July 29, 1924. 1,502,662

DE WITT FOX

GAME SCORE REGISTER

Filed Jan. 6, 1923 2 Sheets-Sheet 1

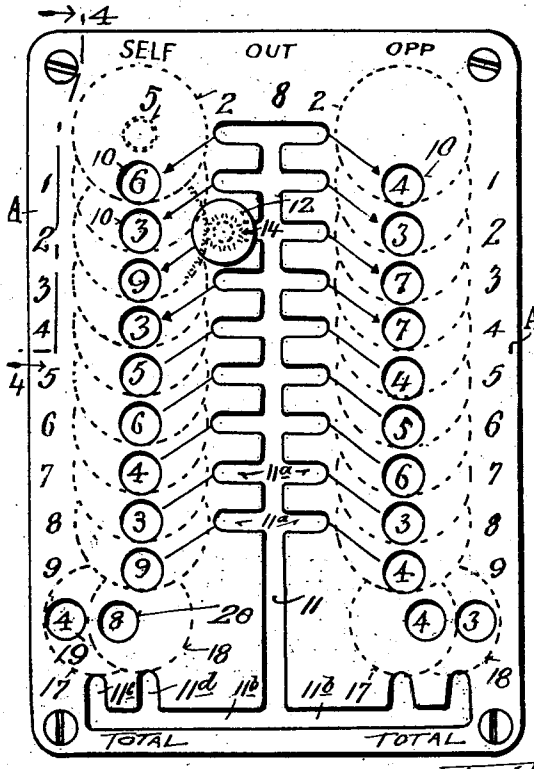


Fig. 1.

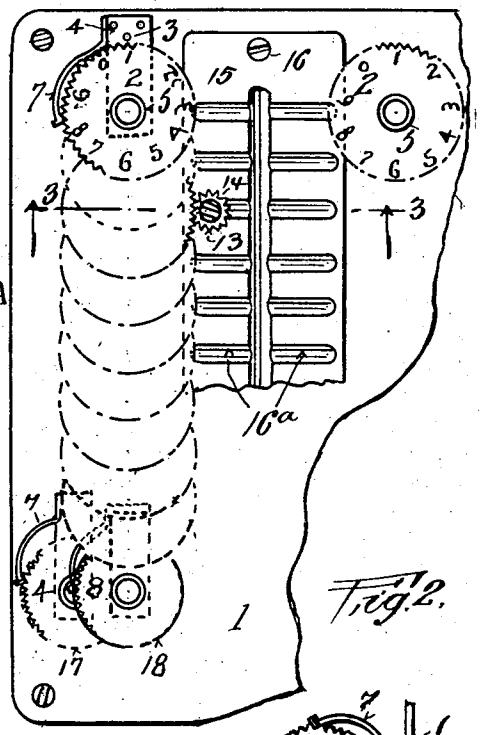


Fig. 2.

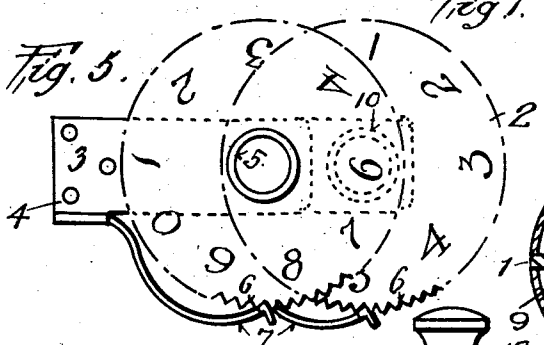


Fig. 5.

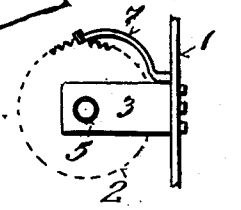


Fig. 7.

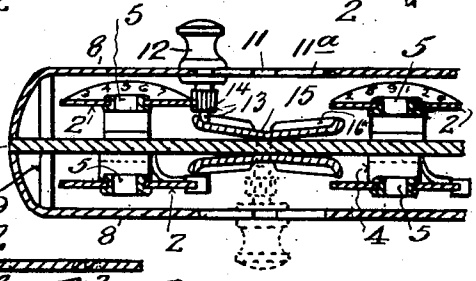


Fig. 3

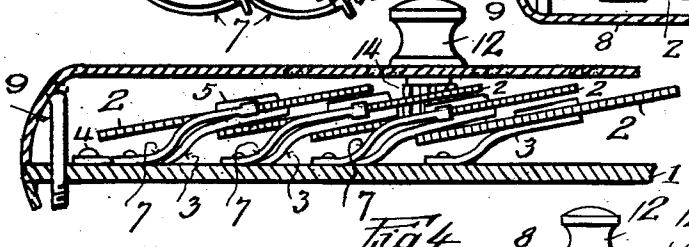


Fig. 4.

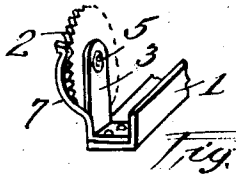


Fig. 8.

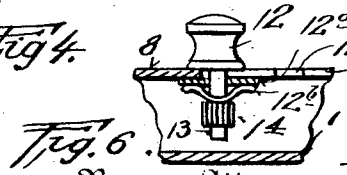


Fig. 6.

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GAME SCORE REGISTER

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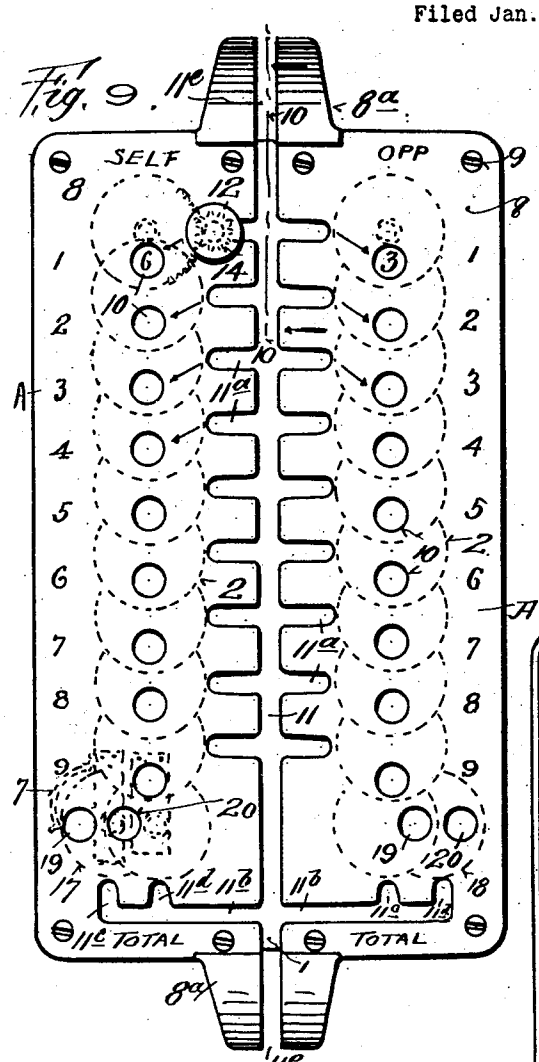


Fig. 9.

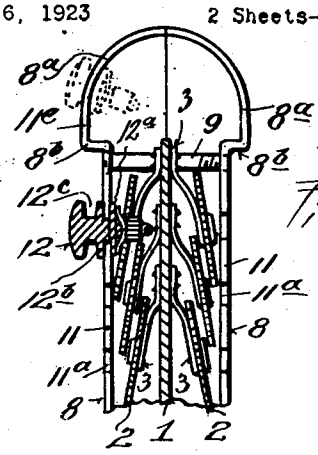


Fig. 10.

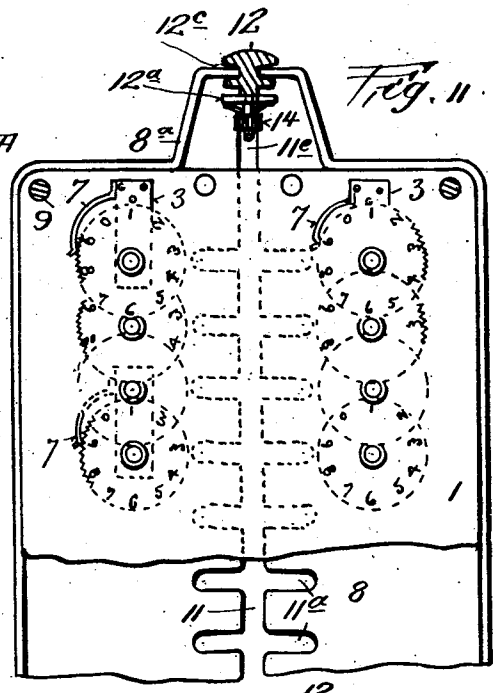


Fig. 11.

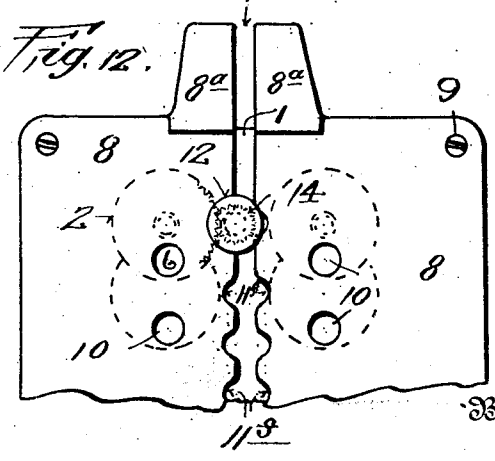


Fig. 12.

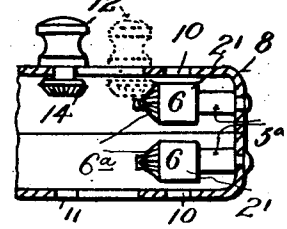


Fig. 13.

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UNITED STATES PATENT OFFICE.

DE WITT FOX, OF NEW YORK, N. Y.

GAME-SCORE REGISTER.

Application filed January 6, 1923. Serial No. 610,991.

To all whom it may concern:

Be it known that I, DE WITT FOX, a citizen of the United States, and resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Game-Score Registers, of which the following is a specification.

My invention relates to devices for registering numbers and is particularly adapted for use in scoring or registering the number of strokes of players in playing a game of golf, such as the strokes in playing from hole to hole, as well as total strokes, for the "out" and "in" trips of the game.

In carrying out my invention I provide a frame or case with series of scoring indicators having appropriate numerals thereon with corresponding apertures in the frame or case through which appropriate numbers of the several indicators may appear, and I provide a movable member suitably guided by said frame or case and adapted to be manually operated to separately actuate the number indicators of a series as desired to cause their numbers to appear through the corresponding aperture. For instance, for each golf hole that is played said member may be manually moved into cooperation with a number indicator corresponding to such hole and upon manually directly rotating said member it will cause rotation of the corresponding indicator to cause the required number to appear through the corresponding aperture of the frame, for scoring the play, and so on for each succeeding hole of the golf course. In a perferred form of my invention I provide two series of scoring indicators in the form of number disks spaced apart with corresponding apertures for said indicators in the frame or case, a wall of the frame or case being provided with guiding means, preferably in the form of a longitudinally disposed slot located between the series of number disks and laterally disposed slots or enlargements communicating with the longitudinal slot and extending on opposite sides thereof toward the series of number disks, said lateral slots or enlargements corresponding to the number disks, and a manually operable member having a shaft adapted to travel in such slots and provided with a pinion adapted to engage teeth upon the peripheries of said disks, whereby said member with its pinion is free to be moved along said slots to mesh the pinion with the teeth of either of the disks to cause rotation of the latter in accordance with the score to be registered with respect to each of nine holes of the golf course, one of such series of disks corresponding to one player and the other series of disks corresponding to the opponent. By preference, totaling number disks are also provided in association with each series of scoring disks to represent the total score of the "out" and "in" plays, said longitudinal slot having appropriate lateral slots to accommodate the shaft of said member to enable its pinion to engage teeth of the "total" disks.

My invention also comprises novel details of improvement which will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part hereof, wherein—

Fig. 1 is a face view of a game register embodying my invention;

Fig. 2 is a fragmentary view, one of the walls of the frame or case being removed;

Fig. 3 is an enlarged cross section substantially on the plane of line 3, 3, in Fig. 2;

Fig. 4 is an enlarged section substantially on the plane of line 4, 4, in Fig. 1;

Fig. 5 is an enlarged detail view;

Fig. 6 illustrates modified means for retaining the movable member;

Fig. 7 is a detail of a modified support for the number disks;

Fig. 8 is a detail of a further modification;

Fig. 9 is a face view illustrating a register arranged to permit a single disk-actuating member to be used on opposite sides of the register;

Fig. 10 is a section on line 10, 10, in Fig. 9;

Fig. 11 is a fragmentary view, one of the outer walls being removed;

Fig. 12 is a sectional detail illustrating a modification, and Fig. 13 is a sectional detail of another modification.

Similar numerals of reference indicate corresponding parts in the several views.

Upon a support 1 one or more series of indicating disks or rolls 2 are mounted, preferably in a row so that the peripheries of the disks of each row are in alignment adapted to be separately engaged by a pinion, as hereinafter explained. The disks 2 are provided with suitable indicating numerals,

the numerals in the example illustrated being adapted to indicate ten digits. The number disks 2 are shown journaled upon arms 3 which may be secured upon support 1 by means of rivets 4 or in any other suitable way. The arms 3 are so shaped that the number disks 2 may partly overlie one another in an angular relation so that the series of disks may be confined in a relatively short space of limited height to reduce the size of the device. The bearings of the disks 2 may be formed by punching the material of the arms 3 laterally in tubular form, at 5, and swaging the ends thereof over the disks in the nature of eyelets, as indicated in Fig. 3. The disks 2 are shown provided with teeth 6 on their peripheries, and at 7 are springs bearing against said teeth to retain the disks in set position. The support 1 carrying the number disks is preferably enclosed within a frame or casing comprising spaced walls 8 on opposite sides of said support, and the parts 1 and 8 may be secured together by means of screws or rivets 9 passing through said walls and through support 1 to clamp the parts together, the edges of the walls 8 preferably being curved toward support 1 to clamp the margin of the latter. The parts 1 and 8 provide a suitable frame or casing to enclose the number disks. Wall 8 is provided with spaced perforations 10 shown in a row and in such relation that the numbers on disks 2 may show through the respective perforations located over the corresponding disks. I have shown nine disks and nine apertures 10 in a row for indicating respectively the score made for the several holes of a golf course. In the example illustrated, two spaced series of number disks 2 having nine disks in each series and two corresponding rows of holes 10 are shown to correspond to a player and an opponent, on one side of the frame or case. The same arrangement may be made on opposite sides of the frame or case, and on one face of the latter the word Out may be applied and on the other side the word In may be applied, for use in scoring the "out" and "in" plays respectively. Adjacent to a row of number disks 2 the wall 8 is provided with a longitudinal slot 11 substantially parallel to and spaced from the edges of a row of number disks, and at 11^a the slot 11 is provided with laterally extending slots or enlargements that are so disposed as to correspond with the adjacent number disks 2, there being a lateral slot or enlargement 11^a for each of the number disks. In the example illustrated, lateral slots or enlargements 11^a are correspondingly disposed on opposite sides of the longitudinal slot 11 corresponding to the two series of number disks 2.

A movable member is indicated at 12, shown in the form of a finger piece, adapted to be grasped by the fingers of the player, which member 12 is provided with a shaft 13 adapted to travel in slots 11, 11^a. Said shaft is provided with a pinion 14 located between support 1 and wall 8 and adapted to engage the teeth 6 of either of the number disks, the slots or enlargements 11^a terminating sufficiently near the peripheries of the number disks to enable the pinion 14 to be meshed with the teeth of said disks. By preference the shaft 13 is free to be moved through slot 11 and in the portions 11^a adjacent thereto, and by preference I provide means to obstruct the free passage of said shaft to the outer extremity of the slots or enlargements 11^a so that the pinion 14 will not accidentally engage the teeth of the number disks, and yet the pinion may be forced into engagement with said disks. For such purpose I have shown a spring plate 15 secured upon support 1 at one side of a row of number disks, as by screws or rivets at opposite ends of said plate, indicated at 16, which spring plate is inclined from support 1 toward the number disks in position to engage the end of shaft 13 projecting beyond pinion 14 when said shaft is pushed toward the outer ends of the slots or enlargements 11^a, so that the shaft will have to be pushed against the resistence of the spring to cause the pinion to mesh with the teeth of the number disks, (see Fig. 3). Said spring will preferably make but slight engagement with shaft 13 when the latter travels through longitudinal slots 11. The spring plate 15 is shown provided with laterally disposed recesses at 16^a, corresponding to and registering with the lateral slots or enlargements 11^a, which recesses serve to aid in guiding the shaft toward the disks and to steady that shaft in the nature of a bearing. Instead of using the spring member 16 to resist the member 12 said member may be provided with a washer 12^a to bear against the inner surface of wall 8 and a spring 12^b bearing against said washer, being shown interposed between said washer and pinion (Fig. 6), whereby frictional resistance is provided between member 12 and wall 8 to prevent said member from moving around loosely.

Along the rows of apertures 10 I preferably provide wall 8 with consecutive numbers, indicated at A, corresponding to the nine golf holes of a golf course. For each row of number disks I preferably provide at least two totalling disks 17, 18, arranged adjacent to the end of each series of number disks beyond the aperture 10 that corresponds to the indication for the ninth golf hole. The disks 17, 18 may be supported by arms 3 secured upon support 1 in the manner described with respect to the number disks 2. The totalling number disks 17, 18 have peripheral teeth 6 engaged by springs 7 in

the manner before described. The wall 8 is provided with apertures 19, 20 for the totalling disks which are provided with numbers representing any desired digits, say from 1 to 10, to show through the apertures 19, 20, respectively. The word Total may be applied upon wall 8 adjacent to the totalling disks, as shown in Fig. 1. The slot 11 extends sufficiently beyond the slots or enlargements 11^a for the number disks 2 to communicate with transverse slots 11^b provided with lateral enlargements or slots 11^c, 11^d, corresponding respectively to the totalling disks 17, 18, so that the pinion 14 may be passed along such slots for engagement with the totalling disks.

Where two series of number disks with their corresponding apertures 10 in wall 8 are arranged on one side of the device a simple form is provided for the use of two players for registering a golf score when playing either "out" or "in." Where it is desired to keep a record of two players both going "out" and coming "in" the device may be provided with two series of number disks and totalling disks and their corresponding apertures and slots on opposite sides of support 1, with a member 12 and its pinion 14 for each side of the device, as indicated in Fig. 3, whereby the scores for both players may be registered on one side of the device when going "out" and on the other side of the device when coming "in."

When using the register, when a hole has been played, a player will move the member 12 into the slot or enlargement 11^a corresponding to the number disk representing such hole of the golf course and cause the pinion 14 to engage the teeth of the corresponding disk 2 and by rotating said pinion he will cause the numeral on such disk representing the strokes of his play to appear through the corresponding aperture 10 and said member 12 will also be moved to enter the corresponding slot 11^a on the opposite side of slot 11 to correspondingly operate the disk 2 of the other player, or the opponent, to indicate his play at such golf hole on the corresponding disk 2. The member 12 then will be moved away from the disk 2 and left free in the slot of the counter so that there will not be danger of displacement of the previously set disks 2. At the termination of the play of each hole the corresponding disks 2 will be operated to show the number of strokes of such plays, and after the nine holes have been played the numbers oppearing through a series of apertures 10 may be counted and by adjusting the pinion 14 in connection with the corresponding totalling disks 17, 18 the total score of the corresponding player may be indicated on the last named disks through the apertures 19 and 20.

Where both sides of the register are to be utilized for scoring, and to enable a single member 12 to be used, I provide slot 11 continuously disposed along the walls 8 on opposite sides of the register with means at one or both ends of the register to permit member 12 to pass from slot 11 on one side of the register to slot 11 on the other side thereof, as shown in Figs. 9 to 12. For such purposes the walls 8 on each side of the register are shown made in two parts so spaced as to provide the slot 11 therebetween, and at the ends of said walls the material thereof, at 8^a, is extended laterally for a short distance at 8^b (Fig. 10), and extended forwardly in a suitable arc so that extending portions 8^a are opposed and spaced apart to provide the slots 11 with the extending portions 11^e which meet or register at the ends of the parts 8^a, whereby the longitudinal slots are continuous on opposite sides and at one or both ends of the register. In order that member 12 may fit snugly along wall 8, as by means of the washer 12^a and spring 12^b, and have proper guidance in the portions 11^e of the slot, I provide member 12 with a recess 12^c in position to receive the edges of slot portion 11^e at the projecting portions 8^a of walls 8, whereby when member 12 is carried through the end of slot 11 the recess 12^c will enter slot 11^e and thereby the portions 8^a will guide said member beyond the number disks, so that said member may be carried from the slot 11 on one side to the slot 11 on the other side, in manner indicated in Fig. 10, whereby pinion 14 may be used to engage the disks on either side of the register, according to which direction of play is to be scored. It will be noted that the support 1 that is located between the outer walls 8 of Figs. 9 to 12 is sufficiently short respecting the projections 8^a to enable the member 12 with its pinion, when guided by the slot 11^e, to pass around the end of such support from one wall 8 to the other.

While I have illustrated the lateral slots 11^a extending from the longitudinal slot 11 as of considerable length, in the form shown in Figs. 1 to 11, the edges of slot 11 may be of any desired shape which will enable the member 12 to be moved from slot 11 toward the number disks 2 without unduly widening slot 11 in which the shaft or guiding portion of member 12 travels. In Fig. 12 the material at the side edges of slot 11 is shown more or less sinuous having laterally extending enlargements or offsets at 11^f which correspond to the slots 11^a but are not so deep. yet serve at the bottom portions as guiding means to retain the shaft 13 of member 12 in position as a bearing for the shaft when pinion 14 engages a number disk 2.

Instead of making the number indicators in the form of ordinary disks the indicators may have any other desired form, such as

rolls or cylinders, indicated at 2′ in Fig. 13, having the indicating or scoring numerals on their circumferences. Said indicators may be mounted to rotate upon studs 5ª extending from the walls 8, and said indicators are shown provided with gears 6ª to mesh with pinion 14 of member 12, the latter being guided in slot or slots 11, 11ª, as before explained.

The term "indicators" as used by me is intended to include elements bearing scoring numerals either in the form of disks, cylinders, rolls or their equivalent to indicate scores through the apertures 10 of the frame or case.

My invention is not limited to the details of construction set forth, as the same may be varied, within the scope of the appended claims, without departing from the spirit of my invention.

Having now described my invention, what I claim is:

1. A register comprising a series of longitudinally disposed number indicators, a manually rotative member movable independently of said indicators, said indicators and member having cooperative means for actuating each of the former independently by the latter, and means to guide said member longitudinally along and laterally to said indicators.

2. A register comprising a series of independent number indicators having teeth, a manually rotative member movable independently respecting said indicators and provided with a pinion to engage the teeth of each of said indicators, the register having a slot provided with lateral enlargements corresponding to the indicators to guide said member along and laterally to said indicators independently.

3. A register comprising a series of number indicators having corresponding edges in substantial alignment, a manually movable member provided with means to operate each of said indicators, the register having a slot provided with lateral enlargements corresponding to the indicators to guide said member along the sides of said indicators and independently toward each indicator for cooperation therewith.

4. A register comprising a wall provided with spaced apertures, a series of number indicators, means to support said indicators adjacent to said wall and its apertures to show a number on each indicator through a corresponding aperture, a manually rotative member movable with respect to said indicators, means cooperative between said member and said indicators for operating either of the latter independently of the others, the register having a slot provided with lateral enlargements corresponding to the indicators to guide said member with relation to said series of indicators and laterally toward each of the indicators for operation of the latter.

5. A register comprising a wall provided with spaced apertures, a series of number indicators, means to support said indicators adjacent to said wall and its apertures to show a number on each indicator through a corresponding aperture, a member movable with respect to said indicators, means cooperative between said member and said indicators for operating either of the latter independently of the others, said wall having a slot spaced from said indicators and extending in the direction thereof, said slot having enlargements extending toward each of the indicators, said member having means operable in said slot and enlargements for guiding the member toward said indicators independently.

6. A register comprising a wall provided with a plurality of spaced series of apertures, a plurality of spaced series of number indicators, means rotatively supporting said indicators with relation to said apertures to show numbers through the corresponding apertures, a member movable with relation to all of said indicators and provided with means to operate said indicators, and means to guide said member between two series of said indicators and toward and from each of said indicators.

7. A register comprising a wall provided with a plurality of spaced series of apertures, a plurality of spaced series of number indicators, means rotatively supporting said indicators with relation to said apertures to show numbers through the corresponding apertures, a member movable with relation to all of said indicators and provided with means to operate said indicators, said wall having a longitudinal slot between said series of indicators, said slot having enlargements extending on opposite sides thereof toward the corresponding indicators, said member having means guiding it for movement in said slot toward and from corresponding indicators.

8. A register comprising a wall provided with spaced apertures and having a longitudinal slot extending substantially parallel to said apertures, said slot having lateral enlargements extending toward corresponding apertures, a series of number indicators, means to support said indicators with relation to said apertures to show numbers on the indicators through corresponding apertures, means cooperative with said indicators to retain them in set position, a member having a shaft movable in said slot and provided with means to cooperate with each of said indicators, and a spring member cooperative with said movable member, said spring member being located in position to engage said member when its pinion is in mesh with any of said indicators.

9. A register comprising a wall provided with spaced apertures and having a longitudinal slot extending substantially parallel to said apertures, said slot having lateral enlargements extending toward corresponding apertures, a series of number indicators, means to support said indicators with relation to said apertures to show numbers on the indicators through corresponding apertures, means cooperative with said indicators to retain them in set position, a member having a shaft movable in said slot and provided with means to cooperate with each of said indicators, and a spring member cooperative with said movable member, said spring member being located in position to engage said member when it engages any of said indicators, said spring member having depressions corresponding to said lateral enlargements.

10. A register comprising a support, walls spaced from said support on opposite sides thereof, said walls having series of spaced apertures, number indicators supported on opposite sides of said support in relation to the corresponding apertures to show numbers therethrough, said walls having slots provided with lateral enlargements extending toward the corresponding indicators, and movable members having shafts operable in said slots, said shafts being provided with means to actuate the corresponding indicators.

11. A register comprising spaced walls provided with series of spaced apertures, number indicators supported in relation to the corresponding apertures to show numbers therethrough, a movable member adapted to cooperate with each of said indicators, said walls having longitudinal slots communicating with one another to guide said member along either wall into cooperative relation with said indicators.

12. A register comprising spaced walls provided with series of spaced apertures, number indicators supported in relation to the corresponding apertures to show numbers therethrough, a movable member adapted to cooperate with each of said indicators, said walls having longitudinal slots and having projections at their ends spaced apart providing a slot therebetween communicating with the first named slots to guide said member from one of the first named slots to the other.

13. A register comprising spaced walls provided with series of spaced apertures, number indicators supported in relation to the corresponding apertures to show numbers therethrough, a movable member adapted to cooperate with each of said indicators, said walls having longitudinal slots and having projections at their ends offset from the planes of the walls and curved around the ends thereof, said projections being spaced apart providing a slot communicating with the first named slots, said member having a recess to receive the inner edges of said projections to guide the member from one of the first named slots to the other.

14. A register comprising a wall provided with series of spaced apertures to indicate individual scores and having other apertures to indicate total scores, a series of number indicators corresponding to the first named apertures and a plurality of disks corresponding to the second named apertures, a member adapted to cooperate with all of said indicators to actuate them independently, said wall being provided with a slot located with relation to the first named indicators for guiding said member to said indicators, said slot being provided with an extension having enlargements corresponding to said totalling indicators to guide said member from the first named slot to the last named indicators.

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