

F. O'BRIEN.
 SPRING SEAT STRUCTURE.
 APPLICATION FILED JUNE 5, 1908.

954,331.

Patented Apr. 5, 1910.

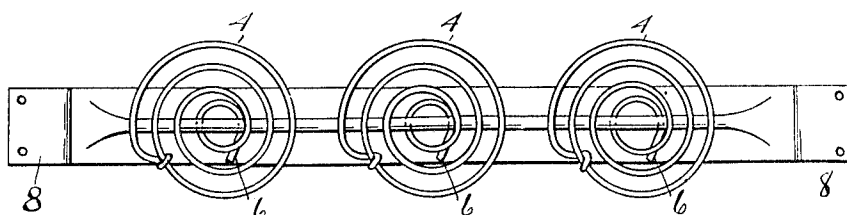


Fig. 1.

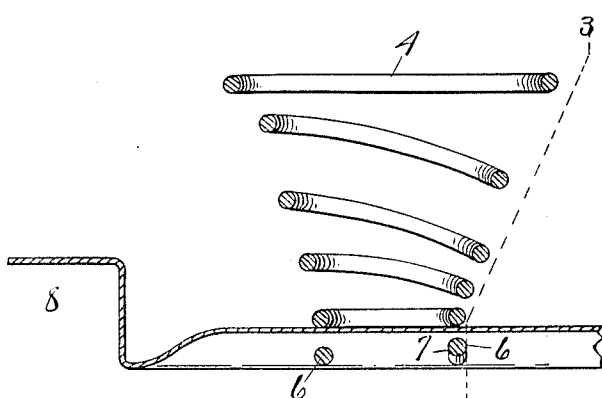


Fig. 2.

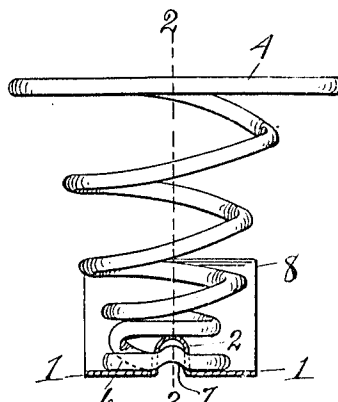


Fig. 3.

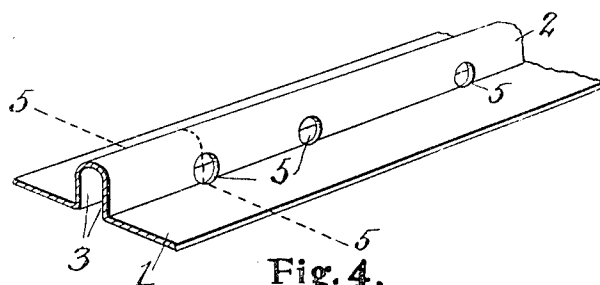


Fig. 4.

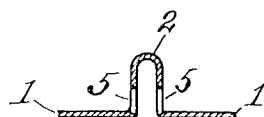


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

FALCONER O'BRIEN, OF DETROIT, MICHIGAN, ASSIGNOR TO DETROIT WIRE SPRING CO., OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

SPRING-SEAT STRUCTURE.

954,331.

Specification of Letters Patent.

Patented Apr. 5, 1910.

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To all whom it may concern:

Be it known that I, FALCONER O'BRIEN, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Spring-Seat Structures; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to spring seat construction, and consists in the association and arrangement of parts hereinafter more fully set forth and pointed out particularly in the claims.

The object of the invention is to produce in a spring seat structure, transverse supporting strips adapted to carry the springs, of such formation as to afford the requisite weight-supporting strength for the minimum quantity of material employed, and wherein the arrangement is such as to provide for quickly and securely mounting the springs upon said transverse strips and securely locking them thereto in a manner to prevent loosening of the springs or their accidental detachment from the transverse strips.

The above object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of one of the transverse or cross strips which enter into a spring seat structure, showing a row of springs mounted thereon. Fig. 2 is an enlarged fragmentary view in section through one end of a strip and a spring mounted thereon, as on dotted line 2—2 of Fig. 3. Fig. 3 is a transverse section through one of said strips adjacent to a spring, as on dotted line 3—3 of Fig. 2. Fig. 4 is a fragmentary view in perspective of a portion of one of the transverse strips. Fig. 5 is a transverse section as on line 5—5 of Fig. 4.

Referring to the characters of reference, 1 designates a strip of sheet metal of suitable gage, which is provided through its longitudinal center with a raised rib 2 having vertical parallel sides 3. The marginal portions of the strip on each side of said rib are flat and extend horizontally there-

from. By forming the central rib extending longitudinally of the strip, said strip is trussed in a manner to afford it the requisite weight-supporting strength.

The springs which are employed in structures of this character are of spiral form, as shown at 4, and to enable said springs to be securely mounted upon the cross strip, the parallel walls 3 of the rib 2 are provided through the base portion thereof with the registering perforations 5 in pairs which are on a plane with the horizontal marginal portions of said strip, and through which the lower coils 6 of the spiral springs are adapted to be threaded by a rotation of said springs in a manner to cause said coils to pass through said perforations from side to side of said rib. When properly in place, the central portions of the lower coils of the springs lie in the registering perforations in the rib 2, and the outer portions of said coils lie upon the flat surfaces formed by the margins of the strip, whereby the springs become firmly seated on the strip and are so supported as to maintain them rigidly in a vertical position. To lock the springs to the transverse strip so as to prevent them turning backward and becoming loosened or detached therefrom, the lower coils 6 of the springs at a point between the vertical walls 3 of the rib 2, are bent sharply upward, as shown at 7, forming a kink or shoulder in said coils which prevents a movement thereof through the rib in either direction, effecting a permanent locking of the springs to the transverse strip in a very simple and economical manner. To enable the transverse strips to be properly supported upon the frame of the seat, not shown, the end portions of said strips are provided with the angular terminals 8 to engage said frame.

Having thus fully set forth my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a spring seat structure, the combination of a transverse metallic strip having a central rib extending longitudinally thereof, said rib having registering apertures through its opposite sides, a spring having one of its coils passed through said registering apertures, said coil between the walls of the rib being provided with a shoulder to prevent the withdrawal thereof through said apertures.

2. In a spring seat structure, the combina-

tion of a transverse metallic strip having a central rib extending longitudinally thereof, said rib having registering apertures through its opposite sides, a spiral spring
5 having a coil passing through said apertures, and a shoulder on said coil between the walls of the rib to lock the coil in place.

3. In a spring seat structure, the combination of a transverse metallic strip having a
10 central rib extending longitudinally thereof, said rib being provided with registering perforations through its opposite sides, a spiral

spring having a coil passing through said perforations, a portion of said coil between the side walls of said rib being bent to en- 15-
gage one of said walls to lock said coil against movement through said perforations.

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

FALCONER O'BRIEN.

Witnesses:

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I. G. HOWLETT.