

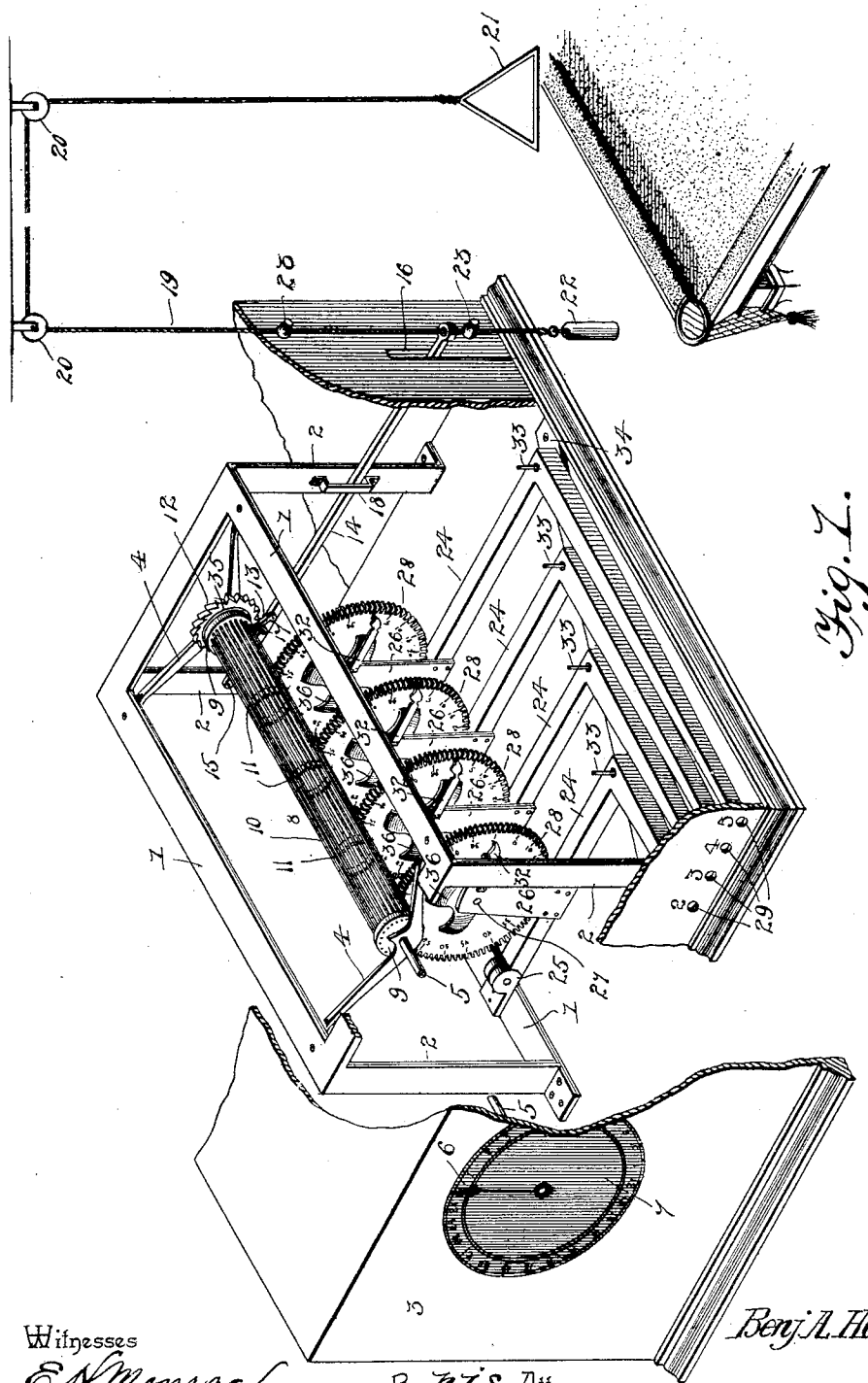
(No Model.)

2 Sheets—Sheet 1.

B. A. HOLMES.
GAME REGISTER FOR POOL TABLES.

No. 582,128.

Patented May 4, 1897.



Witnesses

E. N. Monroe
P. M. Smith.

By *W. S.* Attorneys,

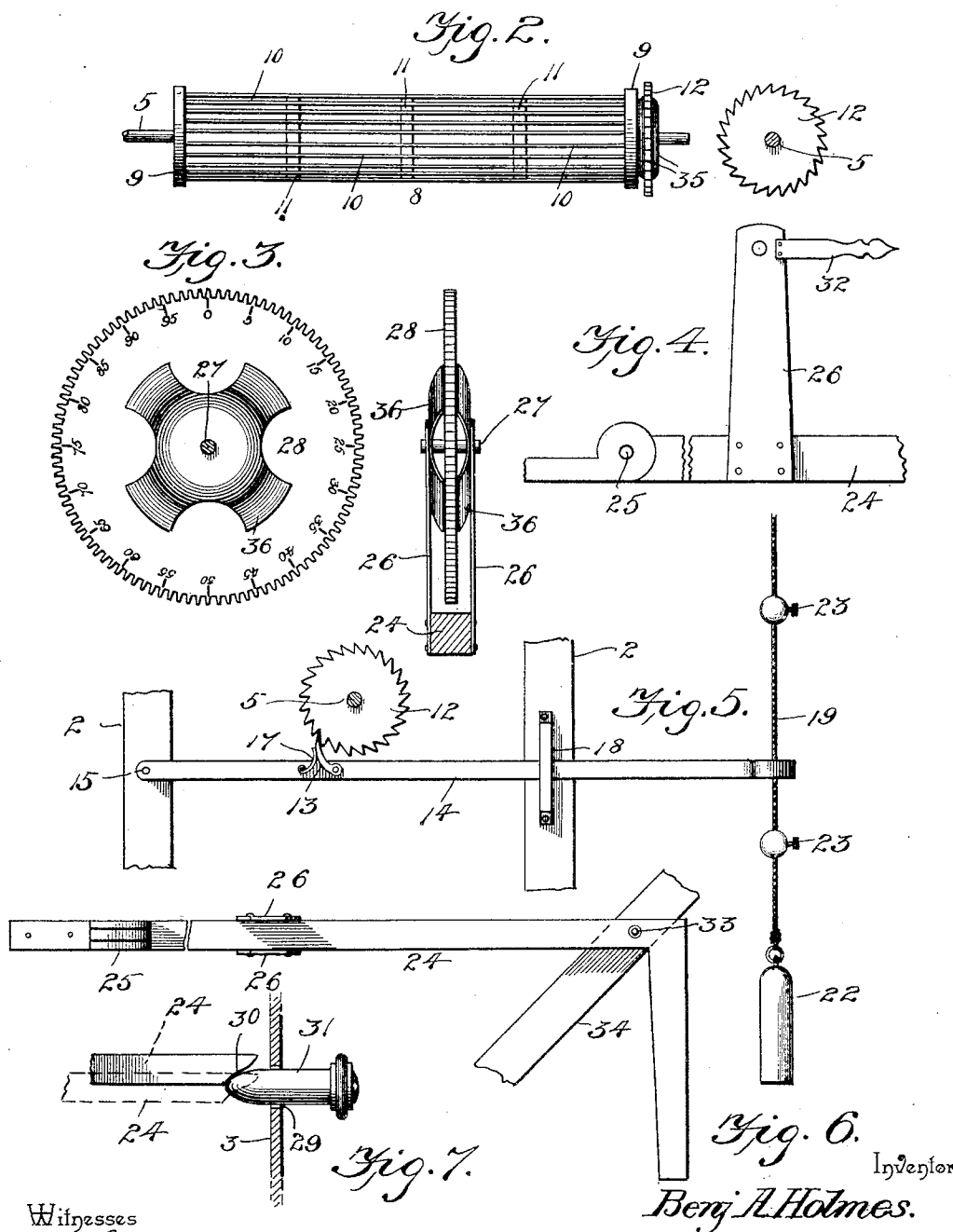
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UNITED STATES PATENT OFFICE.

BENJAMIN A. HOLMES, OF FORT DODGE, IOWA.

GAME-REGISTER FOR POOL-TABLES.

SPECIFICATION forming part of Letters Patent No. 582,128, dated May 4, 1897.

Application filed February 19, 1896. Serial No. 579,955. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. HOLMES, a citizen of the United States, residing at Fort Dodge, in the county of Webster and State of Iowa, have invented a new and useful Game-Register for Pool-Tables, of which the following is a specification.

This invention relates to game-registering devices for pool-tables and the like, and has for its object to provide a complete, reliable, and automatic device of the nature referred to which will register accurately each and every game played at any particular table and in addition thereto indicate with accuracy the number of players engaged at such table.

Pool-table game-registering devices have been heretofore devised in which an account was kept of the number of games played, but there was no provision whereby the proprietor could tell at the end of a long series of games the particular number of games played by a certain number of players and the number of other games played by a different number of players. It is well understood that the profits which inure to the proprietor vary according to the number of persons engaged in the game, and it is with the object of keeping account of the number of players, as well as the number of games, that the invention herein contemplated was devised.

To the end above set forth the invention consists in an improved registering device or pool-table embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a broken perspective view illustrating the construction and arrangement of the improved registering device. Fig. 2 is a side and end elevation of the barrel-gear. Fig. 3 shows one of the graduated gears and its friction-clutch in side and edge elevation. Fig. 4 is a detail side elevation showing a portion of one of the gear-carrying arms, indicating pointer, &c. Fig. 5 is a detail view of the actuating-lever, showing its pawl-and-ratchet engagement with the shaft of the barrel-gear. Fig. 6 is a plan view of one of the gear-lifting bars or levers, showing the manner of steadying and guiding the same. Fig. 7 is a detail

section showing the manner in which one of the gear-wheels may be thrown into operative engagement with the barrel-gear.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

For the purpose of carrying out the present invention a suitable framework consisting of top and bottom horizontal bars 1 and connecting uprights or corner-posts 2 is provided, within which the operative parts of the registering mechanism may be mounted. This framework is inclosed in a suitable case 3, which conceals the mechanism from view and which is also provided with a door for giving access to such mechanism, said door not being shown in the drawings, as both the case and door may be constructed in any convenient manner. It is also intended to provide the door or the case with a window or observation-aperture by means of which the positions of the graduated gear-wheels within the case may be observed by the proprietor, but the same is not shown, as being too obvious to require illustration.

Secured to the upper horizontal bars 1 of the frame and at or near the opposite ends thereof are two V-shaped bearing-brackets 4, in which is journaled the main game-registering shaft 5. This shaft extends at one end through the casing 3 and has fast upon its extremity a hand or pointer 6, which revolves around a dial 7, attached to the front side of the case 3. This dial is provided around its periphery at regular intervals with numerals which, in connection with the pointer 6, indicate the number of games played at a certain table. Fast upon the shaft 5 is a long barrel-gear 8, comprising spaced end disks 9 and a circular series of longitudinal wires 10, forming the teeth of the gear. The wires 10 may be braced at suitable points intermediate their ends by circular stays 11 for imparting the necessary rigidity to the gear 8. One of the end disks 9 is provided as to its periphery with ratchet-teeth 12, corresponding in number to the numerals on the dial 7, there being one tooth for each numeral. The ratcheted disk is preferably located at the rear end of the case, or that end opposite and farthest from the dial, and is actuated by means of a pawl 13, pivotally connected to

an actuating-lever 14, fulcrumed at 15, within the casing and projecting at its swinging end through a vertical slot 16 in the side wall of the casing. The pawl 13 is held in engagement with the teeth 12 of the disk 9 by means of a spring 17, and the throw of the lever 14 is limited by means of the slot 16 and also by means of a bracket 18, secured to one of the corner-posts 2 of the frame, said parts also serving to steady the lever. The projecting outer end of the lever 14 is formed with an eye through which passes a cord or cable 19, preferably of braided wire to prevent stretching. This cable 19 runs over suitable pulleys 20, attached to the ceiling or other overhead support, and one extremity thereof depends from above one of the pool-tables and has the usual triangle 21, by means of which the balls are nested, permanently attached thereto. To the other extremity of the cable is attached a weight 22, and above and beneath the eye of the lever 14 are arranged balls or stops 23, secured to the cable by means of binding-screws or other suitable means. The balls or stops 23 are so disposed that when the triangle is brought into contact with the table the lower ball or stop will lift the lever 14 and advance the barrel-gear a distance equal to one of the ratchet-teeth 12, such movement being registered upon the dial 7 by the hand 6, which moves one space. Upon releasing the triangle the weight 22 elevates the same and in descending brings the upper ball or stop 23 against the upper side of the lever 14, thus carrying the same downward to the initial point of its stroke. The triangle 21 is thus held suspended where it will be out of the way.

If, through carelessness or otherwise, the triangle is lifted before the balls are properly nested, it may be replaced over the balls without vibrating the lever 14 and thereby registering a game. Not until the upper stop 23 strikes against and depresses the free end of said lever will a game be recorded, and this will not occur until the triangle 21 is lifted to its full extent by the descent of the weight 22.

24 designates a series of L-shaped bars nested together in the base of the structure and each pivoted at one end, as indicated at 25. Each arm carries opposing brackets 26, which extend upwardly above the same and in the upper ends of which is journaled the shaft 27 of a gear-wheel 28. This gear-wheel is preferably formed with one hundred teeth, although of course the number may be varied as desired, and the wheel is provided near its periphery with graduations, as shown, which are numbered for the sake of convenience in reading. When the bar 24 is down, the wheel 28 is out of gear with the barrel-gear 8; but when the bar 24 is lifted in the manner presently described the said wheel 28 will be elevated sufficiently to bring the same into mesh with the barrel-gear 8. In order to effect this lifting in a convenient manner from the exterior of the case, a number of apertures 29

are formed, preferably in the front wall of the case, and the swinging extremities of the bars 24 are brought into proximal relation to such apertures. The extremities of the bars are formed with concavities or undercut portions 30, whereby they are adapted to be acted upon by a pin 31, which may be removably inserted in any one of the apertures 29. When so inserted, it will bear beneath the extremity of the end of one of the bars 24 and will uplift the same, as indicated in dotted lines in Fig. 8. This is the movement which is needed to elevate one of the gear-wheels 28 into operative engagement with the barrel-gear. The apertures 29 are also numbered for the sake of convenience, as shown in Fig. 1, and it is designed that the pin 31 shall be inserted in that aperture whose number corresponds to the number of players engaged in the game. This throws the gear-wheel 28 of that respective bar 24 into mesh with the barrel-gear and causes said gear-wheel to be moved a number of teeth equal to the number of games played while such a number of persons are engaged in the game. The number of games may be readily counted with the aid of a pointer 32, secured to one of the brackets 26 of each gear-wheel. In order to steady the bars 24 in their movements, they are provided near their elbows with vertical openings through which project the vertical pins 33 of an obliquely-disposed plate 34, attached to the bottom of the case. The bars 24 may vibrate freely upon said pins, but lateral movement thereof is prevented.

In order to provide for turning the hand or pointer 6 back to the beginning-point, the disk having the ratchet-teeth 12 is made separate from and independent of the end disks 9 of the barrel-gear and is held in frictional engagement with the shaft 5 by means of opposing friction-disks 35, arranged on each side thereof and causing sufficient frictional adhesion to effect a rotation of the barrel-gear when it is rotated by the mechanism above described. At the same time the hand or pointer 6 may be forcibly turned back to the starting-point. The same provision is made with regard to each of the gear-wheels 28, friction disks or plates 36 being mounted upon the shaft 27 of each gear-wheel and arranged upon opposite sides thereof and between the gear-wheel and the bearing-brackets 26, the friction-plates being, in this instance, preferably constructed of spring sheet metal and caused to bear at their peripheral edges against the side faces of the gear-wheel. Such gear-wheels 28 are thus held against rotation while out of mesh with the barrel-gear and at the same time may be turned back with ease to the starting-point when so out of mesh.

From the foregoing description it will be seen that a very complete and reliable registering device is obtained, which will not only register with accuracy the number of games played at any particular table, but also keep

a strict record of the number of games played by each particular group of players. It is only necessary for the proprietor to change the position of the pin 31 to agree with the number of persons engaged at the particular table which the register governs and the register will keep account of the number of games played by that particular group of persons. Should the number of persons in the group again change, the proprietor can adjust the position of the pin 31 in an instant and without any appreciable loss of time.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. In a game-register, the combination with the registering mechanism, and an actuating-lever for imparting motion thereto having an eye at its free end, of a flexible connection between the ball nesting or setting device and said lever passing loosely through said eye, said flexible connection being weighted and provided with stops spaced apart and arranged upon opposite sides of said lever, whereby the flexible connection may be drawn upon or moved to a certain extent without vibrating said lever, substantially as described.

2. In a game-register, the combination with the registering mechanism, and a lever for actuating the same, said lever having an eye in its swinging end, of a flexible connection interposed between the lever and the game apparatus, said flexible connection extending loosely through the eye of the lever and being weighted and having applied thereto adjustable stops located upon opposite sides of said lever and spaced apart so as to permit a partial movement of the flexible connection without vibrating the lever, and provision for limiting the vibration of said lever, substantially as described.

3. In a game-register, the combination with a common barrel-gear, an indicator-hand attached to the shaft thereof, and a dial, of a series of lifting-bars, a corresponding series of gear-wheels journaled one directly on each of said bars and adapted to be moved independently into engagement with said barrel-gear and also graduated to indicate the extent of their movement, and operative connections between said barrel-gear and a movable part of the game apparatus, whereby the number of games played and number of participants are registered, substantially as described.

4. In a game-register, the combination with a series of independently-movable lifting-bars, of a corresponding series of gear-wheels mounted thereon and graduated to indicate

the extent of their movement, a barrel-gear common to each and all of said gear-wheels, an indicator attached to the shaft of said barrel-gear, actuating means for said barrel-gear, and an interchangeable pin or plug adapted to be removably inserted through a series of apertures in the casing and brought into engagement with any one of the lifting-bars, whereby its respective gear-wheel is thrown into mesh with the barrel-gear and held until said pin or plug is removed, substantially as and for the purpose described.

5. In a game-register, the combination with the common or master gear, and the shaft upon which the same is mounted, of a hand or pointer fast on said shaft and revolving around a dial, a ratchet-disk loosely mounted on said shaft, and friction plates or disks fast on said shaft on opposite sides of the ratchet-disk for holding the latter in frictional engagement with the shaft, whereby motion imparted to the ratchet-disk is communicated to the common or master gear, and at the same time the hand or pointer is adapted to be forcibly turned back to the starting-point, substantially as described.

6. In a game-register, the combination with a barrel-gear, and its actuating means, of a series of registering gear-wheels having graduations for indicating the degree of their movement, an independent shaft for each of said gear-wheels and a pair of friction-plates arranged one on each side of said gear-wheel and bearing against the same, whereby said gear-wheel is held stationary when out of mesh and at the same time is adapted to be turned back to the starting-point, substantially as described.

7. In a game-register, the combination of a series of L-shaped bars arranged in nested form and pivoted at corresponding ends, the said bars being provided adjacent to their elbows with openings, a series of steadying pins or guides attached to the frame and entering said openings, provision whereby any one of said bars may be lifted independently of the others, a graduated gear-wheel carried by each bar, a barrel or master gear common to each and all of said gear-wheels, a pointer fast on the shaft of said barrel-gear and co-operating with a dial to indicate the degree of movement of said gear, and actuating means for imparting motion to the barrel-gear, all arranged and operating substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BENJ. A. HOLMES.

Witnesses:

ERNEST F. GREENE,
A. E. JOHNSON.