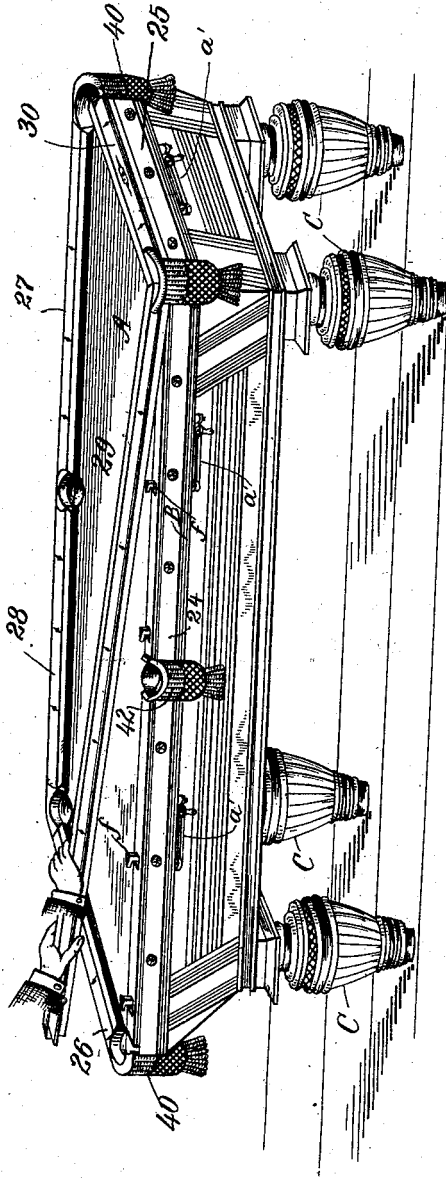


H. F. DAVENPORT.
 CONVERTIBLE POCKET CAROM BILLIARD TABLE.
 APPLICATION FILED MAR. 18, 1907.

923,249.

Patented June 1, 1909.
 3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 3.

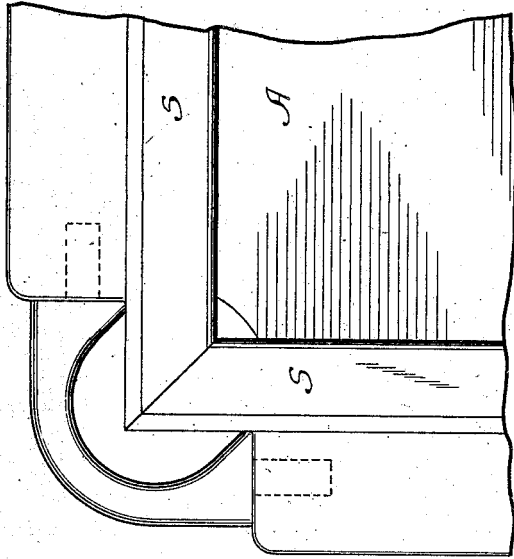


Fig. 2.

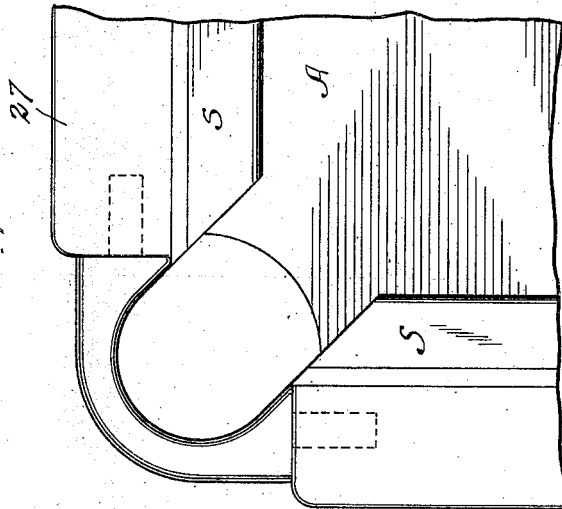


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 6.

29

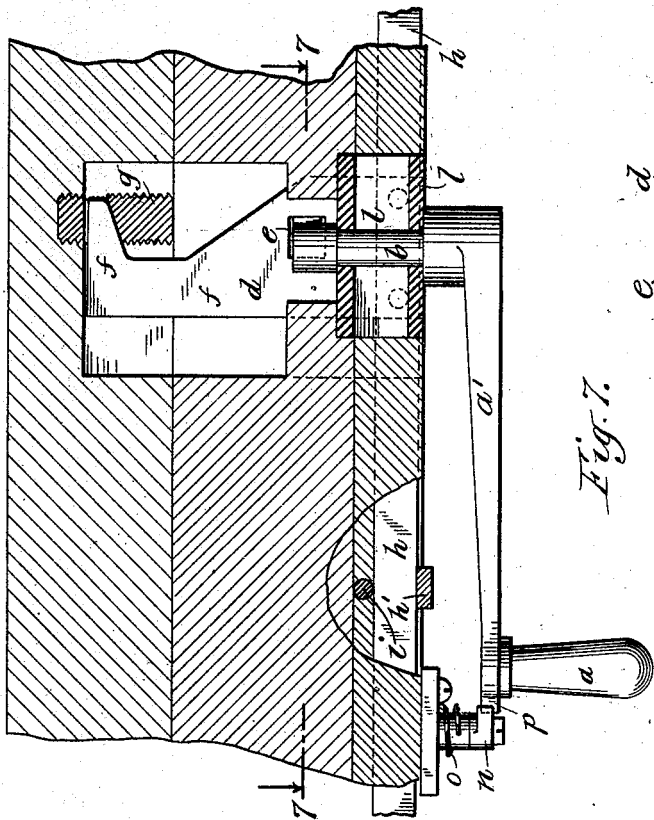


Fig. 7.

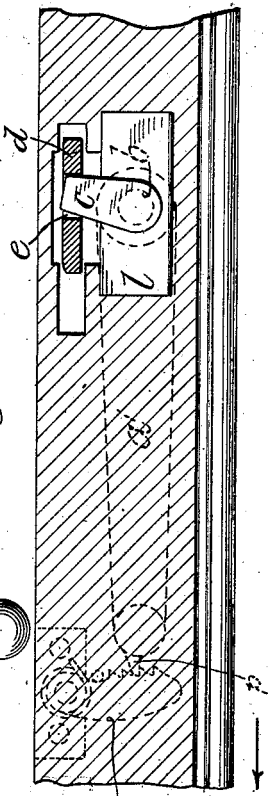
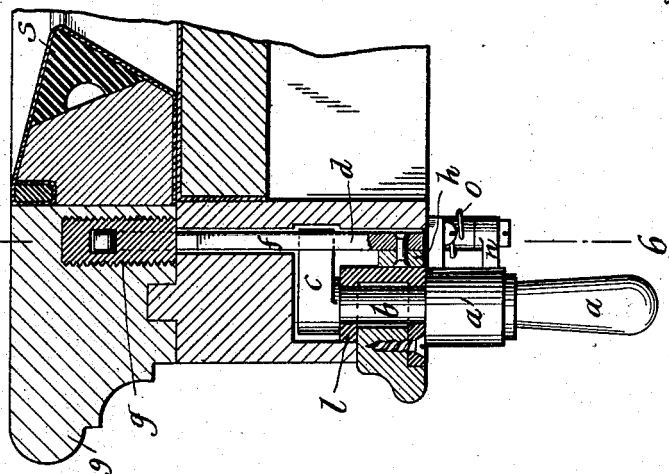


Fig. 5.

29



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UNITED STATES PATENT OFFICE.

HARMON F. DAVENPORT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BRUNSWICK-BALKE-COLLENDER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF OHIO.

CONVERTIBLE POCKET-CAROM BILLIARD-TABLE.

No. 923,249.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed March 13, 1907. Serial No. 362,136.

To all whom it may concern:

Be it known that I, HARMON F. DAVENPORT, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Convertible Pocket-Carom Billiard-Tables, of which the following is a specification, reference being had to the accompanying drawing, forming part thereof.

My invention relates to what is commonly denominated "a combined billiard and pool table," which is, more properly speaking, a table which by either the use or disuse of certain parts, in connection with the major portions of the table, or by the adjustment of certain parts always attached to the table, may be transformed from a "pocket-table" into a "carom-table" and vice versa, at the pleasure of the user of the table and without the employment of a skilled mechanic and tools to effectuate the transformation. Many inventions have been made and patented having for their end and object the accomplishment of this desideratum, among which may be instanced a table having a "bed-rail" provided with six permanently-arranged pockets, a set of six pocket cushion-rails, and an interchangeable set of four carom cushion-rails, each of such sets of rails being attachable to and detachable from the said bed-rails by means of thumb screws; which last named style of convertible table is made the subject of U. S. Letters Patent to Bartel No. 650,085, of May 22, 1900, in which its construction and operation will be found fully set forth. Many other forms of convertible table have been devised; patented; and used; but only two kinds have ever gone much into use, viz. 1st, that kind comprising the use of attachable and detachable "cushion-blocks," which kind has been in commercial use now for a great many years and to a considerable extent; (mainly on account of its simplicity, its cheapness, and the ease with which it may be used by the owner of the table) but which kind has given but little satisfaction to players of much skill; on account of the imperfect action of the cushions, when adjusted for use as a carom table, due to the lack of a perfect continuity of the "playing-surfaces" of the cushions, or the jointures of the permanent and the detachable parts of the cushions; and 2nd. that other style of convertible table patented to Bartel, as stated, and which is

now well known in the market as the "Bartel" table; which has gone very extensively into public use, within the past few years; and has given and now gives satisfaction to the purchasing public; because, while costing much more than the ordinary pocket table provided with attachable "cushion-blocks" to transform it into a carom table; and while requiring more time and hand labor, on the part of the owner or user, to effectuate the transformation, it is perfect in operation when adjusted for use for carom billiards.

My invention relates to this Bartel type of convertible billiard table, and has for its object to improve the means by which the attachable and detachable or translatable sets of cushion-rails are rigidly and perfectly connected with and disconnected from the stationary or fixed bed-rails of the table, in making the transformation of the latter from a pocket table to a carom, and vice versa, so that the table can be changed from a pocket to a carom table with much greater expedition, and with much less trouble to the user of the table.

In the Bartel table, the cushion-rails, as is well known, are removably, but very securely, attached to and detached from what are called the "bed rails" of the table, by means of a series of vertically arranged thumb-screws; which pass upwardly through the bed-rails and are manipulated from beneath, by hand, and which engage, at their upper, threaded, ends, with nuts which are securely and permanently attached to, or let-into, the cushion-rails proper. Under this construction, as is well known, in making the transformation from one to the other kind of table, quite a number of these securing thumb-screws has to be separately manipulated (usually five or six of each longer, and three or four of each shorter set of cushion-rails) which involves considerable time and trouble by the user, or by the person making the transformation.

My invention has for its object to render much easier and more expeditious the manipulation of the translatable sets of cushion-rails, by the user or manipulator of the table; and to this end and object may be said to consist essentially, in the combination, with a series of female locking members, located in the removable cushion-rail, of a series of male locking members, adapted to engage with said female members, and se-

cured to an operating-bar located in the stationary bed-rail; and a device or mechanism for actuating said operating-bar, adapted to be moved by hand; so that, by a slight and rapid manipulation of a single hand-lever, (located preferably immediately beneath the bed-rail) all the male members of the rail-locking mechanism may be simultaneously moved into, or out of engagement with the female members; as will be hereinafter more fully explained.

To enable those skilled in the art to which my invention relates, to make and use the above mentioned type or species of convertible table with my improvement embodied therein, I will now proceed to describe my said invention more particularly, by reference to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a perspective view of a "Bartel" convertible table, illustrating the method of shifting or translating the cushion-rails, and embodying my improvement. Fig. 2 is a partial top view, on an enlarged scale, of one corner portion of the said table, showing one of the corner pockets and the arrangement therewith of a set of pocket table cushion-rails. Fig. 3 is a similar view, showing in connection with the corner pocket and its pocket iron, a set of carom cushion-rails. Fig. 4 is a view of one of the slide-bars and its fastener-hooks, detached. Fig. 5 is a vertical cross-section through the cushion-rail, bed rail, table bed, and cushions proper, at the vicinity at which is located one of the series of improved or novel fastening devices, made according to my invention. Fig. 6 is a vertical, partial, longitudinal section taken in a plane indicated by the dotted line 6—6, of Fig. 5. Fig. 7 is a partial, horizontal section, taken in a plane indicated by the dotted line 7—7 of Fig. 6.

In the several views the same parts will be found always designated by the same character of reference.

Referring now more particularly to Fig. 1, A represents the bed or playing surface; B, the body or broad-rails; and C, the legs of a convertible billiard table of the "Bartel" type, and embodying my improvement. In this and the other views, 40 indicates the usual corner pockets with their pocket irons, and 42 the side pockets with their corresponding irons, of a "Bartel" convertible table; while, as seen at the front and left-hand sides of the table, shown at Fig. 1, 24 are the side bed-rails; 25 the end bed-rails of the table; 26, the end cushion rail of the pocket table species; and 27, 28, two side cushion rails of a pocket table; while 29 is a side rail of the carom table species, illustrated as being substituted for a set of pocket cushion rails which have been removed; and 30 is an end cushion rail of the carom spe-

cies, which has already been placed in position in the operation of transforming the table, as illustrated at Fig. 1.

As best seen and understood by reference to Figs. 4, 5, and 6, in the table made according to my invention, each and every one of the detachable and re-attachable cushion-rails is provided with a plurality of metallic nut-like devices *g*, each of which is let into the stock of the cushion-rail, so that its lower end lies about flush with the bottom surface of said rail; and each of these metallic devices is perforated with a polygonal aperture, running through the device in the direction of the length of the table-rail. Adapted to engage with this aperture, in one of the devices *g*, is a male fastening device member *f*, (see particularly Figs. 4 and 5) which is of an approximately wedge shaped configuration in side view, and integral with which is a body-portion marked *d*, of plate-like form, which, extending downwardly and being located in a housing or cut-away in both the removable cushion-rail and the stationary bed-rail, has its lower end securely fastened (preferably by rivets as seen at Fig. 4) to a longitudinally sliding bar *h*, which is housed within the lower portion of the bed-rail of the table, and is free to move, endwise, on supporting devices *h*; and which is held against any bodily upward movement; by over-lying metallic devices *i*. The function of this sliding bar *h*, is to form a rigid connection between all the vertically arranged sliding plates *d*, of any one bed-rail, to enforce a similar and simultaneous movement of all of such devices *d*, (with their cam-like fastening members *f*) when anyone is moved.

Within the lower part of each bed rail is suitably arranged, within a metallic housing, or journal box *l*, a vertical crank-shaft *b*, the upper end of which is formed or provided with a crank arm *c*, the vibratory end of which engages with a horizontal aperture *e*, in some one of the sliding plate-like devices *d*; (preferably with one which may be located near the middle of the series of any one cushion-rail) and the lower end of which vertical shaft *b*, is securely fastened to one end of a hand lever *a'*, which is provided with a downwardly projecting handle *a*; and by a vibration of which, to the proper extent, horizontally, (by a manipulation of said hand piece *a*) the vertical crank shaft, or stud *b*, is rotated sufficiently on its axis to effectuate, through the medium of the connection of said crank arm *c* with the perforated plate *d* the proper longitudinal movement with the bed rail of the said operating-bar to cause all of the cam-like devices *f* to either enter into and pass along within the apertures of the perforated devices *g*; or to be wholly withdrawn therefrom; in the manner and for the purpose to be hereinafter more fully explained.

The vibratory end of the actuating hand-

lever a' , is formed or provided with a pall-like device p , which engages with one or the other of a series of ratchet-like notches in one edge or face of the horizontally-arranged vibratory arm n , (see Fig. 6) which arm is mounted, at its inner end, on a vertically depending stud beneath the bed-rail of the table (as best seen at Fig. 5) and is provided with a spiral spring o , which operates to keep the said spring arm n pressed into engagement with the device p at the end of the hand lever a' ; all in such manner, as will be plainly understood, that whenever the vibratory hand-lever a' shall be vibrated or swung at its movable end toward the body of the table and into a position which brings it beneath the bed rail thereof, it will come into engagement with the notched, hold-fast device n , and will be by the latter securely locked, or held in such position.

In the operation of the device or mechanism shown, particularly at Figs. 5, 6 and 7, and so far described, assuming the rail fastening devices to be in the position or condition seen at said figures (in which the cushion rail is securely fastened in place on top of the bed rail) by moving the lower end of the locking device n sufficiently (against the tendency of its spiral spring) in the direction indicated by the arrow at Fig. 7, so as to release the locked end p of the hand lever a' , the latter may then be swung outwardly, to the requisite position, or extend to rotate the vertical stud or shaft b sufficiently to cause the vibratory end of its crank c , which engages with the aperture e in the plate-like device d , to move said plate-like device, lengthwise of the table, or in the direction indicated by the arrow at Fig. 6, to a sufficient extent to wholly withdraw the cam-like or wedge-shaped intergal part f from the aperture in the permanent female member g of the fastening mechanism; whereupon (this operation and effect being duplicated in all the fastening devices of the one cushion-rail) the latter may readily be removed from the bed-rail and put one side, to permit the substitution therefor of another species of cushion-rail, which, of course, is provided with the same female fastener devices g ; and, when the substitution shall have been made, then by turning the crank handle a' back to its former position or condition, a reverse movement of the plate-like device d will be effected, causing the male members of the locking mechanism to enter the perforation of the devices g , of the newly applied, or substituted, cushion-rail; and as these male members enter said perforations of said devices, they will, by reason of the oblique or inclined shape of their lower edges, coacting with the upper surfaces of the perforations, or cut-outs, of g , draw or force downwardly into the final or proper position, said devices g ; which

will, of course, similarly force or draw down the newly applied cushion-rail; and insure the retention of the latter in its proper position.

Of course, as plainly shown, the perforations in the devices g , are such, in a vertical direction, that there will be sufficient play or space between the top of the opening or aperture, and the upper edge of the male member f , of the locking plate, to permit the necessary descent or enforcement downwardly, of the applied cushion-rail to bring it into juxtaposition with the bed-rail of the table rail where, as has been said, it will be firmly held in place, by the cam-like action of the lower part of the member f , on the bottom surface, so to speak, of the aperture g .

To compensate for any wear or variation, structurally, in the co-acting parts of the fastening devices (composed, as explained, of the male members f and the female members g) I provide the means shown and above described, of the ratchet-like, or notched hand-lever or arm n , with which the vibratory end of the crank bar a' engages so that, in forcing home the applied cushion-rail by the manipulation of the crank handle and bar a and a' , not only will the parts be securely locked and held in the right position, by the positive engagement of the male member p , of the crank handle with one of the notches in the locking bar n ; but, furthermore, by forcibly pushing inwardly, beneath the rail of the table, (by manipulation of the handle a) the vibratory end of the crank arm a' , to a greater or less degree, so as to effectuate the locking with one or another of the notches in n , any wear in the coacting parts or surfaces, of the male and female members of the fastening devices, will be taken up, or compensated for.

It will be understood, of course, that, in so far as the general construction and operation together, of all the other parts of the table, (such, for instance, as the bed-rails; the translatable cushion-rails; and the attached cushions) are concerned, it is immaterial to my invention exactly how these parts may be made and assembled; so long as the general construction and mode of assemblage peculiar to the "Bartel" construction of convertible table be followed. And, in so far as many of the details of construction of the parts constituting my improvement are concerned, variations may be made therein, without departing from the spirit of my invention; so long as any such changes do not materially affect the novel principle of construction, which lies, essentially in means for producing the simultaneous actuation of the series of locking devices, and do not vary the novel mode of operation of my improved table, which lies, essentially, in a simultaneous actuation of the series of locking devices that effectuate the attachment to, and permit the

detachment from the bed-rails of the interchangeable cushion-rails, by the manipulation of a single hand-lever, as I have hereinbefore explained.

5 What I claim as new and desire to secure by Letters Patent is:

1. The combination with the bodily removable cushion-rails; and the stationary bed-rails, of a convertible pocket-carom 10 billiard table, of a locking mechanism comprising a series of female members immovably arranged in the cushion-rail and a series of bodily movable male members located in the bed-rail; means for causing a simulta- 15 neous and similar movement of all of the said male members; and means for so moving the said male members that is actuated through the medium of a single hand-operated device; all in substantially the manner 20 hereinbefore set forth.

2. In a convertible pocket-carom table of the species shown, the combination, with one of the stationary bed-rails, and one of the 25 bodily removable cushion-rails, of a series of female locking members immovably connected with the said removable cushion-rail; and a series of male locking members in said bed-rail, engaging with said female members and all attached to a connecting device or 30 member; whereby the actuation of one of said male members necessarily produces a like movement of all the male members, of the said set of male cushion-locking devices; substantially as shown and described.

35 3. The combination, with the stationary

bed-rails; the removable cushion-rails; a series of female locking device members, arranged in the latter; and a series of male locking device members permanently connected so, that all move together, of a vertically arranged crank-shaft, located within 40 the table rail and provided with a crank, the vibratory end of which engages with one of the said male members of the locking devices; and a crank-handle adapted to oscillate said crank-shaft on its axis, to effectuate 45 the locking and unlocking of the removable or translatable cushion-rail, and provided with means at its vibratory end or portion, by which it may be locked in position, when 50 turned beneath or under the bed-rail, for the purpose of effectuating said locking in place of the said cushion-rails; all substantially as hereinbefore set forth.

4. The combination, with the end portion 55 of the stationary bed-rail; the locking mechanism; and the vibratory end of the hand-lever of the latter, of an automatically operating locking device, for fastening in place the vibratory end of said hand-lever, in such 60 different positions as the conditions of the working parts of the rail-locking mechanism may require; substantially as hereinbefore set forth.

In witness whereof I have hereunto set my 65 hand this 7th day of March, 1907.

HARMON F. DAVENPORT.

In presence of—

EDW. F. THOMAS,
JOHN H. WIESE.