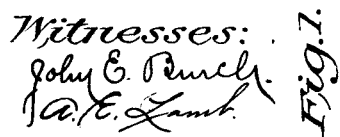


H. BARGHAUSEN.
GAME APPARATUS.

(No Model.)

(Application filed Feb. 27, 1901.)

2 Sheets—Sheet 1.

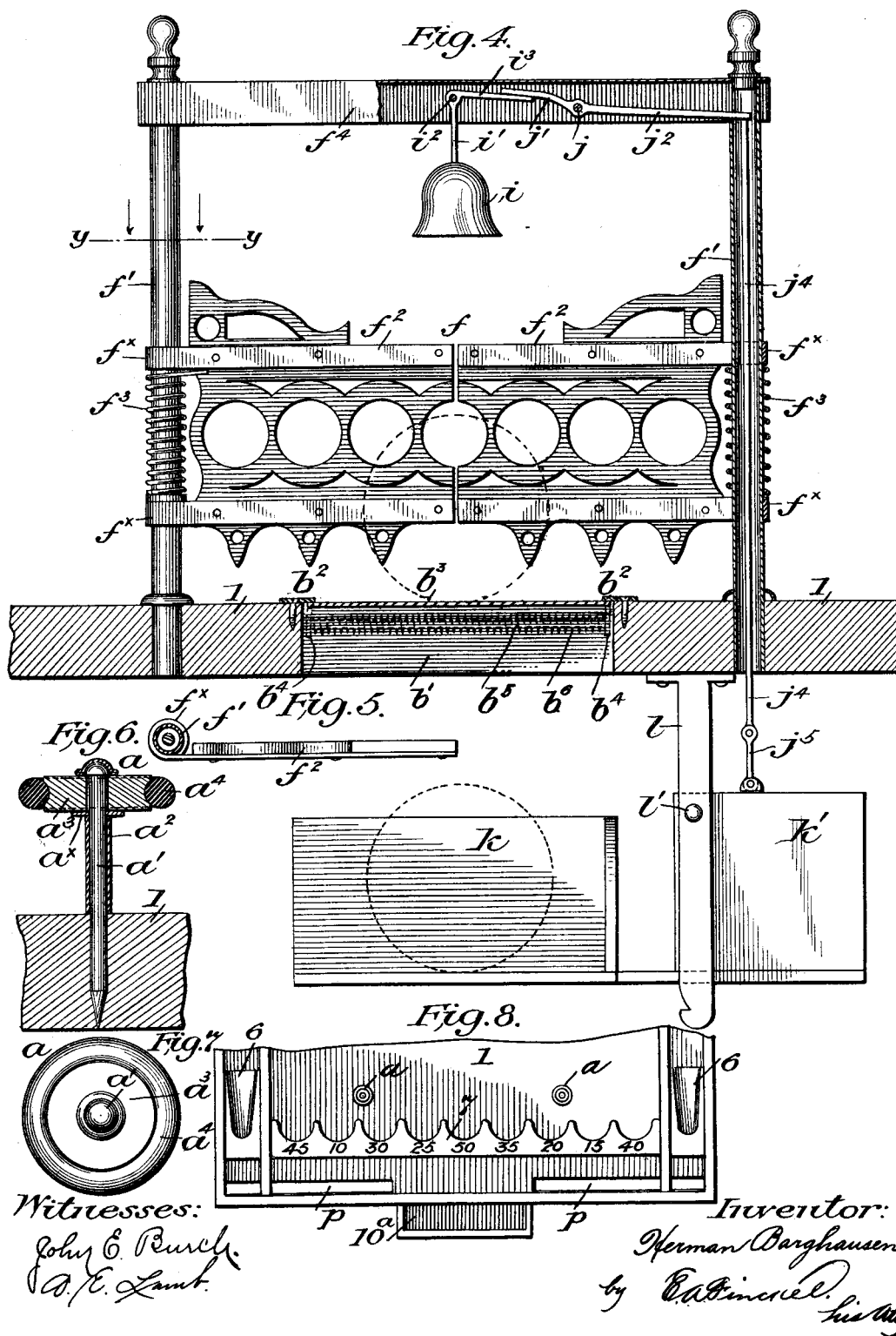


Inventor:
Herman Parghausen.
by E. A. Simcoe
his Atty.

Patented June 11, 1901.

(Application filed Feb. 27, 1901.)

2 Sheets—Sheet 2.



UNITED STATES PATENT OFFICE.

HERMAN BARGHAUSEN, OF WASHINGTON, DISTRICT OF COLUMBIA.

GAME APPARATUS.

SPECIFICATION forming part of Letters Patent No. 675,920, dated June 11, 1901.

Application filed February 27, 1901. Serial No. 49,149. (No model.)

To all whom it may concern:

Be it known that I, HERMAN BARGHAUSEN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented an Improvement in Game Apparatus, of which the following is a specification.

This invention relates to that class of game apparatus comprising a table having an inclined top provided with projecting pins and ball-receiving pockets, &c., and over which a ball is adapted to be projected and retraversed in a diverted and interrupted course, and which are commonly known as "bagatelle-tables;" and the object of the invention is to provide a game apparatus of this character which is much more interesting and complete in its operation than those which have heretofore been produced.

The invention consists in a bagatelle-table the top or inclined surface of which is provided with a series of ball-diverting pins or bumpers of novel construction.

The invention also consists in a bagatelle-table the top or inclined surface of which is provided with a series of trap-doors of novel construction; also, the combination with such trap-doors of means for retarding the motion of and directing the ball upon said trap-doors, and passage-ways for directing the ball either upon or away from one or more of said trap-doors.

The invention also consists in the combination, with such trap-doors, of a bell-ringing mechanism of novel construction and arrangement.

The invention also consists in a bagatelle-table the top of which is provided with a cleaning-opening.

The invention also consists in a game apparatus comprising the several features above mentioned, all constructed, combined, and arranged substantially as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of my game apparatus. Fig. 2 is a longitudinal section taken in the plane of line *x x*, Fig. 1. Fig. 3 is an enlarged sectional detail view of one of the trap-doors.

Fig. 4 is a front elevation and partial section, on an enlarged scale, of one of the ball-retarding and directing gates and showing the adjacent trap-door and the bell-ringing mechanism. Fig. 5 is a sectional view taken on the plane of line *y y*, Fig. 4, looking in the direction of the arrows and showing one member only of the gate. Fig. 6 is a sectional view, on an enlarged scale, of one of the ball-diverting pins or bumpers. Fig. 7 is a top plan view thereof; and Fig. 8 is a plan view of the lower or pocket end of the table, the pockets and cue blocks or guides being adjusted to expose the cleaning-openings.

Referring to Figs. 1 and 2, the table comprises the inclined top 1, side and end walls 2 and 3, respectively, ball-guides 4 and 5, cue blocks or guides 6, counting-pockets 7, curved head-block 8, inclined base-board 9, ball-receiver 10, and supporting-legs 11, all of usual or approved construction.

In carrying out my invention I provide the inclined top 1 of the table with a series of ball-diverting pins or bumpers *a*, said pins or bumpers being preferably arranged in longitudinal and transverse rows and staggered at substantially equal distances apart, the pins or bumpers being omitted at suitable places to form spaces for the trap-doors and ball passage-ways, to be referred to, as clearly shown in Fig. 1. These pins or bumpers in accordance with my invention and as shown in Figs. 6 and 7 are each constructed of a round-headed nail *a'*, a sleeve or spacer *a*², placed upon said nail, and an annular disk *a*³, having a groove in its periphery adapted to receive a cushion *a*⁴, preferably constructed as a rubber ring adapted to be sprung into said groove, whereby it may be removed and replaced by a new one when desirable. It will be observed that the disk *a*³, with its attached cushion *a*⁴, is placed upon the nail, between the head thereof and the upper end of the sleeve or spacer *a*², a washer *a*^x being interposed between the sleeve and disk, and the parts being thus assembled the nail is driven into the top of the table, as shown in Fig. 6, a sufficient distance to confine the disk between the head of the nail and the upper end of the sleeve or spacer, but not sufficiently to bind the said disk against rotation, in so far as it is one of the important features

of my invention to have the disks rotatably mounted upon the pins and for a purpose presently appearing.

I have thus shown and described one manner of constructing the pins or bumpers with a rotatable disk or head; but I wish to be understood as not limiting my invention to this construction, as it is obvious that they may be otherwise constructed and still be within the scope of my invention.

I also provide the top of the table with a series of trap-doors b, c, d , and e , arranged, preferably, as shown in Fig. 1, and each of said trap-doors is constructed alike and a description of one will suffice for all. In the top of the table I make a rectangular opening b' , provided at its upper edge, along three sides thereof, with an overhanging flange b^2 , preferably constructed of thin flat strips of metal secured to the upper edges of said opening in any suitable manner. That side of the opening b' which is toward the upper end of the table and at which the ball is to enter and from which the door opens is not provided with a flange, and within the side toward the lower or playing end of the table the door b^3 is hinged. The door b^3 is preferably constructed of a thin flat piece of metal or other suitable material, having the downturned ears or lugs b^4 , adapted to receive the hinge-pintle b^5 , the said pintle being provided with a spring b^6 , acting against the under side of the door with just sufficient tension to normally keep said door closed or up against the flanges, but to be overcome by the weight of the ball to permit the ball to fall through said trap-door when it rolls thereupon in playing the game. After the ball has passed through the door the spring returns the door to its normally-closed position. Also upon the top of the table and preferably just in front of the trap-doors b, c , and d I arrange the ball retarding and directing gates f, g , and h . The gates f and g are alike and the description of one will suffice for both. Suitably mounted upon the top of the table are the tubular posts $f' f'$, (see Fig. 4,) and mounted to swing upon these posts by means of hinge members $f^2 f^2$ are the gates $f^2 f^2$, of any suitable fanciful design, and these gates are provided with suitable springs, as $f^3 f^3$, which normally tend to keep said gates in a closed position, but are of just sufficient tension to retard the ball in its progress over the table, the weight of the ball overcoming the tension of the springs, thereby permitting the ball to pass through the gates, and thus guiding or directing the ball upon the trap-door in an easy manner. A cross-bar f^4 is secured to the upper ends of the posts $f' f'$, and this cross-bar is preferably of substantially inverted-U shape in cross-section for the purpose of receiving and concealing from view a portion of the bell-ringing mechanism. A bell i , having a hanger i' , is pivoted at i^2 within the cross-bar f^4 , about midway thereof, the bell preferably hanging vertically over the

meeting edges of the gates $f^2 f^2$. Rigidly connected with the hanger i' and preferably formed as an integral part thereof and extending at substantially right angles from the pivot i^2 is the arm i^3 . Also pivoted and concealed within the cross-bar f^4 is a rock-lever j , the short arm j^1 of which rests upon the arm i^3 of the bell-hanger. The long arm j^2 of the rock-lever j extends into the tubular post f' . A push-rod j^4 is arranged and concealed within the post f' , its upper end engaging the arm j^2 of the lever j and its lower end connected by a link j^5 with a pivoted ball-catching shelf k . The shelf k is supported by means of a bracket l , depending from the under side of the top of the table, the said shelf being pivoted to said bracket at l' , and connected with the shelf and extending on the opposite side of the pivotal point thereof is the weight k' , and to the weight the push-rod j^4 is connected by the link j^5 above referred to. The shelf k is arranged in such relation to the trap-door b as to catch the ball when it falls through said trap-door, and the weight of the ball overbalances the weight k' and tilts the shelf, thereby ringing the bell and discharging the ball into the ball-receiver of the table. The bell i is arranged at such a height above the top of the table that the ball will not strike it when passing through the gates.

The bracket l extends a sufficient distance below the bottom of the shelf k to act as a stop for said shelf, and thus prevent it from tilting too far.

The gate h is constructed the same as gates f and g ; but, as herein shown and as is preferable, the cross-bar f^4 and the bell-ringing mechanism are omitted therefrom. However, these omitted parts may be added to the gate h , if desirable.

As shown in Figs. 1 and 2, stop-pins m are arranged adjacent the gates to prevent them from swinging too far.

In connection with or adjacent the trap-door e at the lower end of the table and as shown in Figs. 1 and 2 I arrange a double passage-way having a single entrance, one of said passage-ways leading to the trap-door and the other leading away therefrom. As shown in the drawings, I construct said passage-ways of two substantially parallel curved rows of pins n' and o' , having a single ball-entrance formed by the last pins of the two outer rows toward the upper end of the table, the inner rows of pins meeting at a point about midway of said entrance, and thus forming the passage-ways n and o , the passage-way n leading directly to the trap-door e , while the passage-way o leads just to one side of and away from said trap-door. The uppermost pin of the inner row of pins, as above stated, is arranged at about midway of the entrance formed by the outer rows, and hence tends to direct the ball into either of the passage-ways n or o .

The several trap-doors and the end pockets

are provided with suitable numerals adjacent thereto, as shown in Fig. 1, to indicate the number of counts or points to be made in playing the game.

5 In order to clean the table of any dust or dirt that may accumulate thereon, I provide the top thereof, at its lower or pocket end, adjacent to the end board or wall 3, with cleaning-openings *p*, as shown in Figs. 2 and 8, the
10 pockets 7 and the cue-guides 6 being removable for purposes of cleaning, said pockets and cue-guides covering the openings *p* when in place. In the preferred construction these openings *p* do not extend far enough toward
15 the center of the table to extend over the contracted end 10^a of the ball-receiver, and hence when the table is being cleaned or brushed no dust or dirt will fall into the ball-receiver.

20 In playing the game it is preferable to use two balls of different colors—say one white and one red. The red ball is placed on the spot *q*. The white ball is placed in either of the guideways 4 or 5 and projected by means
25 of a cue up over the inclined surface of the table through the guideway until it reaches the curved head-block 8, where its course is diverted in accordance with the force by which the ball is driven. The ball then re-
30 traverses the table in consequence of its inclination. Should the ball take the course or be diverted to enter the gate *h*, its rolling motion will be retarded as it comes in contact with said gate, and then by its weight
35 overcoming the tension of the springs of said gate will force its way through the gate and roll gently and slowly upon the trap-door and disappear therethrough (counting two hundred) and falling into the ball-receiver will
40 return to the lower end of the table to be projected again. Should the ball have escaped the gate *h* and proceeded in its course down the table, being diverted in its course by the pins or bumpers *a*, and should it find the
45 course to enter either of the gates *f* and *g*, the operation just described in connection with gate *h* would be carried out and in addition the bell *i* would be rung by the ball falling upon the shelf *k*, tilting it and forcing up the
50 rod *j*⁴ against the end of the long arm *j*² of the rock-lever *j*, thereby rocking said lever *j* and causing its arm *j*¹ to vibrate the bell through the arm *i*³ of the bell-hanger, thus counting one hundred and twenty-five. The
55 shelf when tilted discharges the ball into the ball-receiver, and the bell-ringing mechanism is returned to its normal position by the weight *k*². All of the parts of the bell-ringing mechanism being concealed from view
60 makes it very interesting to know what rings the bell, and especially in view of the fact that the ball cannot touch the bell when it passes under it. Should the ball have escaped the gates *f* and *g* and proceeded down the
65 table in a diverted course by reason of the pins or bumpers and should it be directed to the entrance of the passage-ways *n* or *o*, the

central pin of the inner rows will divert it to either of said passage-ways. Should it traverse passage-way *n*, it would be directed to
70 the trap-door *e*, thus counting three hundred; but should it traverse passage-way *o* it would escape trap-door *e* and proceed to one of the pockets at the lower end of the table, thus counting the number adjacent the pocket it
75 enters. Should the ball escape all of the trap-doors and the double passage-way, it will also find its way to one of the pockets at the lower end of the table.

If the red ball should be disturbed from its
80 rest by the white ball, it is possible for it to take any of the courses just described in connection with the white ball, and this would count double. Therefore it is the main object in the game to so disturb the red ball,
85 which can be accomplished by practice and experience.

Heretofore in game-tables of this character straight rigid pins have been placed upon the
90 table to divert the ball in its progress over the table, and it has been found that such pins will very often hold or stop the ball, whereas by my construction of pin or bumper with the rotating or revolving disk or head
95 this objection is overcome by reason of the fact that when the ball comes in contact with the disk or head of the pin no matter what the speed of the ball may be the weight of
100 the ball will cause the disk or head to rotate, and thus release itself from the pin or bumper.

Heretofore it has been proposed to provide bagatelle-tables with trap-doors; but in such
prior constructions the trap-doors were provided with cumbersome and unsightly weights
105 and levers to keep them in closed position, and I overcome this cumbersomeness and unsightliness by providing the trap-doors with springs concealed within the opening in the
110 table-top, and thus produce a much more complete and compact arrangement, and, furthermore, produce a much better and easier operation, and, furthermore, in such prior
115 constructions there were no means for retarding the motion of the balls when entering upon the trap-doors, and consequently it very often occurs that the ball rolls over said trap-doors
without falling through, and this objection is overcome by my retarding-gates.

I wish to be understood as not limiting my invention to the exact construction and ar-
120 rangement of the several parts of the apparatus herein shown and described, as they may be altered in various particulars and still be within the scope of my invention.

What I claim is—

1. In a bagatelle-table, the combination
125 with the top thereof, of a series of ball-diverting pins or bumpers provided with rotatable annular disks or heads adapted to be rotated by the ball, substantially as described.
2. In a bagatelle-table, the combination
130 with the top thereof, of a series of ball-diverting pins or bumpers provided with cushioned rotatable annular disks or heads adapted to

be rotated by the ball, substantially as described.

3. In a bagatelle-table, the combination with the top thereof, of a series of ball-diverting pins or bumpers, each constructed of a
5 headed nail or pin, a surrounding sleeve or spacer, and a rotatable disk interposed between said sleeve or spacer and the head of the nail or pin, substantially as described.

10 4. In a bagatelle-table, the combination with the top thereof, of a series of ball-diverting pins or bumpers, each constructed of a headed nail or pin, a surrounding sleeve or
15 spacer, a rotatable disk arranged upon said nail or pin above the sleeve or spacer, and a washer interposed between said sleeve or spacer and said disk, substantially as described.

5. In a bagatelle-table, a trap-door for the
20 ball-surface thereof, comprising a hole or perforation in said surface provided with overhanging flanges at its upper edge, a plate hinged in said opening beneath said flanges, and a coiled spring confined within the opening
25 and about the hinge of said plate and normally tending to close said plate up against the flanges of said opening, the tension of said spring being just sufficient to be overcome by the weight of the ball to permit said ball to
30 pass through the trap-door, substantially as described.

6. In a bagatelle-table, a trap-door for the ball-surface thereof, constructed as a rectangular opening in the top of said table, metal
35 strips arranged at the upper edge of said opening and overhanging said edge to form projecting flanges within said opening, a thin, flat metal plate hinged within said opening below said flanges, a coiled spring arranged
40 about the hinge of said plate and confined within said opening and normally tending to close said plate against said flanges, the tension of said spring being just sufficient to be overcome by the weight of the ball, substantially
45 as and for the purpose described.

7. In a bagatelle-table, a trap-door for the ball-surface thereof, combined with a ball retarding and directing gate arranged in front
50 of said trap-door, a spring for normally closing said gate and adapted to be overcome by the weight of the ball, substantially as described.

8. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, and means for retarding the movement of the ball and directing
55 it upon said trap-door, comprising a pair of spring-gates arranged in front of said trap-door, the tension of the springs of said gates being just sufficient to retard the movement
60 of the ball and permit the weight thereof to open said gates and thereby direct the ball upon the trap-door, substantially as described.

9. In a bagatelle-table, a trap-door arranged
65 in the ball-surface thereof, and means for retarding the movement of the ball and directing it upon said trap-door, comprising a pair

of spring-gates arranged in front of said trap-door, the tension of the springs of said gates being just sufficient to retard the movement
70 of the ball and to permit the weight thereof to open said gates and thereby direct the ball upon the trap-door, and stops for limiting the opening movement of said gates, substantially as described.

10. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, combined with a double passage-way having a single
75 entrance, one of said passage-ways leading to said trap-door and the other of said passage-ways leading to one side and away from said
80 trap-door, and means for directing the ball into either of said passage-ways, substantially as described.

11. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, combined
85 with a double passage-way arranged adjacent thereto, one of said passage-ways leading to said trap-door and the other of said passage-ways leading to one side and away from said
90 trap-door, the said passage-ways being constructed of substantially parallel curved rows of pins, the outside rows being arranged to form a single entrance to said passage-ways, and the inner rows being continuous and the
95 uppermost pin thereof being arranged about midway of said entrance and adapted to divert the ball into either of said passage-ways, substantially as described.

12. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, a bell hung
100 upon said table out of the way of the ball, a pivoted shelf arranged beneath said trap-door and adapted to catch and release the ball, and connections between said shelf and
105 the bell for ringing said bell when the ball enters the trap-door, substantially as described.

13. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, combined
110 with a ball retarding and directing gate arranged in front of said trap-door, a bell hung above said gate in the frame thereof, a pivoted shelf arranged below said trap-door and adapted to catch and discharge the ball, and
115 connections between said shelf and the bell, concealed from view within the gate-frame, whereby when the ball enters the trap-door and falls upon the shelf the bell is caused to ring, substantially as described.

14. In a bagatelle-table, a trap-door arranged in the ball-surface thereof, combined
120 with ball retarding and directing means arranged in front of said trap-door, and comprising upright tubular posts, an inverted-U-shaped cross-bar connecting the upper
125 ends of said posts, and swinging spring-gates hung upon said posts, a bell pivotally hung in said cross-bar and provided with a right-angular arm projecting from the pivotal point
130 thereof and concealed within the cross-bar, a two-armed lever also pivoted and concealed within said cross-bar, one arm of which engages said right-angular arm of the bell-

hanger and the other arm of which projects into one of the gate-posts, a pivoted ball catching and discharging shelf arranged below the trap-door and provided with a weighted end on the opposite side of its pivot, and a rod connected to said weighted end and passing up through and concealed within the tubular gate-post and adapted to engage the projecting end of the two-armed lever, whereby when the ball enters the trap-door and falls upon the shelf the bell will be rung by said concealed mechanism, substantially as described.

15 15. A bagatelle-table, provided with a ball receiver below said table, having a contracted end projecting beyond the lower end of said table, cleaning-openings at the lower end of the ball-surface of said table arranged to one side of the contracted end of the ball-receiver, whereby in cleaning the table no dust or dirt will enter said ball-receiver, and removable pockets and cue-guides adapted to conceal said cleaning-openings when in place, substantially as described.

25 16. A bagatelle-table, provided with a series of ball-diverting pins or bumpers suitably arranged upon the ball-surface of said table and provided with rotatable disks or heads,

a series of trap-doors also suitably arranged in the ball-surface of said table, ball retarding and directing gates arranged in front of said trap-doors, a bell arranged above one or more of said gates, a pivoted ball catching and discharging shelf arranged below said trap-doors, and concealed connections between said shelf and the bell adapted to ring said bell when the ball enters the trap-door, a double passage-way having a single entrance, also arranged adjacent one or more of said trap-doors, one passage of which leads directly to said trap-door and the other passage of which leads to one side and away from said trap-door, and means adjacent said single entrance for diverting the ball into either of said passages, removable end pockets and cue-guides, and cleaning-openings in the lower end of said table and concealed or covered by said removable end pockets and cue-guides, all combined and arranged substantially as herein shown and described.

In testimony whereof I have hereunto set my hand this 23d day of February, A. D. 1901.

HERMAN BARGHAUSEN.

In presence of—

E. A. FINCKEL,

CARRIE BARGHAUSEN.