

No. 775,864.

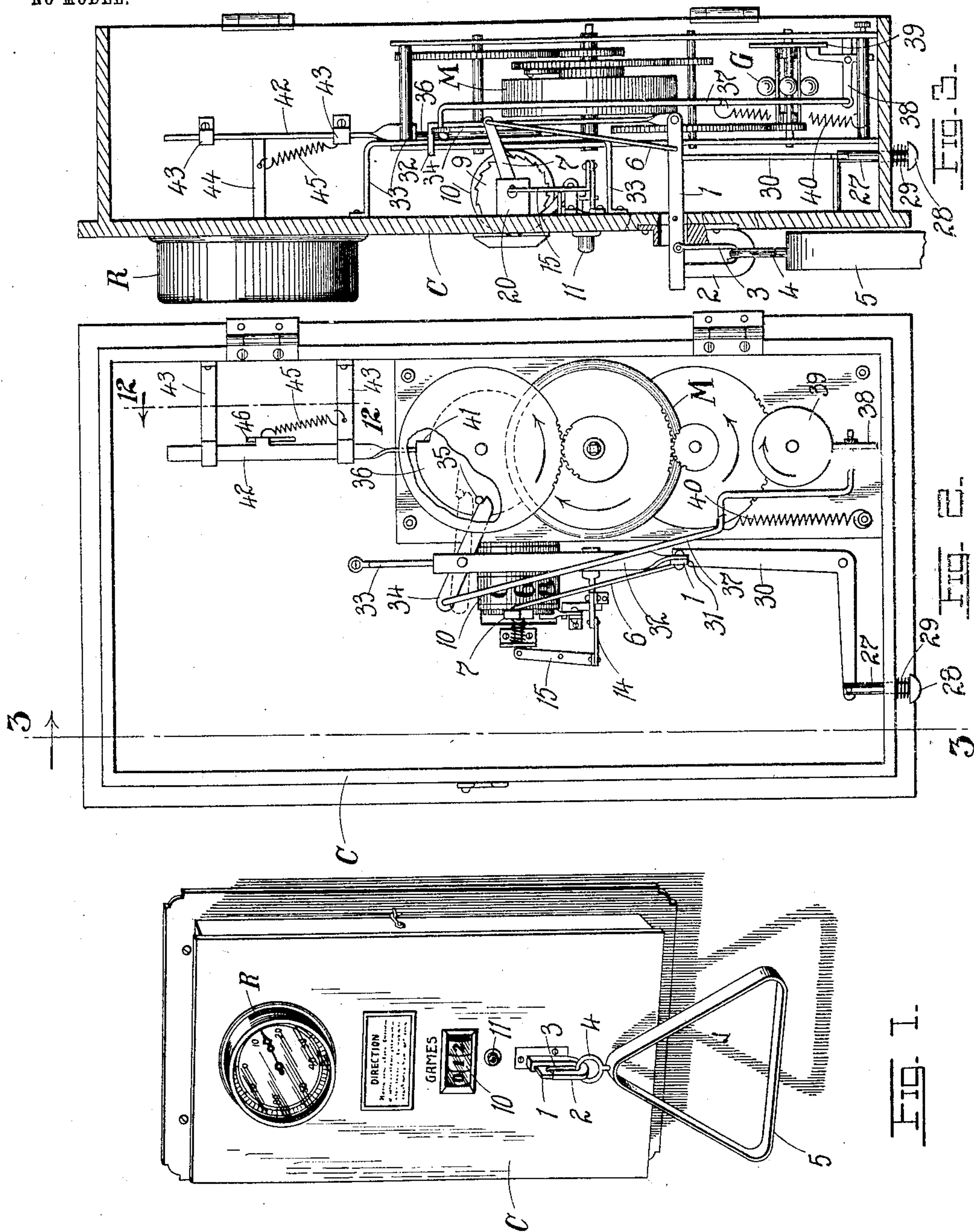
PATENTED NOV. 22. 1904.

F. H. SMITH.  
GAME REGISTER.

APPLICATION FILED FEB. 24, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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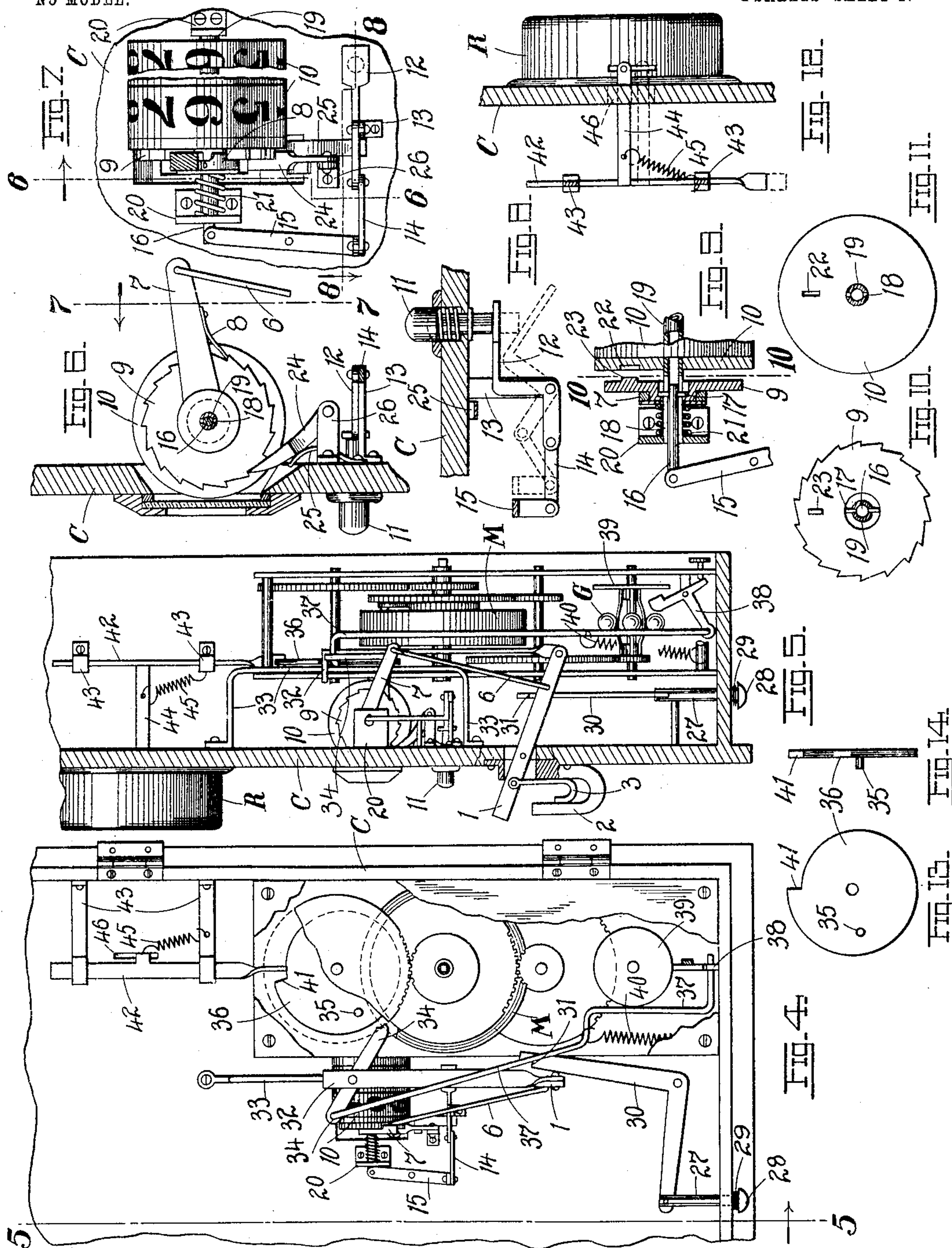
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

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## GAME-REGISTER.

SPECIFICATION forming part of Letters Patent No. 775,864, dated November 22, 1904.

Application filed February 24, 1904. Serial No. 194,997. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK H. SMITH, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new  
5 and useful Improvements in Game-Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements  
10 in game-registers; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective  
15 view of the device. Fig. 2 is an elevation of the operating mechanism as mounted on the rear face of the front wall of the casing, the parts being in their normal position. Fig. 3 is a vertical transverse section on the line 3 3  
20 of Fig. 2. Fig. 4 is a view similar to Fig. 2, showing the position the parts occupy after removal of the triangle by which the play-balls are racked. Fig. 5 is a vertical transverse section on line 5 5 of Fig. 4. Fig. 6 is  
25 an enlarged sectional detail on line 6 6 of Fig. 7, showing the actuating mechanism for the counter. Fig. 7 is a sectional view on line 7 7 of Fig. 6 looking toward the counter. Fig. 8 is a horizontal section on line 8 8 of Fig. 7.  
30 Fig. 9 is a sectional detail showing the ratchet-disk retracted from the counter-disks of the counter. Fig. 10 is a cross-section on line 10 10 of Fig. 9. Fig. 11 is a face view of the terminal counter-disk which the ratchet-disk  
35 engages. Fig. 12 is a sectional enlarged detail on line 12 12 of Fig. 2. Fig. 13 is a face view of the cam-disk of the clock mechanism which controls the totalizer-register, and Fig. 14 is an edge view thereof.

40 The object of my invention is to construct a register in which the triangle usually employed for racking the balls on a pool-table shall enter as a controlling element of the mechanism by which the games played are  
45 registered, it being impossible for the players to rack the balls unless a record of the game is first entered by the machine on the register provided for the purpose. The present machine likewise contemplates a totalizer

which will register the total number of games  
50 played on any table during any given period of time.

In detail the invention may be described as follows: Referring to the drawings, C represents a casing on the back of whose front wall  
55 the several operating parts of my mechanism are mounted. Pivoted to oscillate vertically in an opening of the front wall of the casing, and projecting on either side of said wall, is a lever 1, which when horizontal closes with  
60 its outer end over a U-shaped strap 2, the lever being provided with a hook 3 for the suspension of the eye or ring 4, carried by the triangle 5, by which the pool-balls are racked at the beginning of each game. Secured to  
65 the lever 1 within the casing a suitable distance from the end of the inner arm thereof is one end of a link 6, whose opposite end is pivotally coupled to the free end of an arm 7, provided with an advancing pawl 8, which  
70 rotates (in a manner presently to be referred to) the ratchet-disk 9, by which the counter 10 is actuated. The counter 10 is preferably composed of a series of disks capable of performing addition in a manner well known in  
75 this class of counters, which are old and require no detailed description. To allow the several disks composing the counter 10 to return to their zero positions, I make the following provision: Mounted below the counter 10  
80 is a spring-controlled push-button 11, whose stem engages one arm of a bent lever 12, pivoted to a bracket 13, the opposite end of said lever being pivotally coupled to the adjacent end of a link 14, Fig. 8, whose opposite end  
85 is in turn pivotally secured to the deflected end of a lever 15, pivoted to the casing-wall, the upper end of said lever 15 being in pivotal connection with the adjacent end of a rod 16. The rod 16 is provided with a pin 17, operating in the slotted end 18 of the hollow  
90 counter-shaft 19, which is itself mounted between the brackets 20 20. Encircling the slotted end of the shaft 19 and interposed between the bracket 20 and adjacent face of the ratchet-disk 9 is a coiled spring 21. Now by forcing the  
95 push-button 11 inwardly the parts described will assume the dotted position shown in Fig.



8 and the positions shown in Fig. 9, the pin 17 retracting the ratchet-disk 9 out of engagement with the adjacent counter-disk and permitting the several disks to resume their zero position. This accomplished, the release of the button 11 permits the parts to be restored to their original position, the ratchet 9 being forced under the action of the spring 21 into engagement with the counter-disks, the terminal one of the series being preferably provided with a depression 22 for receiving a projection or lug 23 on the inner face of the ratchet and better lock the parts together, said depression being brought into alinement with the lug for the zero position of the counter-disks. The details of the mechanism by which the disks are operated are not entered into, as any conventional form of counter will answer the present purpose. The check or arresting pawl 24 for the ratchet 9 is controlled by a flexed spring 25, the pawl being pivotally carried by an arm or bracket 26.

When the parts are in their normal position and the lever 1 hangs horizontal under the weight of the triangle 5, it remains locked in such horizontal position, and unless some provision were made to keep it so locked unauthorized persons could remove such triangle from its position. I therefore provide the following locking mechanism for the said lever: Passing loosely through the bottom of the casing is a stem 27, whose outer projecting end is provided with a head or button 28, practically concealed from view by the flange of the front panel or wall of the casing, a coiled spring 29 being interposed between the head 28 and the casing-wall. The inner end of the stem 27 is pivotally coupled to one arm of a bell-crank lever 30, the free end of whose opposite arm is provided with a shoulder 31 for arresting any downward movement of the lever 1 should an attempt be made by unauthorized persons to remove the triangle from its support on said lever. The proper parties, however, or those familiar with the operation of the device may push the stem 27 inwardly, (compressing the spring 29,) thereby tilting the lever 30 out of engagement with the triangle-supporting lever 1, Figs. 4, 5, thus permitting the tilting of the lever 1 sufficiently to allow for the removal of the triangle 5 off its hook 3 when occasion for racking the balls arises. (See Fig. 5.)

The free end of the inner arm of the lever 1 has coupled thereto the twisted end of a bar 32, whose upper deflected end loosely plays over a guide-rod 33, whose bent ends are secured to the casing-wall. Pivotally secured to the bar 32 below the upper deflected end and adapted to oscillate in a plane at right angles to the plane of oscillation of the lever 1 is an intercepting-lever 34, whose rear end when the parts are in their normal position serves to intercept a pin 35 on the cam-disk 36, forming an element of the clock mechanism

or motor M, by which the register R is actuated. The opposite end of the lever 34 is coupled through the medium of a bent link 37 to one arm of an angular brake-lever 38, the expanded end of whose opposite arm is adapted to frictionally engage the face of the brake or friction-disk 39, connected to the governor G of the clock mechanism. About the bend in the link 37 is secured one end of a coiled spring 40, whose opposite end is secured to the casing-wall, the purpose of the spring, as presently to be seen, being to force the intercepting-lever 34 against the pin 35, Fig. 2.

The release of the pin 35 from the lever 34 at once permits the clockwork to operate and set the train of wheels into motion. The arrows in Fig. 2 show the direction of this motion. The cam-disk 36 is provided with a shoulder 41 between the adjacent ends of its shortest and longest radius, this shoulder determining the extent of drop (and subsequent gradual rise) for the plunger-bar 42, whose lower twisted end permanently bears and rides over the eccentric periphery of the cam-disk. This bar 42 is loosely mounted at the ends of the brackets 43 43, the bar being provided at a point between the brackets with a deflected arm 44, connected to the lower bracket by a spring 45, said arm 44 passing through a slot 46 of the casing C to a point adjacent to the casing of the register R, where it is coupled in any well-known manner to the inside mechanism of such register. With every revolution of the disk 36 the plunger 42 drops the vertical distance of the shoulder 41, (the drop being effected by the spring 45 and gravity,) when it is gradually forced up again by the eccentric periphery of the disk. With every drop the plunger advances the indicating-dial one mark, Fig. 1, and thus a record of the number of revolutions of the disk 36 is kept. This number, as presently to be seen, should correspond to the total number of games played or the total number of times the triangle 5 was removed from its support for purposes of racking the balls.

The operation of the device is as follows: Assuming that the register and counter-disks are respectively set at zero and the triangle hung up on the hook 3, the parts being locked, as indicated in Figs. 2 and 3, the attendant thereupon pushes in the stem 27 to tilt the lever 30 out of engagement with the lever 1, whereby a removal of the triangle 5 from its hook 3 may be effected by simply tilting the lever 1 sufficiently to allow the ring 4 to become disengaged from the hook. The parts are then as shown in Figs. 4, 5—that is to say, the lever 34 is out of the path of the pin 35, and unless the triangle is used immediately (within a minute or such time as the clock mechanism has been adjusted to) for racking the balls and restored to its position on the hook the clock mechanism will keep running and actuating the



plunger 42 and recording the games on the register or totalizer R. However, before the disk 36 has made a complete revolution the attendant (or players) racks the balls and restores the triangle back to its hook 3, the parts resuming their original position. In the resumption of such original position of course the bar 32 is moving upward, and the lever 34 under the tension of the spring 40 has assumed substantially the dotted position shown in Fig 2—that is to say, the intercepting end thereof lies in the path of the pin 35, which pin will eventually tilt said lever to the position shown in full lines in said figure, the tension of the spring being sufficient to cause the lever to arrest any further movement of the pin and disk carrying the same, the clock being, moreover, stopped approximately at the same moment by the brake-lever 38 forcibly engaging the disk 39. Of course with each removal of the triangle for purposes of racking the balls for the next game the disk 36 is set into motion, and this in turn causes the register to operate. Should the triangle be removed for any great length of time, (during which unscrupulous persons might attempt to play two or more games without accounting for same,) the mechanism will duly record a successive number of games, depending of course on the speed to which the clock mechanism has been adjusted. If the triangle is restored immediately to its position on the hook after racking of the balls, then the register will only record the actual number of games racked or played. The counter 10 of course simply records the immediate number of games played by any set of players and may be restored to zero after the play is finished. The operation of the counter 10 is of course independent of the register R, though it is controlled by the same lever 1. With each tilting of the lever 1, Fig. 5, the ratchet-arm 7 and ratchet-disk 9 are actuated through the medium of the link 6, the pawl 8 engaging a fresh tooth with each upward sweep of the arm 7, which of course happens with the restoration of the triangle 5 upon its hook 3 and the restoration to the normal position of the lever 1, Fig. 3.

It is of course obvious that any form of counter or register may be employed, those here shown being conventional designs and well known. It is further apparent that I may depart from the details of construction here shown without in any wise affecting the nature or spirit of my invention.

Having described my invention, what I claim is—

1. In a register for recording pool-games, a suitable motor, means for supporting a triangle and locking the same in its supported position, intermediate mechanism for arresting the action of the motor for the supported position of the triangle, and releasing the motor upon removal of said triangle, a reg-

ister actuated by the motor, and a counter operated with each removal of the triangle from its supported position, substantially as set forth.

2. In a register for recording pool-games, a tilting lever adapted to support a triangle at one end, and adapted to be tripped in one direction upon the removal of said triangle, means for locking the triangle in its supported position, a game-counter mounted in proximity to the lever, a pawl and ratchet for advancing the counter for each removal of the triangle and consequent oscillation of the lever, a motor, intermediate connections between the lever and motor for arresting the action of the latter for the supported position of the triangle, and releasing the same upon removal thereof, and a register actuated by the motor, substantially as set forth.

3. In a register for recording pool-games, a tilting lever adapted to support a triangle at one end and to be tripped in one direction upon removal of said triangle, means for locking and temporarily releasing said lever to permit of the tripping aforesaid, a motor, a reciprocating bar coupled to the opposite end of the lever, an intercepting-lever pivotally secured to said bar, a cam-disk forming an element of the gearing of the motor, a pin on one face of the cam adapted to be arrested by the intercepting-lever, a brake-lever for the motor, intermediate connections coupling said brake-lever to the intercepting-lever, a spring for forcing the intercepting-lever in the path of the pin, a shoulder being formed between the adjacent ends of the eccentric periphery of the cam-disk, a spring-controlled plunger adapted to be reciprocated the extent of said shoulder for each revolution of the cam-disk, a register, and intermediate connections between the register and plunger for actuating the former with the movement of the plunger in one direction, substantially as set forth.

4. In a register for recording pool-games, a casing, a lever for supporting a triangle pivoted along one wall thereof and projecting partially into and out of said casing, a hook pivotally suspended from a point adjacent the outer end of the lever, a U-shaped strap for receiving said hook, the lever being adapted to close over the open end of said strap, means confined within the casing and controlled from the outside thereof, for locking said lever against tripping, and a suitable register adapted to be operated upon release of the lever and subsequent tripping thereof, substantially as set forth.

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

FRANK H. SMITH.

Witnesses:

EMIL STAREK,  
G. L. BELFRY.