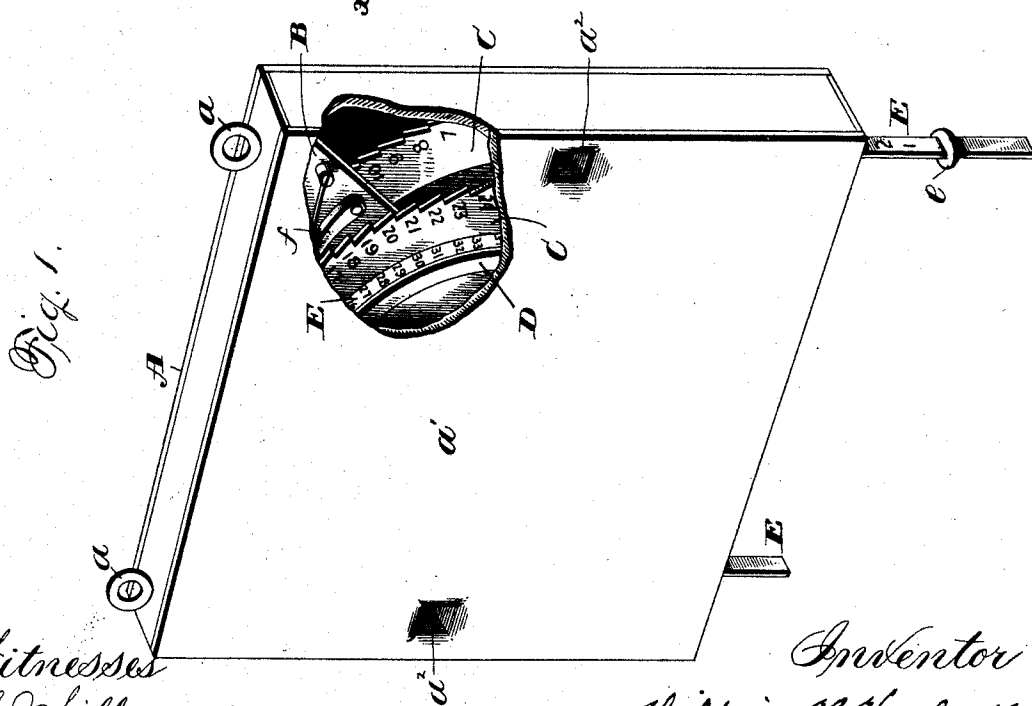
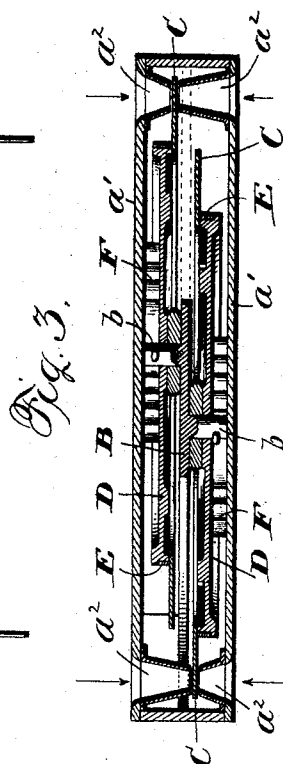
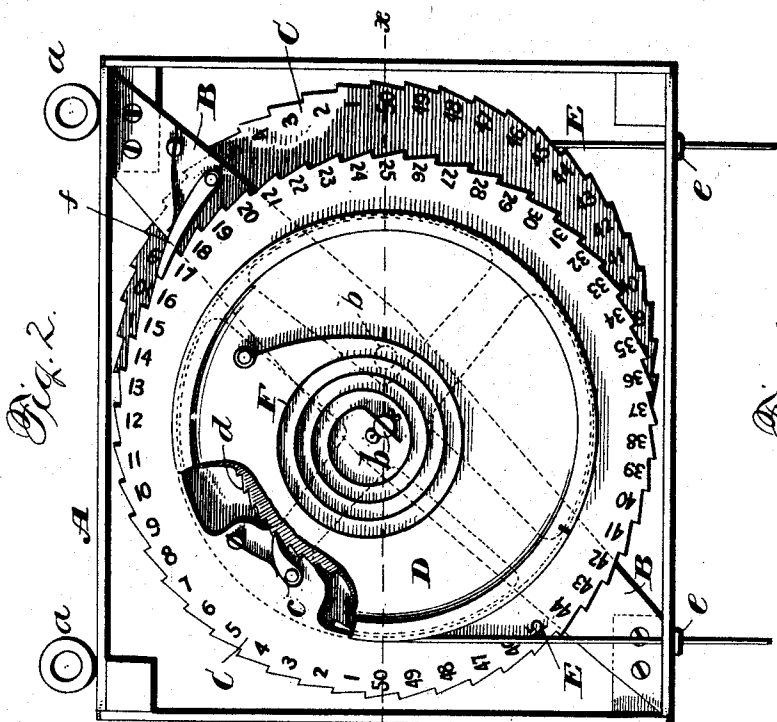


(No Model.)

W. H. WOODRUFF.
BILLIARD REGISTER.

No. 504,957.

Patented Sept. 12, 1893.



Witnesses
J. Williamson
Henry C. Hazard

Inventor
William H. Woodruff
by R. H. Russell
his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM HEAZLIT WOODRUFF, OF AUBURN, NEW YORK.

BILLIARD-REGISTER.

SPECIFICATION forming part of Letters Patent No. 504,957, dated September 12, 1893.

Application filed February 23, 1893. Serial No. 463,469. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HEAZLIT WOODRUFF, of Auburn, in the county of Cayuga, and in the State of New York, have invented certain new and useful Improvements in Counters or Registers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my counter or register, with a portion of the casing shown as broken away; Fig. 2 an elevation with the casing side removed; and Fig. 3 a horizontal section on line $x-x$, Fig. 2.

Letters of like name and kind refer to like parts in the several figures.

My object has been the provision of a simple, cheaply constructed, and efficient counter or register, for use in keeping an account of the number of points made in playing games, such for instance as billiards, and to this end, said invention consists in the counter or register, and the parts thereof constructed and combined substantially as and for the purpose hereinafter specified.

In the annexed drawings, A designates the casing of my device being, as shown, a narrow, square box. The shape, of the casing, however, is unimportant, and may be varied, as desired, without departure from my invention. On its top are two eyes or loops $a a$, by means of which the device may be suspended from the ceiling of a room, or from any other suitable place, in convenient position for ready operation and reference, and with both of its sides a' , a' , visible. Within this casing, midway between its sides a' , a' , and extending diagonally across from one corner to another, is a thin flat bar B having, on its opposite sides, two studs or pintles b, b , lying in the same horizontal plane, but in different vertical planes. On each stud b , next to the plate or bar B, is journaled a wheel or disk C, having on both of its faces, near its periphery, numbers running from 1 to 50, which are visible, one at a time, through display openings a^2, a^2 in both sides of the casing A. One wheel C is to register the points made by one player, and the other wheel C the points made by the other player. The registrations of both wheels are made visible from both sides of the device, through the display openings a^2, a^2 , be-

cause of the described relative arrangement of the pivot studs b, b , which locates the wheels C, C eccentrically with reference to each other, so that they overlap, with a portion of each projecting beyond the other. Each wheel C has its own mechanism for rotating it, which mechanism comprises a disk or wheel D also journaled on the stud b , but so as to be capable of revolution independent of wheel C, and having, on its face, adjacent to the latter, a circular series of ratchet-teeth d , to co-operate with a spring-pressed, pivoted pawl carried by the wheel C. When the wheel D is rotated in one direction, said pawl and ratchet-mechanism connects it to the numbered wheel C, and thus the latter is rotated thereby; while, when the wheel D is rotated in a reverse direction, the pawl will slip over the ratchet-teeth, and no movement will be imparted to said wheel C.

To move the wheel D in the direction necessary to rotate the wheel C, I attach to the periphery of said wheel D, one end of a band or tape E, that thence passes through an opening in the bottom of the casing A, to the outside thereof, where its other end can be reached and grasped by the hand, and drawn downward, to rotate the wheel D. After having been rotated by a pull upon the tape, and the latter has been released, said wheel D is returned to its normal position, and the tape is rewound thereon, by a spiral spring F, one end of which is fixed to the stud b , and the other attached to the wheel. The tape or band is provided with a button or stop e , to prevent its being drawn entirely into the casing by the spring. The tape or band has such length, as to enable it to cause one complete revolution of the wheel C, and upon it I place numbers running from 1 to 50, to correspond with the numbers on said wheel, and serve as an index or gage to indicate the extent to which the tape must be drawn, to bring a certain number on said wheel C into view, at the display openings a^2, a^2 . The numbering of the tape commences at the outer end thereof, and has such relation, in position, to the numbers on the wheel C, that the highest number exposed, when the tape is drawn out, bears a definite and predetermined relation to the number exhibited by said wheel C at the display openings. Thus, if 50 appears at the

display openings, and the tape be drawn out, until 15 is exposed, then 15 will appear on the wheel C at the display openings. The wheel C is held against backward movement by a pawl *f*, which is pivoted upon the bar B and engages ratchet-teeth *c* on the periphery of said wheel. The teeth *c* correspond in number to the numerals on the wheel, and are arranged relatively thereto, so as to insure the proper presentation of the numbers in line with the display openings.

The use and operation of my counter is, briefly, as follows:—At the beginning of a game, say of billiards, both wheels C are turned to exhibit the numeral 50. Upon the completion of his play, the first player pulls one of the tapes out, until the number is exposed corresponding with the number of points he has made. Simultaneously with the pulling out of the tape, the proper wheel C will be rotated, coming to rest, when the tape has been drawn out the required distance, and exhibiting at both sides of the device the number of points made. The second player uses the other tape and counts up his points in the same way. Upon his second play, the first player again draws out his tape, to expose a number thereon agreeing with the points made in his second play, say ten, and, accordingly, the wheel C is rotated, to a point where it displays a number greater by ten than the one previously displayed, it being remembered that said wheel was held by the pawl *f* at the point to which it was moved by the first operation of the tape. At the end of the succeeding plays there is simply a repetition of the operation described, the additional points being mechanically added up on the wheels C, C.

It will be seen that, in the use of my device no mental calculation is at all necessary, it being only requisite that the tape be pulled out each time, until a number on it is exposed corresponding with the points to be registered or counted.

Although I show and describe the wheels C, C as carrying numbers from 1 to 50, the numbering may commence with zero, so that the latter shall be the starting point, instead of 50, as is necessary with the former arrangement, and of course, if desired, the numbering can be higher or lower than 50.

My device is simple and capable of easy and cheap construction, is compact, and especially desirable, because of the feature of exhibiting the registrations of both wheels upon both sides.

I wish it understood that I do not limit my counter to the uses hereinbefore indicated, but regard myself as entitled to its employment in any other connection in which it can be used.

Having thus described my invention, what I claim is—

1. In a counter or register, in combination with a casing having two sets of display openings, two eccentrically located, overlapping registering wheels, having numerals on both of their faces, and each wheel having the line of its axis passing within the circumference of the other wheel, and means for actuating each wheel, substantially as and for the purpose specified.

2. In a counter or register, in combination with a casing, having two sets of display openings on diametrically opposite sides, two overlapping registering wheels having numerals on both of their faces and being independent of each other in their movements, and the bar, in the casing, between, and having pin-tles on its opposite sides journaling said wheels, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of January, 1893.

WILLIAM HEAZLIT WOODRUFF.

Witnesses:

E. D. WOODRUFF,
ANNA G. WOODRUFF.