April 6, 1943. C. ROSS 2,315,737

RECORDING DEVICE

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Fig. 1

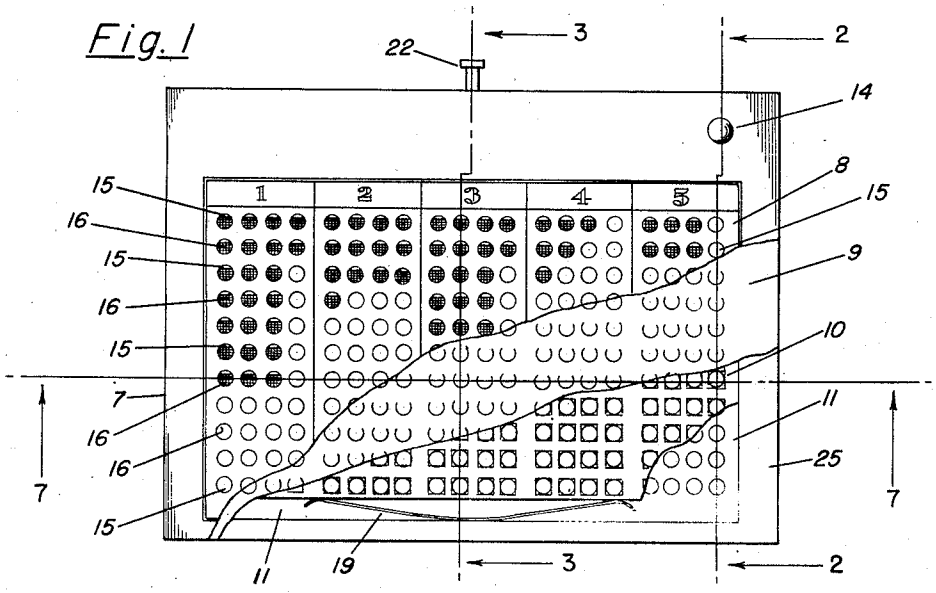


Fig. 2

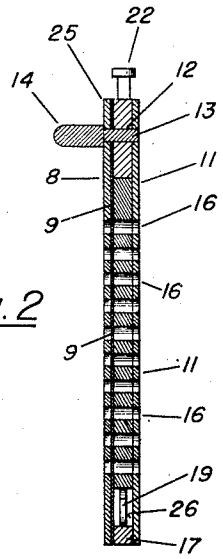


Fig. 3

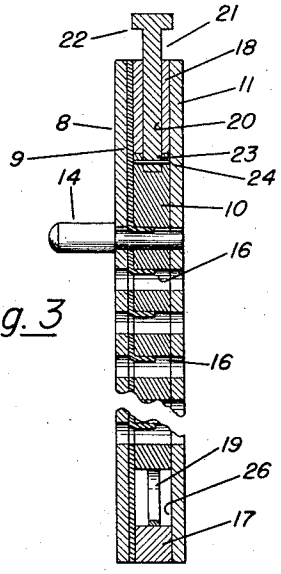


Fig. 4

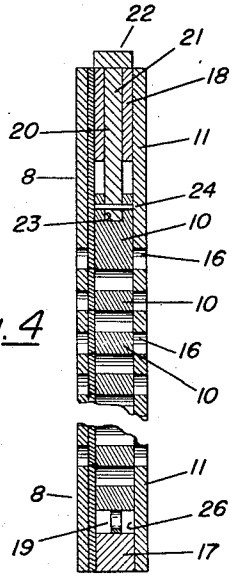


Fig. 5

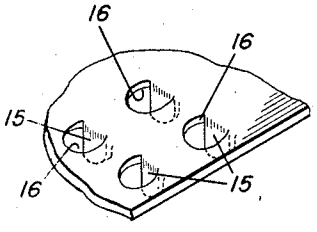
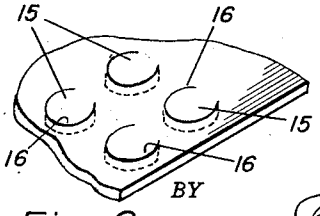


Fig. 6



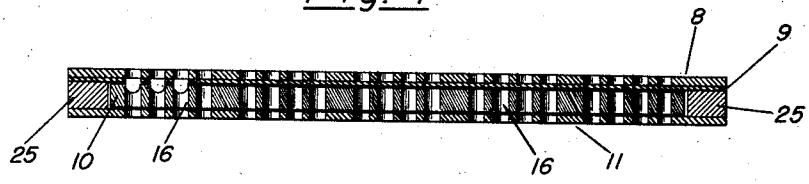
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RECORDING DEVICE

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Fig. 7



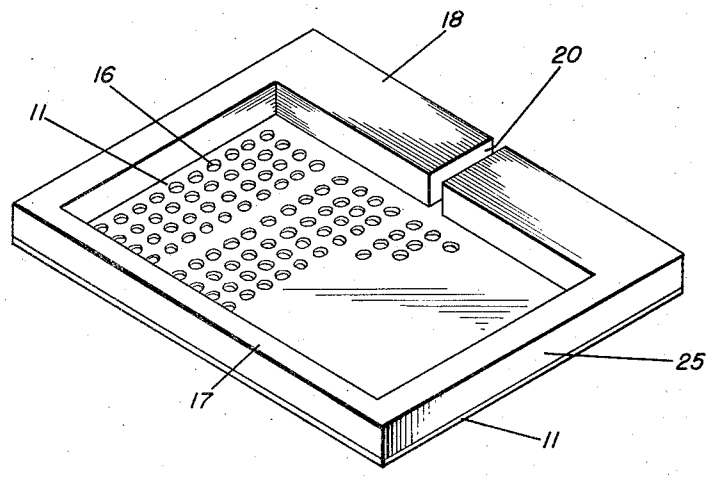


Fig. 8

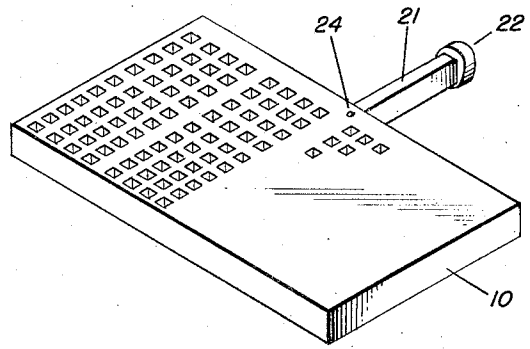


Fig. 9

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Patented Apr. 6, 1943 2,315,737

UNITED STATES PATENT OFFICE

2,315,737

RECORDING DEVICE

Charles Ross, San Diego, Calif., assignor of one-half to Loyd B. Rice, La Jolla, Calif., one-eighth to John M. Sachs and Paul W. Dixon, one-eighth to George Bucknam, and one-sixteenth to Wesley S. Severson, all of San Diego, Calif.

Application August 4, 1941, Serial No. 405,439

6 Claims. (Cl. 116—136)

My invention relates to recording devices, particularly those in which the matter already recorded may be mechanically erased and the device immediately reconditioned for original use, and its principal object is to afford an erasible and inexpensive means for keeping record or tally of a great variety of matters, such as card games, checkers, pool, billiards, baseball, golf, tennis, target practice, piece-work, packing and shipping merchandise, and in fact of any matter, cause or thing where ready enumeration is desired or required. Other objects and advantages of my invention will become apparent from the drawings and as hereinafter described and claimed.

I am aware that in the prior art, there are numerous devices where there are employed placards or sheets of material having weakened spots containing removable disks, which spots are usually arranged in columnar or regular formation and which may be punched out through the use of a punch bar, and inspected by the operator. In all such cases that have come to my knowledge, however, these disks are designed to be removed from the holes from which they are punched, and after removal or displacement are never restored to their original position. In my improved recording device, however, I preferably employ disks that are in the form of lips and that are permanently secured to the sheet forming the openings from which they are punched and to which openings they may be restored by the mechanical means hereinafter described.

Attention is hereby directed to the drawings, illustrating one form of my invention, in which similar numerals of designation refer to similar parts throughout the several views, and in which—

Figure 1 is a front elevation of my device, with parts broken away in order to show the different perforated layers thereof, a number of the perforations being darkened to indicate the disks in punched out positions;

Fig. 2 is a section on line 2—2 of Fig. 1, looking in the direction of the arrows, and showing the disks of the lip punctured sheet in unpunched position;

Fig. 3 is an enlarged section on line 3—3 of Fig. 1, looking in the direction of the arrows, and showing the disks of the lip punctured sheet in punched out position;

Fig. 4 is a section similar to that shown in Fig. 3, the central grating being shown as moved downwardly to restore the disks to their normal unpunched position;

Fig. 5 is a perspective view of a fragment of the lip punctured sheet, showing a number of the disks in the usual position assumed through action of the punch;

Fig. 6 is a perspective view of the said fragment after the disks have been restored to normal unpunched position;

Fig. 7 is an enlarged section on line 7—7 of Fig. 1, looking in the direction of the arrows;

Fig. 8 is an enlarged view in perspective of the frame of my device, showing the face plate, lip puncture sheet, and grating removed therefrom;

Fig. 9 is an enlarged view in perspective of the central grating and handle thereof, showing the same removed from the frame within which it has a limited sliding movement.

Referring to the drawings, upon a frame 25 is mounted the placard 7, which is preferably constructed in four perforated layers, that is, with the face plate 8, the lip punctured sheet 9, the sliding grating 10, and the back plate 11, and being composed of paper, cardboard, or other suitable material. Through the top strip 18 of said frame and all of said layers extends the socket 12, shaped to receive the shank 13 of the punch 14, and serving normally to hold the said punch therein when not in use. Preferably the face plate 8 is supplied with several banks of perforations, each bank of which is separated from the others and numbered as shown, but it may be of any number of perforations and in any grouping that may be desired. Immediately back of such face plate, is the sheet 9, the edges of which are directly secured to the frame 25, and the perforations 16 of which register with the perforations of said face plate. Into each of the perforations 16 of said sheet 9 extends one of the lips 15 preferably integral with the said sheet, and cut therefrom. These lips 15, while shown curvilinear in form, may be of any shape suitable for the purpose, provided that they may be readily bent into the positions shown. The sheet 9 should be made of such material and sufficiently thin to permit the bending of the lips 15 into and out of their respective perforations 16 without undue wear and tear. In sliding contact with side of the sheet 9 opposite to its contact with the face plate 8, and within the open space of the frame 25, is the grating 10, formed of material considerably thicker than the other layers of placard 7, and having perforations registering with the perforations of said layers. Preferably I make these openings of the grating 10 square in form as shown in the drawings, but they may be made in any shape suitable for the purpose. At the rear of the layers 8, 9 and 10, and secured to the rear

of the frame 25, is the back plate 11, similar in construction to the face plate 8, and having similar perforations registering with the openings of said layers.

For the purpose of permitting a limited up and down movement of the grating 10, within the frame 25, I construct the frame with the space 26 between its lower lateral strip 17 and lower edge of said grating, the vertical edges of said grating being in sliding contact with the vertically extending strips of said frame. Preferably through the use of glue or other adhesive, the face plate 8 and sheet 9 are secured at their edges to the front of said frame, and the back plate is secured at its edges to the rear of said frame, sufficient play being permitted for the movement of said grating, and for operative contact of said grating with the lips 15. Extending between the lower edge of the grating 10 and the strip 17 is the compression spring 19, which normally serves to hold the grating in the position shown in Figs. 1, 2 and 3, with the perforations thereof and normally extending into the the other layers. Extending through the opening 20, centrally located in the strip 18, is the rod 21 of the plunger 22, the lower end of which rod extends into and is secured to the socket 23 in the upper port of the grating 10, a pin 24 serving to fasten said rod within said socket. As will be observed from Figs. 3 and 4, the movement downwardly of the plunger 22 will act to force the lips 15 from the position shown in Fig. 5 back into their original position as shown in Fig. 6, and thereby to restore the sheet 9 to unpunched condition, where the lips 15 are flush with the surfaces thereof.

To operate my recording device, as for example in keeping the score or tally of a game played by several players, the punch 14 is removed from its socket 12 as required and is used to press one at a time one of the lips 15 out into the perforated passage 16 adjacent thereto as shown in Fig. 3. Where the face of the placard 7 is divided into numbered sections as shown in Fig. 1, each section may be used by a player for keeping his individual score as indicated by the darkening of the holes. At the close of the game, the device may again be employed for keeping a new record, simply by pressing down the plunger 22 as shown in Fig. 4, in which case the grating will move within the frame 25 to restore again the lips 15 to their unpunched positions. For keeping record or tally of other matters, the use of my device is obvious.

My invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment of such invention as above set forth, is therefore to be considered as illustrative and not restrictive, the scope of my invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What I claim and desire to secure by Letters Patent is:

1. In a recording device, the combination of a placard constructed of a number of connected registering perforated layers, one of said layers having lips cut therefrom adjacent the perforation thereof and normally extending into the same, another of said layers being a grating in sliding contact with said lip carrying layer and operating to force its lips back into normal position when displaced therefrom, and means connected with said placard for operating said grating.

2. In a recording device, the combination of a placard constructed of a number of connected registering perforated layers, one of said layers being in the form of a sheet having lips cut therefrom adjacent to the perforations thereof and normally extending into the same and another of said layers being in the form of a grating in sliding contact with said sheet and positioned to force its lips back into normal position when displaced therefrom, and spring yielding means mounted upon said placard and connected to operate the sliding contact of said grating.

3. In a recording device, the combination of a placard composed of a plurality of connecting registering perforated layers, one of said layers being in the form of a sheet having lips cut therefrom adjacent to the perforations thereof, and normally extending into the same, and another of said layers being in the form of a grating in sliding contact with said sheet and positioned to push its lips back into normal position when displaced therefrom, means for bending said lips out of normal position, and means mounted upon said placard and connected to operate the sliding contact of said grating.

4. In a recording device, the combination of a frame, a sheet containing perforations extending therethrough and being attached to said frame, said sheet having lips extending into said perforations, a grating contacting with said sheet and mounted to slide within said frame and operable to force said lips back into said perforations when displaced therefrom.

5. In a recording device, the combination of a rectangular frame, a sheet containing perforations extending therethrough and being attached to said frame, said sheet having lips cut therefrom extending into said perforations, a grating contacting with the lips of said sheet and mounted to slide within said frame, and spring yielding means connected with said frame and slidably operable to force said lips back into the perforations of said sheet when displaced therefrom.

6. In a recording device, the combination of a rectangular frame, a perforated sheet secured to the front of said frame, said sheet having lips cut therefrom and extending into the perforations thereof, a perforated plate secured to said frame over said sheet, and a perforated plate secured to the back of said frame, the perforations of said sheet and plates registering throughout, a grating mounted to slide within said frame between said perforated sheet and back plate and operating to force said lips back into the perforations of said sheet when displaced therefrom.

CHARLES ROSS.