

No. 709,977

Patented Sept. 30, 1902.

J. H. FINNEY.  
PNEUMATIC CUSHION.

(Application filed Sept. 26, 1901.)

(No Model.)

Fig. 1.

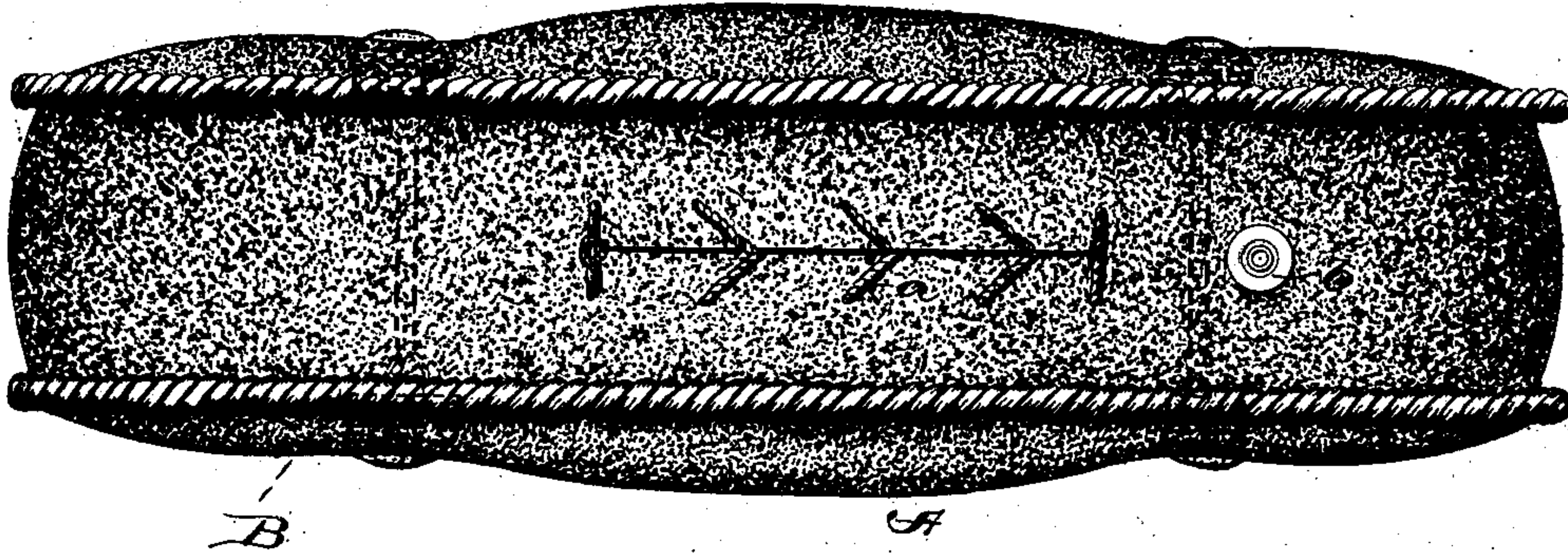


Fig. 2.

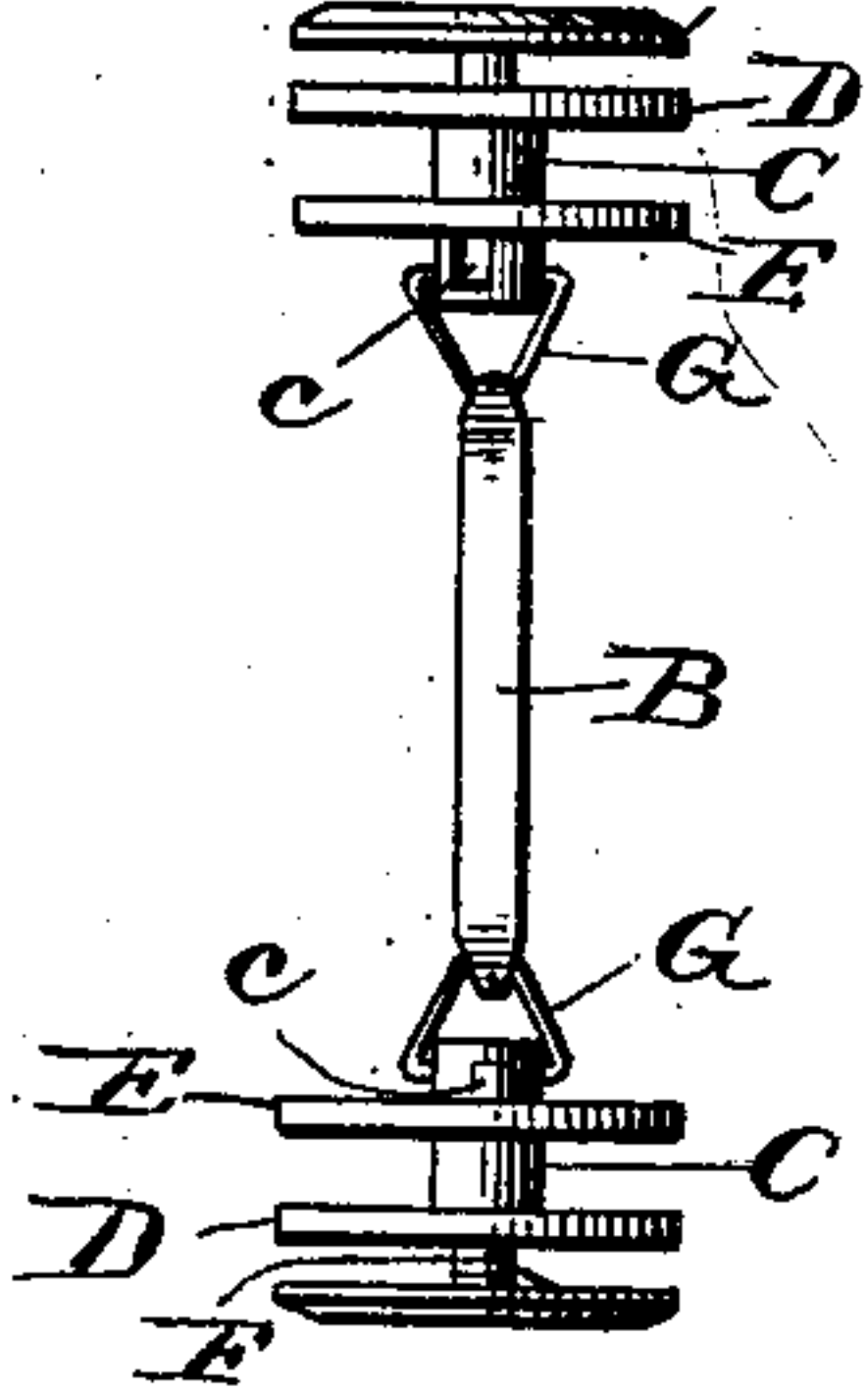


Fig. 3.

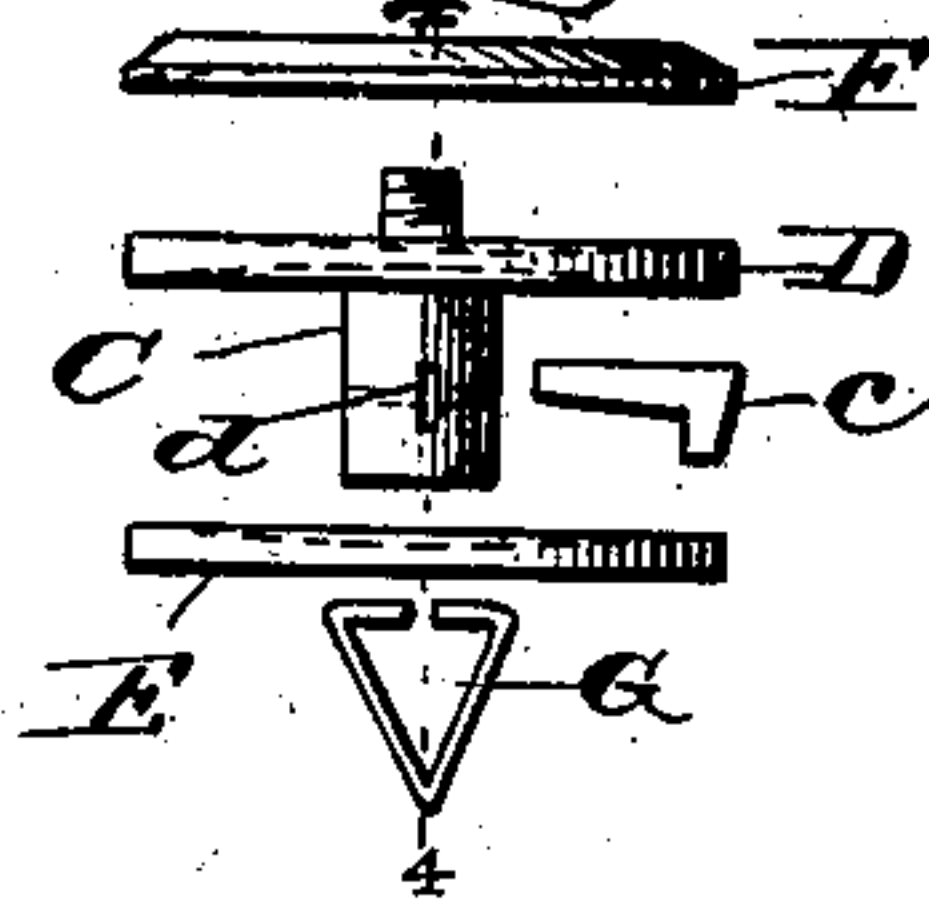


Fig. 4.

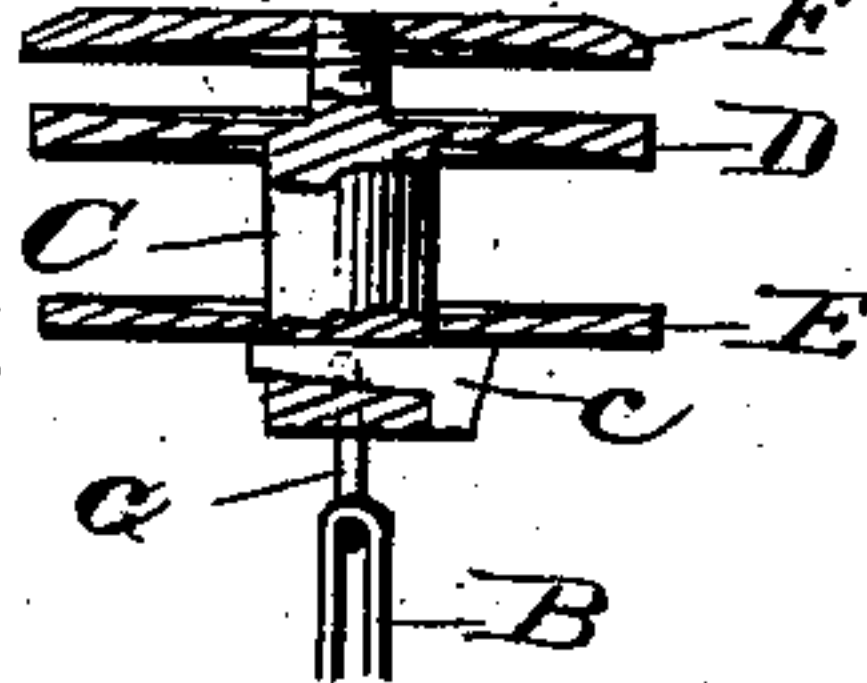
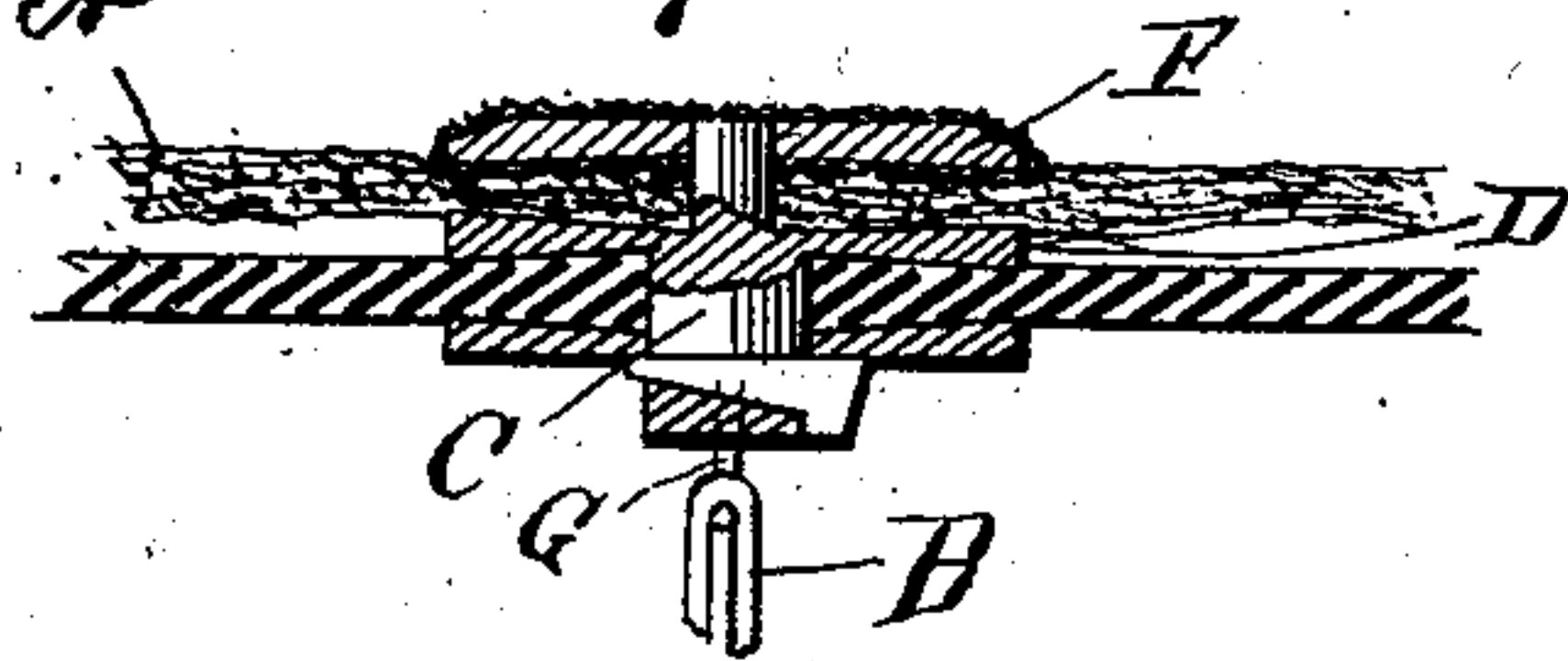


Fig. 5.



witnesses:  
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# UNITED STATES PATENT OFFICE.

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## PNEUMATIC CUSHION.

SPECIFICATION forming part of Letters Patent No. 709,977, dated September 30, 1902.

Application filed September 26, 1901. Serial No. 76,675. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. FINNEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Pneumatic Cushions; and I do hereby 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  
10 it appertains to make and use the same.

My invention relates to the art of upholstery, and particularly to means for securely fastening or tying together the two sides or surfaces of cushions, chair-seats, couches, mat-  
15 tresses, bedding, and similar articles in order to maintain a comparatively flat top and bottom surface regardless of the bulging tendencies of the filling material employed.

The invention is of special value in the  
20 manufacture and use of pneumatic cushions as a means of preserving their symmetrical form after the introduction of air-pressure which otherwise would serve to inflate the cushion equally in all directions, imparting  
25 thereto an approximately spherical form and rendering it useless for its intended purposes.

As a further object the invention contemplates and employs tie-hubs which are self-packing at points where they are secured to  
30 or penetrate an air-cushion. It also contemplates novel means for centering and securing the tie-bands to said hubs, so that the strain thereon will always be in direct axial lines.

35 The improvements will be hereinafter more fully described, and particularly pointed out in the claims following.

In the accompanying drawings, which form part of this specification, and whereon corresponding letters of reference indicate like parts in the several views, Figure 1 represents an end view of a pneumatic cushion embodying my invention. Fig. 2 is a side elevation of the novel features of the invention  
45 detached. Fig. 3 is an enlarged segregated view, in side elevation, of one tying-hub. Fig. 4 is an enlarged central sectional view taken on the line 4-4 of Fig. 3. Fig. 5 is also a sectional view corresponding with Fig. 4,  
50 showing in relative arrangement fragments of the air-bed and covering therefor.

Reference being had to the drawings and letters thereon, A is a pneumatic cushion, which may be formed with single or double linings, provided only that it is air-tight. 55  
The present illustration discloses an outer case or cover, within which is contained an inflatable air-tight lining. (Not shown except by Fig. 5.) Cushion A may be of felt or other suitable material, more or less ornamental, and is laced, as at *a*, to permit the introduction of the inner inflatable lining aforesaid, while at *b* may be seen a projecting valve-stem, through agency whereof the structure is inflated. 65

At suitable intervals throughout the body of cushion A are oppositely-arranged top and bottom tie-hubs, as clearly shown by Fig. 2 of the drawings, each pair of such hubs being secured together by means of tie-bands 70 B and in turn secured to the body of cushion A, as will now appear.

The body C of each hub has a fixed flange D, upon one side of which is mounted a relatively adjustable washer E, and upon the opposite or outer side of which is a screw-cap F, 75  
all of said parts D, E, and F having concave opposing faces, as shown by Fig. 4. The washer E is driven toward flange D by means of a wedge-shaped key *c*, located in a key-seat 80  
80 *d* of corresponding shape, perforating the body C, while in pivotal relation with the inner end of said body C is an angular bail G, to which are secured the tie-bands B.

This being a general description of my invention, its manner of application and use is substantially as follows: Each pair of bails G are connected by means of suitable tie-bands B, while one hub of each pair is secured to opposite sides of an inner inflatable air-tight cushions by means of washer E, between which and flange D said cushion is confined. 90  
The washer E is set up toward said flange D by action of the wedge-key *c*, while the cushion at this point is by preference flanked upon 95  
each side by a flexible washer cemented to the cushion, into which the concave surfaces of washer E and flange D are embedded. Outside of each flange D is screw-cap F, which may be covered with material corresponding 100  
100 with the outer case A of the cushion, between which cap and the outer concave sur-



face of flange D is confined the outer case A of the cushion, as shown by Fig. 1. By this arrangement it will be observed that the symmetry of the cushion is at all times preserved, the confining members D, E, and F are rendered self-packing by their peculiar concave opposing faces, and bails G insure a direct pull upon each pair of hubs, owing to their peculiar angular form, which necessarily centers the tie-bands B directly in line with the axis of each hub.

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

1. A tie-hub for cushions comprising a body portion having a fixed flange, of a clamping-washer, a wedge-key piercing said body for adjusting the clamping-washer thereon, and a triangular bail pivoted upon the body aforesaid adapted to receive at its centrally-located swinging apex a cushion tie-band, substantially as described.

2. A tie-hub for cushions comprising a body portion, a fixed flange and an adjustable

clamping-washer said flange and washer having opposing concave faces, of a wedge-key piercing said body for adjusting the clamping-washer thereon, and a triangular self-centering bail pivoted upon the body aforesaid adapted to receive at its swinging apex a cushion tie-band, substantially as described.

3. In a cushion the combination with oppositely-arranged tie-hubs each having a body portion, a screw-cap, a fixed flange and an adjustable clamping-washer, said cap, flange, and washer having opposing concave faces between which portions of the cushion are secured; of a triangular self-centering bail pivoted upon each body portion aforesaid, and a flexible tie-band connecting said bails by their swinging apexes, substantially as described.

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

JOHN H. FINNEY.

Witnesses:

H. D. ZOLLER,

B. W. FORWARD.