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F. B. WATKINS

3,185,481

BRIDGE BIDDING DEVICE

Filed Sept. 7, 1962

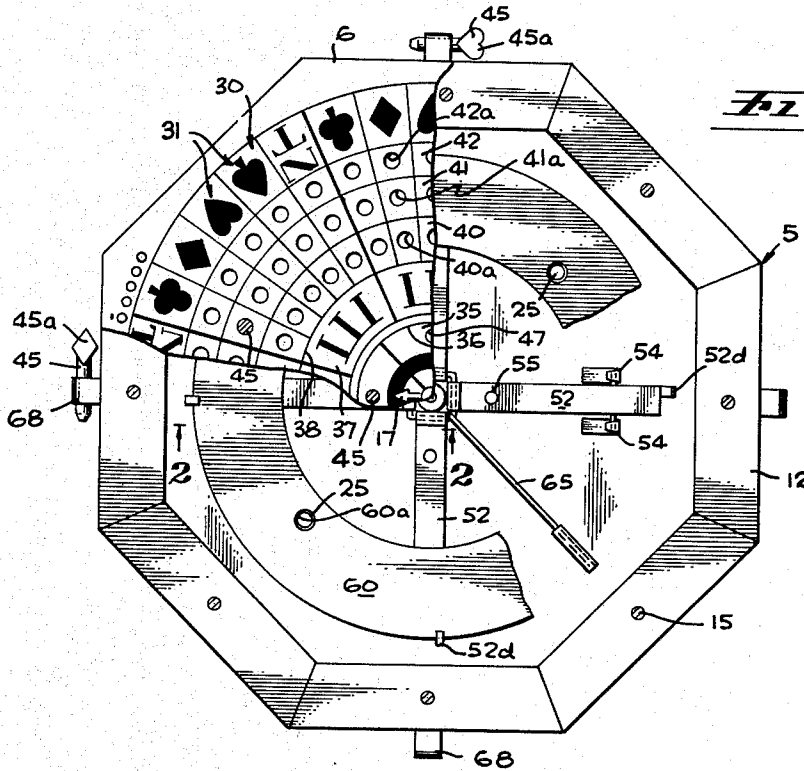


Fig. 1

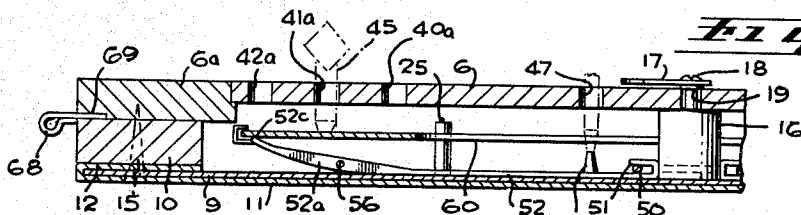


Fig. 2

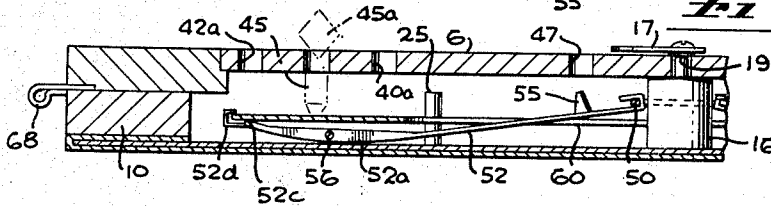


Fig. 3

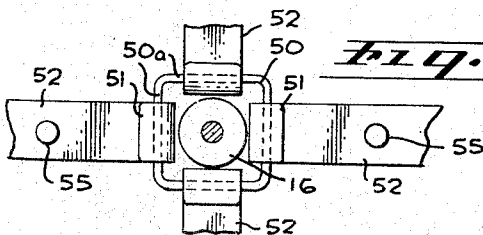


Fig. 4

FREDERICK B. WATKINS
INVENTOR.

BY *Maorn Graham*

ATTORNEYS

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BRIDGE BIDDING DEVICE
Frederick B. Watkins, 5311 Norwich Ave.,
Van Nuys, Calif.
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My present invention has to do with devices for recording and visually indicating the sequential bid, "doubling," "redoubling" or "pass" declarations made by bridge players in the course of arriving at a contract.

My present invention is an improvement over the invention of my previous United States Patent No. 2,004,513, which discloses a perforated board or plate carrying suitably arranged and displayed bid, pass, doubling or redoubling indicia, pegs or indicators to be selectively inserted in the perforations to record such declarations, and a lever actuated mechanism operable, in response to the insertion of a peg in a perforation to record a bid or pass or doubling or redoubling declaration, to eject any pass declaration indicator which may have been previously inserted in any of the pass declaration perforations.

One of the difficulties experienced with the device of my said former patent has been that the pass indicator ejecting pins are carried by a collar slideably engaging a center post, the bottom of the collar being loosely engaged by separate lever means, resulting in the shortcoming that when greater pressure was exerted on one of the individual levers than on the other levers, such inequality of pressure resulted in the collar tilting about and binding on the post. Another difficulty with said device is that the mechanism was not well suited for withstanding shipping and handling without resultant maladjustments of the parts occurring which ordinary users were incapable of correcting. Users of devices of this character are usually people having little or no experience in the operation or manipulation of mechanical devices, so that, to be practicable, such devices must be extremely simple to operate, must be of such design and construction that functional defects do not often arise and must also be of such design and construction that they will withstand handling during shipping and displaying without the mechanical assembly being disturbed.

It is therefore an object of my present invention to provide a device of this character which meets those requirements, overcomes the disadvantages of the device of my said prior patent, and which is also economical of manufacture.

It is a further object to provide a device of such character which embodies unique, durable, highly efficient and "foolproof" mechanism for automatically ejecting "pass" declaration recording members in response to the insertion of a bid or "double" or "redouble" declaration member to record and visually indicate such declaration, and which mechanism is so integrated that its assembly is not disturbed by handling and all its parts operate in unison.

A further and more specific object is to provide, in conjunction with the actuating levers employed in the ejection of pass indicators, a center member to which the inner ends of the actuating levers are snugly but pivotally and slideably connected in such manner as to insure that all the actuating levers operate in unison and have equal movement although more pressure may be applied to one lever than to the others by the insertion of any bid, double or redouble indicator, the engagement and cooperation of the levers with the said center member being such that the latter is at all times positively retained in a plane parallel to the base of the device. This construction also insures that the elements carried by the respective levers for engaging and ejecting pass indicators are always positively maintained in true alignment with the pass indicator receiving perforations.

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Other objects and advantages will appear from the following detailed description of a presently preferred embodiment of my invention, for which purpose I shall refer to the accompanying drawing wherein:

FIG. 1 is a top plan view with part broken away for illustrative purposes;

FIG. 2 is a fragmentary enlarged sectional view showing the parts in one position of operation;

FIG. 3 is a view similar to FIG. 2 but showing the parts in another position of operation; and

FIG. 4 is a further enlarged fragmentary sectional view.

Referring now to the drawing, I show my presently preferred embodiment as having a body generally denoted by the numeral 5. The body comprises a top wall or portion 6 of generally octagonal plan shape, and having a relatively thick marginal portion 6a, a bottom wall or plate 9, and an annular spacer ring 10. The bottom plate 9 preferably has a felt covering 11, whose marginal portion 12 is backturned over the marginal portion of plate 9, the portion 12 being clamped between the marginal portion of plate 9 and the spacer ring 10, as by screws 15.

A center post 16 may be secured at its bottom end in any suitable manner to the bottom plate 9 and project upwardly therefrom to support the central portion of the top 6, and may carry a rotatable pointer 17 secured thereto, as by a screw 18, a spacer ring 19 being interposed between the pointer and the top end of the post. Also the bottom plate 9 carries a pair of diametrically spaced guide pins 25 for the purpose to be hereinafter described.

The top portion 6 carries marking indicia dividing its top surface into seven circumferentially arranged, somewhat triangular bid, "double" and "redouble" declaring and recording areas or zones 30, each of said areas displaying at its margin a row of indicia 31 denoting the four card suits, "Clubs," "Diamonds," "Hearts" and "Spades," as well as the letters "NT" to denote a "No Trump" declaration, in ascending order of bid value.

A central "pass" declaring zone 35 of four parts is delineated by circular line indicia 36, and a radially adjoining area 37 is delineated by a circular line 38, said area 37 displaying indicia "I" to "VII" inclusive to denote the value of the bid declaration.

The top portion 6 of the body has three concentric rows 40, 41 and 42, of holes 40a, 41a, 42a respectively. The holes 42a or row 42 are used to record and indicate a suit or "no trump" bid declaration, the holes 41a of row 41 are used to record and indicate the doubling of a bid declaration; and the holes 40a of row 40 are used to indicate and record the "redoubling" of a bid declaration, by means of inserting a peg or pin indicator 45. The holes of rows 40, 41 and 42 are also in radial alignment with the respective suit and "NT" indicia. Each of the four players is provided with at least one peg to be selectively inserted in the appropriate holes in the course of the declarations made in arriving at a final contract.

Each of the indicator pegs 45 has an enlarged top end portion presenting a stop shoulder 45a which engages the top 6 around the holes in which the peg is inserted, to limit the extent to which a peg may be inserted in a hole.

To indicate and record a "pass" declaration, any one of the respective players may insert a peg or indicator 45 in the appropriate one of the four holes 47 extending through the pass zone 35—that is, there is one of the holes 47 positioned opposite each player.

The pointer 17 may be manually rotated after each "deal" to indicate the player who dealt the cards and is to make the first declaration (either a "bid" or "pass").

The improvements of my present invention are directed more particularly to the novel means provided to operate, in response to the insertion of a peg in either of the

holes 40a, 41a or 42a, automatically to eject any pegs which may have been previously inserted in one or more of the pass zone holes 47 to indicate and record a "pass" declaration. As best shown in FIGS. 1-3, I provide, for this purpose, a squared link or center member 50 and four radially arranged lever members 52.

Each of the lever members 52 terminates at its inner end portion in a hook 51 which is hooked about one of the four runs 50a of the squared center member 50 with only such tolerance as will permit the hooked portion to slideably and pivotally engage said run. That is, while the inner end portion of each lever must slideably and pivotally engage a run of the center member, the engagement must be such as to prevent any undue looseness which might result in rocking movement of the center member relative to the longitudinal axes of the levers.

At a point closer to its outer end than to its inner end, each lever has a relatively thickened portion 52a through which a fulcrum pin 56 passes, the ends of the pins 56 projecting beyond the side edges of the levers and pivoting in brackets 54 secured to the base plate 9, as by soldering or welding.

Outwardly from the fulcrum pin each lever is disposed upwardly and outwardly so that its outer end portion is spaced from the base plate 9, while inwardly from the fulcrum pin each lever is substantially parallel with the base plate. Preferably, when the levers are in their normal or non-ejecting positions (FIG. 2) the bottom surfaces of the inner end portions of the levers are against the base plate and slightly below the plane of the fulcrum pin to reduce the arc about which the inner end of the lever must swing in its pass indicator ejecting movement.

Each lever member 52 preferably has, adjacent its inner end portion, a frusto-conical projection 55, and since the inner end portion of each lever underlies one of the pass indicator peg receiving holes 47, the four projections 55 are in register with the respective holes 47.

The outer end portion of each lever terminates in a pliant tongue portion 52d which is bent over the outer edge portion of an actuating ring-like disc 60. The actuating disc 60 has circumferentially spaced openings 60a through which upright guide pins 25 extend with a loose fit, the bottom ends of the pins 25 being secured in any suitable manner to the bottom plate 9.

From the foregoing, it will be apparent that when a bid indicating and recording peg 45 is inserted in either of the holes 40a, 41a or 42a, the disc 60 will be engaged by the inner end of the peg and forced downwardly against the outer ends 52c of the lever members, thus fulcruming the lever to raise the projections 55 to eject any pass recording peg or pegs 45 which may be in any of the holes 47. Consequently, upon inserting a peg 45 in either of the holes 40a, 41a or 42a to indicate and record a bid, double or redouble declaration, any peg or pegs which might have been previously placed in any of the holes 47 to denote a "pass," will be automatically ejected.

It will be apparent that by providing my squared center member 50 and pivotally and slideably securing the inner end portions of the respective levers to the respective runs of the center member, it is insured that the levers will operate evenly and in unison regardless of whether the disc 60 imposes greater downward pressure on the outer end portion of one lever than on another, and that the center member is always parallel to the base plate. Also, by thus securing the inner end portions of the levers to the center member, the entire ejecting mechanism is in effect integrated to prevent relative maladjustments of the parts.

Inasmuch as the fulcrum for each of the levers is relatively closely adjacent the outer end of the lever, the inner end portions of the levers will tend, by gravity, to drop back into inoperative position against the bottom plate 9 when the manual pressure on the ring 60 im-

posed by inserting a peg to indicate a bid, double or redouble declaration is relieved. However, to positively insure that the inner ends of the levers will thus drop back into such inoperative position, it is my preference to provide a pair of diametrically opposite leaf springs 65, each of which is secured at one end to the bottom plate 9, as by soldering or in any other suitable manner, and bears downwardly at its other end against a corner portion of the member 50. (See FIGS. 1 and 4.)

While, in the broader aspects of my invention, it is possible to use any number of levers greater than two, I have found that the use of four 90° related levers is decidedly preferable and advantageous. The width of each lever, which preferably is of the order of 1/2", is slightly less than the length of the respective runs 50a of the center member, to prevent the hooked inner end portions of the levers from interfering with each other in the course of downward movement of the center member. Also the center member is of sufficient interior width in relation to the diameter of the center post 16 to allow for the sliding engagement of the hooks with the center member 50 without the hooks contacting the center post.

The pegs 45 may be suitably differently colored to indicate which player is making a declaration. When not in use, the pegs may be inserted in flexible loop members 68 which are secured to the body by having their flanged portions 69 sandwiched between the marginal part 6a of the top portion and the spacer ring 10.

In using my device to record and indicate the sequential declarations of the players, each player will, in the proper order, record his declaration by inserting a peg 45 in the appropriate hole 40a, 41a or 42a, or will record his pass declaration by inserting a peg 45 in the appropriate one of the holes 47. While the position of a bid declaring peg can only be changed by manually removing it and inserting it elsewhere, any peg which may be in one of the pass declaring holes 47 will be automatically ejected by a member 55 when a bid declaration is made in the manner before described.

I claim:

1. In a device for use by bridge players to record and visually indicate successive bid and pass declarations, a hollow body having a top wall carrying bid and pass zone indicia and having perforations therethrough for selectively receiving bid and pass indicating pegs, and indicator pegs for selective engagement in said perforations; means within said body for automatically ejecting a pass indicating peg positioned in either of said perforations in said pass zone in response to engaging a bid indicating peg in either of said perforations in either of said bid zones, said means comprising: four radially arranged, 90° related levers, each fulcrumed between its ends to the bottom wall of said body and having an upward projection adjacent its inner end registering with one of said perforations in said pass zone, a frame-like center member of squared plan section positioned in said body at the inner end portions of said levers, said inner end portions of said respective levers terminating in upwardly and backwardly bent positions slideably and pivotally engaging the respective sides of said center member, and a ring-like disc vertically movably mounted in said body between said top wall and the outer end portions of said levers in position to engage and depress the outer end portions of said levers when engaged by an indicator peg in a perforation in either of said bid zones.

2. The device of claim 1 wherein the outer end portion of each of said levers has a portion engaged over the peripheral edge of said disc.

3. The device of claim 1 wherein the space between said backwardly bent portion of each of said levers and the underlying portion thereof is substantially equal to the thickness of the respective sides of said center member whereby to prevent rocking movement of said center

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member relative to the longitudinal axes of said levers.

4. The device of claim 1 wherein each of said indicator pegs has a downwardly facing stop shoulder adjacent its top end whereby to limit its insertion in said perforations.

5. The device of claim 1 which additionally includes spring means engaging and yieldably urging said center member downwardly against the bottom wall of said body.

6. The device of claim 1 wherein said disc has circumferentially spaced openings therethrough and wherein there are guide pins carried by the bottom wall of said body and extending upwardly through said respective openings.

7. In a device for use by bridge players to record and visually indicate successive bid and pass declarations, a hollow body having a top wall carrying bid and pass zone indicia and having perforations therethrough for selectively receiving bid and pass indicating pegs, and indicator pegs for selective engagement in said perforations; means within said body for automatically ejecting a pass indicating peg positioned in either of said perforations in said pass zone in response to engaging a bid indicating peg in either of said perforations in either of said bid zones, said means comprising: radially ar-

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5 ranged levers of rectangular cross section in said body each fulcrumed between its ends against the bottom wall of said body, a continuous frame-like center member of angular plan section and round cross section positioned in said body at the inner end portions of said levers, said respective levers having backwardly bent inner end portions pivotally and slideably engaging the respective angular portions of said center member, means operative in response to upward movement of the inner end portions of said respective levers to engage and eject a pass indicating peg positioned in either of said perforations in said pass zone, and means operative in response to insertion of an indicator peg in a perforation in either of said bid zones to depress the outer end portions of said levers whereby to cause the inner end portions of said levers to swing towards said top wall.

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DELBERT B. LOWE, *Primary Examiner*.

ANTON O. OECHSLE, *Examiner*.

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