

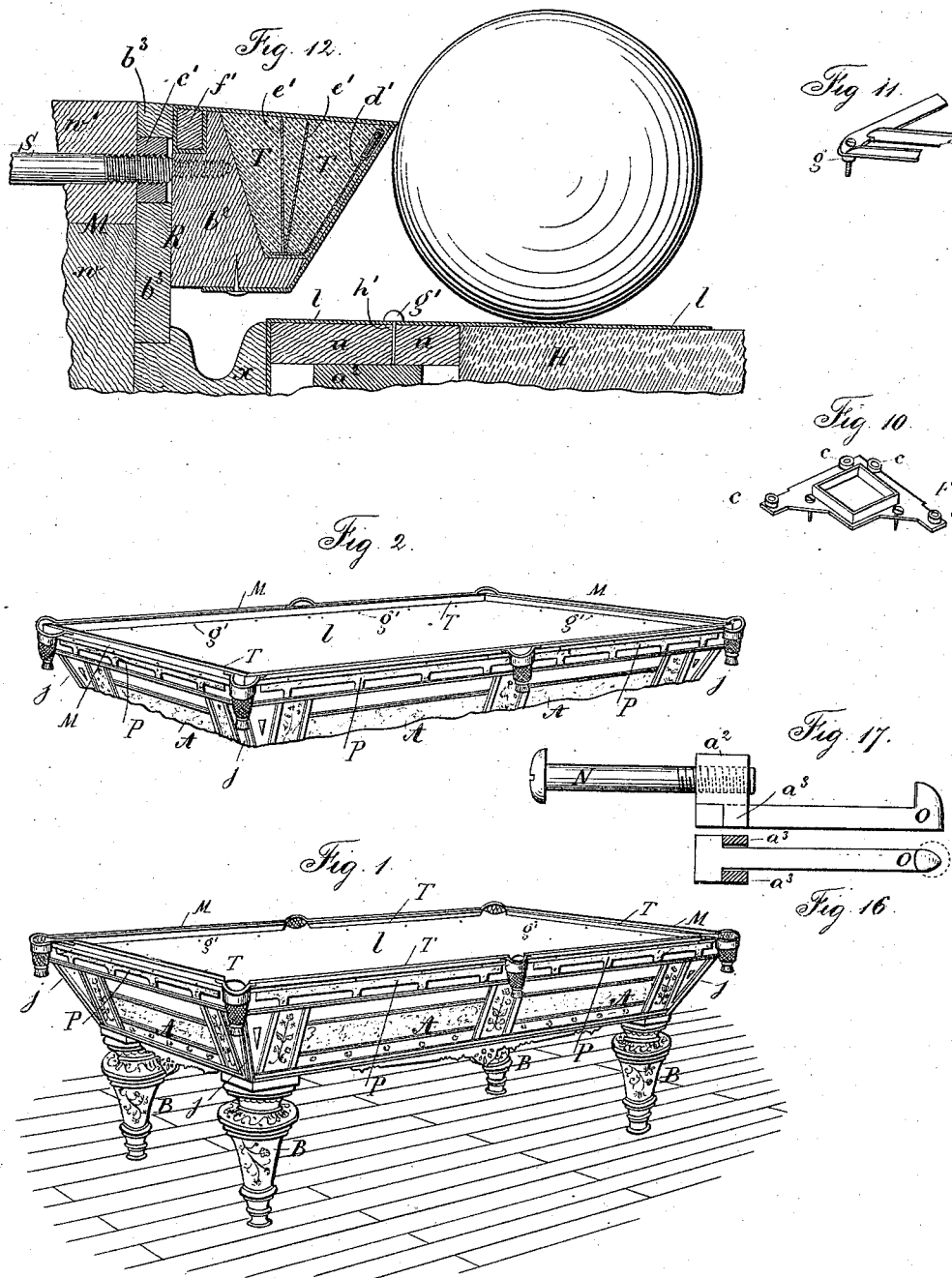
(No Model.)

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W. G. MORSE.
BILLIARD AND POOL TABLE.

No. 305,463.

Patented Sept. 23, 1884.



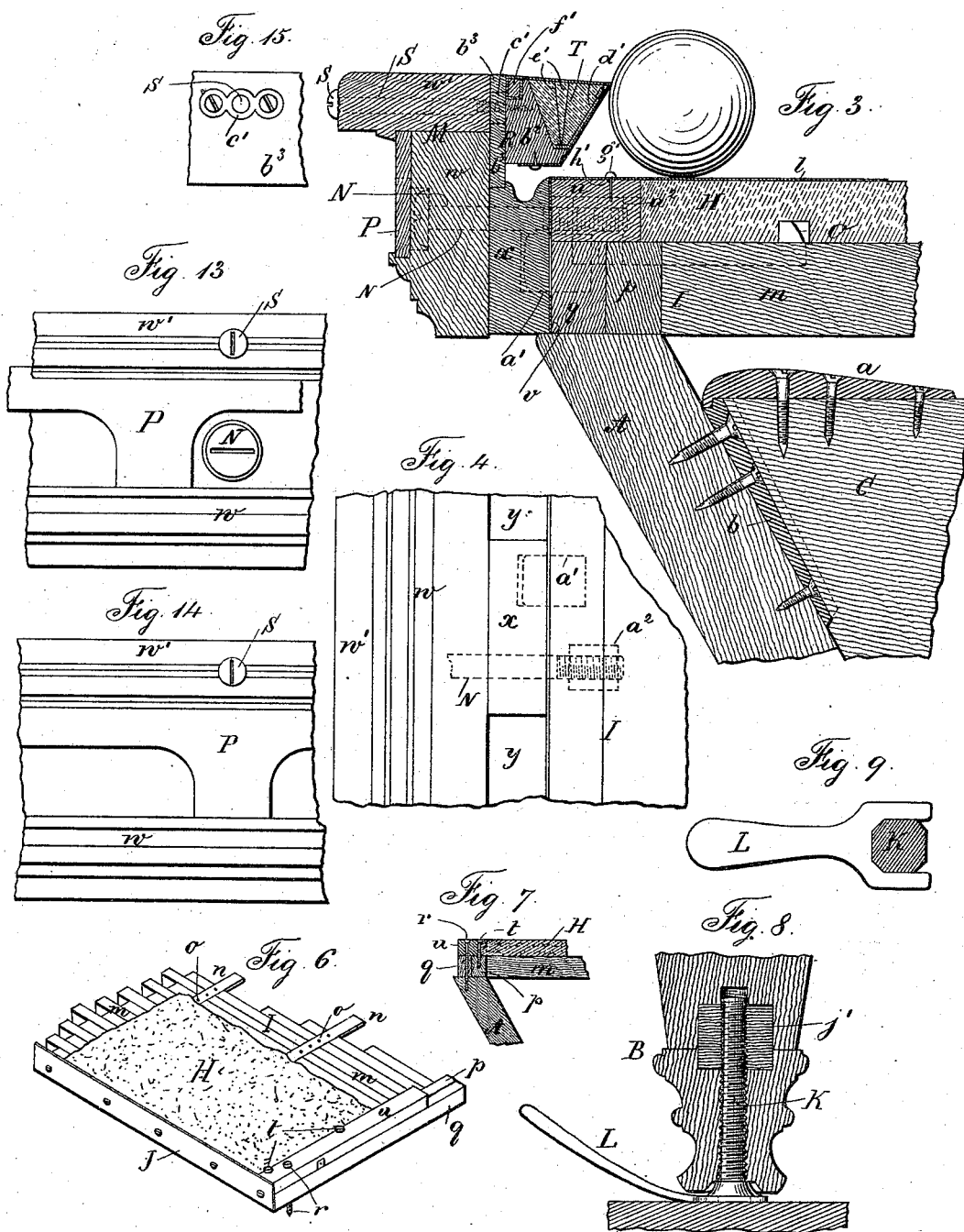
Witnesses
J. Stair
Chas. H. Smith

Inventor
W. G. Morse
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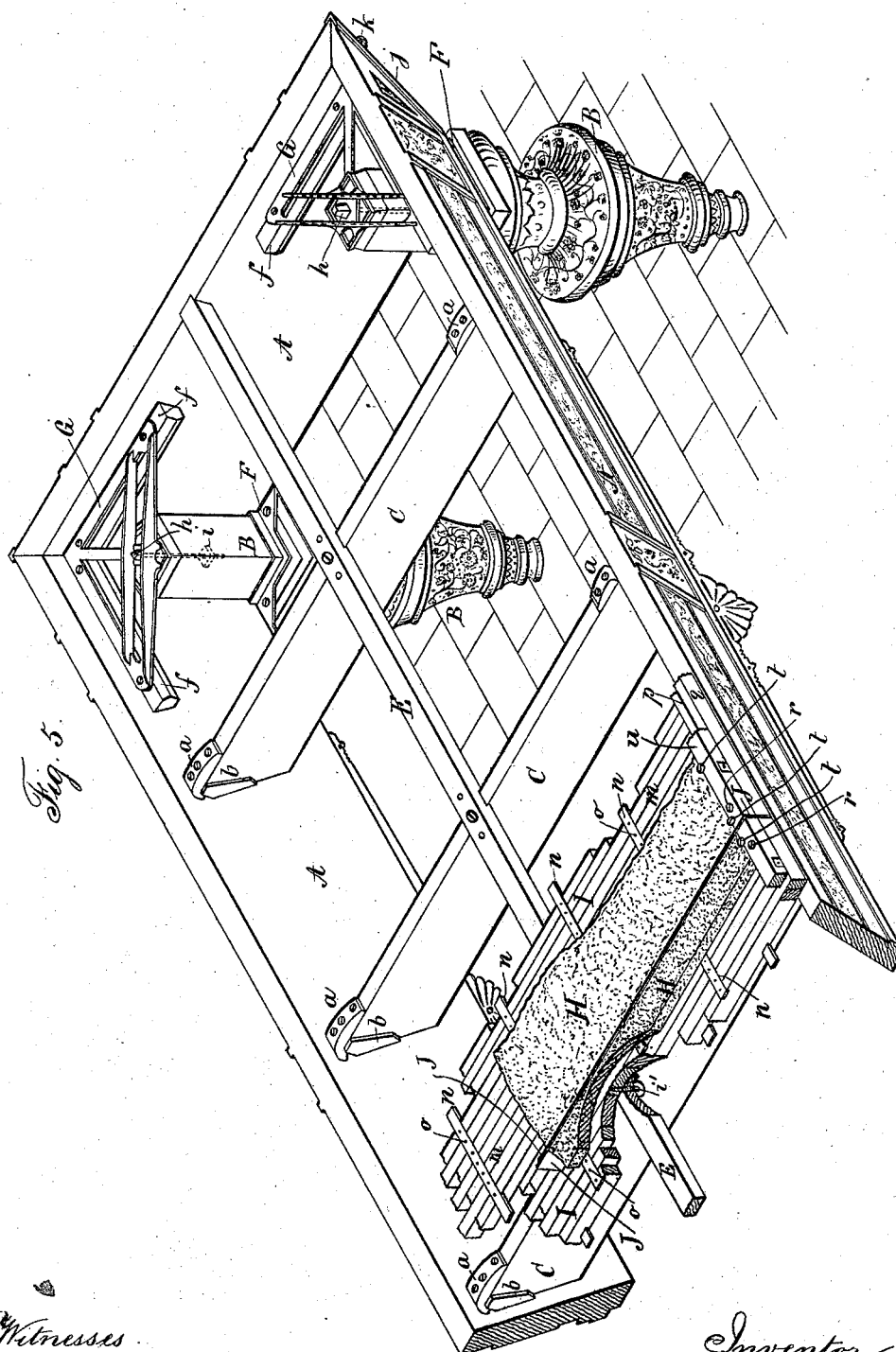
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UNITED STATES PATENT OFFICE.

WILLIAM G. MORSE, OF PLAINFIELD, NEW JERSEY.

BILLIARD AND POOL TABLE.

SPECIFICATION forming part of Letters Patent No. 305,463, dated September 23, 1884.

Application filed March 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, WM. G. MORSE, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Billiard-Tables, of which the following is a specification.

The object of this invention is to render the table easier and cheaper to construct, to keep level, straight, and true, and to lessen the noise in playing, to facilitate the setting up or taking to pieces, to prevent injury to the parts, especially the bed-slabs at the edges, to render the elastic cushions more effectual and the rails more firm and reliable than heretofore, and to allow for the table being used for pool-billiards or for carrom-billiards.

In the drawings, Figure 1 is a perspective view of the table with pockets adapted to playing pool-billiards. Fig. 2 is a perspective view of the top of the pool-table with the short cushion-rails of the same removed, and long supplemental cushions applied in their places for the purpose of playing carrom-billiards. Fig. 3 is a vertical transverse section of one side edge of the table. Fig. 4 is an inverted plan view at one edge, showing part of the bed-rail and bed. Fig. 5 is a parallel perspective view of the frame-work-attaching devices and part of the bed of the table. Fig. 6 is a parallel perspective view of a portion of one section of the bed, showing the manner of constructing the joint-edges. Fig. 7 is a sectional view showing a portion of a bed-section and broad rail, and the method of attachment. Fig. 8 is a section of the lower end of the leg, and Fig. 9 a plan of the wrench for leveling the table. Fig. 10 shows the lower socket-frame for fastening the legs and corners. Fig. 11 shows part of the upper corner-frame and the fastening device. Fig. 12 is a section of the cushion-rail and attaching devices, one of the angle sight-pins, and portions of the connecting parts. Figs. 13 and 14 are elevations of the bed-rails, showing the means for covering and uncovering the bed-rail attaching-screws. Fig. 15 is an elevation of a portion of the back side of the cushion-rail, showing the nut for the attaching-screw. Fig. 16 is a plan, partly in section; and Fig. 17 is an elevation of the bed-rail-attaching device.

The legs B B, broad rails A A, cross-beams

C C, and center bearer, E, Figs. 5 and 3, form the frame-work of the billiard-table. The beams C have bearing-plates *aa* attached upon their upper edges at the ends, and there are grooved iron bearing-plates *b b*, which are secured to the inner surfaces of the broad rails A, and into which the cross-beams C C closely fit. The outer ends of the plates *a* are made as hooks, that pass into recesses at the upper ends of the plates *b b*, to tie the parts together. The center bearer, E, is notched into the cross-beams C and broad rails A, and secured by screws. Each leg B and the broad rails A are fastened together by the four lower socket-frames, F, of metal, through which the upper part of the leg passes, and the frame is screwed upon the broad part of the legs B, and there are tubular dowels *c*, that pass up into holes in the broad rails, and through these screws may be passed up into the rails A. The upper corner-frames, G G, of metal are screwed down upon the bearing-strips *ff*, the screws passing down through the tubular dowel-pins *g g*. The legs are made beveling at their upper ends where they pass into the rectangular opening in the corner-frames, the sides of which openings are beveled, and there is a bolt, *h*, which passes through the corner-frame G, down into a nut, *i*, bedded in the shank of the leg B. When the bolts *h h* are screwed up tightly, the legs B and broad rails A are securely bound together, so that the table stands very firmly when in use. This construction is very simple, cheap, and durable, and the table can be easily put together or taken apart.

As the broad rails are continued completely around the table from corner to corner, and the grain of the wood runs in the same direction, the frame can be very easily and accurately planed off straight on the top edge to receive the bed-sections, and there is also no tendency to warp or become crooked from unequal shrinkage, as is the case when the large, heavy, and bulky legs are fastened to the top of the frame, with the grain of the legs running vertically, while the grain of the broad rails run horizontally. It is not necessary to make close joints where the broad rails meet at the corners of the table, because I make use of ornamental corner-strips *j* to cover the joint. These are fastened by the ornamental-head-

ed screw *k*. It is understood that the cross-beams *C* and the center bearer, *E*, are fitted and applied after the legs and broad rails are connected together.

5 The bed of the table, upon which the cloth *l* is placed, I usually make in four parts, which I call the "bed-sections," each section having a bed-base, *I*, and a hard slab, *H*. The bed-base *I* is made of narrow strips of wood
10 *m m*, Figs. 5, 6, and 3, and the thin strips *n n*, of wood or other suitable material, and attached firmly to the strips *m m* by the nails *o o*, by driving one at the center of every intersection of the strips *n* with the strips *m*.
15 I groove the strips *m*, so as to let the strips *n* in flush, and employ two or more of the strips, preferably, on each side of the bed-base. The strips *n* could in some cases be simply nailed on without grooving; but they would
20 be inconvenient. I employ wooden strips *m* that are not sufficiently seasoned to allow them to absorb moisture and swell to press against one another, and I use no glue or other adhesive substance between the strips *m*, or
25 anything to hold them together except the strips *n* and nails *o*, and the strips of wood *p*, which are glued and nailed to the ends of the strips *m*, and also the strips *q*, which are glued and nailed to the strips *p*. The cloth strips
30 *u*, to which the bed-cloth *l* is nailed, are also attached firmly to the strips *p* and *q*, and serve as a protection also to the slabs *H*. By this construction, the bed-base is stiff and strong, and gives a firm and perfectly-reliable support to the slab *H*, and prevents any liability
35 of the bed-section to spring, twist, shrink, or warp, and no strain can be produced on the bed-sections by the shrinkage of the materials of which they are made, so that the entire bed keeps straight, true, and reliable.
40 The slab *H* may be of concrete, paper composition, or of slate (either in pieces or whole), or any similar materials firmly secured to the bed-base *I* by screws, cement, or other
45 suitable materials; and the screws *t*, Figs. 5 and 7, pass down through the inner edges of the cloth-strip *u*, and the heads of the screws *t* are recessed, and rest at one side upon the edges of the slab *H*, to assist in fastening the
50 slabs to the bed-base *I*.

Another effect of this mode of constructing the bed-sections is to deaden the sound produced by the rolling of the balls over the bed, and I sometimes, therefore, employ this mode
55 of constructing the bed-base, and screwing and cementing the slabs to the bed-base even when I use a whole slab of slate.

It is usual to fill the joints and all defects on the bed-sections with plaster-of-paris to make
60 the surface of the bed complete and even. This is a serious objection, for besides the extra work and trouble, when the table gets out of level, (which it often will from various causes,) the plaster becomes loosened and the
65 rails and cloth require to be taken off and the bed-sections removed and cleaned and reset

before the table can be leveled again. To obviate this difficulty, I face the inner edges of the bed-sections with the facing-strips *j*, Figs. 6 and 5, which may be made of any tough, hard
70 material. I usually employ thin strips of rolled iron, and they are made straight and even with the upper surface of the slabs *H*, and firmly attached to the bed-base *I*. By this
75 arrangement all the inner angles of the slabs are completely protected from injury, and the table can be leveled at any time when the cloth and rails are in place, because there is no
80 plaster or other substance required in the joints, the adjoining facing-strips *J* being fitted so closely that the joint cannot be felt under the cloth. It will also be observed that
85 there is no plaster-of-paris or other similar substance required for any purpose in setting the table, as the screws *r*, which fasten the bed-sections to the broad rails, do not pass through
90 the slabs *H*. These facing-strips *J* are available with any kind of slab, regardless of the character of the frame or bed that supports the slab. The bed-sections, Figs. 5 and 7, rest
95 upon the broad rails *A*, center bearer, *E*, and are fastened firmly to the broad rails by long screws *r* passing down through the cloth strip *u* into said rails, and to the center bearer, *E*, by the screws *r'* passing up through from the under
100 side.

It will be readily observed that the billiard-table has to be leveled without injury to the sectional bed, the rails, or any portion of the
105 table. I employ a device which can be easily operated by any one, even although not skilled in the use of tools. Screws have sometimes
110 been used—one in the base of each leg—and, as the heads of such screws are unsightly in appearance, they have sometimes been covered by movable cylinders. The metallic
115 screw *k*, Figs. 8 and 9, is made, preferably, of cast iron, and with a broad, thin polygonal head at the bottom end to receive the wrench *L*, by which the leveling-screw is turned. The
120 wood nut *j'* for the screw also forms a dowel for uniting the two parts of the leg. This leg and adjusting-screw, being a separate invention, are not claimed herein. The cloth *l* is
125 drawn tightly over the bed and the vertical faces of the cloth strip *u*, and I usually nail the cloth to the cloth strips, and also nail the strip of cloth *v* to the lower edge of the strip *q*, (to insure a firm and even bearing for the rails.)

The bed-rail *M* is usually made of the two
130 strips *w* and *w'*, and the rest-blocks *x x*, Figs. 3 and 4, are made fast to the strip *w*. By the employment of the rest-blocks the openings
135 *y*, Fig. 4, are formed between the bed-rails and bed-sections, and the cushion-rail is raised about three-sixteenths of an inch above the
140 bed of the table. "The object of these openings is to allow dust to pass down freely from the bed to prevent the accumulations of dirt and moth, and also to enable the bed to be
145 kept clean with great facility and little wear upon the cloth, as the dust can be swept out-

wardly on the bed and discharged downwardly below the cushions, instead of being swept to the corners of the bed, as usual." There are also dowel-pins a' , Figs. 3 and 4, fitted into the edges of the bed-sections to hold the bed-rails from slipping.

In order to deaden the sound produced by the concussion of the ball against the cushion-rail, it is desirable to connect the bed-rails M directly with the bed-slabs H.

As the usual method of bolting the rails to iron nuts embedded in the substance of the slabs is both expensive and unreliable, I have provided a bed-rail fastening device consisting of the rail-bolts N, which pass through the rest-blocks x into the nuts a'' , Figs. 3, 4, and 17, which fit loosely in the mortises in the cloth strips u . There is also a hook, O, and a hole in the slab H to receive it, and the hook has a head at the outer end, which connects with two claws, a'' , on the under side of the nut a'' , so that when the rail-bolt is screwed up the hook O is drawn tightly against the slab, and the rail M is firmly clamped to its place. The hooks may be fitted tightly or loosely in the wood. I prefer to have them loose, and the end o may be connected with the slab H in any convenient manner.

For the purpose of covering the heads of the rail-bolts N, I have provided the ornamental sliding strip P, Figs. 1, 2, 3, 13, and 14, which can be slid endwise in their grooves sufficiently far to uncover the bolt-heads. Fig. 13 shows the bolt-heads uncovered. Fig. 14 shows them covered. This arrangement saves the expense of elaborately-wrought covers to the bolt-heads, and prevents the face of the rails from being marred by screwing or unscrewing the bolts.

It is desirable that the billiard-table should be constructed so that the game of carrom-billiards and the game of pool-billiards can be played upon the same table, and attempts have been made to accomplish this object by applying short pieces of cushion in the pocket-openings. This plan, however, is faulty and impracticable for correct and satisfactory playing, owing to the many joints or breaks in the cushion. To allow for either game being played I have made the rails of the table in two parts, one of which I call the "bed-rail" and the other the "cushion-rail," and I provide two complete sets of the cushion-rails, (with cushions,) one set extending from pocket to pocket for pool-playing, and the other set running from corner to corner for carrom-playing, either set to be used when the other is removed. The cushion-rails R, I make of the strip b^2 , to which the elastic cushion is attached, and the strip b^3 , the lower edge of which is received into and fits grooves in the upper surfaces of the rest-blocks x , and for the purpose of holding either the short or the long cushion-rails firmly to the bed-rails I provide the ornamental-headed screws S, passing through the bed-rail strip w , and the nut c' , bedded in

the substance of the cushion-rail strip b^3 , and secured by screws, as seen in Fig. 15. These fastenings hold the cushion-rails very firmly in their exact places. The cushion T may be of any suitable elastic substance. I prefer and have shown it, Figs. 12 and 3, as a rubber strip, narrow at the bottom side and broad at the top side, and the face is inclined so that the upper edge receives the force of the blow from the ball, and the cushion is attached to the strip b^2 . It is desirable to make the cushion of pure rubber, as adulterated rubber is not as durable; and as pure rubber is found to be too soft to drive the ball with the required force, it has been the practice in some cases to employ strips of muslin, steel, or other suitable substance on the face of the cushion or embedded in the substance of the front side of the cushion, to stiffen the same, so as to cause a greater amount of rubber to act upon the ball. It is also found that the rubber protrudes upward along the middle of the top or upper side of the cushion when greatly compressed by a powerful blow from the heavy billiard-ball, thereby lessening to a great extent the reacting power of the cushion. To remedy this defect, I extend the muslin strip d' across the bottom side of the cushion, and I also firmly incorporate one or more longitudinal strips of muslin, $e' e'$, or other suitable material into the substance of the rubber at or near the center of the cushion. This ties the top and bottom portions of the rubber together, so that the rubber cannot rise or bulge up at the top of the cushion when the ball strikes the face of such cushion; hence the whole elastic power of the cushion is brought to bear upon the ball, and a much greater speed of the movement is thereby obtained, and the cushion can be made lower than heretofore without any risk of the ball jumping when it strikes the cushion. The cushion-rail cloth is first secured at one edge by the strip f' , and then drawn over the face of the cushion and nailed to the under side of b^2 in the usual way.

The angle sight-pins g' , Figs. 2, 12, and 3, are of great benefit in carrom-billiards to most players, especially until the player has become very proficient. Then it is in some cases desirable to dispense with their use. I therefore apply the sight-pins so they can be removed and replaced at pleasure. The sight-pins g' may be made of metal. I have heretofore placed these pins outside of the cloth; but by my present plan of attaching the rails to the table I am enabled to have the pins show upon the cloth, which is preferable; and I provide a socket, h' , Fig. 12, in the upper surface of the cloth strip u , and a hole passing vertically from the bottom of such socket is sufficiently large to receive the stem of the pin loosely. The concave socket enables the pin-hole beneath the cloth to be easily found, and the pin to be readily applied. The head of the sight-pin rests upon the bed-cloth.

I do not claim a billiard-table in which the

elastic cushions and the entire rail around the table have been changed to alter the table from a billiard-table to a pool-table or the reverse. This, however, is expensive. Neither do I claim a cloth face to the rubber cushion, nor two or more layers of cloth covered with rubber. This does not prevent the rubber of the cushion being pressed upwardly in the middle portion of the top when struck by the ball.

I claim as my invention—

1. The broad rails A and the cross-beams C, in combination with the bearing-plates *b* and hook-plates *a*, substantially as set forth.

2. The broad rails A, cross-beams C, bearing-plates *b*, and hook-plates *a*, in combination with the center bearer, E, substantially as set forth.

3. The combination, with the broad rails A and cross-beams C, of the legs B and socket-frames F, substantially as set forth.

4. The combination, with the broad rails A and legs B, of the socket-frame F and corner-frames G, substantially as set forth.

5. The combination, with the broad rails A and legs B, of the corner-frames G, the bearing-strips *f*, the attaching-screws, the bolt *h*, and nut *i*, substantially as set forth.

6. The bed-slats *m* and the connecting-strips *u*, in combination with the slab H, substantially as set forth.

7. The bed-slats *m* and connecting-strips *u*, in combination with the slab H, edge-strips *p q*, connected together and to the slats *m*, substantially as set forth.

8. In combination with the slabs H and the wooden bed upon which they rest, the facing-strips J, secured at the inner edges of the bed-sections, for the purposes and substantially as set forth.

9. The rail M and the rest-blocks *x*, in combination with the edge-strips *p q*, dowels *a'*, and attaching-screws, substantially as set forth.

10. The rail M and slab H, in combination with screws N, the nut *a''*, and the hook *o*, the end of which passes into a hole in the under side of the slab H, substantially as set forth.

11. The elastic cushion T, in combination with the strips *b'' b'''*, the rail M, the blocks *x*, grooved upon their upper surfaces for the reception of the lower edge of the strips *b''*, and the attaching-screws, substantially as set forth.

12. The strips *b'' b'''* and elastic cushions, in combination with the countersunk nuts *C'*, the attaching-screws for the same, the rail M, and the screw S, substantially as set forth.

13. The elastic billiard-table cushion having one or more longitudinal and nearly vertical layers of muslin or similar material in the middle part of the elastic substance, for lessening the spread of the rubber in the cushion vertically when struck by the ball, substantially as set forth.

14. The combination, with the rails M and attaching-bolts N, of the plates P, adapted to covering the ends of the bolts N, and movable endwise, for giving access to such bolts, substantially as set forth.

15. The billiard-table having a set of rails firmly attached around its upper edge, in combination with the elastic cushions and cushion-rails, that are movable, so as to apply long or short rails, and the fastening for securing the cushion-rails in place, substantially as specified.

16. The rail M and slab H, in combination with the screws N, the nut *a''*, having projections, and the T-headed hook or connection to the slab H, substantially as set forth.

17. The cloth strip *u*, over which the cloth passes, with sockets and holes in the upper surface of such strip *u*, in combination with the removable sight-pins, having heads that rest upon the cloth, and stems that pass through the cloth into the holes in the strip *u*, substantially as set forth.

Signed by me this 19th day of March, A. D. 1884.

WM. G. MORSE.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.