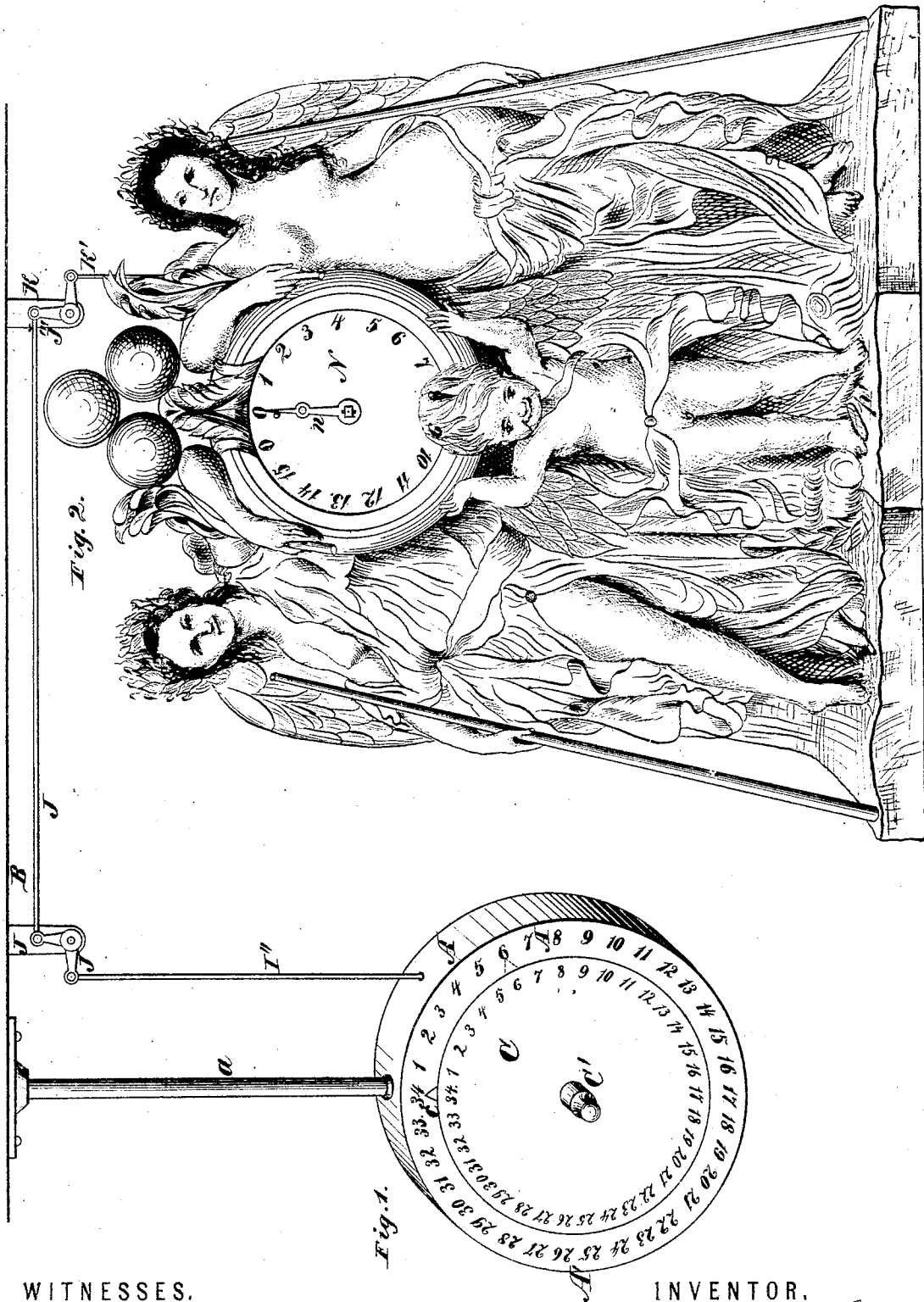


F. M. WOOD & GEORGE GEER.
Improvement in Billiard Registers.

No. 125,242.

Patented April 2, 1872.



WITNESSES.

John. D. K. Smith
Francis Fuller

INVENTOR.

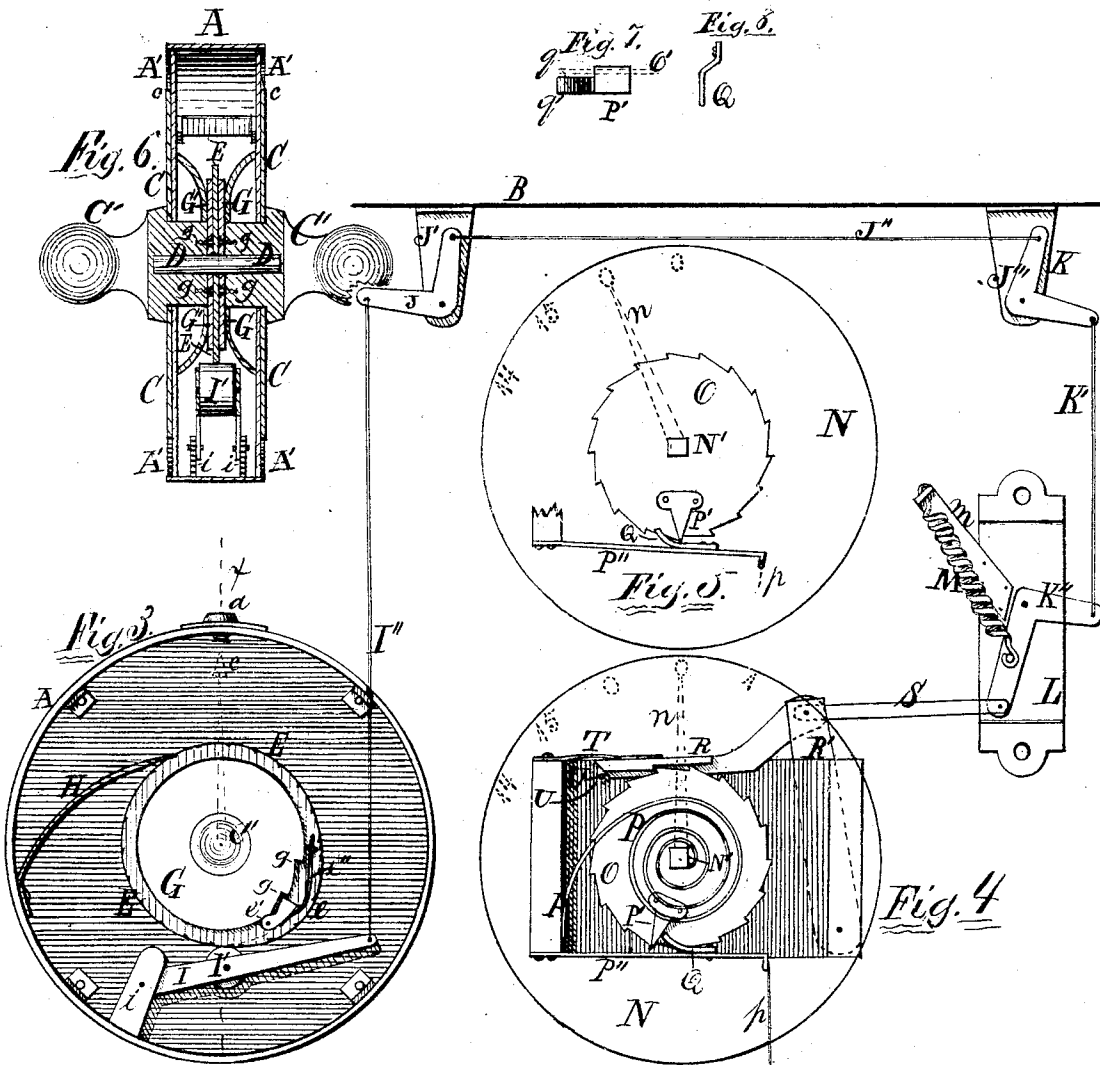
Frank M. Wood and George Geer.
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Platt R. Richards,
J. J. Tunnickiff.

Inventors,

Frank M. Wood & George Geer.

by W. B. Richards,
their atty.

UNITED STATES PATENT OFFICE.

FRANK M. WOOD AND GEORGE GEER, OF GALESBURG, ILLINOIS.

IMPROVEMENT IN BILLIARD-REGISTERS.

Specification forming part of Letters Patent No. 125,242, dated April 2, 1872.

SPECIFICATION.

We, FRANK M. WOOD and GEORGE GEER, of Galesburg, in the county of Knox and State of Illinois, have invented certain Improvements in Billiard-Registers, of which the following is a specification:

Nature and Objects of the Invention.

This invention has for its object to furnish a simple and convenient device whereby the players in a game of billiards may keep count of the "points" played, and, in keeping said count, register the number of "games" played, by a device at the proprietor's desk; and the invention consists in the peculiar construction and arrangement of devices for operating the tallying-points, whereby each indicator can be moved backward and forward independently of the other, as hereinafter set forth. It also consists in a peculiar arrangement of devices for registering the games as played.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the register for keeping count of the "points." Fig. 2 is a front view of the register for keeping count of the number of "games" played, connected with Fig. 1 by suitable wires and elbow-levers. Fig. 3 is a side view of the points-register with the face removed. Fig. 4 is a side view of the games-register with the face removed. Fig. 5 is a front view of part of the interior of Fig. 4 in a different position. Fig. 6 is a vertical cross-section of Fig. 1 on the line *x x*. Figs. 7 and 8 are detail views.

General Description.

Letter A represents a circular case, suspended from the ceiling B or other support by a bracket, *a*. Each of the opposite sides or faces of the case A has a fixed circle, A', graduated on its face into thirty-four equal parts and numbered from 1 to 34. Concentric with each fixed circle A, and within it, is a movable circular plate, C, graduated on its face and near its outer edge into thirty-four equal parts, and numbered from 1 to 34, corresponding with the graduation and numbering of circles A'. Each circle C carries a pointer, *c*, on its periphery, and opposite the number 34. The circles A' and C, on both sides of the case A, are numbered from the top over to the right,

or in opposite directions when seen from the same side. To the center of each circular plate C, and projecting through it, is a handle, C', by which said plate may be rotated.

One illustration of the method of performing addition is deemed sufficient to explain the operation of the plates A' and C. Suppose the pointer *c* to be opposite the figure 6 on the circle A', and eight points are desired to be added to the 6: it will be found that the 8th number on the inner circle is opposite to the 14 on the outer circle—the number sought.

The inner ends of the handles C' are pierced with holes longitudinally, in which are carried loosely a round shaft, D, as shown plainly at Fig. 6. E is a flat metal disk, hung loosely centrally on the shaft D. One side of the disk E is enlarged to form a cam, *e*, (see Fig. 3.) G G' are metallic disks, one on each side of the disk E, secured to the ends of the handles C' by screw-nails *g g*, and pierced centrally, so they may be freely rotated on the shaft D by their respective handles C' C'. Each of the disks G G' is notched, as shown at *g' g'*, Fig. 3, the notches *g' g'* corresponding with each other as the disks are arranged on the shaft D. *e'* is a pawl pivoted on the disk E, and held to engage with the notches *g' g'*, when they are brought round thereto, by a spring, *e''*, (see Fig. 3.) Directly opposite to and corresponding in direction with the pawl *e'* is another pawl on the disk E, which engages with the notches *g g* on the disk G. H is a spring-catch, which engages with notches on the edge of the disk E and prevents it being turned backward improperly. I is a forked lever, pivoted at its forked end between the standards *i i*, and carrying in the fork the friction-roller I'. I'' is a wire extending from the free end of the lever I to one end of an elbow-lever, J, which is pivoted to a bracket or standard, J'. J'' is a wire extending from the elbow-lever J to one arm of another elbow-lever, J''', pivoted on a standard, K. K' is a wire connecting elbow-lever K with another elbow-lever, K'', which lever K'' is pivoted in frame L. M is a spiral spring, attached at one end to the arm *m*, and its other end attached to one arm of the elbow-lever K'', so as to continually exert a drawing force thereon, and thereby, through the intervention of the intervening elbow-levers and wires, keep the friction-wheel I' in

close contact with the periphery of the disk E. N is a circular case, graduated on one face into seventeen equal parts and numbered up to 15. N' is a central shaft in the case N, and carries on its outer end a pointer, *n*.

Figs. 4 and 5 show the case N with its front graduated face removed.

O, Figs. 4 and 5, is a ratchet-wheel carried on the shaft N'. P is a coiled spring, attached at one end to a part of the case N, and at the other to the shaft N'. P' is a stop attached to the ratchet-wheel O, a front view of which is shown at Figs. 4 and 5, and a side view at Fig. 8. P'' is a spring, attached at one end to a part of the case N, and provided at the free end with a wire or cord, *p*, which cord *p* extends downward and is attached to a thumb-lever, *p'*, the free end of which projects outside of the case. Q is a stop resting on the lever-spring P'', a side view of which is shown at Figs. 4 and 5 and a top view at Fig. 7; the dotted lines O' at Fig. 7 showing the track of the ratchet-wheel O over the stop Q; the shoulder *q* engaging with the teeth of the ratchet-wheel; and the turned-up point *q'* engaging with the catch P. R is a pawl pivoted to the end of a reciprocating lever, R', which lever R' is connected by a connecting-rod, S, with the lower or vertical arm of the elbow-lever K''. T is a spring, one end attached to the case N, and the other resting on and holding the pawl R to its work. The free end of the pawl R is beveled in such manner that, when it is projected to the left, its beveled end strikes and is elevated by a pin, U.

The operation of our invention is as follows: The case A is suspended over the billiard-table, one player keeping his count of points made on one side of the case, and the other player keeping his count on the other side, making additions as hereinbefore described.

The case N is within another case, not shown, and kept closed by the proprietor, if so desired.

Any number of cases A may be arranged over as many different tables, and be connected by suitable wires and elbow-levers with as many cases N, all arranged within a case to which access can only be had by persons with the proper key.

The number of games played at any table, the points of which are kept count of at any particular case A, will be registered at its respective case N, as follows: The disks G and E being in the position shown at Fig. 3, and the pointer *c* on the disk C being in the position shown by the dotted lines at the same

figure, it will be evident that, as soon as either handle C' is turned to the right a sufficient distance to carry the pointer *c* over six or eight of the first numbers on the stationary circle A', that the notch *g* will engage with the pawl *e'*, carrying the cam *e* around and pressing down the lever I, thereby drawing on the cords I'', J'', K', and connecting-rod S, carrying the pawl R to the right, which in turn rotates the ratchet-wheel O sufficient to move the pointer *n* over the space of one number, indicating one game played, and so on until fifteen are played, when the point of the stop P' will be brought into the position shown at Fig. 5, and, pressing down the spring P'' and catch Q, allow the ratchet O to fly back one notch every time it is moved one forward by the pawl R. When the cam *e* has passed from over the friction-wheel I the spring M will throw the pawl R back again to the left, and its beveled point, striking the pin U, will raise the pawl R free of the teeth on the ratchet-wheel O. Now, by pressing down the thumb-lever *p'*, the catch Q will be drawn away from the catch P', when, the ratchet-wheel O being free, the spring P will rotate it and throw the pointer *n* back again to its original position.

It will be plainly seen that either player may discount the other, and that turning either handle C' backward cannot affect the counting, as in that case the notches *g g* will slide over the pawl *e'* without engaging therewith; and, further, that when the cam *e* has been carried over the wheel I' by one of the handles C', it will not be carried over again by the further rotation of the other handle during the same game.

Claims.

We claim as our invention—

1. The disks G G' and cam-disk E, constructed substantially as described, and so arranged that either disk G G' can be moved independently backward and forward, as and for the purpose set forth.

2. The disks G G' and E, pawls *e' e'*, handles C' C', and circles C A', when combined and arranged to operate with the rods I'', J'', and K', elbow-levers J, J'', and K'', spring M, pawl R, ratchet Q, springs P P'', pointer *n*, and graduated face-case N, substantially as described, and for the purpose set forth.

FRANK M. WOOD.
GEORGE GEER.

Witnesses:

J. J. TUNNICLIFF,
A. MCCALLUM.