

(No Model.)

2 Sheets—Sheet 1.

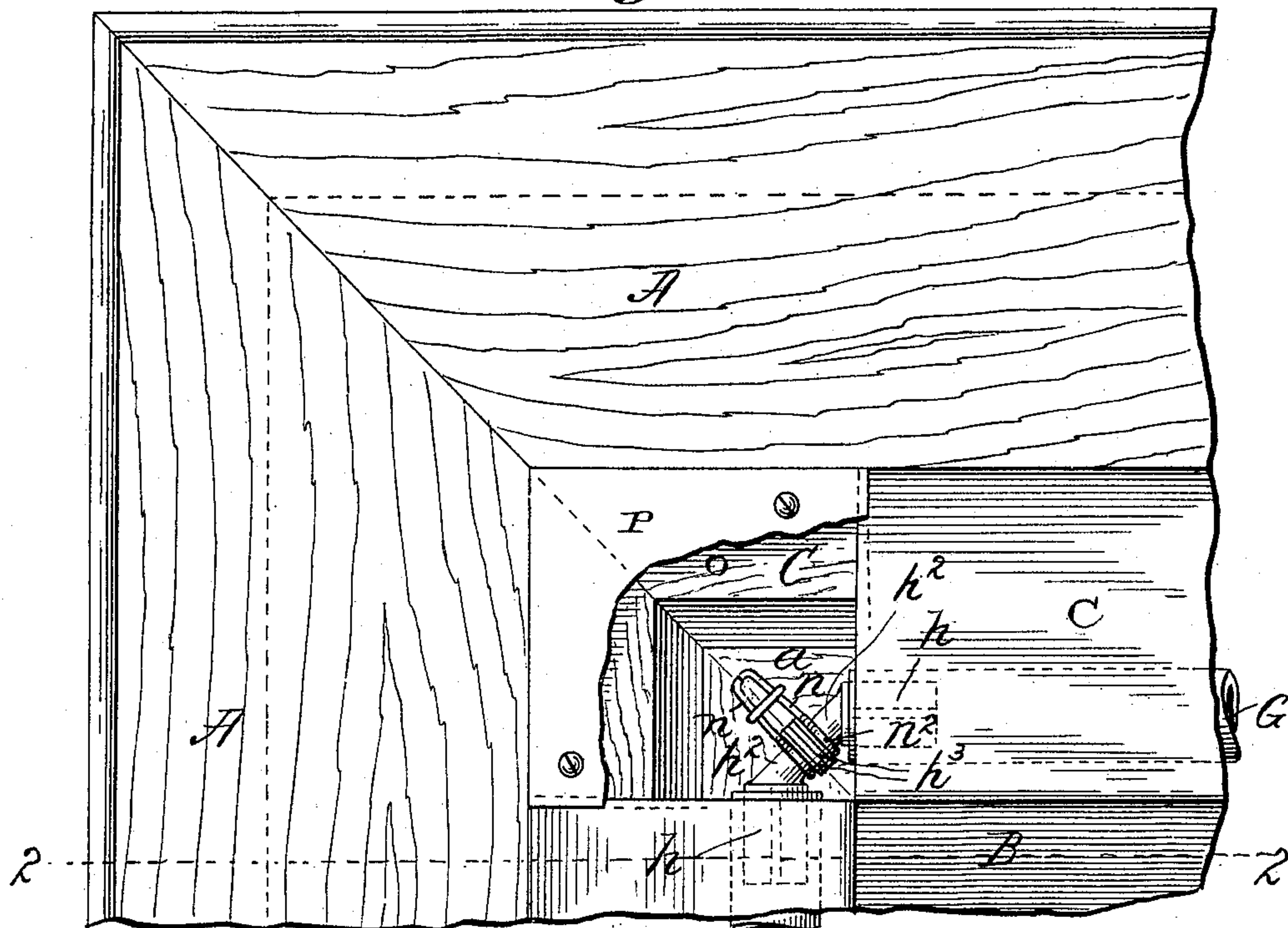
W. F. STEBBINS.

PNEUMATIC CUSHION FOR BILLIARD OR POOL TABLES.

No. 603,490.

Patented May 3, 1898.

Fig. 1.



w^2 Fig. 2. G F J

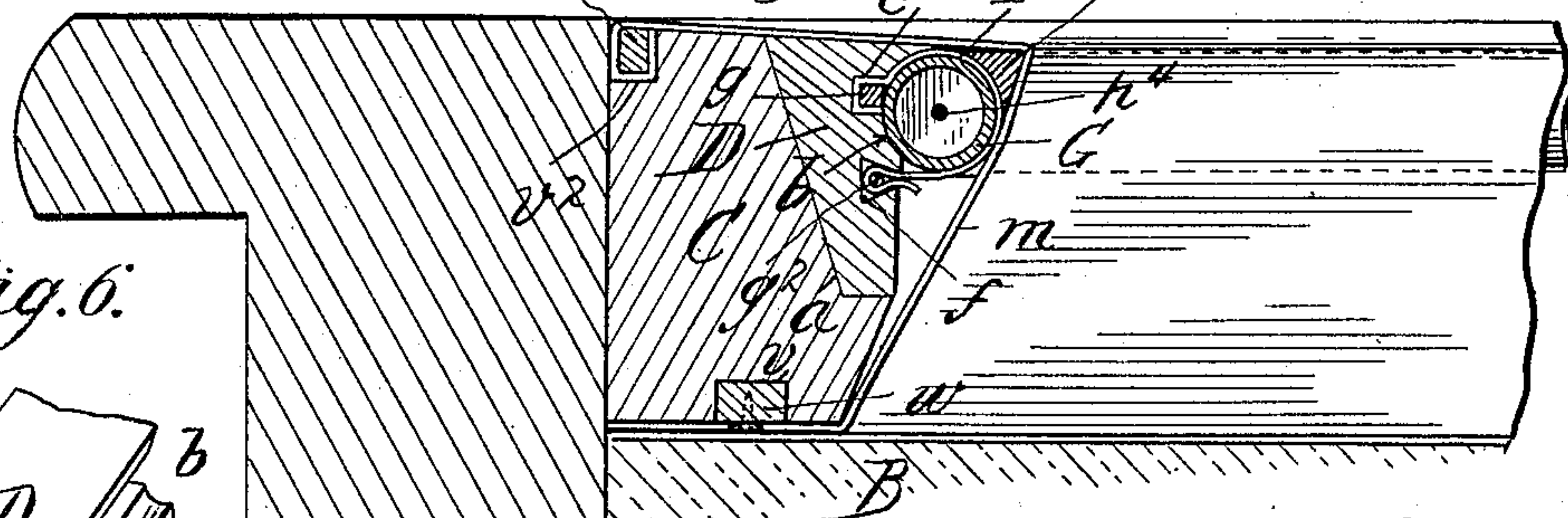


Fig. 6.

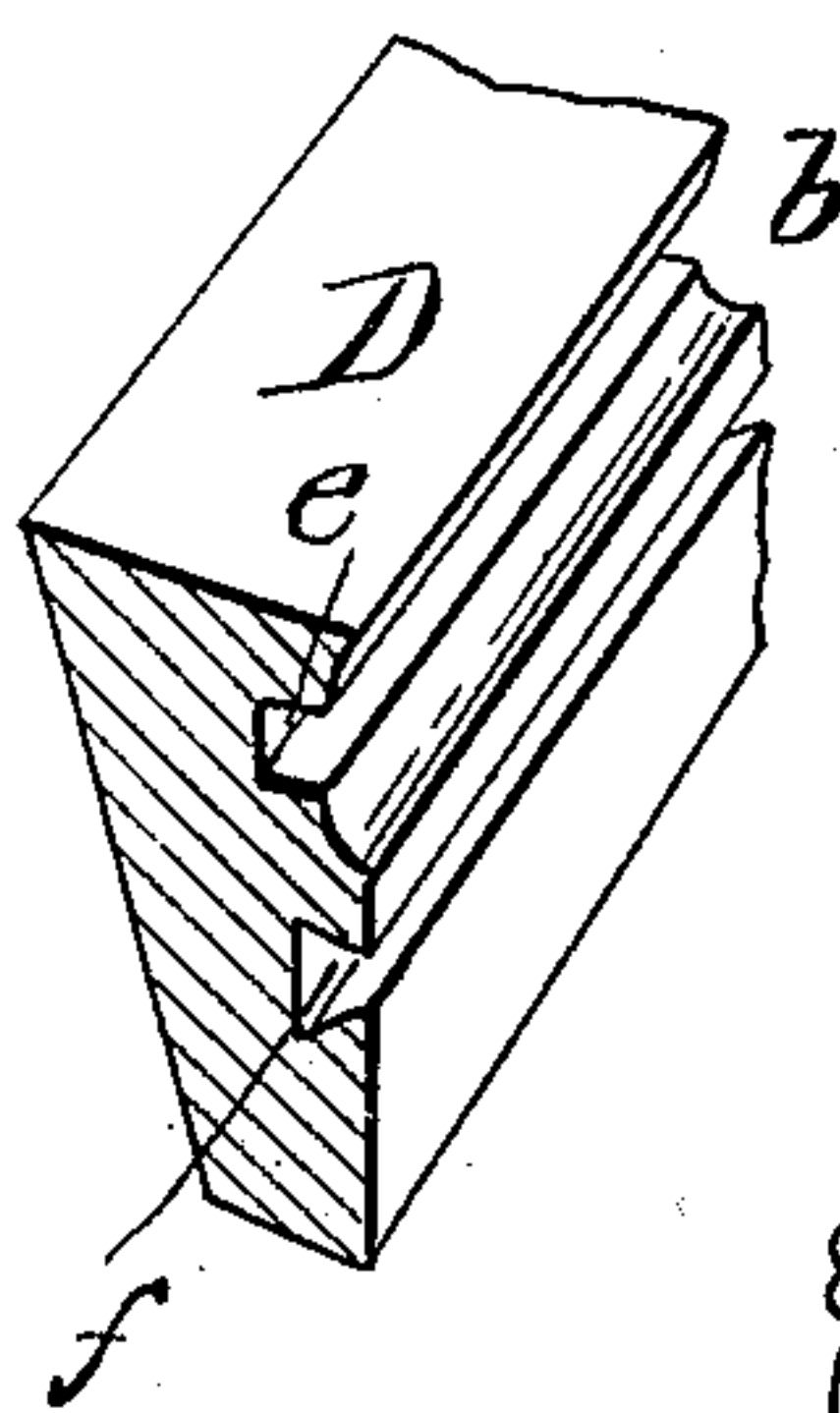


Fig. 3.

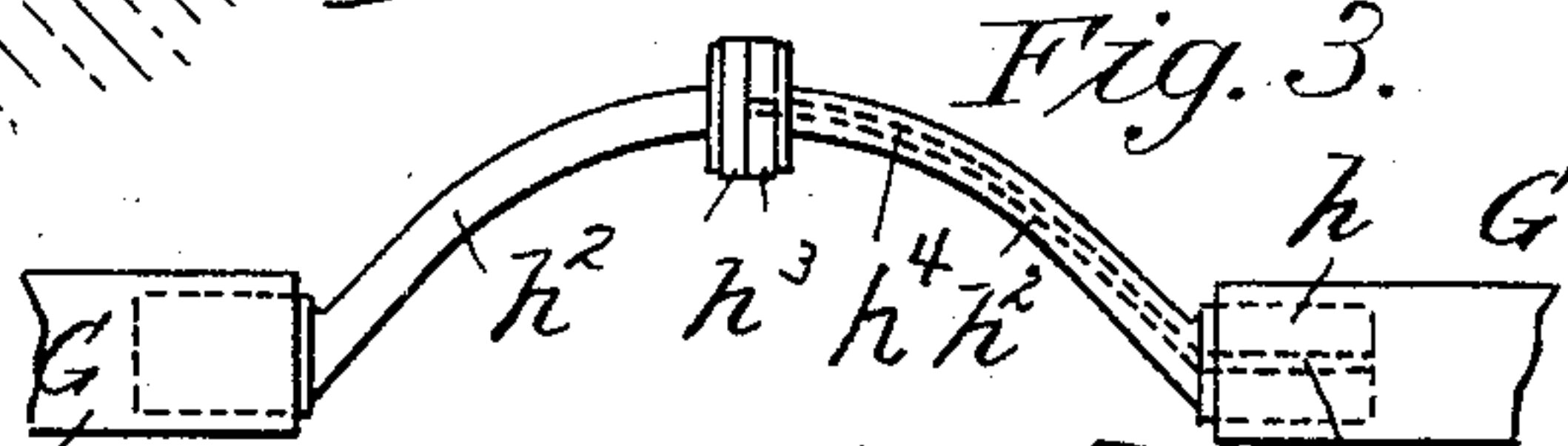


Fig. 5.

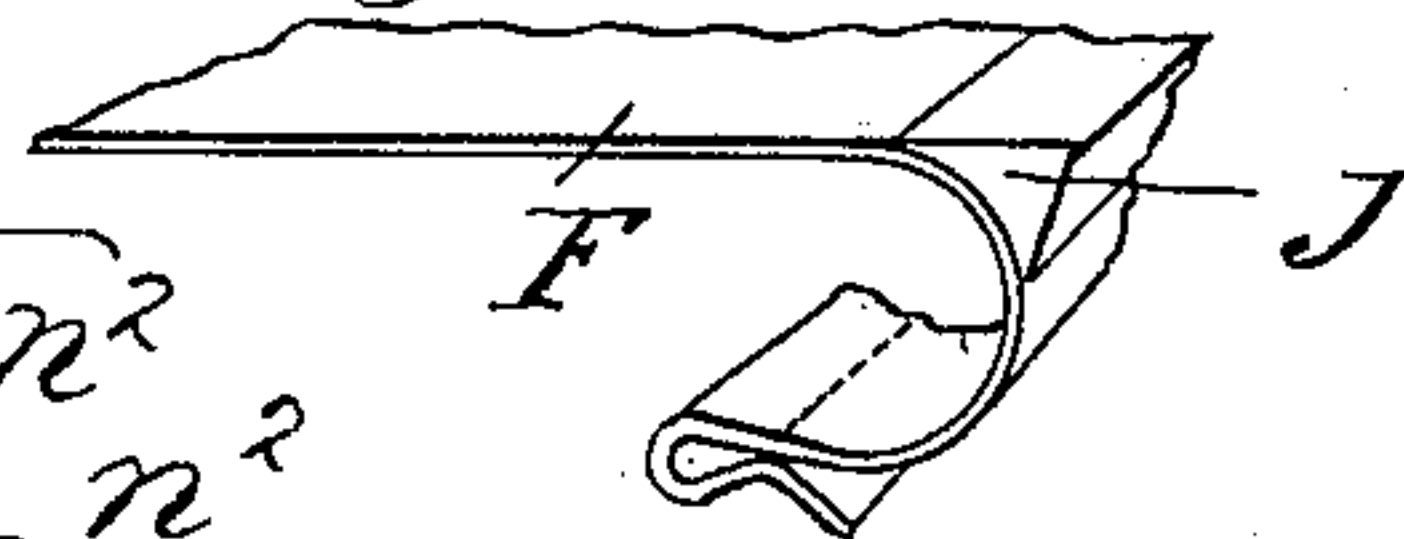
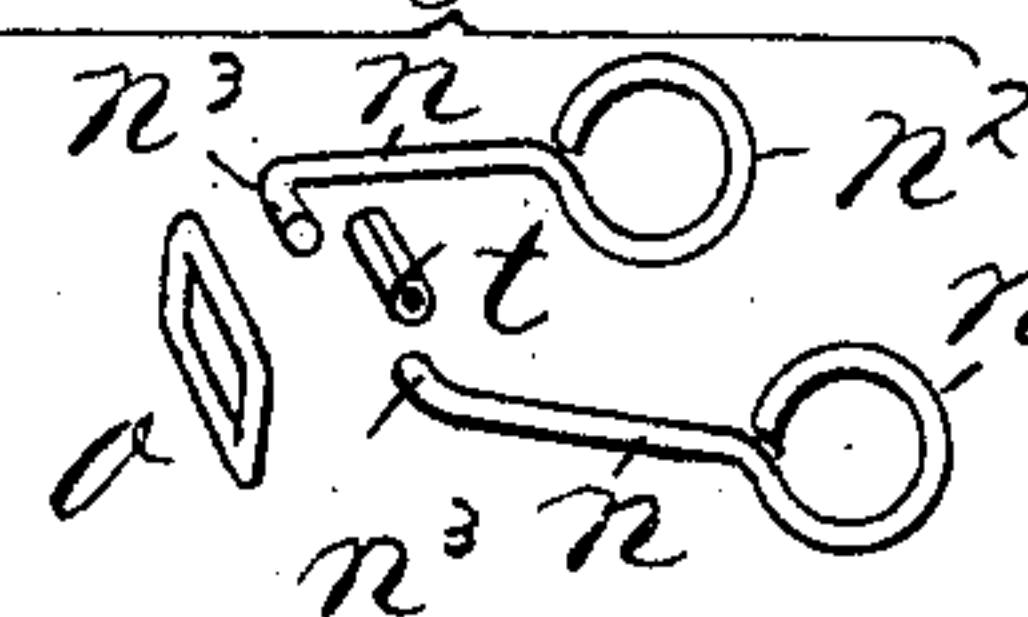


Fig.4.



Witnesses:
J. H. Goffine
M. A. Campbell

Inventor
Wm. F. Stebbins
by Wm. S. Bellows
Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 7.

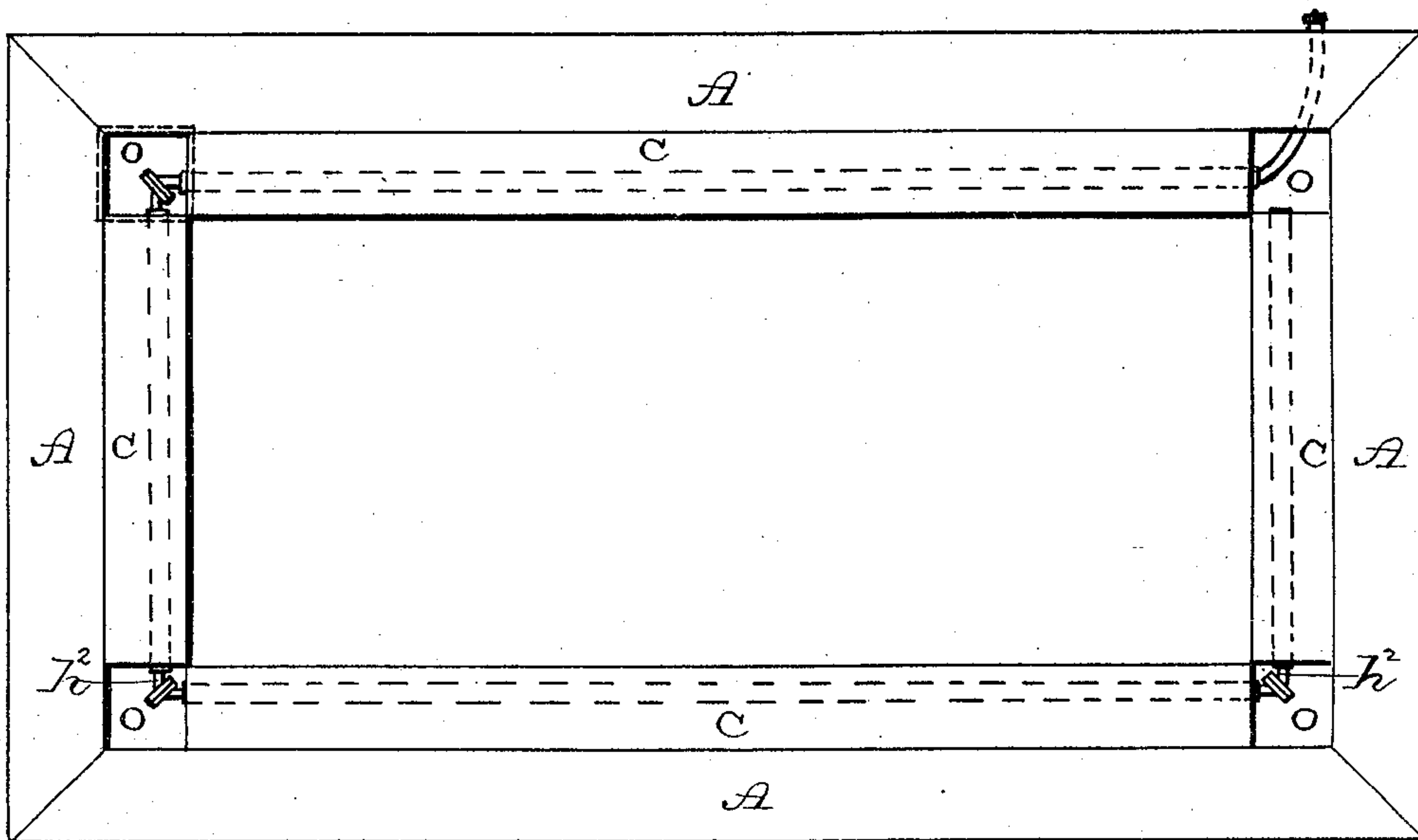


Fig. 8.

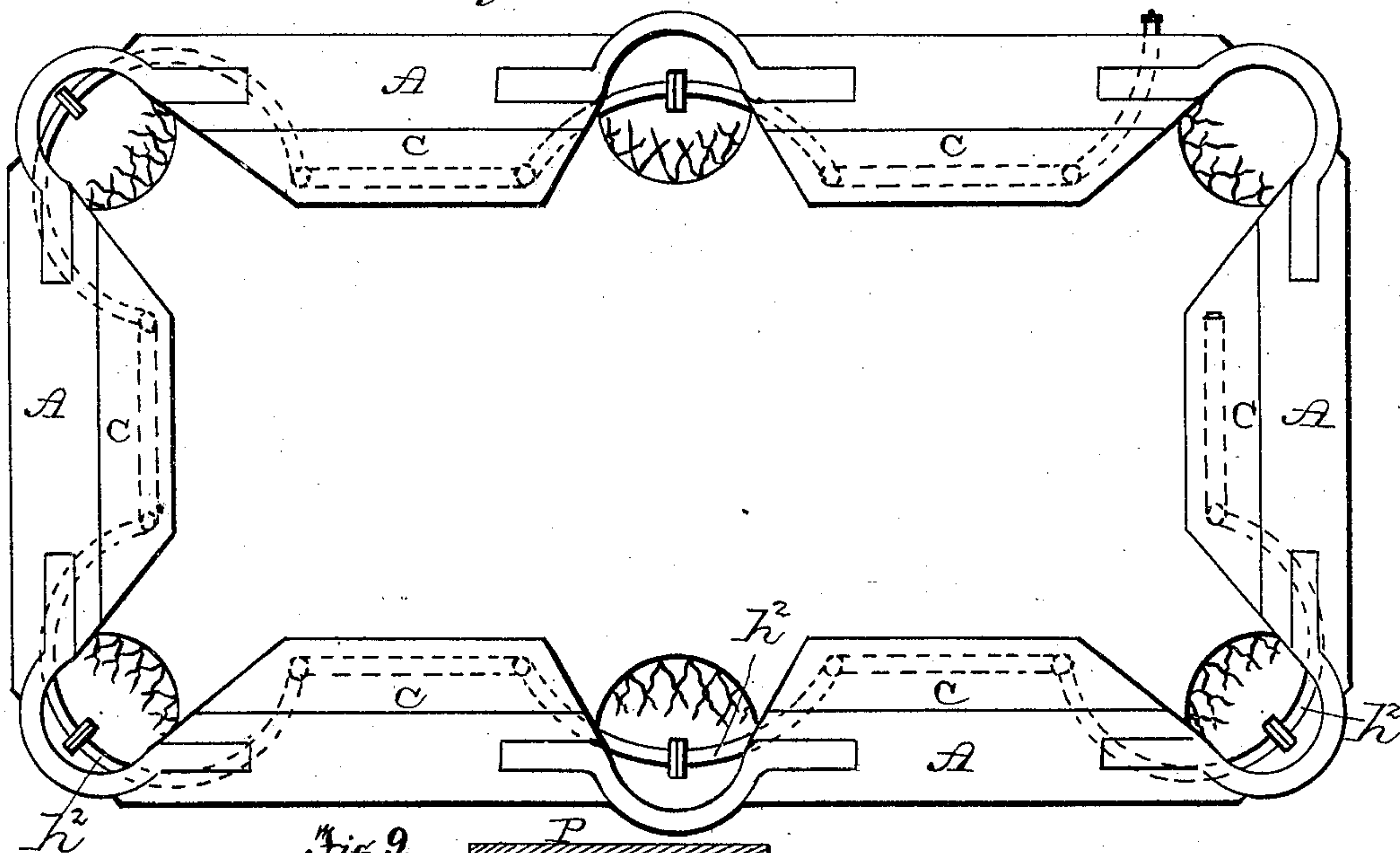
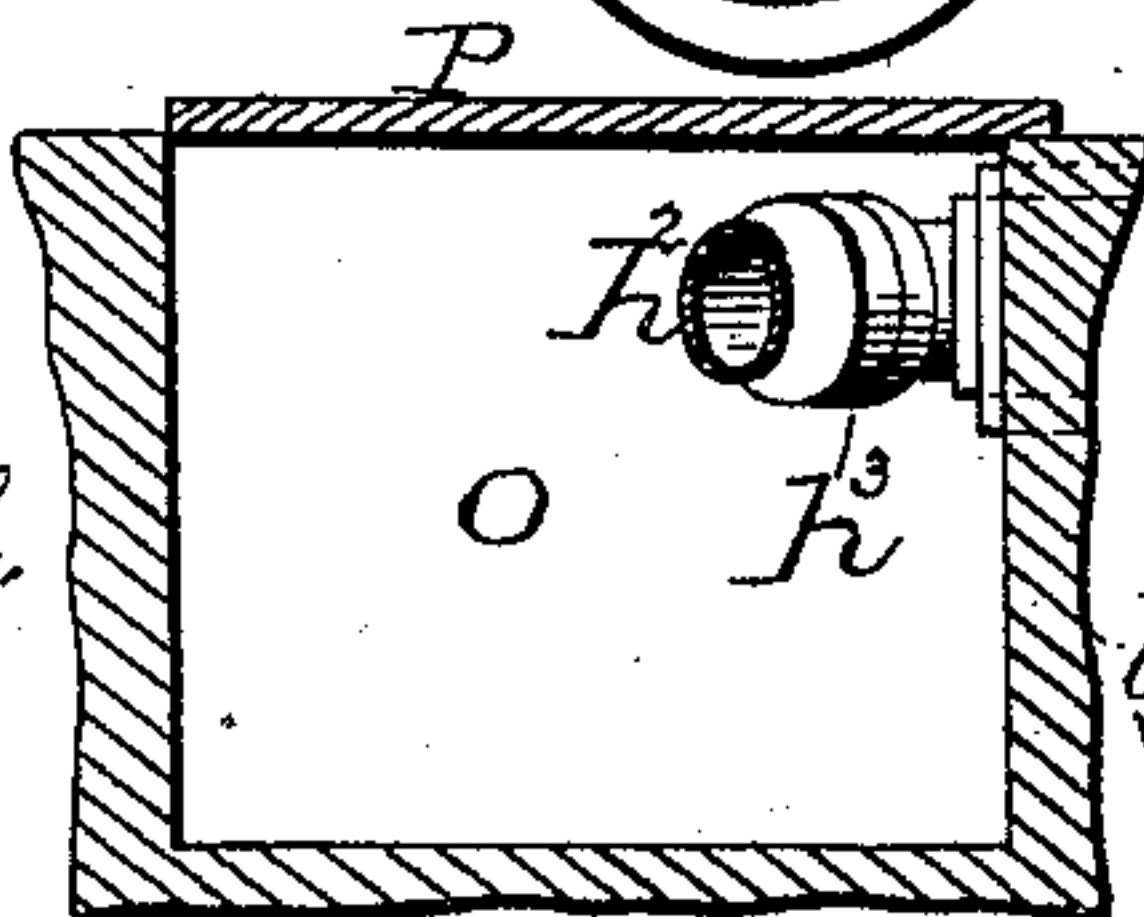


Fig. 9.



Witnesses:
M. A. Campbell.
O. Geiffert.

Inventor,
Wm. F. Stebbins,
by W. F. Bell Atty.

UNITED STATES PATENT OFFICE.

WILLIAM F. STEBBINS, OF SPRINGFIELD, MASSACHUSETTS.

PNEUMATIC CUSHION FOR BILLIARD OR POOL TABLES.

SPECIFICATION forming part of Letters Patent No. 603,490, dated May 3, 1898.

Application filed March 25, 1897. Serial No. 629,151. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. STEBBINS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Pneumatic Cushions for Billiard or Pool Tables; 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 it appertains to make and use the same.

This invention relates to improvements in pneumatic cushions for billiard and pool tables—such, for instance, as those of the general character shown and described in Letters Patent of the United States issued to me February 9, 1897, No. 576,767.

The present improvements pertain more particularly to novel constructions of the devices or parts which constitute the cushion and to the means for coupling the several air-tubes comprised in the cushion, whereby all the cushions may be inflated at once and with uniform pressure.

The objects of the improvements are to render the cushions which comprise the pneumatic tubes of the best possible character in their adaptation for receiving the impact of the billiard-balls and for cushioning same and for rendering the cushion easily susceptible of being repaired or having portions thereof replaced when after long use the rubber comprised in the composition thereof has become deteriorated, and to simplify and render more effective and easily available the couplings.

The invention consists in constructions or formations of parts and combinations of parts, all substantially as will hereinafter fully appear, and be set forth in the claims.

Reference is to be had to the accompanying drawings, in which the nature and composition of this invention are rendered clear, and in which—

Figure 1 is a plan view of the corner portion of a billiard-table equipped with the present improved pneumatic cushions. Fig. 2 is a vertical sectional view on line 2 2, Fig. 1. Fig. 3 is a sectional view centrally through the end portions of the pneumatic tubes for the cushions and through the extended flexi-

ble stems with which the tubes are provided and by means of which the one tube is coupled to the other. Fig. 4 is a perspective representation of retainers or clamp devices employed at the couplings. Fig. 5 is a perspective representation of a portion of the appliance which confines the pneumatic cushioning-tube in its place upon the rail and which comprises a body or strip of elastic material which constitutes the portion of the cushion which directly receives the impact of the billiard-ball. Fig. 6 is a perspective view of a portion of the supplemental rail-section upon which the pneumatic cushion is supported and detachably confined. Fig. 7 is a plan view of a billiard-table complete. Fig. 8 is a plan view of a pool-table. Fig. 9 is a view taken through one of the pockets O.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the frame of the billiard-table, having the bed B, as usual, and C represents the rail extending around the table within the frame, as usual in billiard-tables, having, however, as characteristic of the cushion-rails as constructed by me the step-like seat or depression *a*, constituted by the continuous recess formed within the inner corner portion of the rail, in which is fitted and secured in any suitable manner, preferably removably by nails or screws, the supplemental rail-section D, upon which the pneumatic cushion is supported and detachably confined.

The supplemental rail-section D, the inner face of which is more or less nearly vertical, has within its front face the arc-formed seat or rest *b* and the two longitudinal grooves *e* and *f*.

The two rails C D have their inner corners to meet, as shown in Fig. 1, and the square space left between the ends of these two rails and the inner side of the frame A of the billiard-table forms a pocket or recess O at each corner of the table to receive the coupling, by means of which the rubber tubes G are connected. As shown in Figs. 1 and 7, the rails C D are attached at their inner corners, but meet at no other points. The pockets are covered by means of removable plates P, one of which is shown as partially broken away

in Fig. 1. Whenever access to one of the couplings is desired the plate over the top of that pocket is removed.

G represents the tube for each cushion, which is practically and advantageously made of elastic rubber, the same being of a diameter very much less than the height of the cushion-rail regarded as a whole.

F represents the retainer for the cushion-tube, which consists of a strip of canvas or other suitable flexible material, preferably textile. This textile material has secured thereto and extending longitudinally along it, intermediate between its edges, the strip or body of rubber J, either pure or any suitable elastic compound thereof, the same being triangular in cross-section.

One portion of the textile tube-confining strip F is entered within the upper groove *e* in the front of the supplemental rail-section D, being retained by the rod *g*. The strip F is then carried downwardly around and closely against the tube, and has its other edge portion entered within the groove *f* and retained by the wire or rod *g*².

The location of the triangular strip J is such as to impart a sufficiently sharp corner to the cushion when the parts are assembled, whereby when the usual cushion-covering cloth *m* is applied, substantially as shown, covering the top and front of the rail, the cushion partakes of the same general form and appearance as those heretofore extensively approved and used on common billiard and pool tables.

The triangular strip J of elastic rubber is preferably secured upon and along the front surface of the textile tube-confining strip by a rubber cement. When after a long time this triangular rubber has become deteriorated and has lost its elastic nature to a large extent, it may be stripped off from the canvas and a new section cemented on in place thereof.

The pneumatic tubes G, when they have become old and impaired after years of use, may be readily removed, as is plain, and replaced.

For billiard-tables the cushion-tubes and the coupling devices therefor having combined therewith the triangular section J, of elastic rubber, are continuous throughout the length of each side and end rail, being coupled together at three of the corners in the manner substantially as shown in Fig. 1, the end of one tube at the fourth corner being closed, while the adjacent end of another tube is provided with a valved inlet-passage, through which by an air-pump to inflate, at once and with uniform pressure, all the tubes.

No coupling to which the air-pump is to be connected is here shown, because this forms no essential part of this invention. A single coupling is shown in Fig. 1 as illustrating the manner of connecting the ends of the tubes

G, but nothing more. The coupling shown in Fig. 1 is to be used in connection with an ordinary billiard-table.

Where pool-tables are used, a coupling such as is shown in Fig. 3 will be used. The coupling here shown is adapted for pockets in the rail; but those intended for corner-pockets will of course have a much greater amount of curve.

The couplings for adjacent ends of two of the tubes are constituted by plugs *h*, of rubber, fitted and cemented within the ends of the tubes, each being provided with an extension, preferably in the form of an attenuated stem *h*², having at its end a flange *h*³. Each plug and flanged stem *h h*² has a small passage *h*⁴ through it from end to end, and the flanged ends of two of the coupling-stems are abutted and cemented together, the passage in the one then becoming a continuation of that in the other.

Clamp devices are preferably applied about the adjoining flanged ends of the coupling-tubes for more effectually assuring the permanence of the couplings, and, as shown, a simplified and efficient coupling device is provided, which consists of the pair of short wire bars *n n*, each having at its one end the ring or eye *n*² and at its other the angularly-turned portion *n*³ and the slide ring or clasp *o*. The ring-eyes *n*² encircle the stems next back of the flanges, and the end portions of the wires are brought to abutment, the intermediate portion *n n* being inclined the one to another, so that when the slide-ring *o* is properly forced along the divergent wires their encircling ring-eyes are crowded toward each other and compress the flanges of both stems. The angular ends *n*³ *n*³ of the two parts of the wire device are held in their end to end relations by the small sleeve *t*. This is a provision of preference, but not of necessity.

For pool-tables the stems of the coupling-plugs are made somewhat longer than for the couplings at the corners of the billiard-table, so that they may be curved sufficiently wide to encircle the pockets both at the corners and at the sides, it being of course understood that for a pool-table the cushions would be made in six sections, two for each side and one for each end, five sets of couplings being necessary.

It will be apparent that a billiard or pool table equipped with the appliances involving the present invention provides that the cushions may be separately removed, repaired, or replaced without disturbing the others. For billiard-tables the rails proper, C, are extended to the corners, the one being mitered with the other; but, as indicated in Fig. 1, the supplemental rail-sections D have their ends squared, so that there is ample space left below the top of the rail to accommodate the couplings, and at the corners over the spaces in which the couplings are located metallic

plates may be provided as covers, or the outer billiard-cloth *m* may be extended to cover and conceal the couplings.

The main cushion-rail C has the longitudinal groove *v* in its lower side, and it also has the groove or rabbet *v*² at its upper corner farthest from the edge J. The billiard-cloth is confined by the stay-rod *w*² in the groove *v*², then extends around the appliances F J, and is carried downwardly and under the rail C and tacked or otherwise secured to the stay-strip *w*, which is entered within the said groove *v*. In order to get at a cushion to remove it or repair it, the side frame-rail A is removed, carrying with it the rail-section C, so that its under side becomes accessible, whereupon the strip *w* may be taken out from the groove and the cushion-covering cloth laid open.

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

1. In a billiard-table, the supplemental rail-sections D resting on the rails C, each set of said rails on the four sides of the table having squared ends, which ends abut each other only on their inner edges at each of the corners of the table, whereby a recess or pocket is formed at each of said corners, combined with the inflatable tubes which rest upon the rails D, and suitable couplings for connecting the ends of the tubes, the couplings being located in the pocket or recesses formed between the ends of the rails, substantially as shown.

2. The combination with the rail C of a billiard-table having the seat *a*, of the supplemental rail-section D fitted in said seat, and having the longitudinal grooves *e f* in its forward edge, the rubber tube seated against the supplemental rail-section D, and a strip of textile material overlying said tube and having its edge portions confined in said grooves, and having secured, as one thereto, the triangular strip J of elastic rubber, and the outer cushion-covering cloth, substantially as described.

3. In a billiard-table the combination with the main rail C having the recess or depression in its inner upper corner whereby the step-like seat is formed of the supplemental

rail D fitted in said seat, and having on its inner face the rest *b*, the inflatable tube G, the textile binder-strip J having cemented on its front face the triangular section J of elastic rubber, said binder-strip having its edge portions confined to said supplemental rail, substantially as and for the purposes set forth.

4. In a billiard-table, the main rails C, C having seats formed along their upper and inner edges, and the supplemental rail-sections D fitted within said seats, said rails and rail-sections having square ends and said ends meeting only at their inner corners, thereby forming pockets O at the corners of the table, combined with the inflatable tubes confined along their front edges, and the rails and couplings for the adjacent tubes, the couplings being located within the pockets, substantially as shown.

5. In a billiard or pool table, the combination with rails of inflatable cushion-tubes confined along the front of the rails, and several thereof having at their ends tubular stems, end-flanged and facewise abutted, the separate wire bars *n* having the ring-eyes *n*² encircling the stems back of the said flanged ends, and having the angularly-turned members *n*³ endwise abutted, and the slide-ring *o* adapted, on being moved on said bars toward the ring-eyes to contract the latter against the coupling-flanges, substantially as described.

6. In a billiard or pool table, the combination with rails, of inflatable cushion-tubes confined along the front thereof, one of said tubes having its end closed and another having a valved passage therethrough and several of the tubes having at their ends, the tubular stems, end-flanged and facewise abutted, the separate wire bars *n* having the ring-eyes *n*² respectively encircling the stems behind their end flanges, and having the angularly-turned members *n*³ endwise abutted, the sleeve *t* inclosing said members *n* and the slide-ring *o*, all arranged substantially as and for the purposes explained.

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

WILLIAM F. STEBBINS.

Witnesses:

WM. S. BELLOWS,
M. A. CAMPBELL.