

No. 747,458.

PATENTED DEC. 22, 1903.

E. R. MARSHALL.
POOL BALL RACK AND REGISTER.

APPLICATION FILED FEB. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

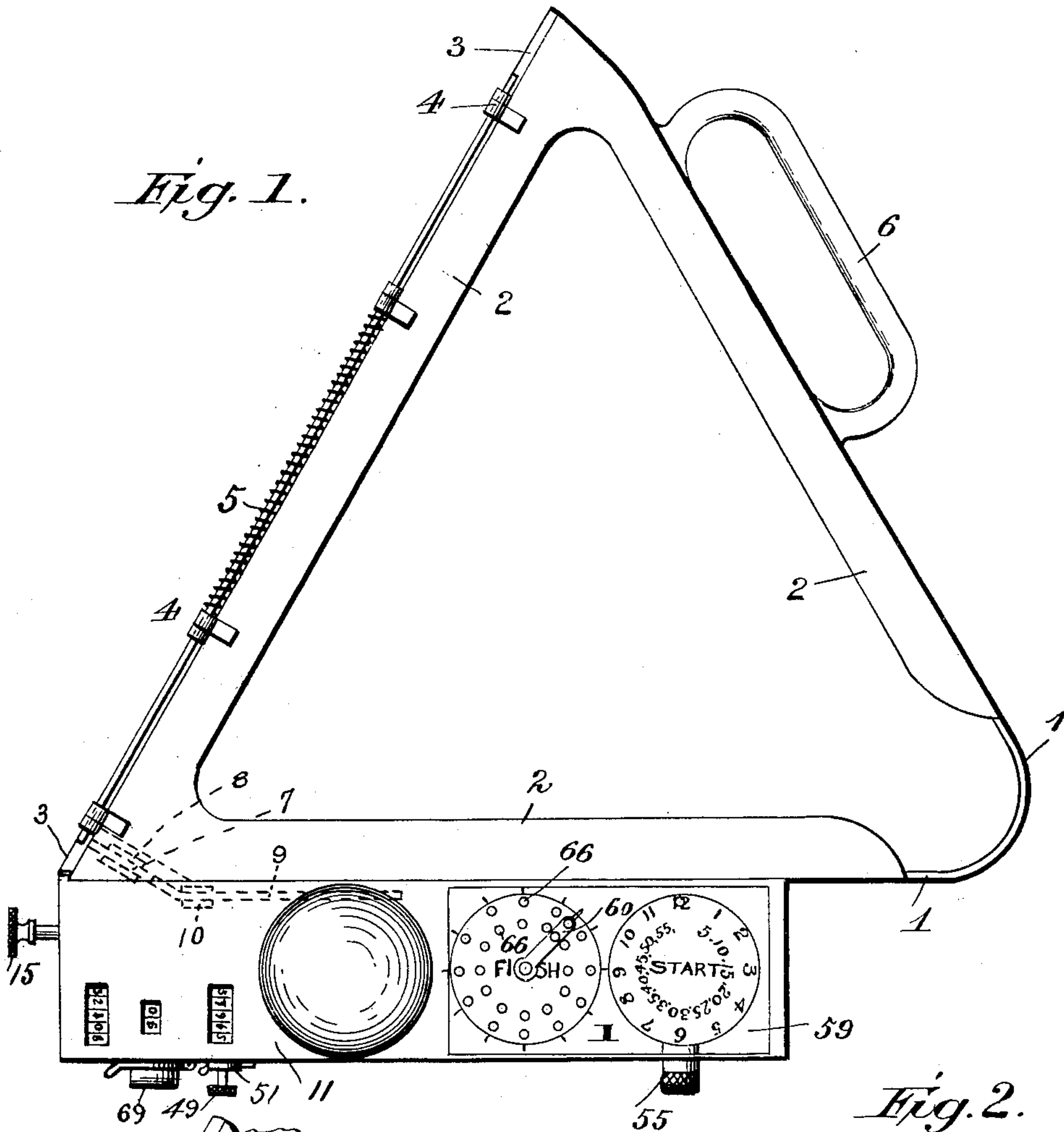
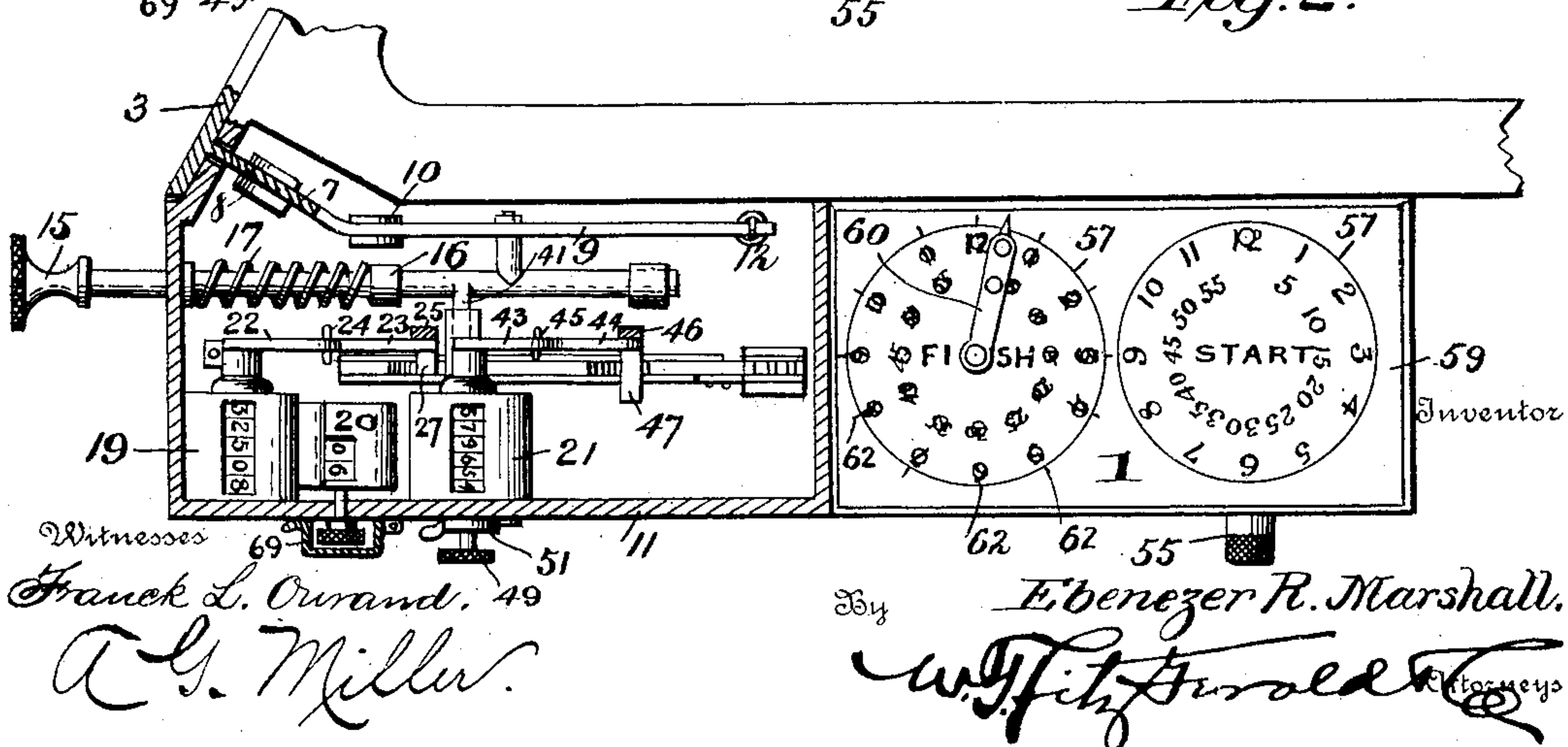


Fig. 2.



Witnesses

Frank L. Ormand, 49

A. G. Miller.

By

Ebenezer R. Marshall.

W. F. Arnold, Attorneys

UNITED STATES PATENT OFFICE.

EBENEZER R. MARSHALL, OF HAMILTON, CANADA.

POOL-BALL RACK AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 747,458, dated December 22, 1903.

Application filed February 3, 1903. Serial No. 141,646. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER R. MARSHALL, a citizen of Canada, residing at Hamilton, Ontario, Canada, have invented certain new and useful Improvements in Pool-Ball Racks and Registers; 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.

My present invention is designed as an improvement upon my invention as presented in Letters Patent No. 702,108, granted to me on the 10th day of June, 1902; and, as will be hereinafter clearly set forth, and pointed out in the claims hereunto appended, my invention consists in the present instance of a further adaptation of and an addition to the mechanism set forth in said Letters Patent, whereby my improved register will be adapted for use in keeping tally either upon the number of games played, the number of cues employed, or the amount of time consumed while the rack is being used.

The prime object of my invention therefore consists in providing suitable registering mechanism whereby the number of cues or players in the game may be recorded or the amount of time consumed if the time system is used and in the adaptation of the controlling means employed to actuate the ball-releasing devices and in ringing a bell.

A further object of my invention, among others, is to provide suitable means intermediate the cue-recording mechanism and an independent register whereby one or the other of said indicators will always be in operative relationship with the controlling means for the ball-releasing devices.

Other objects and advantages will be hereinafter fully set forth, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a top plan view of my invention complete ready for use. Fig. 2 is a top plan view of the registering mechanism proper and actuating means employed to cooperate therewith. Fig. 3 is a vertical central section of the casing containing the registering mechanism. Fig. 4 is a detail view showing the releasing device for the door of the ball-frame. Fig. 5 is a trans-

verse section of Fig. 3 on line xx with the bell-coöperating parts omitted. Fig. 6 is a perspective detail view of certain interior mechanism employed to connect or disconnect the push-rod with or from certain parts of the registering mechanism. Fig. 7 is a detail view showing part of the bell-ringing devices, while Fig. 8 shows a section of the recording-paper.

For convenience in referring to the various details of my invention and accessories desired to coöperate therewith and illustrate a practical application of my invention to use designating-numbers will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 indicates the side walls of my pool-ball frame, which is made in the usual manner, so as to have a triangular form adapted to "bunch" or secure the balls in a triangular group, as is common. As in my former Letters Patent hereinabove mentioned, I provide the frame-section 1 with inwardly-directed lips 2 upon both the upper and lower edges thereof except the lower edge of the rear section, which as in the case of my other patent is wholly cut away and replaced by a door-section 3, properly connected to the contiguous edge of the lip 2 by suitable hinges 4, a controlling-spring 5 being so mounted with respect to said door 3 and the lip 2 that the door will be held normally open, whereby when the lower edge is released by certain devices hereinafter set forth the door will instantly move in an open position through the mediation of said controlling-spring 5. It will be understood that the free edge of the door 3 is also provided with an inwardly-directed lip designed as complementary to the contiguous lips carried by the frame-section. Inasmuch as the door-section 3 when released will be brought into an open condition with more or less force I deem it desirable to provide suitable cushioning devices, as an auxiliary spring, which will serve as a cushion against which the force of the upward-moving door is brought to bear, thereby nullifying the jar incident to opening the same.

If deemed desirable, a suitable handle or handles, as indicated by the numeral 6, may be provided or wholly omitted.

The door-section 3 is provided with an inwardly-directed hook-like extension 7, adapted to cooperate with the hooked terminal 8, carried by the controlling-lever 9, which is pivotally mounted in the bifurcated standard 10, erected within the casing 11, which is secured to a side of the frame-section and designed as a housing for the registering mechanism and controlling devices therefor, as will be hereinafter more clearly set forth. The lever 9 is held normally downward at its free end by means of the controlling-spring 12 and is manipulated by means of the inwardly-directed arm 13, carried by the push-rod 14, provided at its outer end with the push-button or knob section 15 set forth in my Letters Patent hereinbefore mentioned. The push-rod 14 is held in its operative position by passing through suitable apertures provided in the upper ends of the standards 16, as more clearly shown in Fig. 6, and in order that said push-rod may be held disposed normally outward I interpose the controlling-spring 17 between the end of the casing 11 and the next adjacent standard 16, a suitable collar or bearing-point 18 being rigidly secured to the push-rod to accomplish this result. The push-rod 14 is also designed to control a plurality of registering mechanisms and ring a bell when desired, suitable shifting devices being employed in cooperation with said parts, whereby the desired register may be actuated and the other one left inactive, the bell being caused to ring only in connection with the use of one of the registers.

For the accomplishment of the results herein immediately before mentioned I locate a plurality of registers at a convenient point in the casing, preferably upon the upper side of the housing 11 and near the outer corner thereof, though the point of location of said parts is a matter to be determined by the manufacturer. In this instance I provide a register having a double capacity, as indicated by the numerals 19 and 20, the former being adapted to indicate the total number of racks or games or cues during the period of a month or year, as the case may be, while the latter is designed to register the number of games or cues of each new set of players. I also provide an independent register 21, preferably located adjacent to the registers 19 and 20 hereinbefore mentioned, whereby the readings of any of the registers may be readily determined at a glance. The complete register 19 and the auxiliary register 20 are provided with a common controlling-lever 22, which is connected to the bell-crank or angular arm 23 by means of the link-section 24 or equivalent device, and since the angular arm 23 is pivotally sustained by means of a suitable arm or bracket 25, connected to a contiguous part of the top of the casing, the lower end or branch 26 is directed downward and provided with the right-angled extension or finger 27, the free end of which is thereby dis-

posed in the path of the switch-block 28 when the latter is disposed in its extreme inward position in the casing, as will be hereinafter more clearly set forth. It may be stated in this connection that the switch-block 28 is received by and adapted to move longitudinally within the movable shoe or member 29, having a base-section 30, which is adapted to be moved manually upon the guideways or track-sections 31 and 32 by means of the controlling-shaft 33, which latter extends loosely through an aperture provided in a contiguous part of the casing, as more clearly set forth in Fig. 5. The shoe 29 and its cooperating parts are held normally inward or in cooperation with the finger 27 by means of the spring 34, interposed between the wall of the casing and the fixed disk 35, carried by the shaft 33, as will be clearly obvious by reference to Fig. 5. The inner end of the switch-block 28 is extended sufficiently to provide the terminal 36, in which I pivotally mount the bell-ringing detent 37, held in a normally vertical position by the counterweight 38, and since the detent 37 is thus disposed directly in the path of the lower end of the bell-hammer 39, which is pivoted to the standard or other equivalent support 40, the hammer will be actuated when the switch-block or controller 28 is forced inward by the push-rod 14, inasmuch as said rod is operatively connected to said switch-block by means of the arm 41, which fits loosely within or telescopes with the sleeve 42, which latter is rigidly connected to the inner side of said block. The object in providing the telescoping sleeve and arm 41 is to compensate for the outward movement of the switch-block or controller 28, as will be clearly obvious. It will thus be seen that I have provided simple though reliable means for operatively connecting the push-rod 14 with the total and auxiliary registers 19 and 20, respectively, through the mediation of the controlling arm or lever 22 common to both of said registers, and it now becomes necessary to at times wholly disconnect the push-rod from connection with the registers 19 and 20 and with cooperation with the bell and place said rod in connection only with the independent register 21, and with this purpose in view I will call attention to the fact that the independent register is also provided with the controlling-lever 43, which is connected with the bell-crank 44 by means of the link-section 45, suspended in its operative position upon the bracket 46, depending from the casing. The lower end of the bell-crank 44 is bent to form the right-angled extension 47, having the depending terminal 48, disposed directly in the path of the switch or controller 28 when the latter is moved outward upon the guides or trackways 31 and 32, but wholly out of engagement therewith when said controller is disposed inward. Inasmuch as the detent 37 is bodily moved outward, all connection between the push-rod 14 and the bell-ringing device is cut off, thus leaving the bell isolated

and silent when the controller 28 is in position to actuate only the independent register.

It is obvious by the foregoing description and by reference to Fig. 5 of the drawings that the shaft 33 may be readily drawn outward by grasping the handle or knob section 49 and overcoming the tension of the spring 34.

It will be observed that the shaft 33 is provided with the disk 50, which is rigidly secured to it immediately on the outside of the casing, and when the shaft is drawn outward the said disk 50 will be moved sufficiently away from the casing to permit the latch 51 to be dropped between said parts, thereby holding the shaft outward and disposing the switch-block or controlling member 28 in the path of or in position to cause its inclined face 52 to strike the depending arm 48 and operate the independent register. When, therefore, it is desired to restore the controller 28 to its normal or inward position and incidentally throw it into engagement with the bell-ringing devices and the controlling-arm 26 of the registers 19 and 20, all that is necessary to be done is to raise the latch or keeper 51, when the spring 34 will exert its power upon the disk 35 and force the shoe inward upon its trackways.

My object in providing the independent register is that it may be used to record each time the door 3 is opened to release the balls, my purpose being to use said independent register in connection with time-recording devices also carried by a part of the casing 11, preferably by the opposite end, which carries the registering mechanism hereinbefore mentioned and consisting in this instance of a carrying-roller 53 and a storage-roller 54, both of which find suitable bearings in the walls of the casing. The storage-roller is provided with a shank which extends entirely through the outer wall of the casing 11, to which is secured a preferably milled wheel or controlling-knob 55, whereby the storage-roller may be readily turned to wind thereon the end of a contiguous strip of paper 56, upon the upper surface of which is printed in pairs certain time-designating devices, the preferred form whereof is illustrated in Figs. 1 and 2 and consists in this instance of two circular fields circumscribed by the line 57, the outer margin of which is printed to show the numerals from "1" to "12," inclusive, as upon the face of a clock, while immediately within the outer circle of figures thus or otherwise provided is another cooperating circle of figures from "5" to "55," inclusive, the numeral "5" being on the inner side of and opposite to the numeral "1," while the numeral "55" is upon the innerside of and opposite the numeral "11," thereby making it possible to utilize said series of numbers for the purpose of indicating any fractional part of an hour in a manner hereinafter set forth.

The paper-compartment and the compartment holding the registering mechanism and controlling devices therefor are preferably

separated by the partition-wall 8, and I provide a cover for the paper-compartment of some transparent substance, as glass, mica, celluloid, or the like, as indicated by the numeral "59," through which the pair of printed graduated disks or rings 57 are visible. The graduated rings or disk-like members 57, are, as before stated, arranged in pairs, the outer one of each pair being designated by the word "Start" or "Open" or similar word to indicate the time of beginning to play, while the other is designated by the word "Finish," "Close," or the like.

I pivotally secure to the covering 59 the arm 60, the free end of which is designed to swing freely within the circle or field 57 when the latter is adjusted or located beneath the same. The arm 60 is preferably so formed that its free end or terminal 61 will be bent downward in contact with the cover 59, whereby said terminal will be disposed in cooperation with one of the graduations 62, properly located at regular points to guide the operator in locating the arm 60. The arm 60 also carries near its outer end a pair of punches, as indicated by the numerals 63 and 64, each being held normally upward by the spring 65. I also form in the transparent cover 59 a plurality of apertures 66, so located that each one will register or be in position immediately above one of the numerals carried by the fields 57, and it is therefore clearly obvious that since the paper 56 is caused to travel over the plate 67 and immediately beneath the perforated cover 59 a downward movement of either of the punches 63 or 64, as the case may be, will cause the paper to be perforated at the point registering with one of the apertures 66 through which the punch is extended. It will be further obvious that the location of the perforations 66 will be so determined that one of the graduations carried by the fields 57 will be immediately beneath its individual perforation and that when the punch is forced downward the number located in the path of the punch will be perforated, it being observed that suitable registering-apertures 68 are formed in the plate 67 to receive the part of the paper removed.

The purpose of the graduated fields or disk-like members 57 is to make it possible to record the time of beginning to play and the time when the players have finished, the said system of recording being employed where it is customary to charge a designated rate or toll per hour instead of charging by the game or cue, as in other localities or situations, and in order that the manner of using the graduated fields 57 may be fully understood it may be stated that when my improved ball-rack is to be used under the time system or at so much per hour or fractional parts thereof the handle 49 is grasped and drawn outward and secured by means of the latch or keeper 51, which will move the shoe-section 29 upon its guideways and incidentally dis-

connect the controller 28 with the finger 27 and connect it with the depending branch 48 of the independent register 21 and at the same time disconnecting it from the bell-ringing devices. After the independent register has thus been placed in operative connection with the push-rod 14 (the object being to wholly disconnect the push-rod from the total and auxiliary registers designed to register only per cue or game) and the players are ready to begin the handle 55 is turned so as to bring the field marked "Start" directly under to center with the pivot-point of the arm 60, when said arm is swung around, so as to bring the hour-marking punch 64 directly over the current hour. We will suppose the time of starting is 12.45. The punch 64 will therefore be brought immediately over the figure "12" and forced downward through the aperture in the cover 59, which will cause the perforation of the field 57 through the numeral "12." The arm is then moved so as to bring the punch 63 over the numeral "45" and forced downward, and the starting-disk will show at a glance the exact time of beginning. The players will then continue to play, and each time the balls are released the push-rod must be forced inward to open the door 3, thereby incidentally operating the independent register as many times as the ball-releasing devices are operated. When the players have finished, the handle 55 is turned so as to bring the field 57 marked "Finish" to center with the pivot-point of the arm 60, as before, and the punches operated in the same manner as employed to record the time of starting, and as each pair of fields is individually numbered the proprietor or bookkeeper at the end of the day or week may remove such portion of the paper as may be stored upon the roller 54, which will enable him to read the beginning and closing time of each set of players for the day or week, as the case may be, over which the record extends. It will therefore be seen that the purpose subserved by the independent register is to place a check upon any attempt made to make a dishonest record when punching the starting and finishing fields, inasmuch as the proprietor or person in charge can by means of the independent register readily determine the number of times the balls have been released, as it follows that there should be a reasonable number of releases for each hour of time played. If, therefore, the players or attendant should attempt to impose upon the proprietor, and we will suppose, for instance, would improperly and dishonestly record the closing time, so as to show that the players had been using the ball-frame but one hour and fifteen minutes, whereas independent register would show, for instance, that the balls had been released and the rack consequently used forty-five times the dishonesty in time recorded would at once be apparent, since a fair average would show only six or seven

racks per hour, thereby indicating that the players had used the rack at least six or six and a half hours instead of one hour and fifteen minutes, as recorded.

In some instances a clock mechanism may be employed for recording the time, as upon a continuous strip of paper, any suitable stamping or indicating mechanism to show when the players begin and finish being used in cooperation with the clock recording mechanism—as, for instance, some suitable adaptation of the construction now in common use like the combination of parts presented in United States Patent No. 485,639 and a number of other patents kindred thereto in the same art. While, therefore, it is common to provide clockwork recording mechanism, I deem it unnecessary in this application to exemplify any specific construction involving the use thereof, leaving it to the manufacturer to make such adaptation from the art as developed or as may be suggested by mechanical expediency as will provide a suitable substitute for the manually-controlled mechanism presented in the foregoing specification and illustrated in the accompanying drawings.

The registers 19, 20, and 21 may be of any well-known or preferred construction. The auxiliary register 20 is provided with the controlling-shaft, which extends through a contiguous part of the casing 11 and is provided with an operating-handle, which latter is entirely covered by a housing or shield 69, adapted to be secured in a closed position, as by being snapped over a suitable lug or catch, thereby preventing casual or unauthorized turning of the handle. The construction of the register 20 is of such character that it may be readily restored to the initial point without in any wise disturbing the total registration shown by the register 19. The auxiliary register 20 will therefore be found very desirable, inasmuch as it may be restored to "naught" for each new set of players.

It will be understood that any suitable bell-ringing devices, as the spring-controlled member 39, may be adopted to cooperate with the counterbalanced detent or its equivalent 37. It will also be obvious that any equivalent of the switching mechanism comprehending the member 28 and the shoe 29 may be adopted by the manufacturer, inasmuch as the same result of connecting and disconnecting the preferred register with the push-rod and the ringing or the non-ringing of a bell may be accomplished in a variety of ways, and I therefore wish to comprehend in this application the broad idea of suitable connecting and disconnecting devices cooperating with the push-rod and the bell and a plurality of registers and at the same time leave the connection between the push-rod and the door-opening mechanism undisturbed.

Inasmuch as I have herein described how the manually-controlled indicator or register-

ing mechanism comprehending the recording-fields 57 may be otherwise actuated and controlled, as by a clock mechanism, I desire to reserve the right to employ either form of actuating means as I may find most desirable in practice.

It will be seen that I have provided valuable accessories and auxiliaries in coöperation with or partly in substitution of the mechanism illustrated in my said former Letters Patent and that by means of my present invention I have fitted my ball rack or frame so that it will meet the requirements of either situation, being equally desirable and efficient when used under the time system of recording the playing of a game of pool or when used to register each game played, as by the game or per cue.

Having therefore clearly set forth the construction and manner of using my improved registering mechanism for pool-ball racks, further description is deemed unnecessary.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a pool-ball rack, of a plurality of registers; a push-rod; a door and a keeper controlled by said push-rod; devices intermediate the push-rod and said registers; a bell and means adapted to control said devices whereby one of the registers and said bell may be placed in coöperation with the push-rod and but one of the registers and the bell will be actuated by the push-rod as and for the purpose set forth.

2. The combination with a pool-ball rack, of a plurality of registers carried thereby; releasing devices for the balls within the rack; suitable controlling means for said registers and ball-releasing devices whereby when said controlling means are actuated but one of the

registers will be operated, substantially as set forth.

3. The combination with a pool-ball rack of ball-releasing devices, a pair of complete registers; controlling means for said releasing devices and registers; a bell and means intermediate the same and said register-controlling means whereby when the controlling means is actuated one of the registers will be operated and the bell detonated while the other register will be shunted and inactive as and for the purpose set forth.

4. The combination with a pool-ball rack of ball-releasing devices; a push-rod; a pair of independent registers and a bell; suitable interlocking devices intermediate the push-rod and registers, which when operated, will simultaneously connect one register and disconnect the other register from the push-rod whereby the bell will be rung when one register is actuated and left silent when the other register is operated, as and for the purpose set forth.

5. The combination with a pool-ball rack, of ball-releasing devices; a push-rod controlling said releasing devices; a pair of registers; suitable means to connect a preferred one of said registers with the push-rod and leave the other register disconnected therefrom; a bell adapted to ring with the actuation of one register and remain silent when the other register is operated as and for the purpose set forth.

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

EBENEZER R. MARSHALL.

Witnesses:

S. C. HILL,
C. S. FRYE.