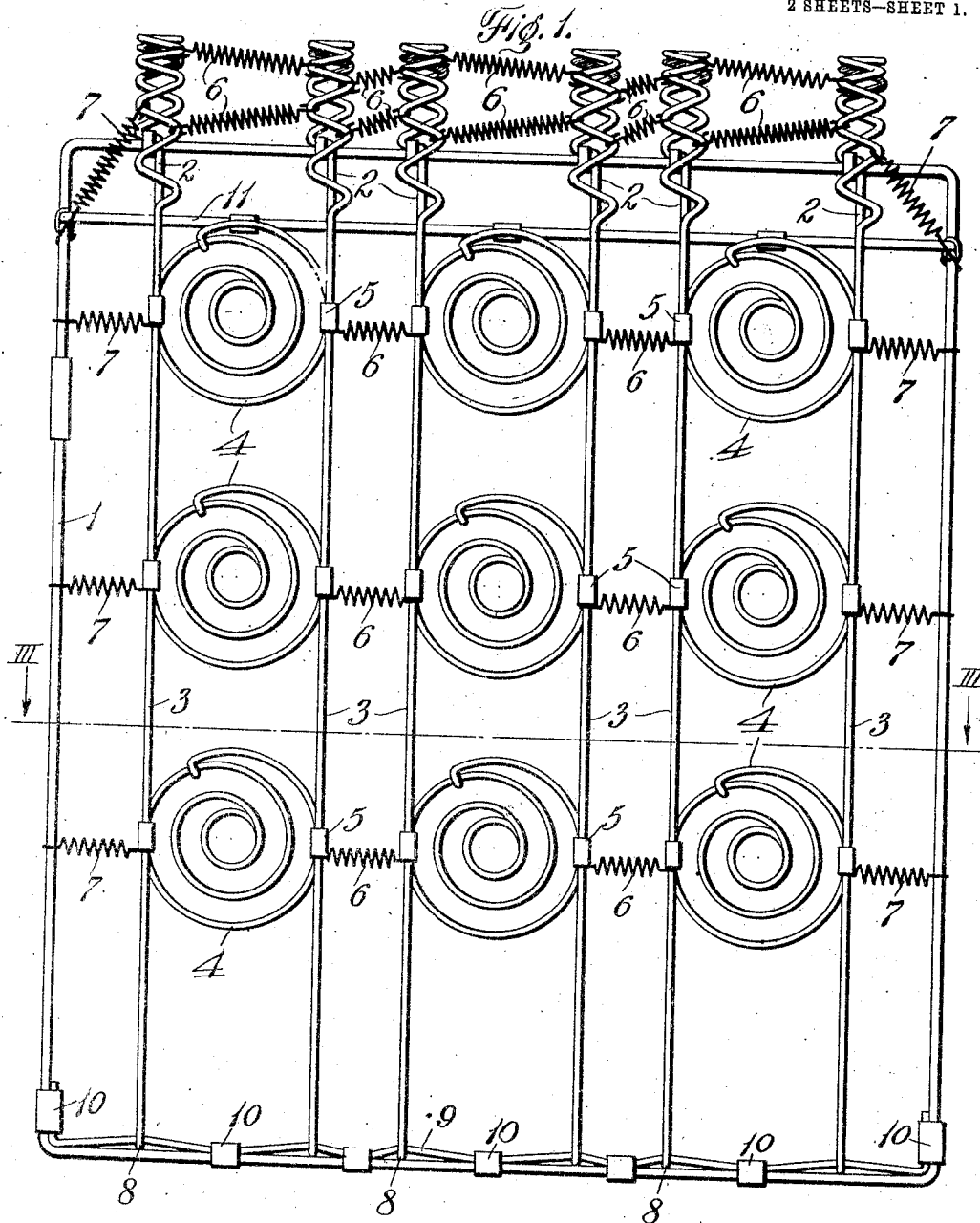


S. M. RAFTERY.
 SPRING CONSTRUCTION.
 APPLICATION FILED FEB. 15, 1912.

1,036,904.

Patented Aug. 27, 1912.

2 SHEETS—SHEET 1.



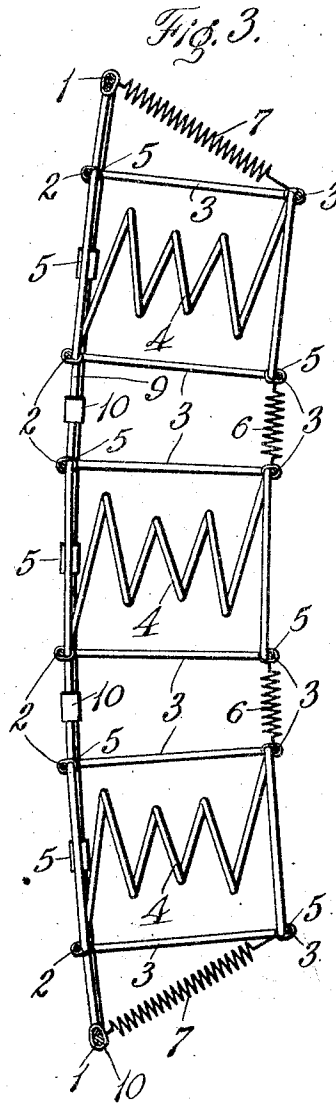
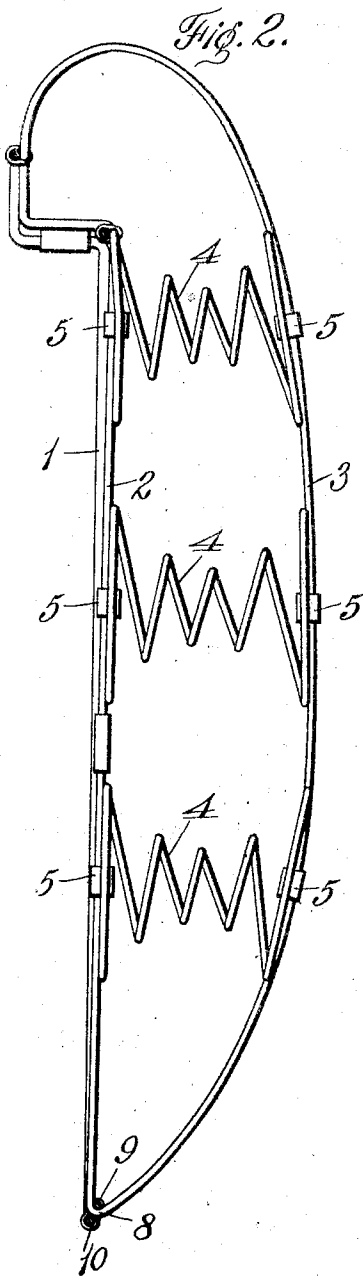
Witnesses
 Chas. W. Stauffer
 A. M. Dorr

Inventor
 Solomon M. Raftery,
 By *[Signature]*
 Attorneys

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2 SHEETS—SHEET 2.



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 Chas. W. Stauffer
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Inventor
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UNITED STATES PATENT OFFICE.

SOLOMON M. RAFFERTY, OF ALBION, MICHIGAN, ASSIGNOR TO NATIONAL SPRING AND WIRE COMPANY, OF ALBION, MICHIGAN, A CORPORATION OF MICHIGAN.

SPRING CONSTRUCTION.

1,036,904.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed February 15, 1912. Serial No. 677,781.

To all whom it may concern:

Be it known that I, SOLOMON M. RAFFERTY, a citizen of the United States of America, residing at Albion, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Spring Constructions, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to back spring constructions and more especially to a method or the arrangement of the parts whereby a spring back of any dimensions may be set up as desired, the parts presenting a yielding upper edge surface for supporting applied upholstery without the use of hair rolls or the like.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

20 In the drawings, Figure 1 is a view in front elevation of a back spring construction embodying features of the invention; Fig. 2 is a view in longitudinal section of the construction; and Fig. 3 is a view in transverse section taken on or about line 111—111 of Fig. 1.

As herein shown a rim frame 1 is provided of suitable material and form on which a series of arch trusses are disposed longitudinally in spaced relation. Each truss consists of a pair of members bent on themselves to form a closed loop having a straight back portion 2 extending across the frame and a convex arch 3 whose upper portion is bent over and extends back of the main plane of the frame, these arches being interconnected by body springs 4 of hour-glass, conical or cylindrical type, the end coils of such springs being clipped by suitable members 5 to the arches. The upper portion of each arch is preferably laterally crimped or corrugated to afford better support for applied upholstery. The adjacent parts of each pair of trusses may be connected as by transverse coil springs 6 or other suitable member and the rim frame may likewise be connected to the outer arches of the outer trusses by stay springs 7 or like suitable means. As a convenient way of securing the trusses to the frame, the lower short bends indicated at 8 may be engaged by a transversely disposed anchor

wire 9 secured to the rim frame by suitable slips 10. Similarly, the upper end portions 55 of the trusses may be secured by a stay rod 11.

By this method of construction back spring arches or trusses are obtained which are very resilient as they are supported at 60 the ends only and are free to yield to transverse pressure. Furthermore the trusses may be put up as separate articles of manufacture and shipped in knocked-down condition ready for assembling on any form of 65 frame, it merely being necessary that the rear or base members 2 of the trusses be so disposed as to conform to the frame.

Obviously, changes in the details of construction may be made without departing 70 from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

I claim:—

1. A back spring construction comprising 75 the combination with a rim frame, of arched trusses independently mounted thereon each consisting of a pair of outer spring members bent into a closed loop having a straight back portion and a convex front portion 80 arching over the upper edge of the frame, and body springs whose end coils are secured to the back and arch portions of the outer spring members independently of the frame.

2. A back spring construction comprising 85 the combination with a rim frame, of series of arched trusses mounted thereon each consisting of a pair of outer spring members bent into a closed loop having a 90 straight back portion and a convex front portion arching over the upper edge of the frame, body springs whose end coils are secured to the back and arch portions of the 95 outer spring members, independently of the frame, a clamping rod securing the lower portions of the truss to the frame, and resilient stays connecting the arches of the trusses with each other.

3. In a spring construction, an arch truss 100 comprising a pair of outer spring members each bent into a closed loop having a convex front portion and a straight back portion with upper section thereof off-set back of the main section and forming with the up- 105 per portion of the spring an edge arch, and

body springs between the back and front portions of the loop securing the loop in spaced relation.

4. In a back spring construction, an
5 arched truss comprising a pair of outer
spring members each bent into a closed loop
having a straight back portion and a con-
vex front portion with arches over the up-
per end of the back portion, and body
10 springs whose end coils are secured to the

back and arch portions of the side spring members and hold the latter in parallel spaced relation.

In testimony whereof I affix my signature in presence of two witnesses.

SOLOMON M. RAFTERY.

Witnesses:

ANNA M. DORR,
LEWIS E. FLANDERS.