T. L. A. ADLER.

SPRING SEAT AND BACK.

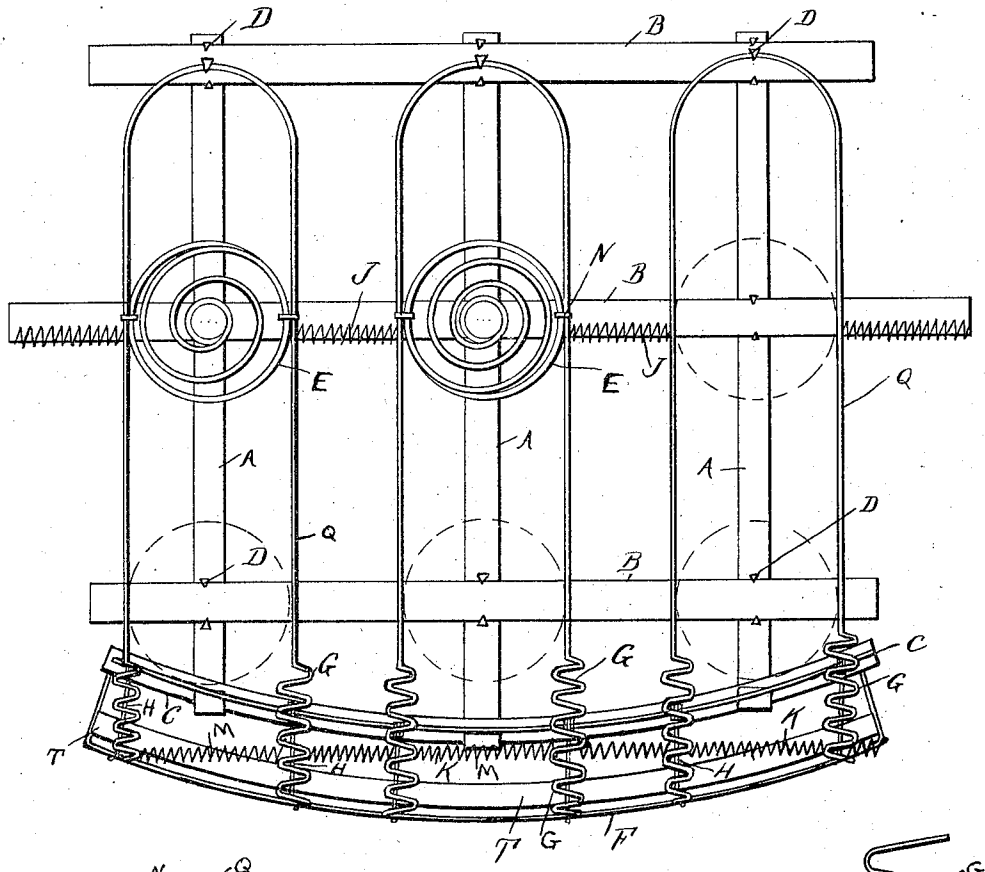
APPLICATION FILED NOV. 6, 1911.

1,179,062.

Patented Apr. 11, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



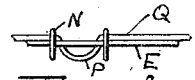
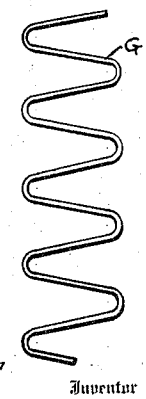


Fig. 3.

Fig. 4.



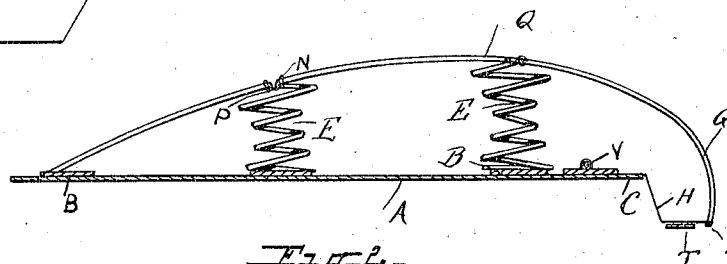


Fig. 2.

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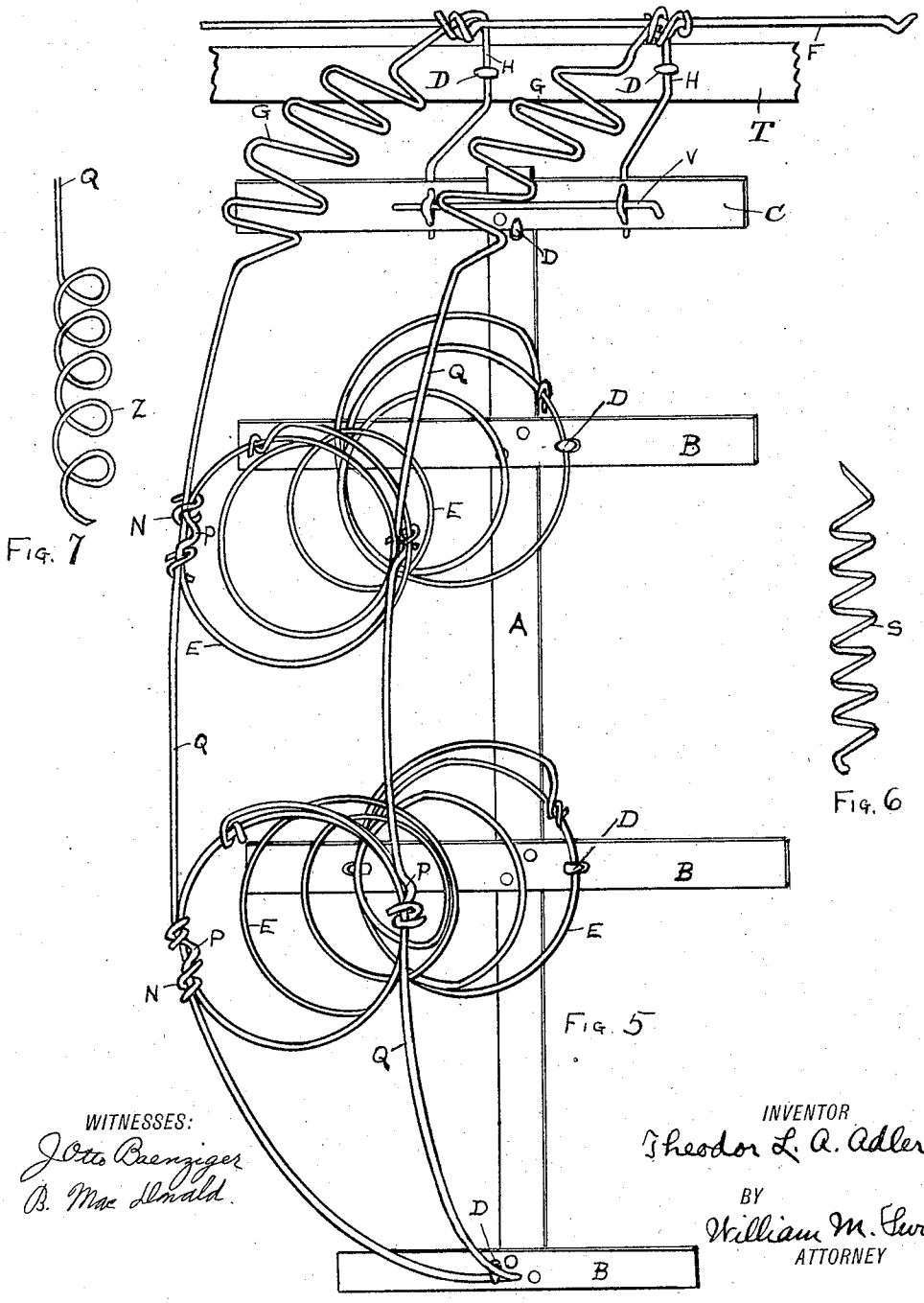


Fig. 7

Fig. 6

Fig. 5

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SPRING SEAT AND BACK.

1,179,062. Specification of Letters Patent. Patented Apr. 11, 1916.

Application filed November 6, 1911. Serial No. 658,709.

To all whom it may concern:

Be it known that I, THEODOR L. A. ADLER, who am a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Spring Seats and Backs, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to seat back springs, and has for its object an improved device adapted to provide a soft yet a firm edge for a spring back.

In the drawings:—Figure 1 is a plan view of a set of springs with the leather or cloth covering removed. Fig. 2 is a cross section. Fig. 3 is a detail of the fastening of the arched wire and helical springs. Fig. 4 is a detail of the zig-zagged spring member which arches over the edge of the frame. Fig. 5 is a perspective of one section of the device, showing both the spiral and the arching springs and their relation to the frame. (The top bar of the frame is here shown as straight instead of curved as in Fig. 1.) Figs. 6 and 7 show both round and flattened spiral springs which may be substituted for the zig-zagged arching spring elsewhere illustrated herein.

The several cross pieces A and B of the frame, which are preferably of sheet metal of sufficient rigidity, cross each other at about right angles, and along one end is preferably located the curved frame piece C, although this is not always essential; a straight piece may be employed if the intended contour of the cushion otherwise permits it (see Fig. 5). Tongues D are struck up from each piece at appropriate points to permit their engagement over the bases of the several helical or spiral springs E.

Projecting outwardly and downwardly when the spring is lying in horizontal position as shown in Fig. 2 and rearwardly from the curved frame piece C are a series of arms H suitably spaced from one another, with their hooked inner ends in engagement through apertures in the frame piece C, being held in place by the key or rod V (Fig. 5), and with their outer ends supporting the intermediate portion of the more or less resilient fender bar F, which may be supported at its ends from the corner of the frame adjacent the ends of the frame piece C. These arms H extend substantially perpendicularly from the general plane of the adjacent frame portion and seat back as shown in Fig. 2. (The frame is referred to as "the adjacent frame portion" because obviously it might be curved so as to embrace a number of planes). The extension in this direction is short, being about the distance of the width of one of the frame bars. The arms then bend back and run parallel to the general plane of the adjacent frame portion and seat back. The bracing strip T runs along the portions of these arms H which are parallel to the general plane of the adjacent frame portion. Arching over the offset formed by the arms H are a series of zig-zagged wires G. These arches G build out the edge of the spring from the row of helical springs and form an edge spring structure that reaches beyond and is offset from the general plane of the frame. I have shown zig-zag wire arches but I do not wish to limit myself to zig-zag arches. In my preferred form of construction each zig-zag arch G becomes straight as at Q, except for indentations or curves P, to permit the attachment of the tops of the several spiral springs E thereto, through the medium of the clips N. Each wire Q continues to the opposite edge of the frame, which it approaches more or less at an angle instead of a curve, and it may be anchored at its end, or, as illustrated, at the middle point, for return to the edge of the frame from which it started, by tongues D, on the edge of the frame bars B where the loop occurs in turning the wire Q.

As illustrated in Figs. 6 and 7, in place of the zig-zagged wire G for the edge-over-reaching portion, there may be substituted therefor, without departing from the spirit of my invention, either the round spirals S or the flattened or matted spirals Z; in either case the plain portions Q, which extend over the tops of the spiral springs E continue from the end as in the case of the zig-zagged type G.

The arched portions of the several zig-zagged wires G (or spirals S or Z) are resiliently connected with one another by the spiral springs K. The bracing strip T shown adjacent the fender bar F is espe-

cially useful when the structure is used as a seat back spring for it adds much rigidity to the offset structure. The offset structure can, in a seat back, be rested directly against the trimming rail of the seat back. The bracing makes the offset structure foolproof, that is to say, it gives enough strength to the offset to make that member withstand such rough usage as standing on the edge of the seat back which is often done when the occupants of the vehicle are watching some public exhibition.

What I claim is:—

In a spring construction, the combination of a frame, helical springs carried thereby, said frame being provided with an offset extension comprising arms extending angularly away therefrom and then turning and running substantially parallel with and beyond the main part of the frame, arched springs running from the said helical springs beyond and over the edge of the main portion of said frame and connecting with said arms, and a reinforcing member comprising a band metal strip running crosswise of those portions of the said arms which are parallel to the main portion of the frame, the said band metal strip being disposed so that its plane is substantially parallel with the main portion of said frame.

In testimony whereof, I sign this specification in the presence of two witnesses.

THEODOR L. A. ADLER.

Witnesses:
WILLIAM M. SWAN,
JEFFERSON G. THURBER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."