United States Patent

[11] 3,536,257

[72] Inventor **Ira G. Laws**
Tulsa, Oklahoma

[21] Appl. No. **765,293**
[22] Filed **Oct. 7, 1968**
[45] Patented **Oct. 27, 1970**

[73] Assignee **Seismograph Service Corporation**
Tulsa, Oklahoma
a corporation of Delaware

---

[54] **VOTE RECORDER**
7 Claims, 10 Drawing Figs.

[52] **U.S. Cl.** **235/50**
[51] **Int. Cl.** **G07c 13/00**
[50] **Field of Search** 235/50; 225/93; 346/104, 143; 83/168

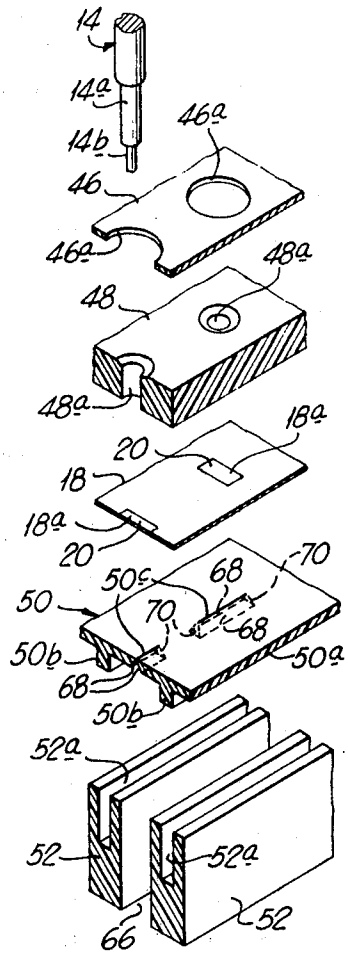
[56] **References Cited**

UNITED STATES PATENTS

3,007,620	11/1961	Laframboise et al.	225/93
3,240,409	3/1966	Harris	235/50X
3,280,482	10/1966	Johnson	225/93X
3,424,376	1/1969	Evans	235/50

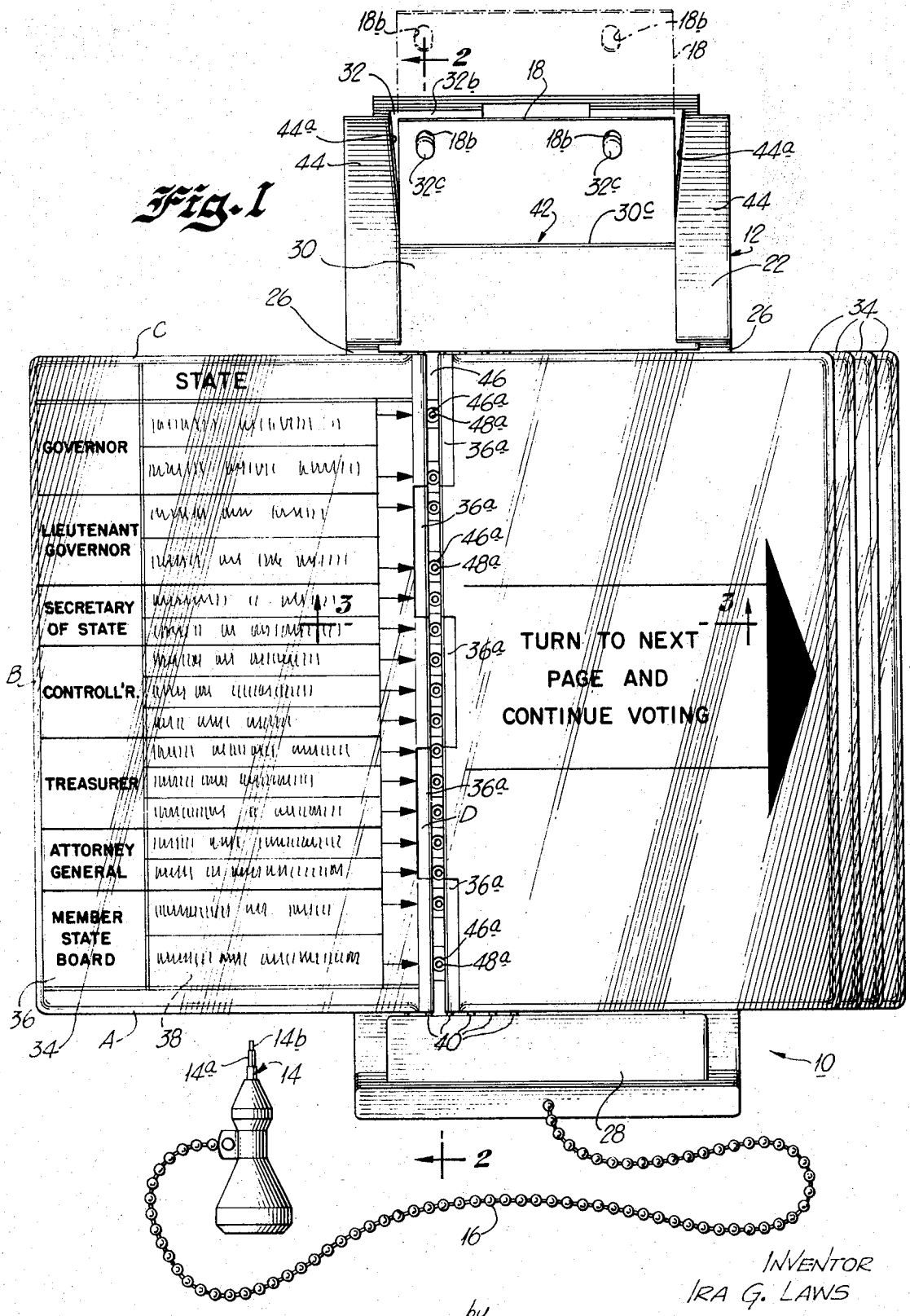
Primary Examiner—Richard B. Wilkinson
Assistant Examiner—Stanley A. Wal
Attorney—Mason, Kolehmainen, Rathburn and Wyss

ABSTRACT: Apparatus for recording selections of a voter made by punching out selected, prescored areas on a machine processable record card with a stylus, comprising support means underlying the card for supporting the same while the voter's selections are being made. The support means comprises a unitary mat formed of a thin sheet of resilient material provided with a plurality of elongated, slotted openings positioned to lie in matched confronting relation beneath the prescored areas of the ballot. The mat includes downwardly depending, integrally formed, longitudinal, stiffening ribs spaced on opposite sides of each row of slots in the mat and the ribs are supported in recesses formed in a supporting framework of the vote recorder.



Sheet 1 of 3

Fig. 1



INVENTOR
IRA G. LAWS

by
Mason, Kolehmainen, Rathburn and Wyss
ATTORNEYS.

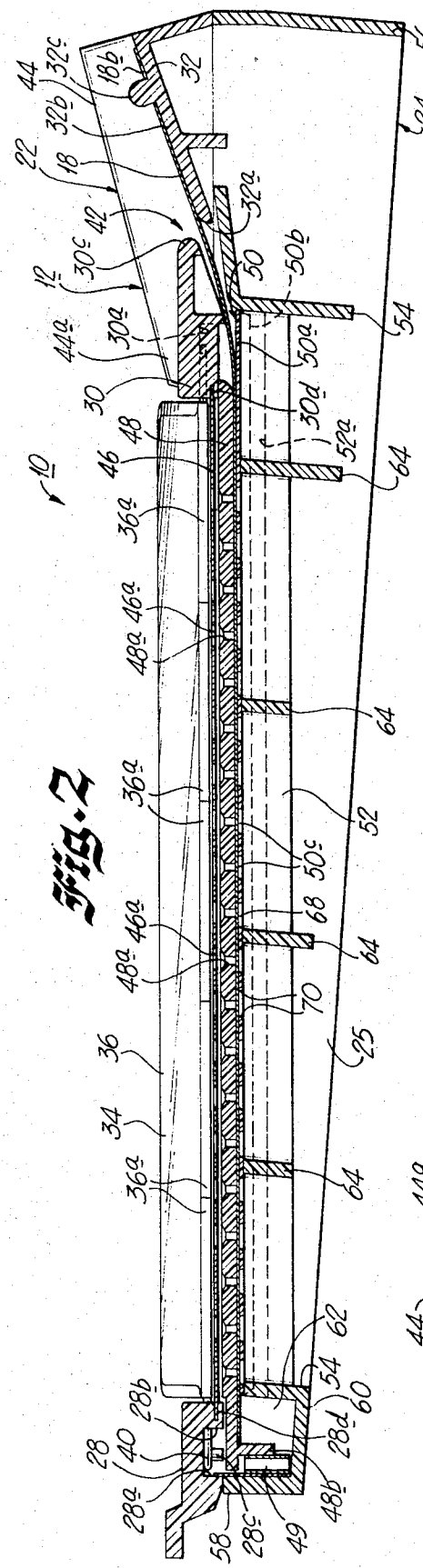


FIG. 2

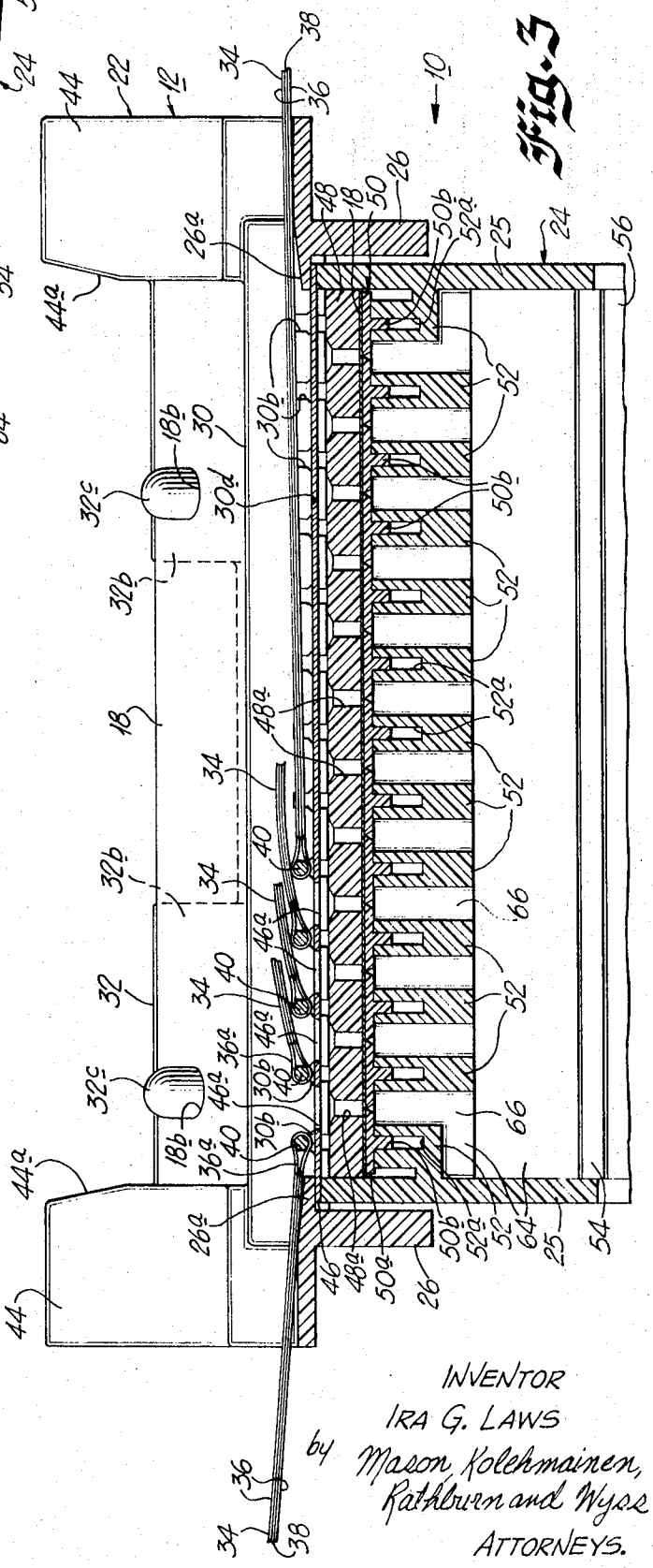


FIG. 3

INVENTOR
IRA G. LAWS
by Mason Kolehmainen, Rathburn and Wyss
ATTORNEYS.

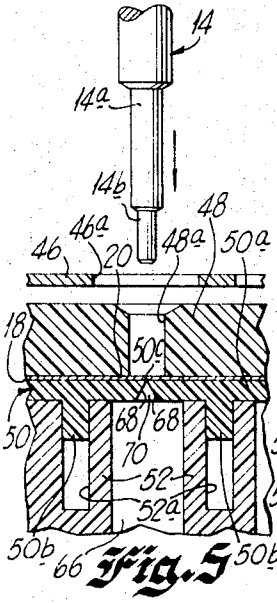


Fig. 5

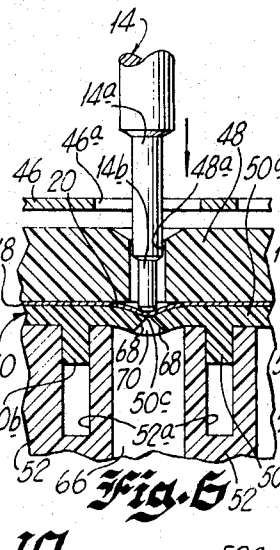


Fig. 6

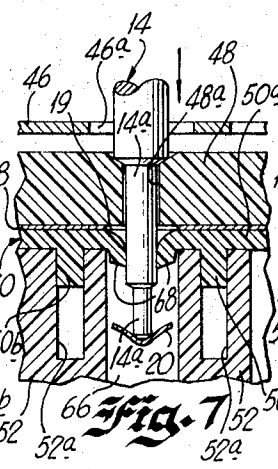


Fig. 7

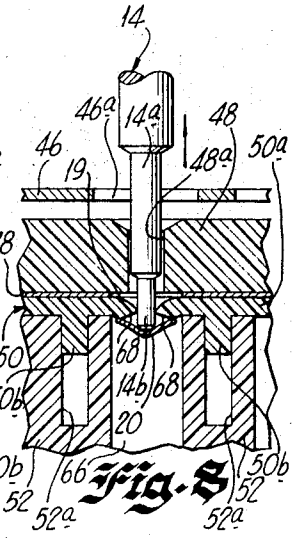


Fig. 8

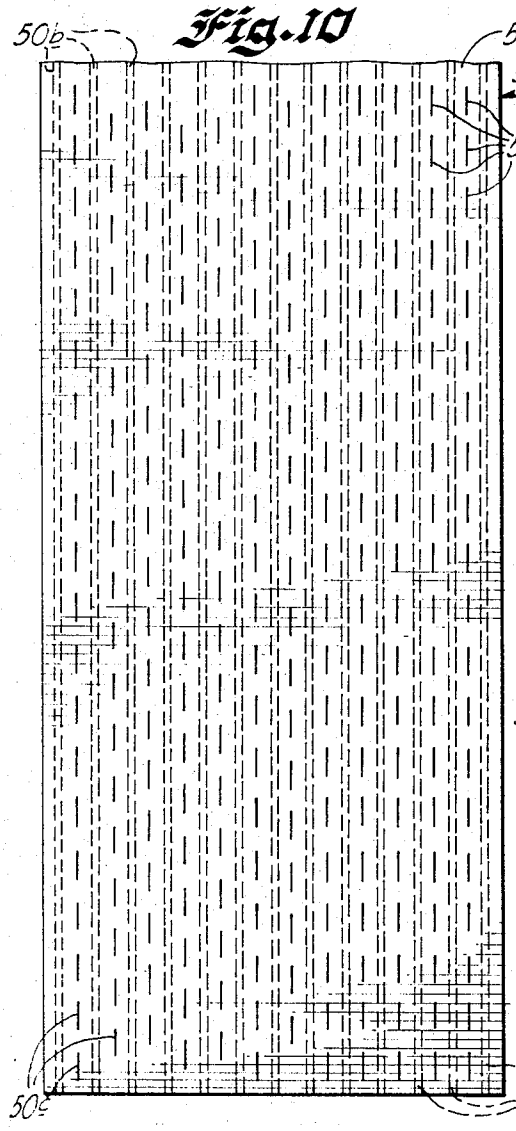


Fig. 10

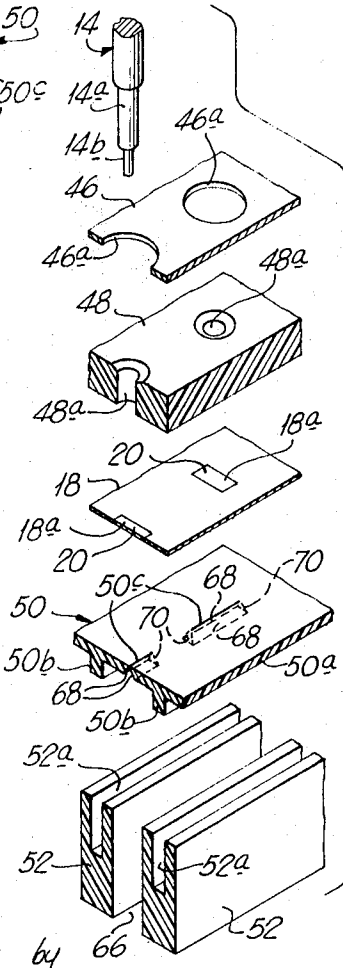


Fig. 4

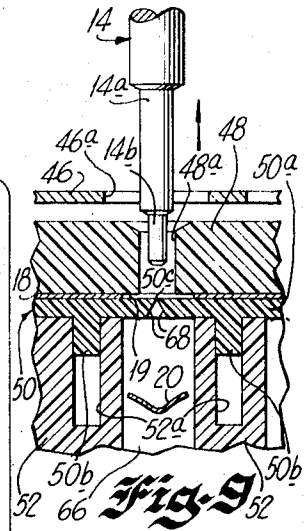


Fig. 9

INVENTOR
IRA G. LAWS

by Mason, Kolehmainen, Rathburn and Wyss
ATTORNEYS.

VOTE RECORDER

The present invention relates to improvements in data registering devices or vote recorders and, more particularly, to vote recorders of the type disclosed in U. S. Pat. No. 3,201,038 and in the commonly assigned copending U.S. Pat. application Ser. No. 574,106, filed Aug. 22, 1966, now U.S. Pat. No. 3,424,376.

One of the problems associated with vote recording devices in which the voter makes his selections by punching out selected, prescored areas on a machine processable ballot is the fact that in order for the recorder to get the needed approval from election officials of the various political bodies around the country, it is necessary to provide means for insuring that the voting selections, as punched in the card, will accurately reflect the voter's wishes when the ballots are counted. It is necessary to insure that the chips or card portions punched out of the selected, prescored areas on the ballot are positively separated from the ballot and retained in the vote recorder so that errors will not be made when processing the ballots because of a chip being only partially removed and remaining attached to the ballot during counting.

In prior vote recording devices, such as the type shown in U.S. Pat. No. 3,240,409 to J. P. Harris, a plurality of elongated strips of resilient material having T-shaped cross sections and arranged in side-by-side relation, have been used to underlie and support machine processable ballots during the voting selection process, and the stylus is extended between the edges of adjacent strips when used to punch out the voter's choices. Because a number of strips are needed for each vote recorder and because the strips are normally glued or cemented in place, the process of installation of the strips is complex, costly and time consuming. In some instances, after the stylus is inserted through a selected prescored area on the card and is then withdrawn, the chip or card portion within the selected prescored area was merely folded downwardly on the card along an edge but still remained attached to the ballot. This often resulted in an inaccurate counting and tabulation of the vote when the cards were later processed or counted in a vote tabulating machine.

It is therefore an object of the present invention to provide a new and improved data registering device or vote recorder of the character described employing new and improved means for insuring that the chips or ballot portions punched from selected prescored areas on a ballot are completely removed and permanently detached from the ballot so that an accurate vote tabulation can be obtained.

Yet another object of the present invention is to provide a new and improved vote recorder of the character described employing novel means for supporting the ballot during the selection or voting process, said means being operable to insure that the chips or ballot portions that are punched from the ballot are wiped off the stylus during retraction thereof and retained in the recorder.

Another object of the present invention is to provide a new and improved supporting and chip retaining, resilient ballot supporting mat which is easily installed and/or replaced in a vote recorder and which has a long and useful life without requiring maintenance or replacement after prolonged periods of heavy usage.

Another object of the present invention is the provision of a new and improved resilient, ballot supporting chip retainer for vote recorders of the character described, having especially designed slots therein for receiving the stylus and insuring that the punched-out chips or ballot portions are not permitted to adhere to the card after the punching has been completed and the stylus withdrawn.

The foregoing and other objects and advantages of the present invention are accomplished in an illustrative embodiment of the invention comprising a vote recorder apparatus for supporting a ballot card during the voting process as selections are made by a voter by punching out selected prescored areas on a machine processable ballot with a stylus. The apparatus includes support means underlying the card for supporting the same while the voting selection is made by downward movement of the stylus through the card. The support means comprises a unitary chip retaining mat formed of thin, resilient sheet material and is provided with a plurality of elongated slotted openings arranged in rows therein to match in underlying, confronting relation, prescored areas on a machine processable ballot. Each slot or opening is defined by a pair of elongated sides which are closely spaced apart adjacent the upper surface of the mat by a distance less than the width of the stylus and slope downwardly and outwardly in opposite directions therefrom toward the lower surface of the mat. Upon downward movement of the stylus through the slots in the mat, the opposite side surfaces defining the slot are deflected downwardly and outwardly and the closely spaced upper edges cling tightly against the stylus. On upward withdrawal of the stylus after the punching operation has been completed, the edges of the slot are drawn inwardly, tightly against the stylus, and positively remove the punched-out chip or ballot portion from the stylus and ballot and retain the chip below the mat. The chip retaining mat thus positively insures that the ballot chip does not remain attached to the ballot after the punching is completed and the stylus is withdrawn.

For a better understanding of the present invention reference should be had to the following detailed description and claims, taken in conjunction with the drawings in which:

FIG. 1 is a top elevational view of a new and improved data registering device or vote recorder constructed in accordance with the features of the present invention;

FIG. 2 is a longitudinal, vertical, sectional view taken substantially along lines 2–2 of FIG. 1;

FIG. 3 is a transverse, vertical, sectional view taken substantially along lines 3–3 of FIG. 2;

FIG. 4 is a fragmentary, exploded perspective view taken through the vote recording device of FIG. 1, with a ballot inserted therein illustrating the stylus in a raised, aligned position ready for punching the ballot to make a selection;

FIGS. 5 through 9 are enlarged, fragmentary, sectional views similar to FIG. 3, showing sequentially the functional cooperation between the stylus and the chip retainer of the vote recorder as a selection is made by a voter in punching out a selected prescored area on a ballot with the stylus and illustrating removal of the chip upon upward withdrawal of the stylus after a selection has been made; and

FIG. 10 is a top plan view of a new and improved ballot supporting chip retaining mat constructed in accordance with the features of the present invention.

Referring now, more particularly, to the drawings, therein is illustrated a data registering device or vote recorder generally referred to by the reference numeral 10 and constructed in accordance with the features of the present invention.

The vote recorder 10 includes a ballot holding framework generally referred to by the numeral 12 and a ballot punching stylus 14 connected to the recorder by a flexible chain 16 to allow the voter to manipulate the stylus as desired when making selections. The ballot holding framework 12 is adapted to receive a machine processable ballot 18 inserted therein and the voter indicates his selections by punching out selected, prescored areas 18*a* (FIG. 4) aligned in parallel rows on the ballot card. A relatively large number of prescored areas 18*a* are provided on the card so that a large general election, wherein many candidates, offices, and issues are to be voted on, can be accommodated. The prescored areas 18*a* are generally rectangular in shape, as shown in FIG. 4, and are formed in a stamping operation in which the perimeter of the area is outlined and the surface indented to provide for a clean, punch out operation when the stylus is used.

As a selection or choice is made by the voter the lower portion of the stylus 14 is forced through the ballot causing a small rectangular chip or card portion to be removed from the ballot 18 leaving a clean, rectangular slot or opening 19 which is counted on a tabulating machine when the ballots are processed after the election. The rectangular chips or punched out portions of the ballot are referred to herein by

reference numeral **20** and, once the chips are punched out of the ballot they are permanently separated from the remaining portion of the ballot and are retained in the interior of the vote recorder.

Preferably, the ballot holder **12** is formed of molded plastic material and includes an upper, generally rectangular framework **22** and a separate, lower base member or frame **24** (FIGS. 2 and 3). The rectangular shaped upper framework **22** includes a pair of longitudinal, opposite side members **26** of angular cross section (FIG. 3), a lower, transverse cross member or end member **28**, an intermediate, transverse cross member **30** and an upper transverse cross member **32**. In order to direct the voter's attention to the proper row of prescored area **18***a* on the ballot card **18** for making his selection, the vote recorder **10** includes a plurality of voting information leaves **34** and a sufficient number of leaves **34** are provided for each election, depending upon the number of candidates, issues, offices, etc., to be voted on by the elector. The leaves **34** are pivotally mounted on the upper framework **22** of the ballot holder **12** and are read in succession by the voter during the voting procedure. After the issues depicted on one leaf have been voted, the next leaf is turned over and voted and the process is continued until the voter has completed all of his selections. Each voting information leaf includes an outer, protective envelope or jacket formed of tough, clear, flexible, plastic material and a voting information sheet **38** is contained in the jacket for directing the voter's attention to the relevant area **18***a* on the ballot. As more fully described in commonly assigned copending U.S. Pat. application Ser. No. 747,607 filed July 25, 1968 the plastic envelopes **36** are preferably heat sealed around three outside edges as at "A", "B", and "C", and are open along a fourth, inside edge "D" so that an appropriate voting information sheet can be inserted in the jacket. After the appropriate voting information sheet has been inserted into a plastic envelope, an elongated hinge pin **40** is threaded into coaxially aligned, tubular socket portions **36***a* formed on alternate, opposite side members of the envelope along the open edge "D". Insertion of the hinge pin closes the envelope and the completed voting information leaf **34** is then pivotally mounted on the upper framework **22** of the ballot holder **12** on a vote recorder. The intermediate cross member **30** of the ballot holder is formed with a recess **30***a* (FIG. 2) on the underside, and the pointed ends of the hinge pins **40** project forwardly into and are accommodated within the recess. The lower end cross member **28** of the ballot holder **12** is formed with a similar recess **28***a* on the underside for receiving the eyelet ends of the pins **40** and the opposite end portions of the pins are supported in spaced, keyhole shaped openings (FIG. 3) formed between downwardly extending projections **28***b* and **30***b*, respectively, formed within the recesses **28***a* and **30***a*. The eyelets of the pins **40** are snapped over separate, downwardly extending, pin projections **28***c* formed in the recess **28***a*, thus preventing the pins from rotating once the leaves **34** are assembled into place and flipped over or turned as the voting proceeds.

In order that a ballot **18** can be easily inserted into the ballot holder **12** into position for voting, the upwardly facing edge **30***c* of the intermediate cross member **30** and the opposite, downwardly facing, lower edge **32***a* of the upper cross member **32** are spaced apart as best shown in FIG. 2, thereby defining a slot or opening **42** for receiving the lower end portion of the ballot **18** as it is inserted downwardly into the vote recorder **10** from the upper end of the ballot holder **12** (FIG. 1). For this purpose, the opposing edge surfaces **30***c* and **32***a* of the respective cross members **30** and **32** are rounded, and the underside of the cross member **30** is curved to guide the ballot into proper place as it is inserted into the vote recorder.

The upwardly facing surface **32***b* of the upper an end cross member **32** is sloped, as shown in FIG. 2, to aid in guiding the insertion of the ballot **18** into the ballot holder **12**, and to prevent lateral movement of the ballot during insertion, the framework **12** includes a pair of upstanding side guide bosses or projections **44** having vertical inside faces adapted to guide the longitudinal side edges of the ballot into the ballot opening **42**. The upper surface **32***b* of the main portion of the upper end cross member **32** is sloped, as shown, at an angle similar to the curved underside of the intermediate cross member **30** and serves to guide the card or ballot **18** through the opening **42** into a fully inserted voting position wherein the voter makes selections by punching out the card with the stylus **14**.

In order to lock and hold the ballot **18** in a fully inserted voting position in the ballot holder **12**, a pair of integrally formed, upstanding locating projections **32***c* are integrally formed to project upwardly from the sloped surface **32***b* of the upper end cross member **32**, and the locating pins are rounded at their upper ends for easy engagement with appropriately located holes or openings **18***b* formed adjacent the upper edge of the ballot card. The openings **18***b* are spaced eccentrically of the longitudinal center line of the ballot card **18** so that the ballot may be locked into place with the pins **32***c* in the openings only when the printed matter on the ballot is facing upwardly, thereby insuring that proper areas are punched to accurately reflect the voter's selections. The voting area of ballot cards presently being used and suitable for machine processing is approximately 3¼ inches in width and 7¼ inches long, and 12 rows of prescored areas **18***a* are provided with 19 or 20 prescored areas or punch locations in each row. The punch locations are arranged in a nonsymmetrical matrix on the ballot with areas **18***a* in one row being staggered from those in an adjacent row.

Accordingly, the ballots can accommodate 235 bits of information or selections and this number is usually more than enough for most elections. Normally, not more than four or five rows of punch out areas are required on the ballot, and in the illustrated embodiment, which is typical, only five rows on the left-hand side of the ballot are being used. Because all of the available rows on a ballot are not normally utilized, and generally in each row that is used not all of the possible spaces in the row are needed, and in order that the unused spaces in a row can be covered so as to not confuse the voter, a masking card **46** is provided having a plurality of circular openings **46***a*, each being located appropriately over a prescored punch out area **18***a* which is to be available to the voter in making his selection. Because the number of rows being used varies from election to election, correspondingly the number and location of the openings **46***a* in the mask **46** varies for each election. The mask **46** is preferably constructed of relatively stiff cardboard or card stock and is perforated appropriately for the election. The mask is placed in position in the vote recorder beneath the ballot information leaves **34** and, as best shown in FIG. 3, opposite longitudinal edges of the mask **46** are sandwiched between inwardly directed flange portions **26***a* formed on the side members **26** of the upper ballot framework **22** and the upper edges of longitudinal side members **25** of the base frame **24**. Opposite ends of the mask are seated in slots **28***d* and **30***d*, respectively, in the upper ballot holding framework cross members **28** and **30**.

Beneath the mask **46** is provided a relatively thick, stylus guiding die member **48** formed of plastic and having a plurality of stylus guiding openings **48***a* therein which are aligned in parallel rows to match the punch out areas **18***a* in the ballot inserted into the vote recorder. The openings **48***a* in the die member **48** are slightly larger in diameter than the intermediate stem portion **14***a* of the stylus and guide the stylus vertically downward through the ballot as shown in FIGS. 5 through 9. The upper end portion of the stylus openings **48***a* are enlarged and frustoconically shaped to aid in initially guiding or centering of the reduced diameter tip end portion **14***b* of the stylus above the opening.

Referring to FIG. 2, the die member **48** is illustrated with the openings **48***a* therein in matched alignment with selected openings **46***a* in the mask **46**. When a ballot **18** is not present in the ballot holder **12**, the die member **48** is biased toward the right or upper end of the holder by a leaf spring **49** positioned at the lower or left-hand end of the ballot holder, and the openings **48***a* in the die member are moved out of alignment

with the openings 46*a* in the mask, indicating that a ballot 18 has not been inserted into place ready for the voting operation. Upon insertion of a ballot into the ballot holder 12 through the main ballot receiving slot or opening 42 at the upper end of the framework, the lower end of the ballot engages a lug 48*b* on the underside of the die member adjacent the lower end and moves the die member downwardly against the force of the spring 49 into a registering position wherein the openings 48*a* are aligned directly beneath the openings 46*a* in the mask. With a ballot thus inserted in the ballot holder 12 and the openings 18*b* at the upper end of the ballot seated on the alignment pins or projections 32*c*, the ballot is positively retained in the proper position for voting with the prescored punch out areas 18*a* in registration beneath the aligned pairs of openings 46*a* and 48*a* in the mask and die member. The ballot itself holds the die member 48 in the voting position (FIG. 2) in registration with mask 46 against the force of the spring 49 and, after voting is completed and the ballot is withdrawn from the ballot holder, the spring 49 again moves the die member out of registration with the mask 46.

In accordance with the present invention, the ballot 18 is supported in a voting position within the ballot holder 12 on a chip retaining mat 50 which is formed from a sheet of resilient material. As shown in FIG. 10, the chip retaining mat has a planar upper portion 50*a* and is formed of a plastic material, such as polyethylene or neoprene, having a durometer hardness preferably in the range of 65 to 80. The chip retaining mat is of rectangular shape and is substantially equal in size to the voting portion of the ballot 18, which it underlies. The lower base framework 24 of the ballot holder 12 provides support for the chip retaining mat 50 and for this purpose includes a plurality of longitudinally extending, spaced apart ribs 52 parallel to the side members 25 and integrally joined at opposite ends with transverse stiffening ribs 54 (FIG. 2). Preferably, the base framework 24 is formed of molded plastic material and includes an upper end cross member 56 and a lower end cross member 58 integrally joined with the lower end stiffening rib 54 by a bottom wall member 60. The members 54, 58, and 60 form a hollow area 62 for housing the spring 49 which biases the lower end of the die member 48 toward the opposite end of the die supporting frame. Intermediate the end cross members 54, the ribs 52 are stiffened by transverse ribs 64, best shown in FIG. 2, with the result that the bottom base framework 24 of the ballot holder provides a strong, gridlike structure for supporting the resilient chip retaining mat 50 thereon.

The support ribs 52 are spaced apart and lie intermediate the rows of die openings 48*a* in the die member 48, so that open areas 66 are provided between the ribs to accommodate the chips 20 punched out of the ballot 18. Each rib 52 is formed with a longitudinally extending recess 52*a* adjacent the upper edge thereof for receiving a downwardly depending stiffening flange 50*b* integrally formed on the underside of the chip retaining mat 50. It will thus be seen that the mat is firmly supported by the stiffening ribs 52 and is locked against lateral movement therein by the engagement of the downwardly depending flanges 50*b* which are preferably adhesively secured within the recesses 52*a* in the supporting framework ribs.

The spaced, parallel flanges 50*b* on the underside of the chip retaining mat 50 are preferably integrally formed with the body of the mat, and the flanges are spaced to lie midway between the adjacent rows of die openings 48*a*, in order that the stylus 14 can pass freely through the ballot into the areas 66 between the support ribs 52 without interference.

In accordance with the present invention, the body 50*a* of the chip retaining mat is constructed to be approximately one-sixteenth inch thick, and the lateral spacing between the stiffening flanges 50*b* was approximately one-fourth inch. Each row or area on the chip retaining mat between each pair of flanges 50*b* is formed with a plurality of elongated slits or openings 50*c*, each opening positioned to underlie a prescored area 18*a* on a ballot when it is placed in the vote recorder and locked in voting position therein.

As best shown in FIGS. 4 through 10, the slits 50*c* extend longitudinally of the chip retaining mat and lie in parallel rows spaced midway between each pair of adjacent flanges 50*b* on the underside of the chip mat. Each slit or opening 50*c* is disposed to lie at approximately a right angle with the longitudinal or wider dimension of the associated prescored rectangular area 18*a* on the ballot 18, and each slit 50*c* includes longitudinal side surfaces 68 (FIGS. 4—9) which slope normally downwardly and outwardly from the top surface of the chip mat to a maximum spacing at the bottom surface of the mat intermediate the stiffening flanges 50*b*. As best shown in FIG. 4, opposite ends of the slits 50*c* are formed by parallel triangularly shaped end surfaces 70.

Referring to FIGS. 5 through 9, when the voter decides on a candidate, office, or issue, the stylus 14 is grasped and centered above the appropriate opening 46*a* in the mask 46 and the concentrically aligned opening 48*a* in the die 48. The stylus is then moved downwardly from the position of FIG. 5 to that of FIG. 6 wherein the lower tip portion 14*b* begins to engage a chip 20 defined within a selected prescored area 18*a* on the ballot 18. Further downward movement of the stylus causes the chip 20 to be punched downwardly and removed cleanly from the ballot in the manner shown in FIG. 7. The chip is carried along on the tip of the stylus into the area 66 between an adjacent pair of supporting ribs 52, and normally falls from the stylus tip into the bottom of the ballot holder.

The chip mat 50 is resilient and absorbs the force of the stylus, permitting the chip 20 to be readily severed from the remaining portion of the ballot 18 and carried downwardly with the stylus through the slit or opening 50*c*. During this process the opposite longitudinal side surfaces 68 of the selected slit or opening 50*c* are deflected downwardly by the stylus and the upper corners cling tightly against the stylus, as shown in FIG. 7. Upon upward withdrawal of the stylus, as illustrated in FIG. 8, if the chip 20 is still retained on the tip portion of the stylus, the adjacent edge surfaces 68 of the slit or opening 50*c* cling closely to the stylus and effectively wipe the chip from the stylus as the stylus is withdrawn upwardly. When this occurs, the chip 20 falls freely downwardly in the space 66 into the bottom of the ballot holder 12.

Because the surfaces 68, which define the opposite longitudinal sides of each slit or opening 50*c* the chip mat are sloped downwardly and outwardly, as shown, there is virtually no possibility that a chip can remain on the stylus after the stylus is withdrawn upwardly of the chip mat. Moreover, there is no possibility that a chip 20 will be retained within a slit or opening 50*c* after the stylus is withdrawn therefrom because of the downwardly and outwardly sloping wall surfaces 68.

In prior stylus operated voting devices, often a number of punched out chips collected and lodged in slots or openings in a ballot supporting structure and, accordingly, insertion of ballots into the devices was sometimes difficult. Tests conducted on devices constructed in accordance with the invention revealed that after a large number of punches with a stylus have been completed, no problems have arisen because of a failure to separate or punch out the chips 20 from the ballot and few, if any, chips 20 were retained in an opening or slit 50*c* in the chip mat after the perforations were completed on the ballot and the stylus withdrawn. The present invention simplifies the construction and programming of a vote recorder for an election in that only a single unitary chip retaining mat is required, rather than separate chip retaining devices for each prescored area 18a or row of prescored areas on the ballot. Moreover, it is virtually impossible for a chip 20 to be carried upwardly with the stylus 14 after it has been punched out of and separated from the remaining portion of a ballot, thus making operation of the vote recorder of the invention extremely reliable and excellently suited for use in elections.

While there has been illustrated and described one embodiment of the present invention, it will be appreciated that numerous changes and modifications will occur to those skilled in the art, and it is intended in the appended claims to cover all

those changes and modifications which fall within the true spirit and scope of the present invention.

I claim:

1. Apparatus for recording selections made by punching out selected, prescored areas on a card with a stylus comprising support means underlying said card for supporting the same while selections are punched out downwardly of said card with said stylus, said support means comprising a mat formed of a thin unitary sheet of resilient material and provided with a plurality of elongated, slotted openings therein positioned in matched confronting relation with the prescored areas on said card, each of said openings being defined by opposite edge surfaces closely spaced apart adjacent the upper surface of said mat by a distance less than the width of said stylus and sloping downwardly and outwardly in opposite directions toward the lower surface of said mat whereby downward movement of said stylus through a prescored area of said card deflects said closely spaced edge surfaces downwardly and outwardly, and upward retraction of said stylus from an opening in said mat causes said edge surfaces to be drawn tightly against said stylus causing the punched out portion of the card to be retained below said mat, said elongated slotted openings in said mat aligned in laterally spaced rows in spaced apart, end-to-end relation, said mat including integrally formed, downwardly extending, longitudinal stiffening ribs spaced between said rows.

2. The apparatus of claim 1 wherein said support means includes a plurality of parallel, spaced apart, longitudinal support members underlying said mat, each support member being formed of rigid material and including an elongated upwardly facing recess therein receiving a stiffening rib of said mat.

3. The apparatus of claim 2 wherein said support members are U-shaped transverse cross section and said ribs of said mat are adhesively secured in the recesses of said support members.

4. The apparatus of claim 1 wherein said mat is formed of extruded plastic material having a durometer hardness in the range of 65 to 80.

5. The chip retaining mat of claim 1 wherein said slotted openings comprise elongated slits arranged in spaced apart, end-to-end relation along laterally spaced, parallel rows and wherein said integrally formed, stiffening ribs are in parallel alignment spaced between said rows of slits.

6. The chip retaining mat of claim 5 wherein said deflectable opposite edge surfaces of each slit are spaced apart along said upper surface of said mat by a distance substantially less than the width of said stylus and slope downwardly and oppositely outward toward the lower surface of said mat.

7. The chip retaining mat of claim 6 wherein each slit is terminated at opposite ends by substantially triangular shaped end surfaces extending generally normal to the upper surface of said mat.