTURE.

APPLICATION FILED FEB. 26, 1914.

1,139,644.

Patented May 18, 1915.

2 SHEETS—SHEET 1.

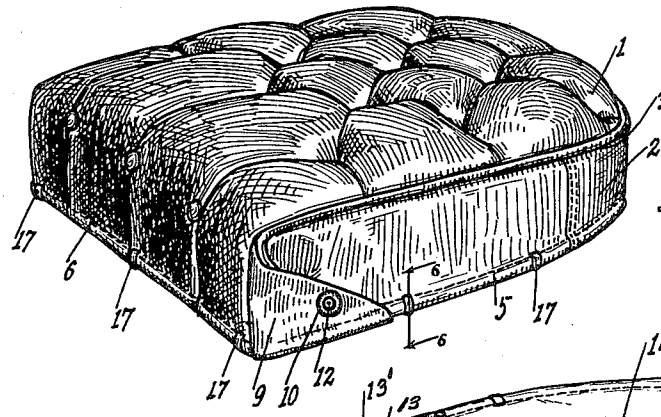


Fig. I.

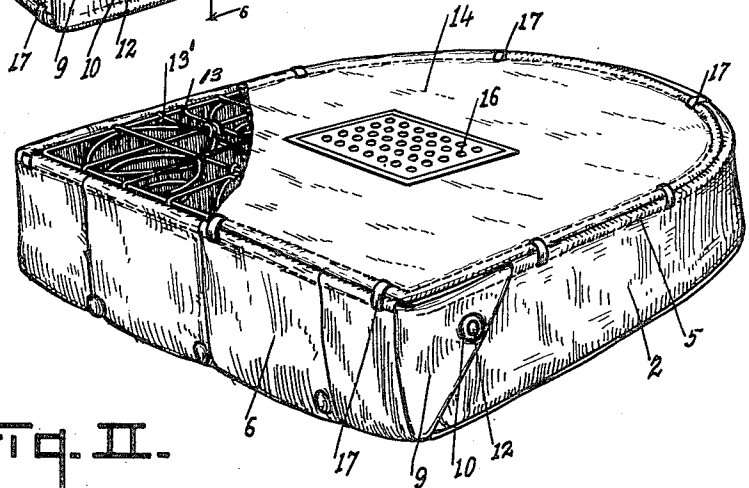


Fig. II.

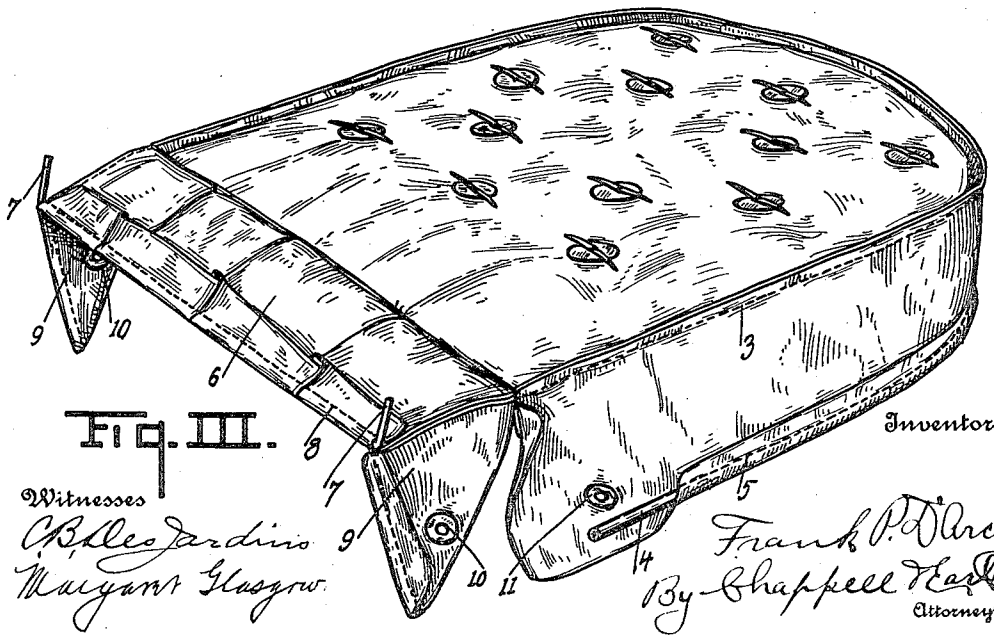


Fig. III.

Witnesses

C. B. Desjardins

Margaret Glasgow

Inventor

Frank P. D'Arcy

By Chappell Hall

Attorneys

F. P. D'ARCY.

SEAT CUSHION STRUCTURE.

APPLICATION FILED FEB. 26, 1914.

1,139,644.

Patented May 18, 1915.

2 SHEETS—SHEET 2.

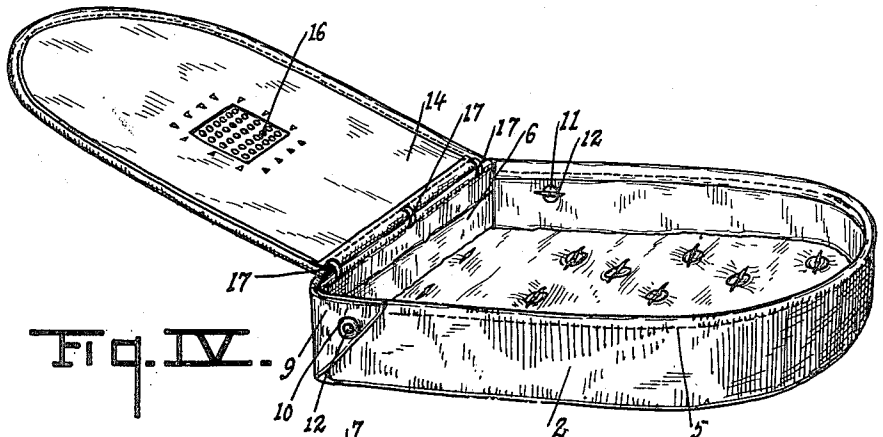


Fig. IV.

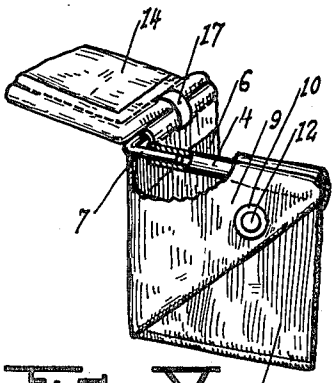


Fig. V.

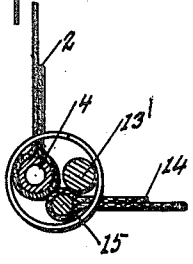


Fig. VI.

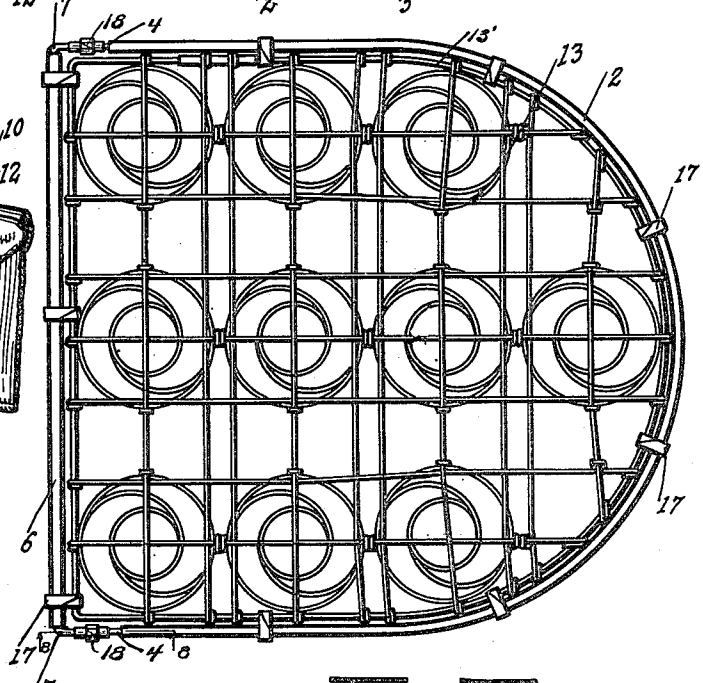


Fig. VII.

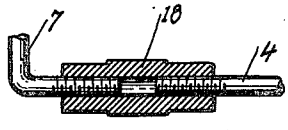


Fig. VIII.

Inventor

Witnesses

O. B. Desjardins

Wm. Grant Glasgow

Frank P. D'Arcy

By Chappell & Co.

Attorneys

UNITED STATES PATENT OFFICE.

FRANK P. D'ARCY, OF KALAMAZOO, MICHIGAN.

SEAT-CUSHION STRUCTURE.

1,139,644. Specification of Letters Patent. Patented May 18, 1915.

Application filed February 26, 1914. Serial No. 821,152.

To all whom it may concern:

Be it known that I, FRANK P. D'ARCY, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, and State of Michigan, have invented certain new and useful Improvements in Seat-Cushion Structures, of which the following is a specification.

This invention relates to improvements in seat cushion structures.

The object of this invention is to provide an improved cushion structure in which the sewing necessary can be done entirely on a machine and in which the springs are placed within the structure and secured therein quickly and easily with a minimum of hand work.

The invention comprises a structure which is provided with an auxiliary bottom frame formed in two sections which can be quickly and easily secured together so that the parts of the cushion structure can be sewed to the auxiliary frame on a machine before the sections of the frame are joined together.

It further consists of a construction in which the cushion structure proper can be joined together and the springs placed within the same and secured thereby by a single operation.

Further objects, and objects relating to details and economies of construction will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure constituting a preferred embodiment of my invention is shown in the accompanying drawing forming a part of this specification, in which:

Figure I is a perspective view of a structure embodying my invention. Fig. II is a perspective view of said structure, the bottom being shown uppermost and a portion of the bottom being broken away to show the set of springs secured in place. Fig. III is a perspective view showing the structure with the sides turned down in position to secure them to the sections of the auxiliary frame. The sections of said frame are shown detached from each other. Fig. IV is a perspective view showing the structure ready to receive the springs and with the bottom thrown back. Fig. V is an enlarged detail fragmentary view of a corner of the structure showing the manner of joining the two sections of the auxiliary frame together. Fig. VI is an enlarged detail sectional view on the line 6—6 of Fig. I, showing the method of securing together the auxiliary frame, the bottom frame, and the border wire of the springs. Fig. VII is a bottom plan view of a modified form of my invention showing the manner of securing the springs in place in the seat structure. Fig. VIII is a detail sectional view on the line 8—8 of Fig. VII, showing the manner of securing the sections of the auxiliary frame together.

In the drawing, similar reference characters refer to similar parts throughout the several views and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Considering the numbered parts of the drawing, 1 is the padded portion of the seat and 2 is a side strip which is stitched or suitably secured to the padded portion, as at 3. An auxiliary bottom frame is provided which is made in two sections, the U-shaped section 4 and a cross bar section which is bent at right angles at its ends as at 7, 7. The ends of the U-shaped section 4 are hollow and the right angled portions 7, 7 of the cross bar fit within the hollow portions of the U-shaped section 4 when the parts of the auxiliary frame are secured together. The U-shaped section is disposed at the bottom of the side strip 2 and the side strip is folded over said U-shaped frame and stitched as at 5. The padded portion is also provided with the section 6 which is secured thereto at the front thereof and is folded over the cross bar section of the auxiliary frame and stitched as at 8.

At the ends of the section 6 are provided the triangular pieces 9, 9 which overlap the adjacent ends of the side strip 2 when the seat structure is assembled. These triangular sections 9, 9 are provided with eyelets 10, 10 which aline with the eyelets 11, 11 provided in the side strip 2 and a clench button or suitable fastener 12 is passed through the same so as to connect the triangular sections and the side strip and thus secure the side portions of the seat structure together. It will be seen that when the side portions are thus secured, the right angle portions 7, 7 of the cross bar are disposed

within the hollow ends of the U-shaped frame member 4.

13 represents a set of springs of any approved construction which is disposed within the recess or chamber formed by the padded portion and the side wall portions. Said set of springs has a border wire 13' around the edge thereof.

A bottom 14 is provided which has at its edge the wire frame 15. The springs are placed within the recess or chamber and the bottom is placed over them. The bottom is then fastened to the seat structure proper by means of the split ring fasteners 17 which embrace the auxiliary bottom frame, the bottom frame 15 and the border wire 13'. The split ring fasteners 17 serve to hold the bottom 14, springs 13, and the auxiliary bottom frame securely in position, and these fasteners 17 can very readily be clamped into place.

Ventilating openings 16 are provided in the bottom to permit of the escape of air from the interior of the cushion.

In Fig. VII I have shown a modification in which the bottom 14 is omitted and the springs are connected to the two part auxiliary bottom frame by means of the split ring fasteners 17. In this structure I connect the ends 7—7 of the cross bar section and the ends of the U-shaped section 4 of the auxiliary frame by means of a coupling 18 provided with right and left hand screw threads engaging the threaded ends of said members. I may also use a ferrule of any kind.

From the description of the parts given above, the method of constructing this cushion can be very readily understood. Fig. III shows the structure with the parts of the auxiliary frame detached from each other and the seat turned wrong side out. In this position the side strip 2 can be sewed to the top 1 and the seam 5 can be stitched in the bottom edge of the strip 2, on a machine. The front strip 6 can also be attached to the top and the seam 8 stitched therein to secure the cross bar section. The structure is then turned right side out by turning the side strip 2 upwardly, the sections of the auxiliary frame are fastened together, the triangular flaps 9 are brought over the ends of the side strip 2 and a clench button or suitable fastener passed through the eyelets 10 and 11. The bottom 14 is secured to the rear cross bar as shown in Fig. IV. The structure is now ready to receive the springs 13 and they are placed within the recess or chamber formed by the top 1 and the side wall portions, as shown in Fig. II. The bottom 14 is then placed over the springs 13 and secured to the auxiliary frame by means of the split ring fasteners 17 which embrace the auxiliary frame, the border wire 13 and the bottom frame and hold them together.

As I have shown in Figs. VII, and VIII, the two parts of the auxiliary frame may be secured together by means of the right and left hand threaded coupling 18. It will also be apparent that the auxiliary frame may be of any shape depending upon the shape of the seat, and that the essence of my invention consists in the provision of an auxiliary frame in two parts which may be detached from each other so that the seat may be turned wrong side out as shown in Fig. III to enable the sewing thereon to be done on a sewing machine.

In Fig. VII I have shown a structure in which the bottom 14 is omitted.

I am aware that the particular embodiment which I have here set forth is susceptible of considerable variation without departing from the spirit of my invention and, therefore, I do not wish to be restricted to the same. However, I have found this to be the preferred form and, therefore, I desire to claim the same specifically as well as broadly as indicated by my appended claims.

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

1. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, flaps carried by said front strip and adapted to overlap the adjacent ends of the side strip, fastening means securing said flaps to said side strip, pockets provided in the lower edges of said side and front strips, an auxiliary bottom frame comprising a U-shaped section disposed in the pocket in the lower edge of said side strip, and a cross bar section disposed in the pocket in the lower edge of said front strip, the ends of said U-shaped section being hollow, the ends of said cross bar section being bent at right angles and inserted in the hollow ends of the U-shaped section, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs having a border wire around the edge thereof, a bottom provided with a bottom frame around the edge thereof, and split ring fasteners embracing said auxiliary bottom frame, said bottom frame and said border wire, and attaching the bottom to said side wall portions, all coacting substantially as described for the purpose specified.

2. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, pockets provided in the lower edges of said side and front strips, an auxiliary bottom frame comprising a U-shaped section disposed in the pocket in the lower edge of said side strip, and a cross bar section dis-

posed in the pocket in the lower edge of said front strip, the ends of said U-shaped section being hollow, the ends of said cross bar section being bent at right angles and inserted in the hollow ends of the U-shaped section, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs having a border wire around the edge thereof, a bottom provided with a bottom frame around the edge thereof, and split ring fastenings embracing said auxiliary bottom frame, said bottom frame and said border wire and attaching the bottom to said side wall portions, all coacting substantially as described for the purpose specified.

3. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, an auxiliary bottom frame comprising a U-shaped section carried by the lower edge of said side strip and a cross bar section carried by the lower edge of said front strip, the ends of said U-shaped section being hollow and the ends of said cross bar section being bent at right angles and inserted in the hollow ends of said U-shaped section, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs having a border wire around the edge thereof, a bottom provided with a bottom frame around the edge thereof, and split ring fastenings embracing said auxiliary frame, said bottom frame and said border wire, and securing the bottom to said side wall portions, all coacting substantially as described for the purpose specified.

4. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, an auxiliary bottom frame comprising a U-shaped section carried by the lower edge of said side strip and a cross bar section carried by the lower edge of said front strip, said sections being detachably connected together, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs having a border wire around the edges thereof, a bottom provided with a bottom frame around the edges thereof, and split ring fastenings embracing said auxiliary frame, said bottom frame and said border wire, and securing the bottom to said side wall portions, all coacting substantially as described for the purpose specified.

5. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, flaps carried by said front strip and adapted to overlap the adjacent ends of the side strip, fastening means securing said flaps to said side strip, pockets provided in the lower part of said side and front strips, an auxiliary bottom frame comprising a U-shaped section disposed in the side strip pocket and a cross bar section disposed in the front strip pocket, said sections being detachably connected together, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs being provided with a border wire around the edge thereof, and split ring fastenings embracing said auxiliary bottom frame and said border wire for securing said springs in place in said chamber, all coacting substantially as described for the purpose specified.

6. In a structure of the class described, the combination of a top portion, side wall portions comprising side and front strips secured at their upper edges to said top portion, pockets provided in the lower part of said side and front strips, an auxiliary bottom frame comprising a U-shaped section disposed in the side strip pocket and a cross bar section disposed in the front strip pocket, said sections being detachably connected together, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs being provided with a border wire around the edge thereof, and split ring fastenings embracing said auxiliary bottom frame and said border wire for securing said springs in place in said chamber, all coacting substantially as described for the purpose specified.

7. In a structure of the class described, the combination of a top portion, side wall portions comprising two sections, each of said sections being secured to said top portion at its upper edge, an auxiliary bottom frame comprising two sections detachably con- the combination of a top portion, side wall portions of said seat structure, a set of springs disposed in the chamber formed by said top portion and said side wall portions, said set of springs having a border wire around the edge thereof, a bottom provided with a bottom frame around the edge thereof, split ring fastenings embracing said auxiliary frame, said bottom frame and said border wire for securing said springs in place in said chamber, all coacting substantially as described for the purpose specified.

8. In a structure of the class described, the combination of a top portion, side wall portions comprising two sections each secured at its upper edge to said top portion, an auxiliary bottom frame comprising two sections detachably connected together and carried by the side wall portions of said structure, a set of springs disposed in the chamber formed by said top portion and said side wall portions, and means engaging said auxiliary bottom frame for securing

said springs in place in said chamber, all coacting substantially as described for the purpose specified.

9. In a structure of the class described, the combination of a top portion, side wall portions, an auxiliary bottom frame connected to said top portion by said side wall portions comprising two sections detachably connected together, a set of springs disposed in the chamber formed by said top portion and said side wall portions and means engaging said auxiliary bottom frame for securing said springs in place.

10. In a structure of the class described, the combination with a top portion and side wall portions of an auxiliary bottom frame connected to said top portion by said side wall portions comprising a plurality of sections detachably connected together and a set of springs disposed in the chamber formed by said top portion, said side wall portions and said bottom frame.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

FRANK P. D'ARCY. [L. S.]

Witnesses:
EDWARD T. CLARY,
R. H. CARROLL.