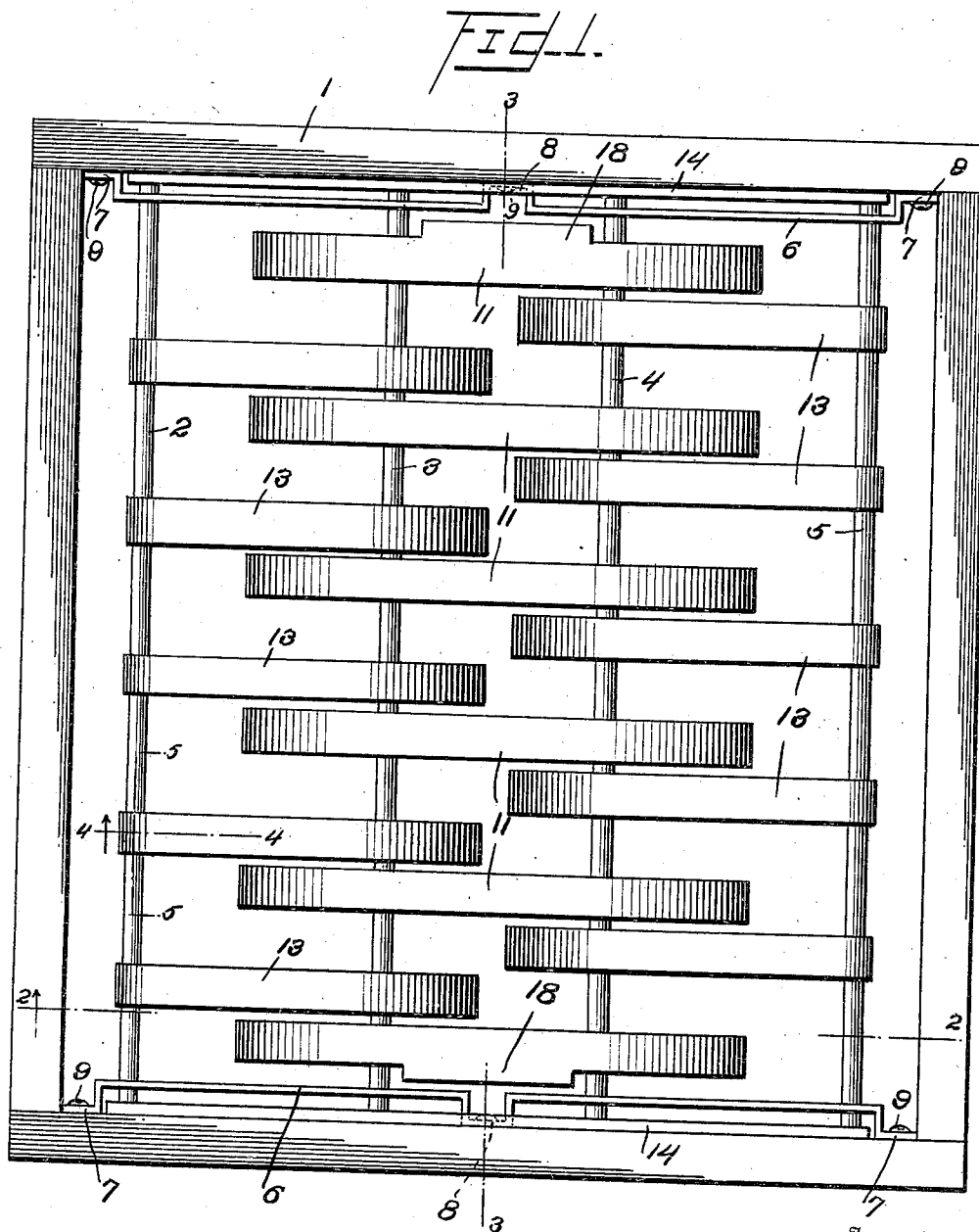


H. G. PRICE.
FURNITURE SPRING.
APPLICATION FILED NOV. 15, 1910.

991,086.

Patented May 2, 1911.

3 SHEETS—SHEET 1.



Witnesses

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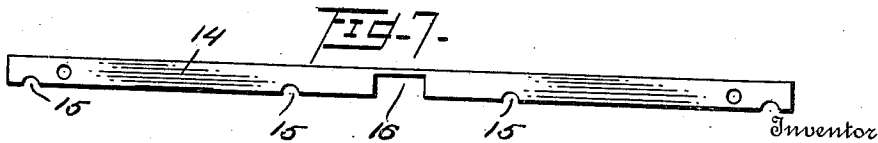
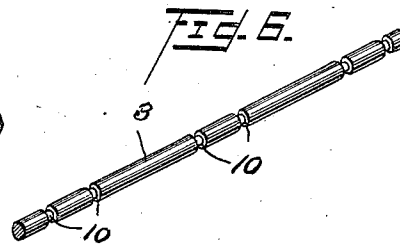
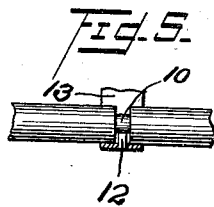
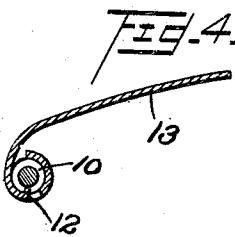
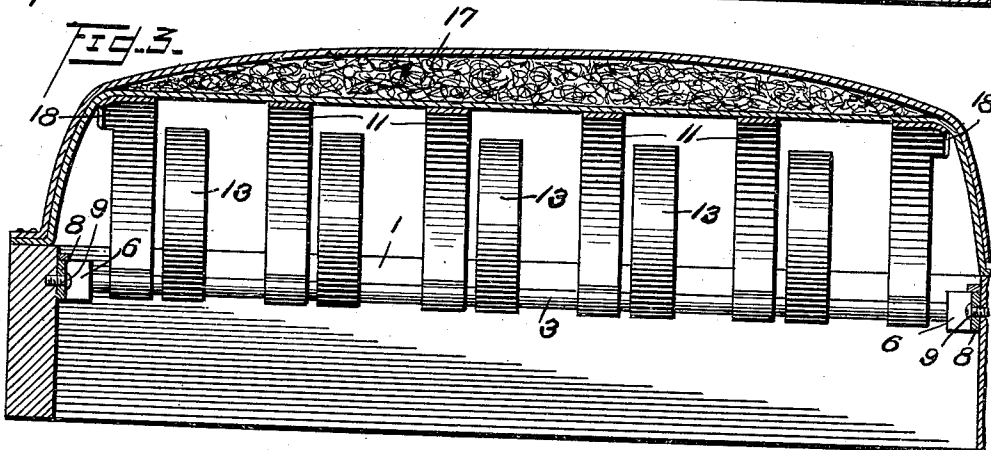
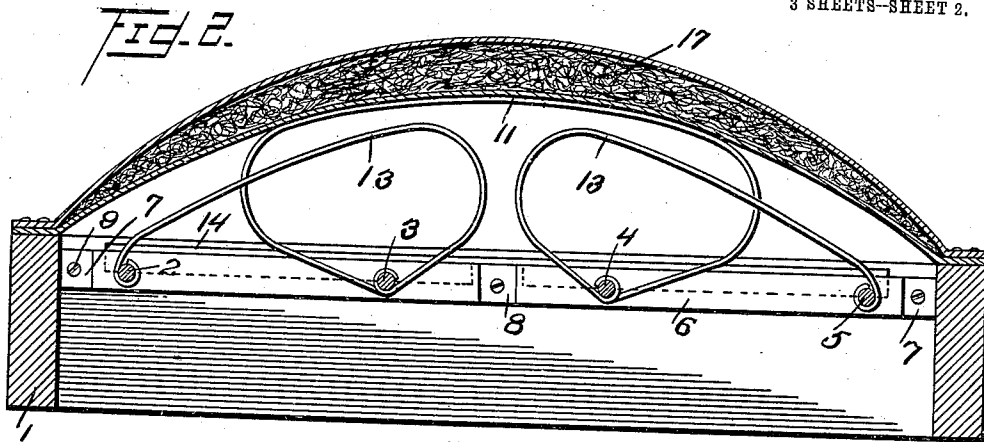
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3 SHEETS-SHEET 2.



Witnesses

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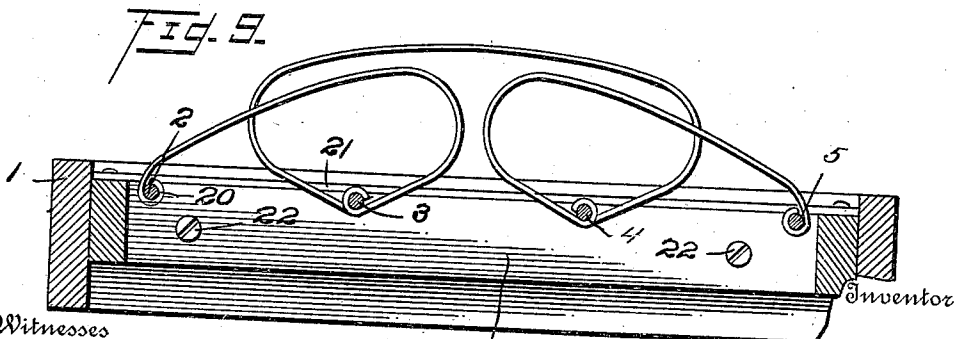
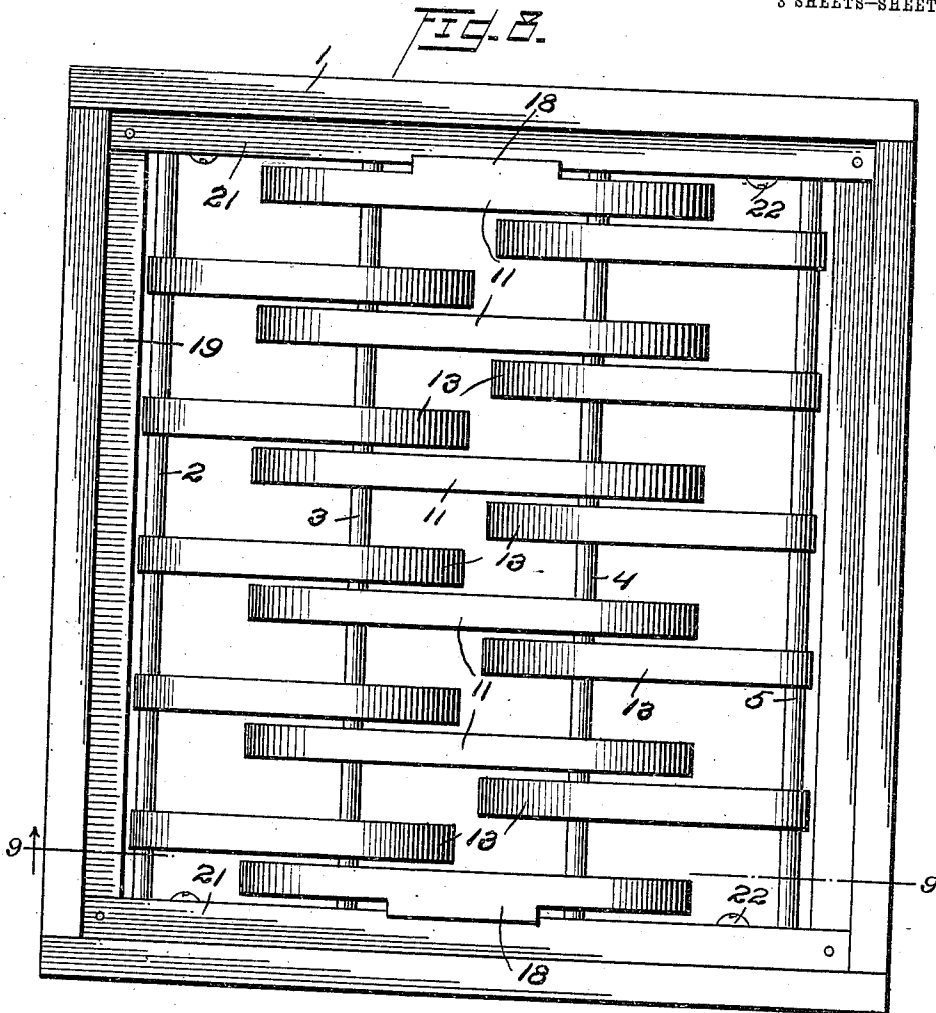
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3 SHEETS—SHEET 3.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY GREGG PRICE, OF PHILADELPHIA, PENNSYLVANIA.

FURNITURE-SPRING.

991,086.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed November 15, 1910. Serial No. 592,472.

To all whom it may concern:

Be it known that I, HARRY GREGG PRICE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Furniture-Springs, of which the following is a specification.

My invention relates to improvements in furniture springs, the object of the invention being to provide an improved spring or spring frame designed particularly as a cushion for chairs, settees, car seats etc., and which may be readily placed in position in the furniture frame and removed as desired.

A further object is to provide an improved arrangement of rods and springs thereon of a particular shape and assemblage, with improved mounting for the rods whereby the maximum of efficiency of the springs is had, and rendering comfortable the cushioning effect thereof, and embodying the maximum of strength and durability.

A further object is to provide a spring of this character which economizes time and labor in securing the same within a chair or other furniture frame, and enables the spring to be removed without materially affecting the upholstery.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a plan view illustrating my improvements in position in a chair frame. Fig. 2, is a view in section on the line 2—2 of Fig. 1 showing the upholstery in place. Fig. 3, is a view similar to Fig. 2, but taken on the line 3—3 of Fig. 1. Figs. 4 and 5 are detail views illustrating the manner of connecting the springs to the rods. Fig. 6, is a detail perspective view of one of the rods. Fig. 7, is a view in elevation of one of the guide bars. Fig. 8, is a plan view similar to Fig. 1 but illustrating a modification, and Fig. 9, is a view in section on the line 9—9 of Fig. 8.

Referring to the construction illustrated in Figs. 1 to 7 inclusive, 1, represents the frame of a piece of furniture, for example, a chair seat frame. In this frame is mounted

my improved assemblage of springs or spring cushion, which comprises four parallel rods 2, 3, 4, and 5, respectively. These rods are projected through openings in sheet metal bars 6, the latter bent at their ends and between their ends as illustrated at 7 and 8 respectively so as to position the greater portion of said bars 6 spaced from the ends of frame 1 to afford a secure bearing for the rods, while these bent portions 7 and 8 are secured by screws 9 to the frame.

The rods 2, 3, 4, and 5 are each provided at the proper points with annular grooves 10. These grooves being placed in accordance with the position of the springs thereon, which makes it necessary to provide the grooves in the intermediate rods 3 and 4 differently than in the outer rods 2 and 5. Fig. 6 illustrates one of these intermediate rods.

At regular intervals, and connecting the intermediate rods 3 and 4, are bow springs 11. These springs 11 are curved downward at their ends, and at their extreme ends are looped around the rods 3 and 4 at the grooves 10. The metal of the springs is forced inward forming lugs 12, which project into the grooves 10 and prevent any movement of the springs longitudinally of the rods.

The outside rods 2 and 5 are connected with the intermediate rods 3 and 4 by means of bow springs 13. These springs 13 are connected to the rods in like manner as are springs 11 above described, but the bows or loops of these springs extend toward the center, beyond the intermediate rods 3 and 4, so that a downward pressure on these springs will have no tendency whatever to press said springs outward beyond the outer rods 2 and 5. It will also be noted that these springs 13 are normally positioned in a plane lower than are the springs 11, hence springs 11 receive the first pressure or weight, and springs 13 are only brought into play when springs 11 are compressed far enough to allow any movement of springs 13.

In order to guide and compel the spring cushion to be properly positioned in the frame, I provide in each end of the frame what I term "guide bars" 14. These bars are secured in the ends of the frames, and are notched as shown at 15 to accommodate the rods 2, 3, 4, and 5, and said bars are also provided with proportionately larger notches 16 at their centers to accommodate the bent portions 8 of bars 6. These bars

14 are secured in the ends of the frames and the spring cushion inserted from the bottom until it can be moved no farther by reason of the engagement of the rods with bars 14.

5 Bars 6 are then secured by means of the screw 9, and there can be no mistake of misplaced spring cushion.

The upholstery illustrated at 17, which may of course be of various character, is stretched across the spring cushion and secured to frame 1. In order that the end bow springs 11 may not cut this upholstery, I preferably provide said end springs with lips 18 at their outer edges which are bent down as shown most clearly in Fig. 3, so as not to offer a sharp cutting edge to the upholstery.

To remove the spring cushion from the frame, it is simply necessary to unscrew screws 9 and move bars 6 back on the rods 2, 3, 4, and 5, when the spring will readily fall out of the bottom of the frame.

A modification is illustrated in Figs. 8, and 9, in which the rods 2, 3, 4, and 5, are permanently secured in a rectangular frame 19, which may be of wood, metal or any other suitable material, the rods being located in notches or recesses 20, and confined by strips 21 secured to the frame 19. This frame 19 is adapted to snugly fit within the frame 1, and when in position therein, is secured by screws 22. In other respects this modified structure is precisely like the preferred form above described and in all similar parts I have used the same reference characters to indicate parts of the modification and of the preferred form.

Various other slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. In a device of the class described, a pair of inner rods and a pair of outer rods, a plurality of bow springs each having their ends attached to said inner rods, and bow springs having their respective ends attached to one of said outer rods and one of said inner rods, the bearing faces of the first

said springs extending beyond the inner rods and the ends of said springs being curved inwardly and downwardly to said rods, the last said springs curving upwardly and inwardly from the outer rods to which they are attached to points beyond the inner rods to which their inner ends are attached and then outwardly and downwardly to said rods, and the bearing faces of the last said springs being in a plane below the bearing faces of the first said spring.

2. In a mechanism of the character described, the combination with a frame, of a plurality of parallel rods, bow springs connecting the intermediate rods, bow springs connecting the outer adjacent rods, means supporting said rods and securing them in the frame, said rods having annular grooves, said springs bent around said rods, and tongues on said springs projected into said grooves, substantially as described.

3. In a mechanism of the character described, the combination with a frame, of four parallel rods, bow springs connecting the two intermediate rods, bow springs connecting the outer rods with the intermediate rods, said last-mentioned rods inclining downwardly from their inner to their outer ends and located in a lower plane than the first-mentioned springs, all of said rods having annular grooves around which the ends of said springs are bent, and tongues on said springs projected into said grooves, substantially as described.

4. In a mechanism of the character described, the combination with four parallel rods, bow springs connecting the two intermediate rods, bow springs connecting the two pairs of outer adjacent rods, bars having openings therein to receive said rods, means in said frames limiting the movement of said rods in one direction, devices securing said bars in the frame, said rods having annular grooves, said springs bent around said rods, and tongues on said springs projected into said grooves, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY GREGG PRICE.

Witnesses:

CHAS. E. POTTS,
R. H. KRENKEL.