(No Model.)

T. C. JENKINS.

CHECK BILLIARD MARKER.

No. 308,675. Patented Dec. 2, 1884.

Fig. 1.

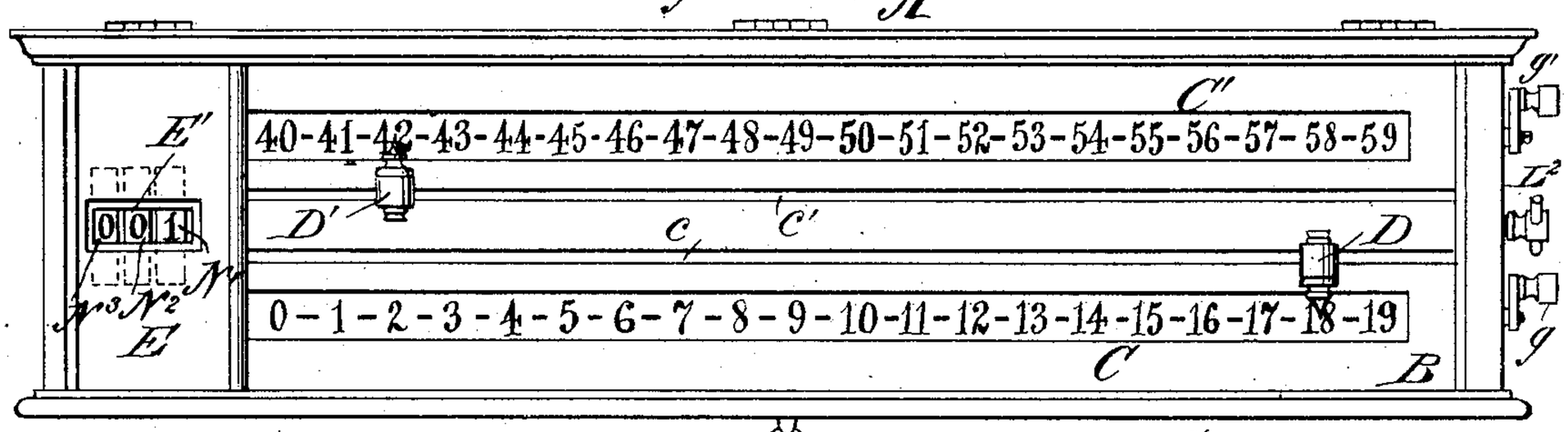


Fig. 5.

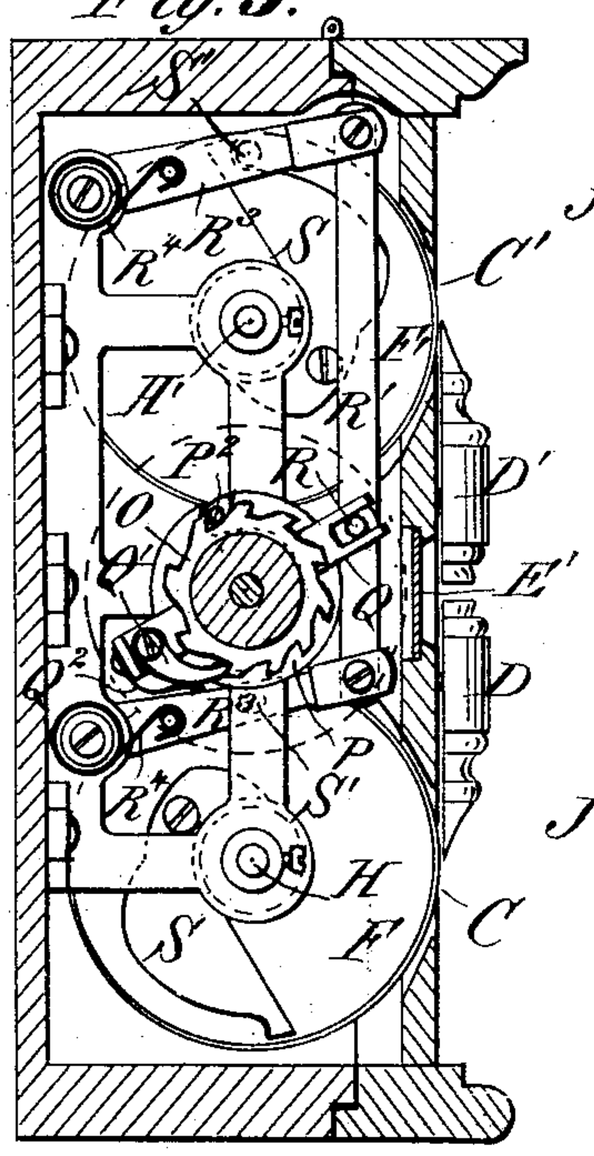


Fig. 4.

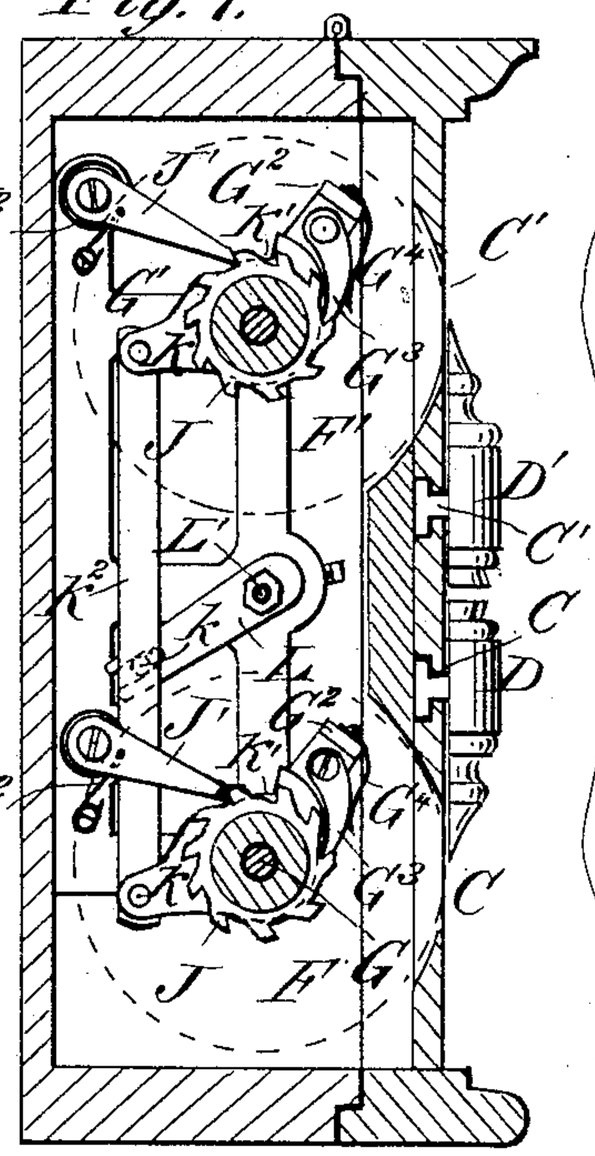


Fig. 2.

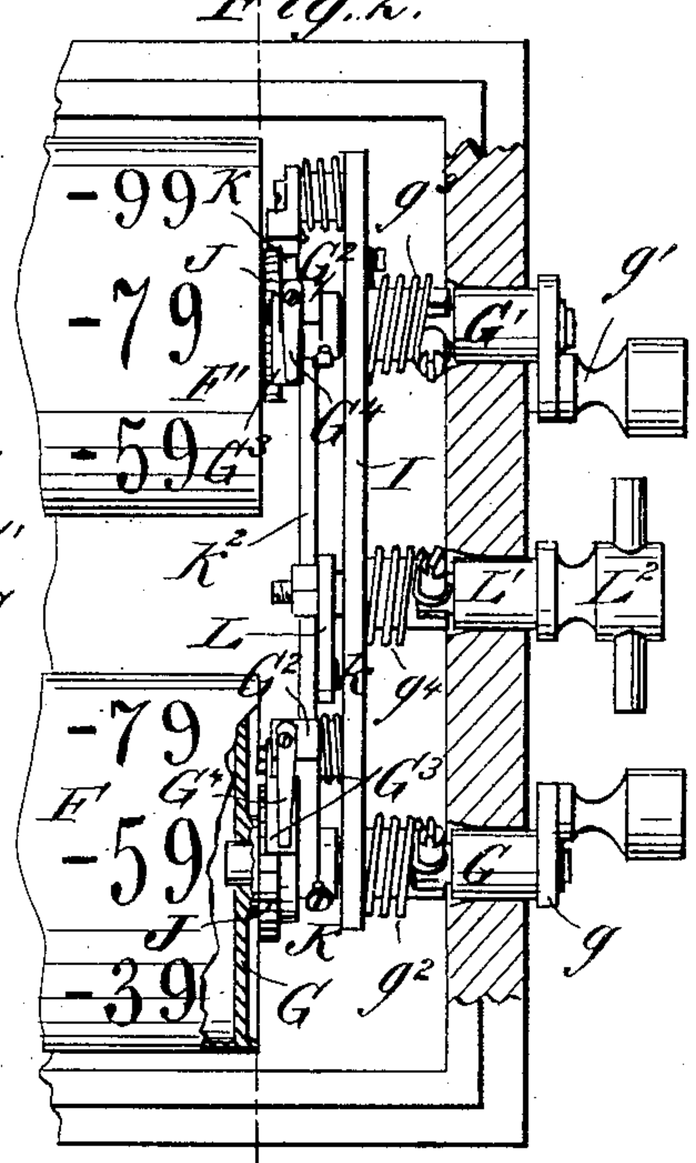


Fig. 7.

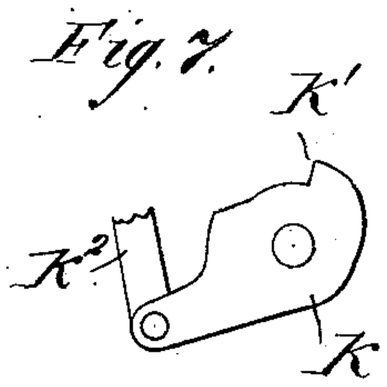


Fig. 3.

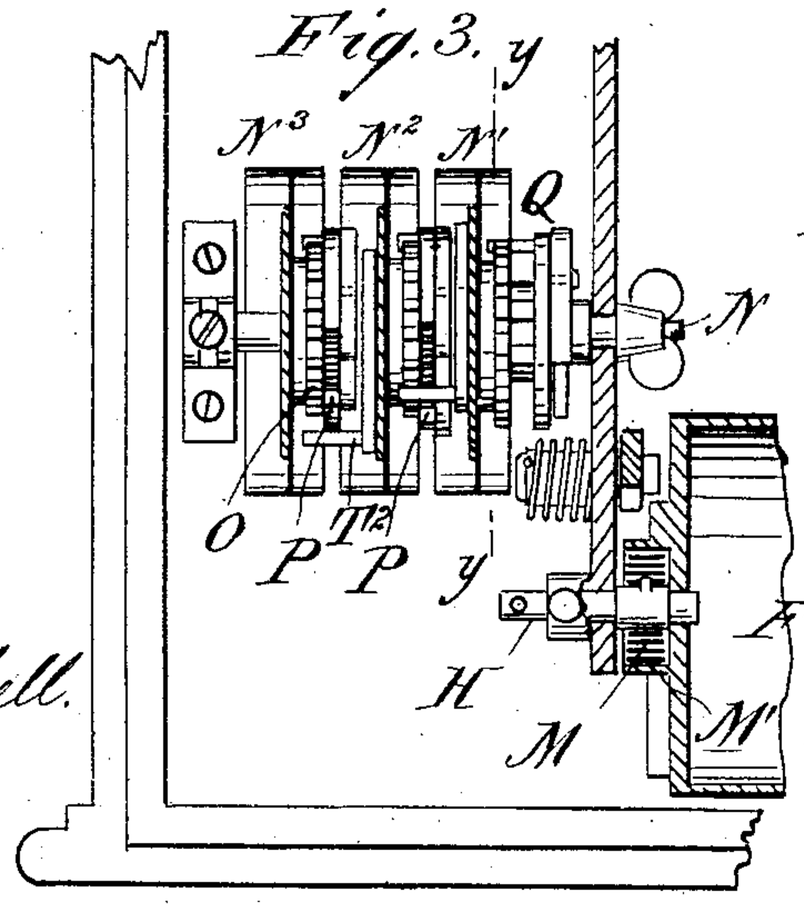
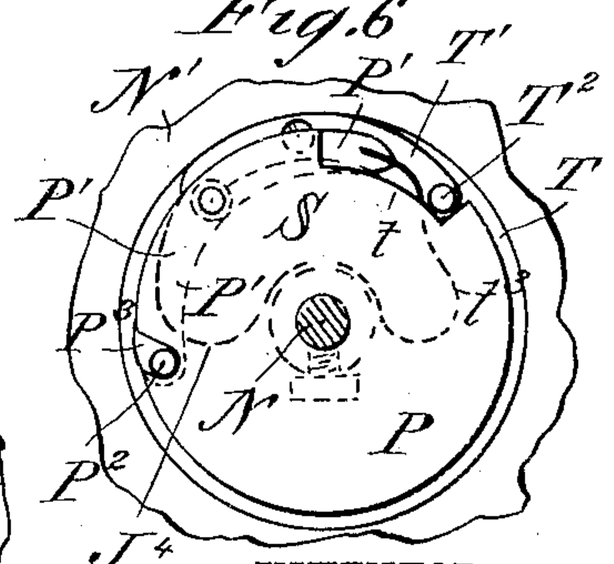


Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS CLARKE JENKINS, OF WELLINGTON, NEW ZEALAND.

CHECK BILLIARD-MARKER.

SPECIFICATION forming part of Letters Patent No. 308,675, dated December 2, 1884.

Application filed June 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CLARKE JENKINS, of Wellington, New Zealand, have invented a new and Improved Check Billiard-Marker, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for marking in the game of billiards, and keeping a register of the number of games played, which device is to be known as a "check billiard-marker."

The invention consists in a box provided with a hinged or sliding cover, in which two longitudinal slots are formed, behind each of which a roller is journaled, on which a series of rows of numerals are produced, each roller being provided with a shaft having a handle for revolving the roller the distance of one row of numerals, according as the number of points made increases, so that the rows of numerals will successively show in the slots in the cover of the box. Sliding pointers are held on the front of the box, which point to the several numerals showing through the slots.

The invention further consists in a mechanism for releasing the rollers and permitting the springs connected with the same to throw them back, so that the first rows of numerals will show through the slots.

The invention further consists in three counting-disks provided with mechanism for operating them from the two rollers above mentioned, which counting-disks are arranged behind a slot in the cover.

The invention also consists in various parts and details and numerous combinations of the same, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a face view of my improved check billiard-marker. Fig. 2 is a face view of one end of the same, the cover being removed and parts being shown in section and others broken out. Fig. 3 is a face view of the opposite end, the cover being removed and parts being broken out and others shown in section. Fig. 4 is a cross-sectional elevation on the line *x x*, Fig. 2. Fig. 5 is a cross-sectional elevation on the line *y y*, Fig. 3. Fig. 6 is a face view of the inner side of one of the disks for registering the number of games, and Fig. 7 is a face view of the cam for throwing up the pawl on the ratchet-wheels of the rollers provided with the rows of numerals.

The box A is provided in its front with a hinged or sliding door or cover, B, provided with two longitudinal slots, C and C′, and with two grooves, *c* and *c′*, in which grooves tenons pass, which are secured on pointers D and D′, the points of which project over the upper and lower edges of the slots C and C′, respectively, the pointers being held to slide on the outer surface of the cover B. The slots C and C′ do not extend from one end of the cover to the other; but at one end of the cover a solid part, E, is formed, in which a slot, E′, is made, which is covered with glass, and through which the register marking the number of games played shows.

Beneath each slot C and C′ a roller, F or F′, is journaled, parallel with the said slot, on which rollers five rows of numerals, from 0 to 99, inclusive, are arranged, the first row containing the numerals from 0 to 19, the second from 20 to 39, the third from 40 to 59, the fourth from 60 to 79, and the fifth from 80 to 99, inclusive, and in the middle of the third row the numeral 50 is located, which is made of a different color from the rest, or is arranged in such a manner that it can easily be distinguished from the other numerals. The rollers F and F′ are each provided in their outer end with an aperture, into which short shafts G and G′, respectively, pass—that is, the shaft G passes into the end of the roller F, and the shaft G′ into the end of the roller F′. Shafts H and H′ pass into the opposite ends of the rollers F F′. The shafts G G′ are journaled in a frame, I, projecting from the inner surface of the bottom or back of the box, and the shafts G and G′ are provided at their outer ends with crank-handles *g* and *g′*, for turning the said shafts. The shafts are surrounded by springs g^2 and g^3, for throwing them back after they have been turned by means of the crank-handles.

On each shaft G and G′ an arm, G^2, is formed or attached, on the outer end of which a pawl,

G^3, is pivoted, which is pressed by a spring, G^4, against a ratchet-wheel, J, mounted on the end of the roller F or F′, whereby the roller will be revolved the distance of one tooth of the ratchet-wheel J by turning the corresponding shaft or spindle. The pawls G^3 also rest on cams K, loosely mounted on the shafts G and G′, between the arms G^2 and the ratchet-wheels J on the rollers. Each cam is provided with a notch, K′, and against each cam a pawl, J′, rests, which is acted upon by a spring, J^2, to press it against the edge of the cam. The cams on the two shafts G and G′ are connected at their lower ends by a connecting-bar, K^2, from which a pin, *k*, passes through a slot in the lower end of an arm, L, formed on the end of a shaft, L′, also journaled in the end of the box in the same manner as the shafts G and G′, which shaft L′ is provided at its outer end with a handle, L^2, for turning it. A spring, g^4, acts on the shaft L′, and throws it back after it has been turned. If the player makes a certain number of points between 1 and 19, he moves the corresponding pointer, D or D′, to the number corresponding with the number of points he has made. If this number is greater than 20, he pulls down the crank-handle *g* or *g′* of the roller for indicating his points, and then moves the pointer to the number of units above 20 required to indicate the number of points he has made. Every time the crank-handle *g* or *g′* is turned, the corresponding pawl, G^3, engages with the teeth of the corresponding ratchet-wheel, J, and turns the corresponding roller the distance of one tooth. If the handle is released, the spring g^2 or g^3 on the shaft of the handle that has been turned throws the handle back, and the pawl G^3 slides back over the teeth of the ratchet-wheel, and so on. Every time twenty units have been made, the roller is turned to expose a new line of figures in the slots C or C′. A game can be played to fifty or to one hundred points, or to thirty or sixty, as may be customary, and the numbers in the rows on the rollers can be arranged in different manners, according to the customary way of playing and marking. After a game has been played and all the points counted, it is necessary to throw the rollers back again, so that the first row of numbers will show in the slot C or C′. This is accomplished by means of springs M, held in the circular projection M′ on those ends of the rollers opposite the ones provided with the ratchet-wheels J, which springs have one end secured on the inner surface of the circular projections, and the other end secured on the shafts H or H′ of the rollers; but in order to permit the springs to throw back the rollers, the pawls G^3 must be disengaged by turning the shaft L′ to lift the bar K^2, connecting the cams K, whereby the cams K will be moved in such a manner as to raise the pawls G^3 and disengage them from the ratchet-wheels J. The handle L^2 is prevented from swinging back too far by suitable stop-pins.

It is also necessary to provide means for automatically registering the number of games played. This is accomplished by means of three rollers or disks, N′, N^2, and N^3, mounted loosely on a shaft, N, next the inner ends of the rollers F or F′—that is, at the ends of those rollers opposite the ones on which the ratchet-wheels J are mounted. The disks N′, N^2, and N^3 are each provided on their peripheries with the numbers 0 to 9, inclusive. Each disk is provided on its outer surface with a ratchet-wheel, O, and a short distance from the ratchet-wheel, on the disk N′ a disk, P, is held rigidly on shaft N, on the outer surface of which disk a pawl, P′, is pivoted, which is provided at one end with a pin, P^2, adapted to pass into the notches between the teeth of the ratchet-wheel O, the disk P being provided with a notch, P^3, into which the pin P^2 can pass, so that it will not project beyond the edge of the disk P.

Between the ratchet-wheel O and the corresponding disk, P, a lever, Q, is loosely mounted on the shaft N, which lever is provided at one end with a pawl, Q′, which is pressed against the teeth of the ratchet-wheel by a spring, Q^2. The opposite end of the lever Q is forked, and into the fork passes a pin, R, projecting from a bar, R′, connecting two rocking arms or levers, R^3, pivoted on a suitable frame on the front surface of the back of the box, which arms are pressed toward the bottom of the box by springs R^4. Cams S are formed on the ends of the rollers F and F′, which cams are adapted to act on pins S′ on the arms R^3, and thus move the bar R′ upward.

On the inner surface of each disk N′ and N^2 a disk, T, is secured, on which a pawl-lever, T′, acted on by a spring, is pivoted, which pawl-lever is provided at its free end with a pin, T^2, adapted to engage with the teeth of the ratchet-wheel O of the adjoining disk, which pin T^2 also passes into a notch, *t*, in the edge of the adjoining disk P. On the outer surface of the disk N′ the lever Q is arranged between the disk P and the ratchet-wheel O; but in the remaining disks N^2 and N^3 the disk P and the ratchet-wheel O are adjoining each other. Each disk P is provided with a pawl-lever, T′, as described, with a notch, *t*, and the pin T^2 on the lever T′, pivoted on the disk T on the inner surface of the first disk, N′, passes into the notch *t* and engages with the ratchet-teeth of the wheel O on the second disk, N^2, and likewise the pin T^2 on the pawl-lever T′, pivoted on the disk T of the second disk, N^2, passes through its notch *t* and engages with the teeth of the ratchet-wheel O of the third disk, N^3.

As has been previously described, one of the shafts G or G′ must be turned as soon as twenty points have been made, or as soon as the number of points has been made—that is, on one of the rows of numbers on the roller F or F′; but as soon as one of the rollers is turned the distance of one row of numbers, the cam S on the corresponding roller begins to act on the pin S′ of the corresponding arm,

R^3, and begins to move the same upward, thereby moving the forked end of the lever Q, Fig. 5, in the same direction, and thus causing the pawl Q′ on the opposite end of the lever Q to revolve the ratchet-wheel O on the first number-disk, N′, the distance of one tooth. The cams S are so constructed and arranged that if the roller is revolved to show successively the five rows of figures on the same the cams will, by means of arms R^3 and bar R′, cause the lever Q to move the ratchet-wheel O the distance of two teeth—that is, when the roller is turned to remove the first row of numerals from under the slot the disk N′ is moved the distance of one number. When the roller is turned to move the second row of numerals from under the slot, the disk N is not moved. If the roller is turned the third time, removing the third row of numerals from under the slot, the disk N′ is again moved one number, and when the roller is turned the fourth time the disk N′ is not moved. If, then, the handle L^2 is turned, it releases the roller and permits it to fly back, and the springs R^4 throw the rods R′ and the connecting-bar downward, ready for another registration. After the disk N′ has made nine-tenths of a revolution, the pin T^2 on the pawl-lever T′ of the disk T on the inner surface of the disk N′ engages with a tooth of the wheel O of the second disk, N^2, and revolves the same the distance of one tooth. After the second disk, N^2, has made nine-tenths of a revolution, the third disk, N^3, is moved in a like manner, and so on. The disk N′ is successively moved the distance of ten teeth, and during that time the pin T^2 on the disk T on the inner surface of the disk N′ rests on the edge of the-disk P on the disk N^2; but after the disk N′ has been revolved the distance of nine teeth the pin T^2 of the disk T′ drops into the notch *t* of the disk P on the disk N^2, thus permitting the pin T^2 to engage with the teeth of the ratchet-wheel O on the second disk, N^2, thus revolving the said disk the distance of one tooth; but as soon as the said movement has been made by the disk N^2 the pin T^2 of the disk N′ slides up on the spring t^3 on the end of the pawl-lever P′ of the disk P, opposite the one provided with the pin P^2. As the end provided with the pin P^2 is pressed outward by a tooth of the ratchet-wheel O of the disk N^2, the spring t^3 is pressed down to permit the pin T^2 to pass on it. As soon as the disk N^2 has been revolved the distance of one tooth, the pin P^2 on the end of the lever P′ of the disk P on the disk N^2 snaps back into the notch P^3, thereby raising the spring t^3 and the pin T^2 on the lever T′ of the disk N′, thus enabling the said pin T^2 to travel on the edge of the disk P of the adjoining disk, N^2.

In order to understand the above operation, it must be kept in mind that the disks P are all rigidly mounted on the shaft N. The ratchet-wheels O are connected with the disks N′, N^2, and N^3 on one side and the disks T on the opposite side, the disks N′, N^2, and N^3, the ratchet-wheels O, and the disks T being loosely mounted on the shaft N.

One of the special features of my machine is that as soon as one of the shafts G or G′ is turned the disk N′ is moved the distance of one number, thus making it impossible for a person to play more than twenty points without registering a game, for a person might well make twenty points, and then run out on a single run without requiring any further registering of points. Then no game would be registered if the cams S were not so constructed as to move the number disks at the first movement of the roller F or F′.

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

1. A billiard-marker consisting of a box provided with a cover having two longitudinal slots in its front, behind each of which slots a roller is journaled, which is provided on its surface with a series of longitudinal rows of numbers, and on which front of the box sliding pointers are held, which point to the numbers on the rollers showing through the slots in the box-front, substantially as herein shown and described.

2. In a billiard-marker, the combination, with a box provided with longitudinal slots in its front, of rollers carrying numbers journaled behind the slots, of sliding pointers on the face of the box, and of means for revolving the rollers one row of numbers successively, substantially as herein shown and described.

3. In a billiard-marker, the combination, with a box provided with longitudinal slots in its front, of rollers carrying numbers journaled behind the slots, of sliding pointers on the face of the box, of means for revolving the rollers one row of numbers successively, of springs for throwing the rollers back, and of means for releasing the rollers to permit the springs to throw them back, substantially as herein shown and described.

4. In a billiard-marker, the combination, with a box, of rollers journaled in the same and carrying a series of rows of numbers, means for turning the rollers, and means for registering the number of games, which means for registering the number of games are operated from the rollers carrying the numbers, substantially as herein shown and described.

5. In a billiard-marker, the combination, with a box, of rollers journaled in the same and carrying a series of rows of numbers, means for turning the rollers, and a series of disks carrying numbers for recording the number of games played, which game-registering disks are operated automatically from the rollers above mentioned, substantially as herein shown and described.

6. In a billiard-marker, the combination, with a box, of rollers journaled in the same and carrying a series of rows of numbers, means for turning the rollers, and a series of

disks carrying numbers for registering the number of games played, of which disks the first one is connected with a mechanism operated by the above-mentioned rollers, substantially as herein shown and described.

7. In a billiard-marker, the combination, with a box, of rollers journaled in the same and carrying a series of rows of numbers, means for turning the rollers, cams on the ends of the rollers, disks carrying numbers and used for registering the number of games, and mechanism for operating the recording-disks, which mechanism is operated from the cams of the rollers as soon as either roller is turned the distance of one row of numerals, substantially as herein shown and described.

8. In a billiard-marker, the combination, with a box, of two rollers journaled in the same and each carrying a series of rows of numerals on its surface, of a crank-handle for turning each roller, and of an intermediate handle for releasing the rollers to permit them to be thrown back by springs at the opposite ends of the rollers, substantially as herein shown and described.

9. In a billiard-marker, the combination, with a box, of the two rollers F and F′, carrying a series of rows of numerals, of the crank-shafts G and G′, carrying pawls, ratchet-wheels on the ends of the rollers, with which ratchet-wheels the above-mentioned pawls engage, and springs for throwing the shafts G and G′ back after they have been turned, substantially as herein shown and described.

10. In a billiard-marker, the combination, with a box, of the rollers F and F′, each carrying a series of rows of numerals, ratchet-wheels on the ends of the rollers, the shafts G and G′, provided with suitable handles, and carrying pawls engaging with the ratchet-wheels on the ends of the rollers, cams loosely mounted on the shafts G and G′ and adapted to raise the pawls from the ratchet-wheels on the rollers, and means for turning the said cams, substantially as herein shown and described.

11. In a billiard-marker, the combination, with a box, of the rollers F and F′, each carrying a series of rows of numerals, ratchet-wheels on the ends of the rollers, shafts G and G′, provided with suitable handles, and carrying pawls engaging with the ratchet-wheels on the ends of the rollers, cams loosely mounted on the shafts G and G′, and adapted to raise the pawls from the ratchet-wheels on the rollers, the bar K^2, connecting the cams, and the shaft L′, provided with a handle and with an arm, L, engaging with a pin on the bar K^2, whereby the cams can be turned to disengage the pawls from the ratchet-wheels on the ends of the rollers by turning the handle of the shaft L′, substantially as shown and described.

12. In a billiard-marker, the combination, with a box, of the rollers F and F′, each carrying a series of rows of numerals, ratchet-wheels on the ends of the rollers, shafts G G′, provided with handles each carrying a pawl engaging with the corresponding ratchet-wheel on the corresponding roller, the cams K, mounted on the shafts G and G′, the pawls J′, pressed against the said cams by springs, and of means for revolving the cams so as to raise the pawls from the ratchet-wheels on the ends of the rollers, and of springs for throwing the rollers back, substantially as herein shown and described.

13. In a billiard-marker and game-register, the combination, with a box, of the rollers F and F′, carrying numbers, means for revolving the rollers, cams S on the ends of the rollers, pivoted arms R^3, adapted to be acted upon by the cams S, and a registering apparatus connected with a bar connecting the arms R^3, substantially as herein shown and described.

14. In a billiard-marker and game-register, the combination, with a box, of the rollers F and F′, carrying numerals, means for revolving the rollers, cams S on the ends of the rollers, pivoted arms R^3, adapted to be acted upon by the cams S, a registering apparatus connected with a bar connecting the arms R^3, and of springs R^4, for throwing the arms R^3 back, substantially as herein shown and described.

15. In a billiard-marker and game-register, the combination, with a box, of the rollers F and F′, carrying numerals, means for revolving the rollers, cams S on the ends of the rollers, pivoted arms R^3, adapted to be acted upon by the cams S, and a registering apparatus connected with a bar connecting the arms R^3, which registering apparatus consists of a series of disks carrying numbers, and provided with means for being revolved successively after the previous disk has made nine-tenths of a revolution, substantially as herein shown and described.

16. In a billiard-marker and game-register, the combination, with a box, of the rollers F and F′, carrying numerals, means for revolving the rollers, cams S on the ends of the rollers, the pivoted arms R^3, the bar R′, connecting the same, and the pivoted bar Q, acted on by the bar R′, and provided with a pawl, Q′, adapted to engage with the ratchet-wheel O of the registering mechanism, constructed of a series of counting-disks combined in such a manner as to be successively revolved after the preceding one has made ten revolutions, substantially as herein shown and described.

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