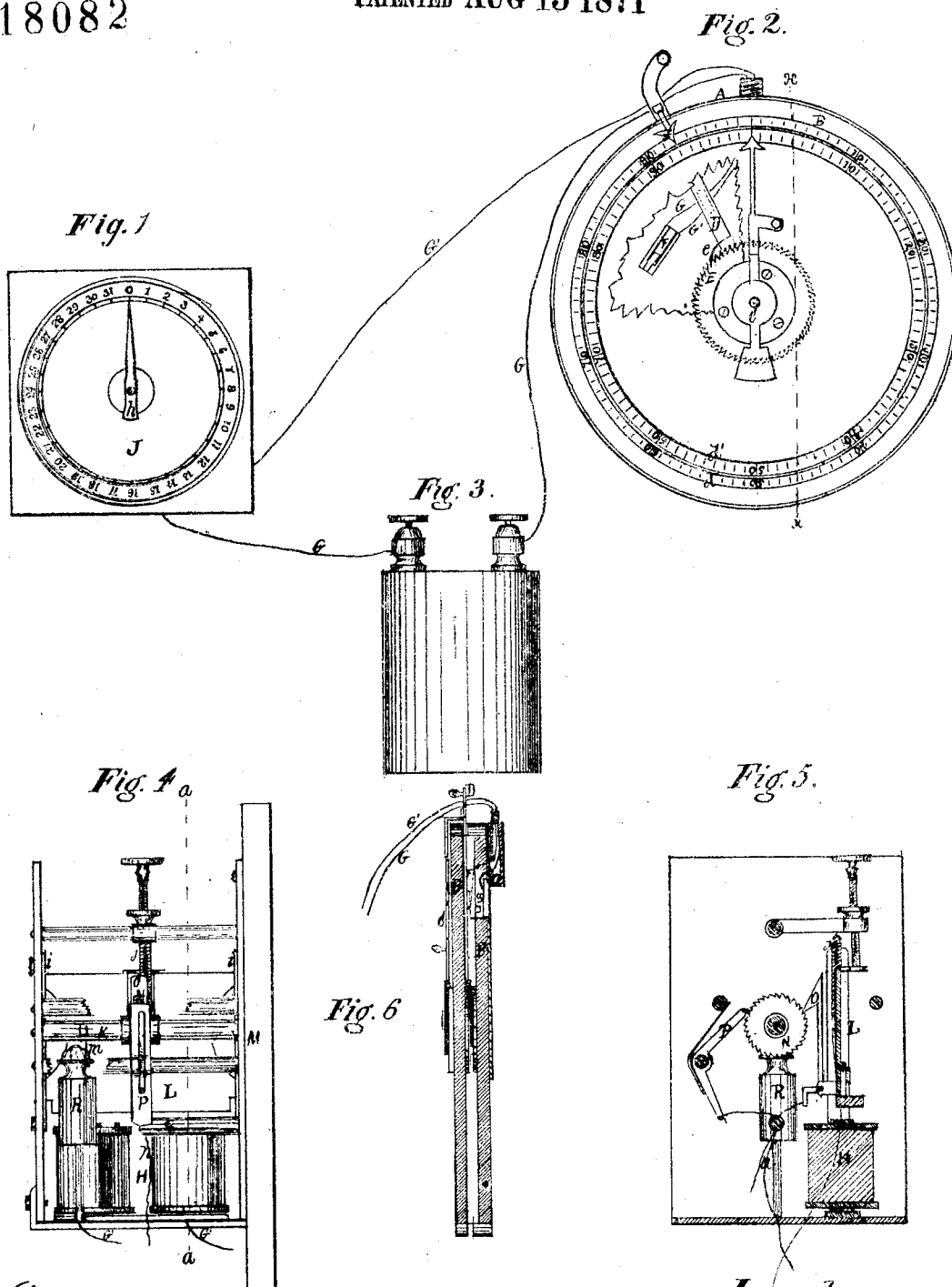


GEORGE A. WEBSTER'S
Electro-Magnetic Billiard Game Register.

118082

PATENTED AUG 15 1871



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE A. WEBSTER, OF ELGIN, ILLINOIS, ASSIGNOR TO HIMSELF AND DEAN S. WEBSTER, OF SAME PLACE.

IMPROVEMENT IN ELECTRO-MAGNETIC BILLIARD-GAME REGISTERS.

Specification forming part of Letters Patent No. 118,082, dated August 15, 1871.

To all whom it may concern:

Be it known that I, GEORGE A. WEBSTER, of Elgin, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Electro-Magnetic Billiard-Game Registers; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a front view of the dial employed in registering the number of games. Fig. 2 is a front view of the dial registering the number of points in each game. Fig. 3 is a side elevation of the battery employed in actuating the moving parts operating the hand of the dial registering the games. Fig. 4 is an enlarged side elevation of the dial to indicate the number of games, showing the moving parts connected therewith. Fig. 5 is a vertical longitudinal section of the same, showing those parts which are at the right hand of the line *a a* drawn vertically through Fig. 4; and Fig. 6 is a vertical transverse section of the point indicating or registering-dial, showing those parts of the same which are at the left hand of the line *x x* drawn across Fig. 2.

Similar letters of reference indicate like parts in the several figures of the drawing.

My invention has for its object to provide an electro-magnetic register, by which the number of games played upon a billiard-table may be transmitted to and registered upon a dial arranged within the office; and to this end it consists in the mechanism employed in the dial registering or indicating the separate points of the game; also in the construction of the parts employed in actuating the hand of the dial registering the respective games, and the whole of which said mechanism will be more fully understood from the following description:

In the drawing, A represents the case of the dial indicating the separate points in the game, which is composed of two circular disks, B and B', connected in the center in such a manner as to provide a span or opening between their inner sides, extending from the center outward to their periphery. Upon the front of disk B are two separate dials, *d d'*, which are decimally arranged, corresponding with the number of separate points in each game. C is the pointer to register or indi-

cate the numbers on dial *d'*, and is pivoted to the center of the disk and so arranged as to admit of being turned backward or forward, the object being so as to discount the game when desired. D is a lever, which is pivoted to the center of the disks between the same, and so arranged as to admit of being turned forward upon its center. Firmly affixed to the rear side of the said lever is a spring, *e*, which engages a ratchet-wheel, E, affixed to the center of the disk, thereby preventing the lever from being turned backward. Permanently affixed to the said lever, near the periphery of the disk, is a pointer, *f*, to indicate the desired figures on dial *d*. F is a lever, which is affixed to and within disk B, and to which lever is attached a wire, G, communicating with the battery. Within the end of the said lever is a platinum point, which is so arranged as to engage a metal plate, *g*, affixed to the outer surface of the said disk, and to which plate is attached a wire, G', which communicates with the battery through magnet H, shown in Fig. 4. J is the dial to register the number of games played. K is the shaft upon which is mounted the pointer *h* to indicate the desired numbers on dial J. L is the armature, which is secured within guides or ways *i i* affixed to the inner sides of the frame-work M, and is so arranged as to admit of a free-and-easy vertical movement. Affixed to the center and upper surface of the said armature is a coiled spring, *j*, the upper end of which is secured to one of the cross-bars of the frame and so arranged as to raise the armature from the magnet when the circuit is broken. N is a ratchet-wheel, which is firmly secured upon shaft K, and the teeth of which wheel are graduated corresponding with the numbers upon the dial. O is a pawl-lever, which is pivoted at its lower extremity to the lower portion of the armature, and is so arranged as to engage the teeth of wheel M, and thereby, as the said armature is drawn downward by the action of the magnet, the said wheel is moved upon its arch one span forward, and is firmly secured in a fixed position by a pawl, P, which engages the opposite side of the wheel, thereby allowing the pawl-lever O to be raised by the upward movement of the armature as the circuit is broken. R is a metal weight, which is attached to a cord, *m*, firmly secured to and around shaft K, the object of which is to move the shaft backward to its normal position as it has made its revolution. Af-

fixed to the lower end of pawl-lever O and pawl P is a cord, *n*, passing downward through an aperture in the end of an arm, S, which is secured to the side of the frame, and as said cord is drawn downward the pawls are disengaged from the wheel, thereby allowing the same to be moved backward by the weight of the weight R.

In arranging my invention for operation, the dial registering the number of points in the game is suspended from the ceiling above the table, and the dial with its mechanism registering the number of games is placed within the office, and both dials are then connected by the wires through the battery, as described.

The operation is as follows: The players, in counting the points in the game, move the respective pointers around upon the dial, which registers the number of points each has made, and as lever D carrying pointers *f* is brought in contact with lever F a contact is made with plate *g*, thereby closing the circuit, by which means armature L is moved downward in contact with magnet H, thus moving ratchet-wheel N of shaft K one tooth forward by the downward movement of pawl-lever O, by which pointer *h* is moved one number forward upon the dial, thereby indicating one game, and as said lever D is moved from lever F the contact with plate *g* is broken, thus breaking the circuit, and armature

L is raised by the action of spring *j*, thus moving pawl-lever O back to its normal position preparatory to indicating another game, which is repeated until the pointer *h* has made one complete revolution. Cord *n* is then drawn downward, which disengages pawls O and P from ratchet-wheel N of shaft K, thereby allowing said shaft to be moved backward by the weight R preparatory to a second revolution of the registering or indicating-hand *h*.

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

1. In an electro-magnetic billiard-game register, the lever P, arranged to open and close the circuit, substantially as described.

2. In combination with lever D, the pointers C and *f*, arranged to indicate the number of points upon the dials *d* and *d'*, substantially as described.

3. The combination of magnet H, armatures L, pawl-lever O, pawl P, ratchet-wheel N, shaft K, and pointer *h*, the whole arranged to operate substantially as and for the purpose described.

GEORGE A. WEBSTER.

Witnesses:

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