Dec. 28, 1937. F. H. ROBINSON 2,103,916

CRIBBAGE SCORING DEVICE

Filed May 27, 1936 2 Sheets-Sheet 1

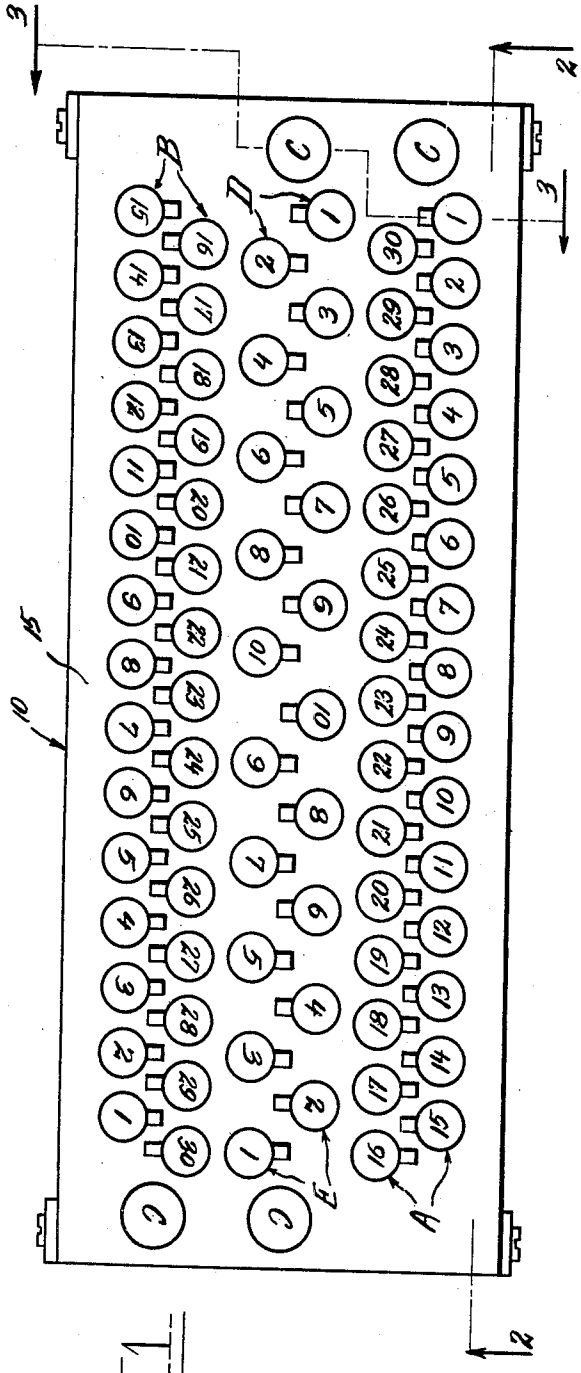


Fig. 1

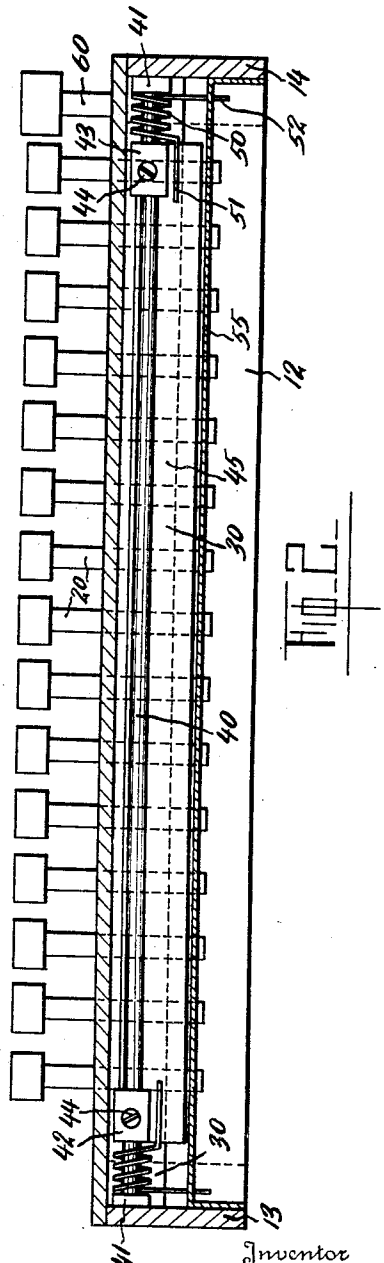


Fig. 2

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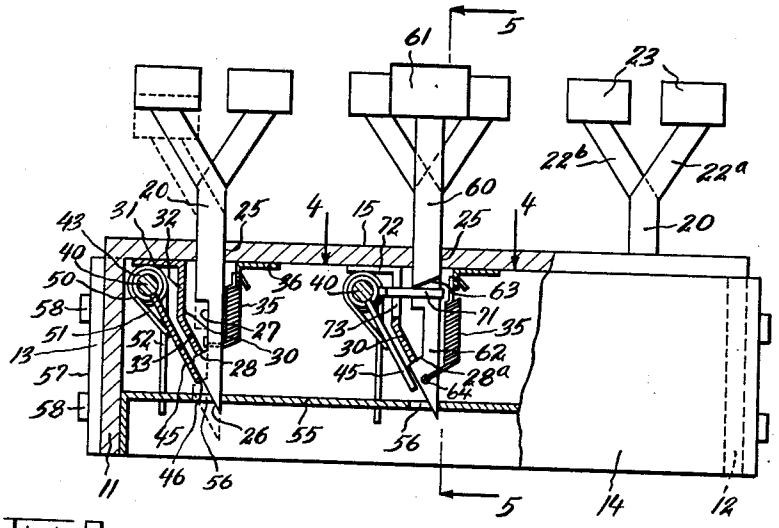


FIG. 3

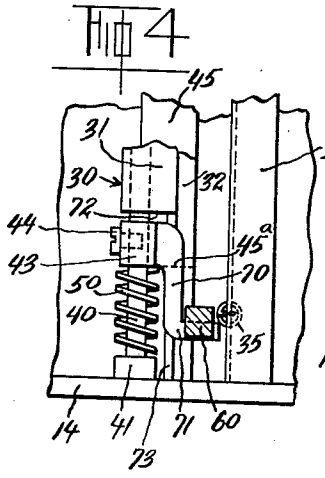


FIG. 4

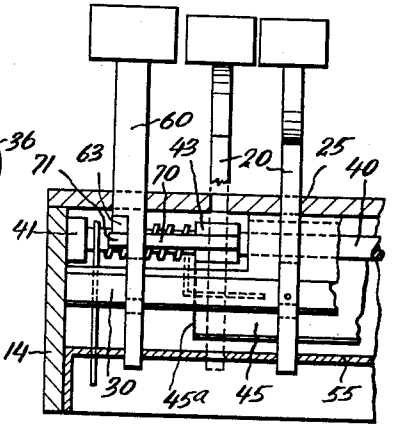


FIG. 5

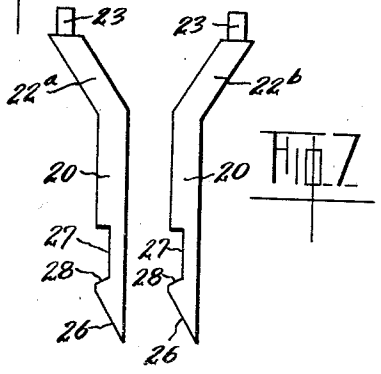


FIG. 6

FIG. 7

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Patented Dec. 28, 1937

2,103,916

UNITED STATES PATENT OFFICE

2,103,916

CRIBBAGE SCORING DEVICE

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Application May 27, 1936, Serial No. 82,065

2 Claims. (Cl. 235—90)

This invention relates to cribbage boards and game boards of a similar character.

The object of this invention is to provide in a cribbage board an automatic key arrangement to replace the ordinary removable pegs as heretofore used in cribbage boards.

Another object of this invention is to mount the playing keys in opposed groups on a casing and to mount between the groups of playing keys other groups of scoring keys.

A further object of the invention is to provide a depressing action for the keys in combination with a control and locking mechanism within the casing which shall be fully automatic.

A still further object of the invention is to provide a clearing key for each group of keys which will act to release any depressed key.

Other objects of the invention will become apparent as the description of the invention given in the following specification proceeds with reference to the accompanying drawings, wherein:—

Fig. 1 is a plan view of the cribbage device,

Fig. 2 is a longitudinal sectional view taken on line 2—2, Fig. 1, showing only the front row of keys,

Fig. 3 is a transverse view partly in section taken on line 3—3, Fig. 1,

Fig. 4 is a detail plan view partly in section of part of the operating mechanism taken on line 4—4, Fig. 3,

Fig. 5 is a partial vertical detail view of the same operating mechanism taken on line 5—5, Fig. 3,

Fig. 6, and Fig. 7, are elevational views of complementary key plungers.

Referring specifically to the drawings, the cribbage scoring device is incorporated within a box-like casing 10 of greater length than width provided with fixed side walls 11, 12, removable end walls 13, 14 for a purpose to be hereinafter described, and a flat top 15.

Arranged on the top 15 are two groups of keys A and B, each group preferably comprising thirty keys formed in two rows of fifteen keys each with each group disposed lengthwise on each side of the casing, as clearly shown in Fig. 1. While this arrangement of keys is for a thirty-one point game, it is to be understood that the device as hereinafter described can be made for a sixty-one point or a hundred and twenty-one point game. In each of groups A and B the row of keys numbered (1) to (15) are disposed adjacent the longitudinal edge of the casing with the row of keys numbered (16) to (30) arranged adjacent to and in staggered relation to the first mentioned row; the number (16) key in the second row immediately following the number (15) key in the first row. Preferably the numbering of the keys in each of groups A and B are directed to the longitudinal edge of the casing 10, whereby when the device is placed on a table between the players of the game each group will properly face a player for easy manipulation of the keys therein, the keys in each group running in the same direction.

At the right of each of the groups A and B is placed a large key designated C which functions in a manner to be hereinafter described to "clear" the group of keys by returning all depressed keys simultaneously to their original raised position.

Between the groups of keys A and B there is provided two smaller groups of keys D and E, each ten in number, in two rows of five each arranged in staggered relation in the same manner as those in groups A and B. The key groups D and E are provided for keeping the score of the number of games played and are each provided at the right thereof with similar "clearing" keys C.

Each of the keys comprises a plunger 20 the upper portion of which is laterally offset and provided with a terminal end 21 to which is fastened in any suitable manner the numbered buttons or tabs 23. The plungers 20 of the outermost row of keys, see Fig. 6 have the laterally offset portion 22*a* inclined outwardly with respect to the casing or to the left while the plungers 20 of the inside row of keys, see Fig. 7 have the laterally offset portion 22*b* inclined inwardly with respect to the casing or to the right.

The plungers 20 which may be of metal or any other desired material may have any suitable cross-sectional configuration and are inserted through suitable openings 25 formed in the top 15 of the casing 10 for vertical movement therein; the openings 25 for both rows of keys in each group being in alignment, with the rows of openings parallel to each other and to the longitudinal edges of the casing 10, as will be most apparent from Figs. 1 and 3.

As the plunger operating and control mechanism is the same for each group of keys a description only of that for the keys in group A will be given.

The plungers 20 of the keys are all of the same length and are each provided at their lower ends and on the same side with an inclined face 26, and a cut-away or recessed portion 27 defining a shoulder or stop 28. Arranged on the under-surface of the top 15 of the casing 10 to one side of the row of openings 25 is a stop plate 30, having

an upper horizontal upper portion 31 for attachment to the top 15, an intermediate vertical portion 32 and a lower inclined portion 33 adapted to normally extend within the recessed portion 27 of the plungers with the edge thereof in engagement with the plunger stop 28.

To hold the plungers 20 in their normal inoperative position, i. e., with the stops 28 abutting the edge of the stop plate 30, each plunger is provided with a tension coil spring 35, the lower end of which is secured in any desired manner to the plunger 20 and the upper end of which is attached to a plate 36 mounted on the underside of the top 15 opposite the stop plate 30, as clearly shown in Fig. 3. The stop plate 30 is uniform throughout and extends the entire length of the casing, for the keys in groups A and B. For the keys in group D and E the stop plate extends only for the distance equal to the length covered by said groups.

Beneath the horizontal portion 31 of the stop plate 30 is arranged a shaft 40 the ends thereof being suitably mounted in bearings 41 carried by the detachable end walls 13 and 14. At the ends of the shaft 40 in spaced relation to the bearings 41 are positioned sleeves 42 and 43 adapted to be rigidly secured to the shaft 40 by means of the adjusting screws 44. The sleeves 42 and 43 carry a depending catch plate 45 that is secured to the sleeves in any desired manner. Referring to Fig. 3 it will be observed that the catch plate 45 is normally inclined downwardly in the same direction as the inclined portion 33 of the stop plate 30, with the edge 46 thereof being disposed beneath and substantially in the same vertical plane as the edge of said stop plate. The position of the catch plate 45 on the shaft 40 relative to the stop plate 30 may be adjusted by means of the screws 44. With the plungers 20 in their raised position, the longitudinal lower end portion of the catch plate is adapted to abut the inclined faces 26 of all the plungers 20 in the group. To maintain the catch plate 45 against the inclined faces 26 of the plungers there is provided at each end of the shaft 40 a torsion coil spring 50 arranged between the bearings 41 and the sleeves 42, 43 adjacent thereto. One end 51 of the spring 50 bears on the catch plate 45 while the other end 52 is attached to a fixed part of the casing. In this case the fixed part comprises an inside cover plate 55 for the casing 10 which cover plate is provided with guide openings 56 adapted to receive the lower ends of the plungers 20 in guiding relation. The end 52 of the torsion coil spring 50 is held in fixed relation by being merely inserted through a suitable opening provided therefore in said cover plate 55.

The end plates 13 and 14 which support the shafts 40 carrying the catch plates 45 are provided with oppositely directed extensions 57 which are fastened to the side walls 11 and 12 by means of the bolts or screws 58.

As stated above each group of keys are provided with identical control and locking mechanisms as set forth above with reference to the keys in group A. In the same manner the clearing key mechanism for the keys C shown for group D and hereinafter described is identical with the clearing keys for the other groups.

The clearing key (designated by C) comprises a straight plunger 60 preferably shown as square in cross-section, see Fig. 4, and provided at its upper end with a button or tab 61. The lower end of the plunger 60 is cut-away to provide an extension 62 having a thickness about one-half the width or thickness of the plunger, and an upwardly inclined shoulder 63. The extension 62 is formed on one side thereof with a recessed or cut-away portion having a shoulder or stop 28*a* identical in all respects with that formed on the plungers 20. To maintain the clearing key in its normal raised position a tension coil spring 35 is utilized, one end being connected to the plunger extension 62 as at 64 while the other end is attached to the plate 36. As with the plungers 20, the spring 35 acts to hold the stop 28*a* against the bottom edge of the stop plate 30, in the manner readily apparent.

Formed integral with the sleeve 43 is an horizontal L-shaped arm 70 that extends toward the end wall 14, with the projecting short leg 71 thereof arranged to extend laterally across the plunger extension 62 in abutting engagement with the lower edge of the inclined shoulder 63. To accommodate the arm 70, the upper portion of the adjacent end of the stop plate 30 is cut-away as at 72, 73. In the case of the clearing keys, the catch plate 45 does not engage the plunger 60 as the same terminates short thereof as indicated by the dotted line 45*a*.

Inasmuch as the arm 70 is integral with the sleeve 43, the arm extension 71 is maintained always in engagement with the shoulder 63 by virtue of the spring action of the torsion coil springs 50. Thus it is seen that the torsion spring 50, through the medium of the arm 70 augments the action of the spring 35 in holding the clearance key raised against the stop plate. If desired the tension coil spring 35 attached to the plunger 60 may be omitted.

In the operation of the keys in the various groups, taking group A for example, it will be seen that when key (1) is depressed, the downward movement of the plunger 20, see Fig. 3, will force the catch plate 45 to move in a clockwise direction because of the sliding movement of the inclined face 26 thereon. As the inclined face 26 clears the bottom edge 46 of the catch plate 45, the same under the action of the torsion springs 50 will be moved back in a counter-clock-wise direction bringing the edge 46 over the shoulder or stop 28. The pull on the plunger 20 because of the stress set up in the spring 35 will act to hold the same against the catch plate to thus hold the key (1) depressed, in the position shown by the dotted lines. In the subsequent depression of any other selected key in this group which will be higher than (1), the movement of the catch plate will be the same as described above except that the same will release the key (1) which under the action of the spring 35 will be raised into its normal engagement with the stop plate 30. Any number of keys may be depressed and held in locked position by a simultaneous depressing movement.

In order to clear the keys, that is, to raise whatever keys are depressed or to raise a key that has been inadvertently or for any other reason depressed, all that is necessary is to depress the clearing key C for that group. The depression of the key C will move the arm 70 downwardly to turn the shaft 40 along with the catch plate 45 carried thereby in a clock-wise direction to release whatever depressed key or keys locked thereby. As there is no locking means for the clearing key C the same will automatically return to its normal position upon release of the downward pressure applied thereto by the player.

The keys in groups A and B are used in playing the game of cribbage, the keys in groups D

and E being used for keeping score or for the number of games played. In order to render the playing keys and scoring keys distinguishable, the buttons or tabs on the keys in the groups facing one side of the casing may be given a color differing from that in the groups facing the other side of the casing. Thus, for example, the keys in groups A and D may be colored red and the keys in groups B and E may be colored black.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. An operating mechanism for a scoring device having at least one row of depressible keys each provided with a depending plunger, each plunger having a recessed portion adjacent its lowermost end and formed at one side thereof to define a shoulder, a stop plate common to all of said plungers fixedly mounted relative thereto and provided with an abutment edge extending into each of said plunger recesses for engagement by said shoulders, spring return means individual to each plunger for maintaining the same in their normal engagement with said stop plate; a spring controlled swinging locking plate common to all of said plungers oscillatably mounted on a horizontal shaft in opposed spaced and juxtaposed relation to said stop plate and in contacting engagement with the lower end of said plungers including a torsion helical spring mounted on said shaft having one end fixed relative thereto and its other end bearing on the side of said locking plate remote from said plungers, an abutment edge on said locking plate arranged beneath and substantially in the plane of said stop plate abutment edge, whereby upon the depressing of any one plunger the shoulder thereon will move downwardly into engagement with the abutment edge of said locking plate for locking engagement therewith.

2. In the operating mechanism as specified in claim 1, including a clearing key arranged at one end of the row of depressible keys, a plunger for said key longitudinally spaced from the adjacent end of said stop plate, a horizontal lever arm mounted on said shaft between said torsion helical spring and an adjacent end portion of said locking plate for simultaneous angular movement with said locking plate, a stop on said clearing key plunger engaged by said lever arm, a shoulder on said clearing key plunger adapted for engagement only with said stop plate and spring return means for said clearing key plunger; whereby downward movement of said clearing key plunger will move said lever arm to thus move said locking plate away from said depressible key plungers to affect release thereof.

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