C. F. GREEN.

SEAT SPRING.

APPLICATION FILED NOV. 18, 1918.

1,415,837. Patented May 9, 1922.

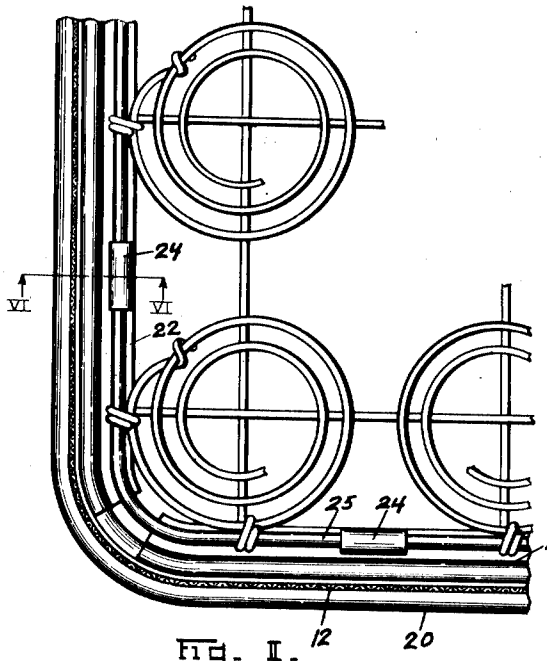


Fig. II.

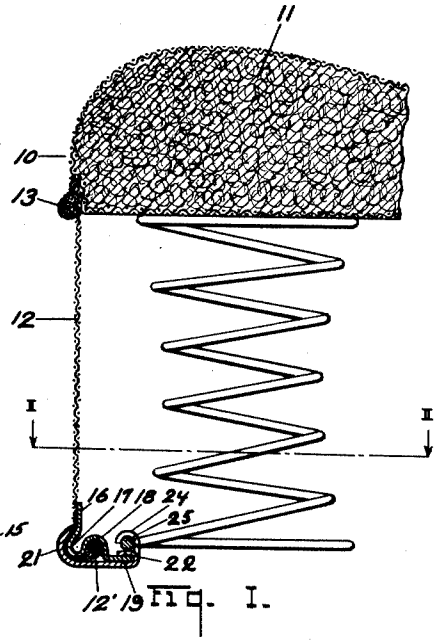


Fig. I.

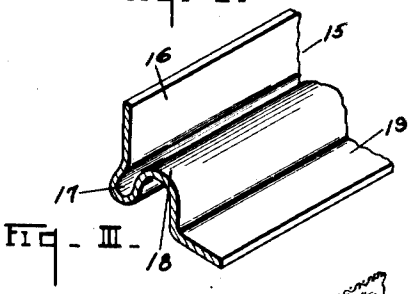


Fig. III.

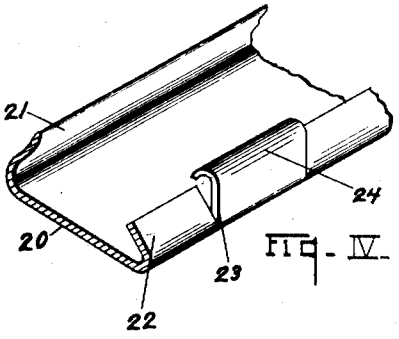


Fig. IV.

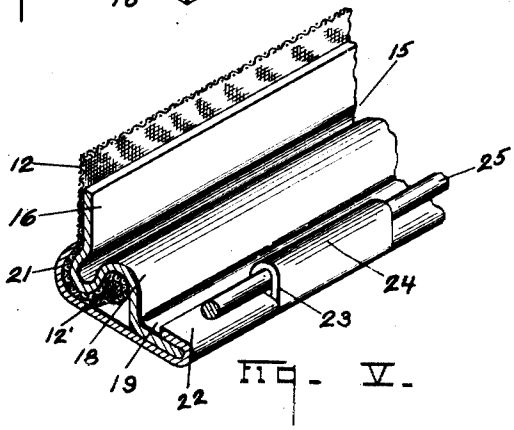


Fig. V.

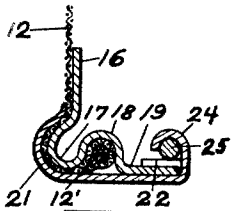


Fig. VI.

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UNITED STATES PATENT OFFICE.

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SEAT SPRING.

1,415,837. Specification of Letters Patent. Patented May 9, 1922.

Application filed November 18, 1918. Serial No. 262,991.

To all whom it may concern:

Be it known that I, CHARLES F. GREEN, a citizen of the United States, residing at Defiance, county of Defiance, and State of Ohio, have invented certain new and useful Improvements in Seat Springs, of which I declare the following to be a full, clear, and exact description.

This invention relates to cushion seats and has more particular reference to the means employed for quickly and permanently attaching the skirt of the cushion seat to the seat spring or the frame enclosed thereby. An object of the invention is to provide a particularly efficient means for clamping the lower edge of the cushion skirt between a plurality of plates to securely bind the plates to the lower edge of the skirt; one or both of said plates being provided with means whereby the strip may be secured to and support the spring frame.

Further objects of this invention are to provide a means of the character indicated which will particularly facilitate the quick assembling and permanently attaching of the parts. Moreover, it is an object of the invention to provide on the exterior lower edge of the cushion skirt a continuous, unbroken metal protecting edge, which will have the advantage of reinforcing the lower edge of the skirt and preventing wearing of the same due to contact with the frame of the motor vehicle or other structure upon which the cushioned seat is used.

Further objects of the invention relate to economies of manufacture and details of construction as will hereinafter appear from the detailed description to follow. I accomplish the objects of my invention in one instance by the means and devices described in the following specification, but it is evident that the same may be widely varied without departing from the scope of the invention as pointed out in the appended claims. A structure embodying one form of my invention, which may be the preferred, is illustrated in the accompanying drawings, forming a part hereof, in which:

Figure I is a vertical transverse sectional view of the cushioned seat and my improved attaching means illustrated therein.

Figure II is a longitudinal sectional view taken on the line II—II of Figure I.

Figure III represents a perspective view of one of the parts of the plate for securing the skirt of the cushion to the spring frame unit.

Figure IV represents a co-acting plate used with the plate shown in Figure III.

Figure V is a perspective view showing the strip assembled to the cushioned skirt and to a portion of the spring frame unit.

Figure VI is a sectional view taken on the line VI—VI of Figure II.

Referring to the drawings, the upholstered and fabric portion of the improved spring cushioned seat is illustrated at 10 as including an upward upholstered portion 11, and a depending skirt portion 12 secured to the portion 11 in any convenient manner as, for example, by the bead 13. The skirt portion 12 is adapted to enclose the spring frame and springs of the cushioned seat and is also provided adjacent the lower edge thereof with means for securely attaching the skirt to the spring frame and supporting the frame in the assembled cushioned seat. My present invention is particularly concerned with the last mentioned means and one embodiment thereof is illustrated in the drawings. A feature of the invention is the provision of two co-acting plates for binding the lower edge of the skirt 12 in clamping relation between the two, and also forming means for securing the same to the spring frame and supporting the spring frame properly within the cushioned seat, the construction being such that the same may be readily assembled by temporarily locking or hooking the frame in the plate sections referred to and then thereafter permanently locking or hooking the two together.

To these ends I have provided an inner plate 15, a portion of which is illustrated in Figure III, the same having an upright vertical flange 16, a beaded angular edge 17 with a reverse U-shaped bend 18 extending inwardly from the outside face of plate 15, the U-shaped portion terminating in an inwardly extending flange 19. The U-shaped portion 18 of the plate is adapted to form a recess within which the lower edge of the skirt 12, which may include a bead 12′, may be located. Plate 15 is located inside the skirt 12, while co-operating therewith is a binding and attaching plate 20, shown in Figure IV, adapted to bind the skirt 12 between the same and the plate 15 as shown in Figure V. One suitable form of plate 20 is to provide the main portion thereof with

an upturned, outwardly curled edge 21, which is shaped and proportioned to curl around the angular edge bead 17 on the plate 15. The inner edge of the plate 20 may also be provided with an upturned reversely bent flange 22 adapted to be clamped upon the inwardly extending flange 19 of the first mentioned plate. The flange 22 of the plate 20 may be cut at intervals on the line 23 to form the upwardly reversed ears or hooks 24, which may be used as means to clamp the plates 15 and 20 to the spring unit or its frame, as, for example, to the border wire 25 thereof. Any number of ears 24 may be provided at any desired point around the peripheral edge of the plate 20, as will be apparent from inspection of Figure II. The plate 20 may extend entirely around the perimeter of the seat, while the plates 15 may extend across one side only, if desired.

From the structure described it will be apparent that the lower edge of the skirt 12 with the bead 12′ may be clamped between the plates 15 and 20 by positioning the plates inside the skirt 12 with the bead 12′ within the U-shaped recess 18, after the co-acting plate 20 had been placed around the seat. The strip 12 will then be clamped between the outcurled edge 21 of the strip 20 and the bead 17 of the strip 15, while the flange 22 of plate 20 is clamped down on to the inwardly extending portion 19 of plate 15. With this metallic strip unit secured to the lower edge of the skirt 12, the parts may then be assembled to form the complete spring cushion seat after the spring unit with the frame thereof have been disposed within the skirt 12. The border wire 25 temporarily hooked under the ears 24 and in this way the frame for the spring is first temporarily attached to the supporting strips on the skirt 12. Thereafter, by the use of any suitable implements the hooks 24 may be clamped down to permanently fix the plates with the wire 25.

The co-acting plates 15 and 20 form particularly efficient and stiffening means for joining the parts of the cushioned seat referred to, and it will be noted that there is formed by the curled portion 21 of the plate 20 a continuous strip of metal extending entirely around the lower peripheral exposed edge of the skirt 12 to protect the same from wear as the cushioned seat is applied to and removed from the frame within which the seat is normally placed when in use. By the use of the plates 20 and 15 arranged in substantially the manner described, a particularly strong frame for the skirt is provided which is capable of withstanding various strains to which the entire device may be subjected. It is further noted that the lower edge of the skirt 12 is clamped between the plates 15 and 20 by a continuously extending portion of each of the plates, there being no cutoff edges or portions of the plate deflected therefrom to form edges liable to tear the fabric or otherwise injure the skirt portion of the cushioned seat.

While I have described my invention in more or less detail, as being embodied in certain forms, I do not desire or intend to be limited thereto since, on the contrary, my invention contemplates broadly all proper changes in the form, construction and arrangement of the parts, as well as the omission of immaterial elements, and the substitution of equivalents therefor as circumstances may suggest, or necessity render expedient.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is:

1. In a device of the class described, a cushion having a skirt portion, a spring unit having a base frame adapted to be positioned within said skirt, and a supporting frame comprising a plurality of plates encircling said base frame and clamping said skirt therebetween, one of said plates being provided with integral members adapted to engage the base frame and retain the same in position relative to the skirt.

2. The combination with a cushion and a depending skirt therefor, of a spring frame enclosed by said skirt, and means for joining the lower edge of said skirt to said spring frame to support the same within the cushion, including a plurality of plates, one of said plates located around the inner edge of said skirt, and the other of said plates located around the outer edge thereof clamping said skirt between said plates, one of said plates having flanges binding it to the other plate and having ears intermediate said flanges binding the plates to said spring frame.

3. In a spring seat, the combination of a cushion portion, a skirt depending therefrom, springs supporting said cushion portion, a frame supporting said springs and means independent of said cushion portion for connecting said skirt to said frame, comprising a pair of metal strips clamping said skirt there-between, one of said strips having two sets of integral projecting portions along one edge, one set being bent over to engage the other of said strips and the other set being bent to engage said spring supporting frame.

4. In a device of the class described having a depending skirt and a spring supporting frame, means for connecting said skirt and said frame comprising a pair of plates between which said skirt is clamped, one of said plates having an edge slitted to form a series of projections, certain of said projections being folded over against the other plate and others being bent to engage said spring supporting frame.

5. In a device of the class described, means for joining and securing in assembled relation the cushion and spring unit of a spring cushioned seat, including a plurality of plates, one located on the inner lower edge of a portion of the cushion, and another located around the lower outer edge thereof to clamp a portion of the cushion between said plates, and integral means carried by one of said plates adapted to be securely and permanently clamped around a portion of said spring unit frame.

6. In a device of the class described, the combination with a cushion and a depending skirt therefor having a corded lower edge, of a spring unit having a frame enclosed within said skirt, a metallic connecting means for joining said skirt and said spring unit to enclose the same within the cushion, including an inner plate having a facing located adjacent the lower edge of said skirt and a U-shaped portion to receive the corded edge thereof, and a co-acting plate provided with means to bind said skirt between said plate with the corded portion located between one of the plates and the U-shaped portion on the other of said plates, and means to join the plates and spring frame.

7. In a seat, the combination with a spring unit having a frame and a cushion, of a skirt depending from said cushion to enclose said spring unit and frame, a plurality of metallic strips, one located at the inner face of said skirt adjacent to the lower edge thereof, and the other located around the outer face of said skirt and adapted to clamp said skirt between said plates, and a plurality of inwardly projecting upwardly-turned hooks on one of said plates for permanently clamping said spring frame thereto.

8. A plurality of plates for use in connection with securing a depending skirt portion of a cushion seat to the spring unit or frame thereof, one of said plates being located around the inner lower edge of said skirt, and the other of said plates being located around the lower outer edge of said skirt, said last mentioned plate being provided with integral means to join said plates together, and integral means for joining said plates to said spring frame.

9. In a device of the class described, the combination of a cushion and a depending skirt therefor, a spring unit having a frame enclosed by said skirt, and a means for securing said skirt to said spring frame comprising a plurality of plates, one of said plates located on the inner lower edge of said skirt and the other of said plates located on the lower outer surface of said skirt to form a continuous protecting lower edge therefor, means for joining said plates together and means formed integral with one of said plates for joining said plates to said spring frame.

10. In a seat, the combination with a spring frame and a cushion, of a skirt depending from said cushion, enclosing said frame, a plurality of metallic strips extending around the lower edge of said skirt with said skirt clamped between said strips, and integral hooked clips extending upwardly from one of said strips and adapted to permanently engage said spring frame to secure said plates thereto and support said spring frame.

11. A supporting frame adapted to secure the skirt portion of a cushion member and spring unit in assembled position comprising a plate, a second plate adapted to bear against the first named plate and clamp the lower edge of said skirt portion therebetween, means carried by the first named plate for preventing disengagement of said plates, and members formed integral with one of said plates for engaging said spring unit and retaining the same in position relative to the supporting frame.

In testimony whereof, I affix my signature.

CHARLES F. GREEN.