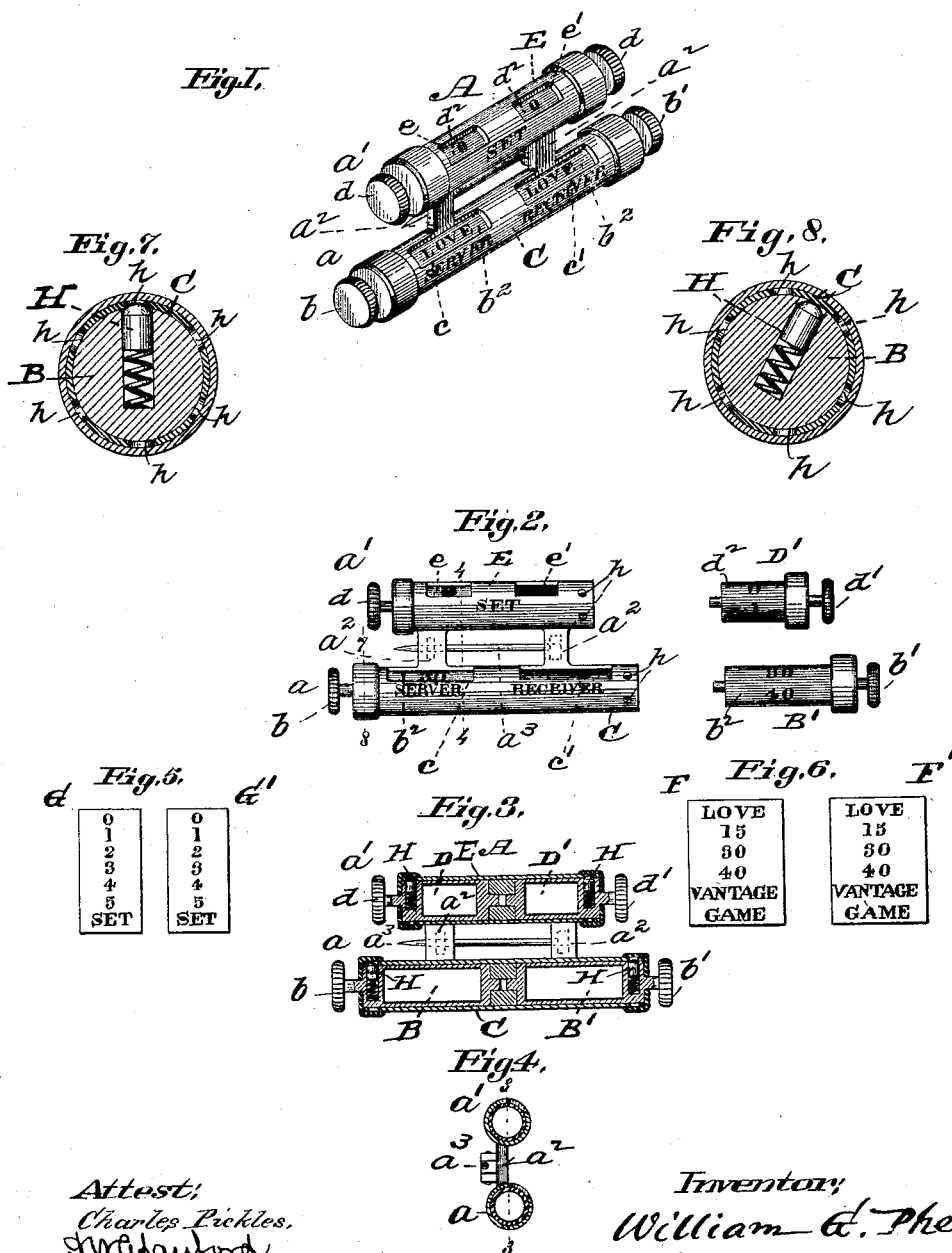


(No Model.)

W. G. PHELPS.
TENNIS SCORER.

No. 418,055.

Patented Dec. 24, 1889.



Attest;
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UNITED STATES PATENT OFFICE.

WILLIAM G. PHELPS, OF ST. LOUIS, MISSOURI.

TENNIS-SCORER.

SPECIFICATION forming part of Letters Patent No. 418,055, dated December 24, 1889.

Application filed May 25, 1889. Serial No. 312,149. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. PHELPS, of St. Louis, Missouri, have made a new and useful Improvement in Tennis-Scorers, of which
5 the following is a full, clear, and exact description.

My improvement is a device used by a tennis player for keeping the score of the game during its progress. The scores of both sides
10 can be kept, and of the set of games, as well as of each single game as it is played. It can be worn by the player as a badge, and this form of the improvement is, perhaps, as desirable as any for reference or adjustment.
15 But I prefer not to be restricted thereto. The scorer, for instance, may be attached to or embodied in a tennis-racket, the details of which combination are not here set forth, but will be made the subject-matter of a separate
20 application for Letters Patent.

The most desirable mode of carrying out the improvement is shown in the annexed drawings, making part of this specification, in which—

25 Figure 1 is a view in perspective of the scorer; Fig. 2, a front elevation thereof, the score-cylinders at one end of the device being shown detached from their respective containing cases; Fig. 3, a longitudinal section
30 on the line 3 3 of Fig. 4, which in turn is a cross-section on the line 4 4 of Fig. 2. Fig. 5 is a representation, in a developed form, of the surfaces of the score-cylinders of the set part of the scorer. Fig. 6 is a similar development
35 of the game part of the scorer; Fig. 7, a cross-section on the line 7 8 of Fig. 2, the score-cylinder being adjusted to bring its catch into engagement with the inclosing-case; and Fig.
40 8, a similar cross-section, the score-cylinder being adjusted to disengage its catch from the inclosing-case. The last two views are upon an enlarged scale.

The same letters of reference denote the same parts.

45 A, Fig. 1, represents the scorer. In its most complete form it comprises what may be termed the "game-scorer" a and the "set-scorer" a' , and the two scorers are preferably united, and preferably by means of the bars
50 $a^2 a^3$, and the device is provided with a pin a^3 , to enable it to be pinned like a badge to the dress of the player. The two scores $a a'$

are substantially similar, the only difference being in the characters used, the characters of the scorer a being adapted to the points 55 or terms used in playing a game, and of the scorer a' being adapted for numbering a set of games as they are played. While each of these scorers can be used separately from each other, it is quite an advantage in hav- 60 ing them in immediate proximity to each other, as thereby the player can at a single glance ascertain both the score of the particular game being played and also the score of the set of games; and it is further an advantage in having the scorers $a a'$ united by bars 65 a^2 , substantially as shown, as thereby in adjusting or upturning one of the scorers so that it can be read, the other of the scorers is is also adjusted so that it can be read. 70

Two leading features characterize each scorer $a a'$ —the provision for keeping the scores of both parties to the game, and the provision whereby, in the game-scorer a , the score at the "vantage" point can be conven- 75 iently increased or reduced in accordance with the rules of tennis. To these ends each scorer $a a'$ is made to consist, substantially, of two score-cylinders and an inclosing-case.

B and B' represent the score-cylinders of the game-scorer a , and C their inclosing- 80 case. D and D' represent the score-cylinders of the set-scorer a' , and E their inclosing-case. The cylinder B occupies one end of the case C, and by means of its stem b it can 85 be rotated therein. The cylinder B' occupies the opposite end of the case C, and by means of its stem b' it can be similarly rotated in the case. The cylinders D D' are in an analogous manner provided, respectively, with the 90 stems d and d' and arranged and operated in the case E. The surfaces b^2 of the cylinders B B' are respectively marked or provided with the series of words and numbers shown at F and F', respectively, Fig. 6, the series F 95 extending around the cylinder B and the series F' around the cylinder B'. By rotating the cylinder B the words and figures "Love," "15," &c., can be brought successively into view through the opening c in the case C, 100 and by rotating the cylinder B' the words and figures of the series F' can be brought successively into view through the opening c' in the case C. The surfaces d^2 of the cyl-

inders DD' are similarly and respectively provided with the two series of numbers shown, respectively, at G and G', Fig. 5, and said numbers in the rotation of the cylinders D D' are similarly exposed at the openings e and e' in the case E. To enable the cylinders B B' to be held at any desired point in their rotations, they are each provided with a catch—say in the form of a spring-actuated bolt H—which coacts with a series of openings or indentations h in the inclosing-case. The openings or indentations h correspond in number with the number of the words and figures of the series F F', and the parts are contrived so that when a word or figure of the series F F' is exposed through the opening c c' in the case C the catch shall enter an opening or indentation h, Fig. 7; but by applying sufficient force to the stem b b' the catch can be made to yield and the cylinder be rotated when desired. The position of the catch when it is not in engagement with the case is shown in Fig. 8.

The scorer is operated as follows: As one of the sides—say the server—makes a point, the player rotates the cylinder B to bring the point—say the point "30"—into view, as shown in Fig. 2, and as point after point is made the cylinder B is rotated accordingly. As the opposite side scores, the player rotates and adjusts the other cylinder B' in the case accordingly—that is, the cylinders B B' can be rotated independently of each other, and the player is thus enabled to keep the score of his own and also of the opposing side. As the vantage-point is reached, it becomes essential in practice to be able to increase or to reduce the score according to the well-understood rules of the game. To this end the cylinders B and B' can be rotated either forward or backward in the case C. The scorer a is similarly operated—that is, as fast as a side scores a game the cylinder D is rotated point by point until the set of games is played, and meanwhile the player operates the other cylinder D' according to the games won by the opposite side. By this means a player can readily and accurately inform himself of the state of the game at any stage thereof. The openings c c' in the case C, as well as the openings e e' in the case E, are preferably toward the upper front of the cases C E, respectively, to enable the player, when the scorer is worn as a badge, to readily see the score by casting his eye downward.

So far as providing a scorer with a double

scorer for keeping the scores of both sides is concerned, I desire not to be limited to a rotating score-bearing part, such as the score-cylinders B B'. Neither do I wish to be restricted to a rotating score-bearing part so far as combining a set-scorer with a game-scorer is concerned.

I desire not to be confined to the game of tennis in the use of the present scorer.

The cases C and E are tubular, and the rotary score-cylinders fit in their open ends with the marks on said cylinders registering with the apertures in the corresponding cases. Centrally within each case is an axially-perforated block, in the perforation of which journals on the inner ends of the corresponding score-cylinders fit and turn, giving the said cylinders an internal bearing, as shown in Fig. 3. Each score-cylinder has a cap that fits over the adjacent end of the corresponding case, and has a central perforation through which the stem of said cylinder passes. These caps prevent dust from entering the cases.

I claim—

1. In a game-scorer, the combination of the tubular casing open at both ends and provided with suitable apertures, the perforated central bearing-block therein, the score-cylinders having journals at their inner ends seated in said block and provided with scores or marks on their circumferences to register with the corresponding apertures in the casing, the caps fitting on the ends of the casing and perforated centrally for the reception of the stems of the score-cylinders, and the spring-catches attached to the said cylinders and engaging in openings in the casings, substantially as specified.

2. The herein-described game-scorer, composed of the upper and lower tubular casings E C, respectively connected by bars a², the pin a³, seated in said bars, by means of which the device can be attached to the dress of a player, the score-cylinders seated and provided with scores or marks arranged to register with the apertures in the cases, and the spring-catches to hold said cylinders in the positions to which they have been turned, substantially as specified.

Witness my hand this 21st day of May, 1889.

WILLIAM G. PHELPS.

Witnesses:

C. D. MOODY,

D. W. A. SANFORD.