Sept. 28, 1954 J. S. NEILL 2,690,017

MARKING RACK FOR BUSINESS FORMS

Filed March 26, 1952 3 Sheets-Sheet 1

FIG. 1.

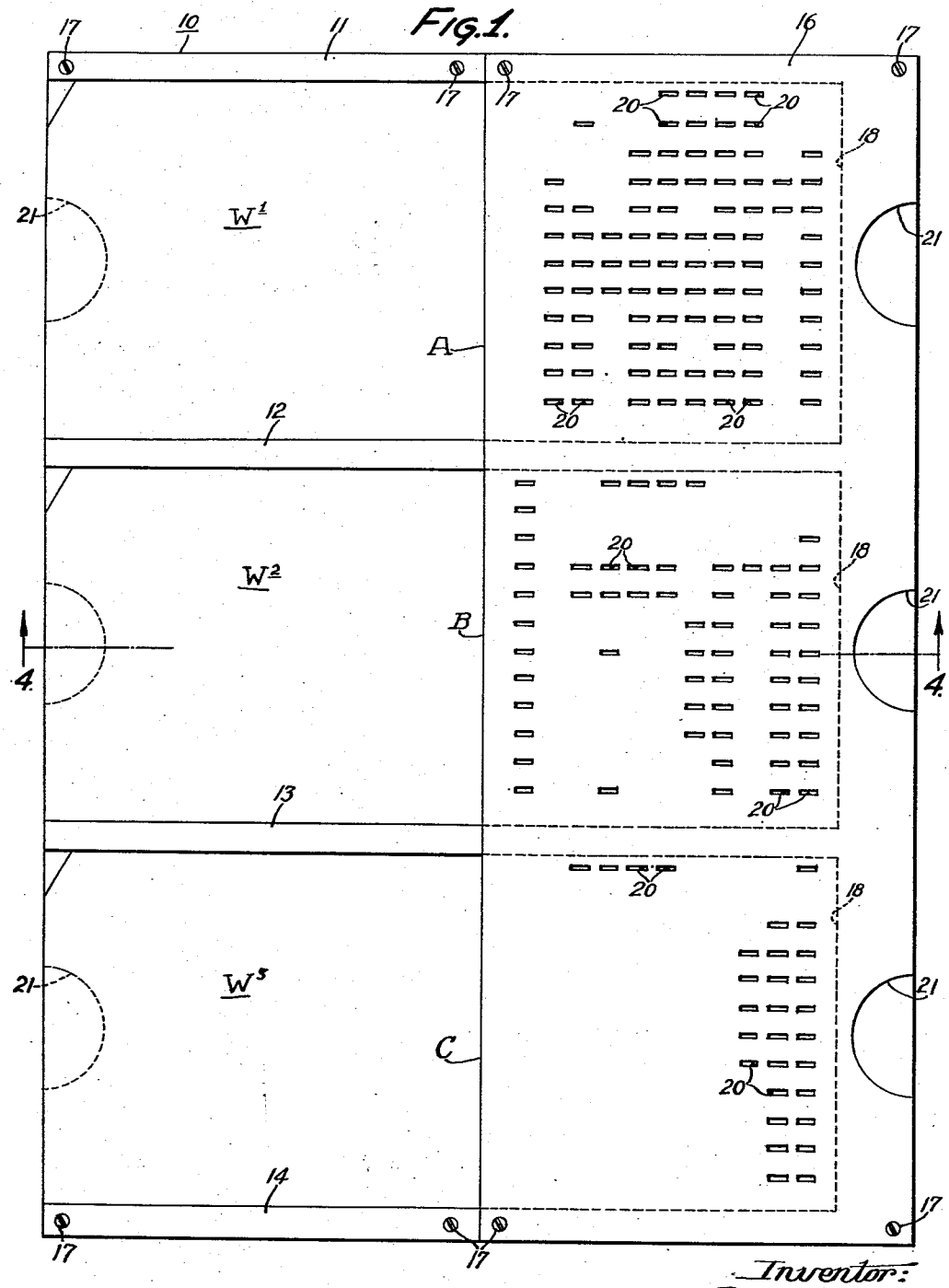

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Fig. 2.

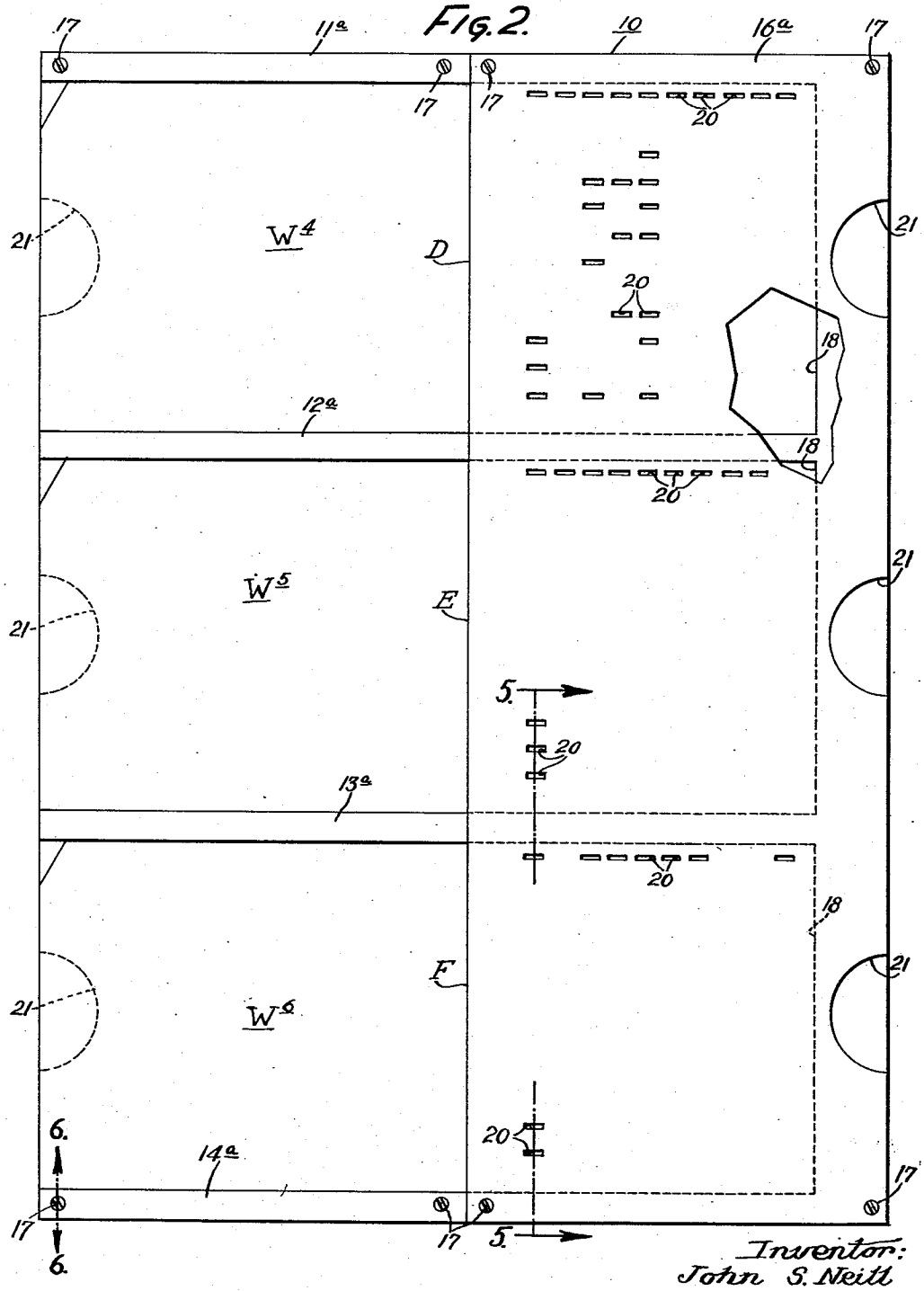

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FIG. 3.

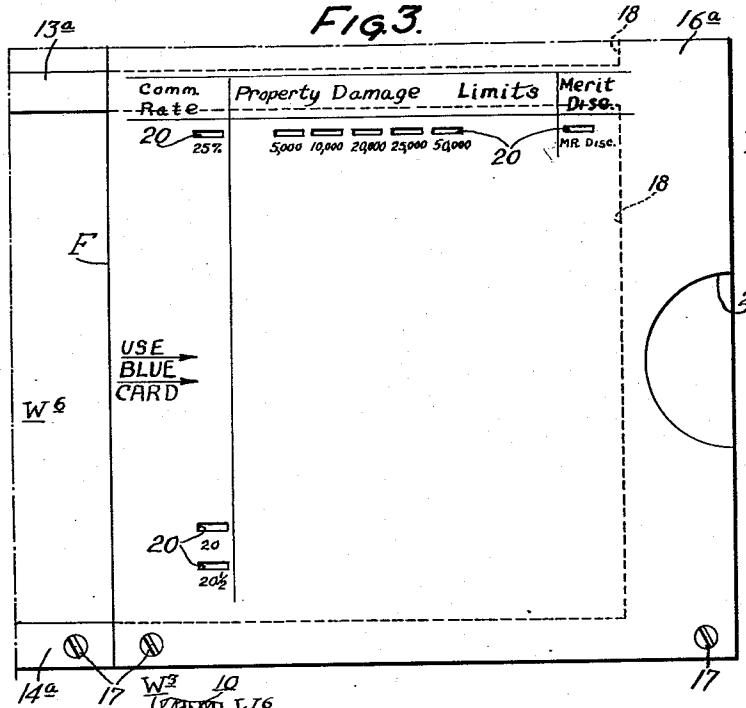


FIG. 5.

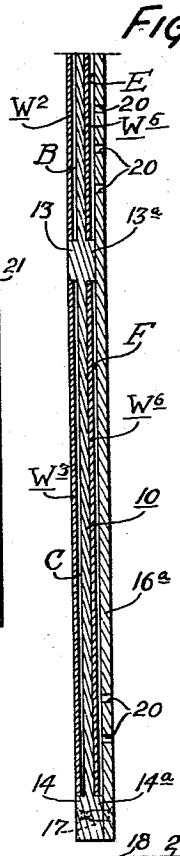


FIG. 6.

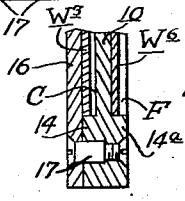


FIG. 4.

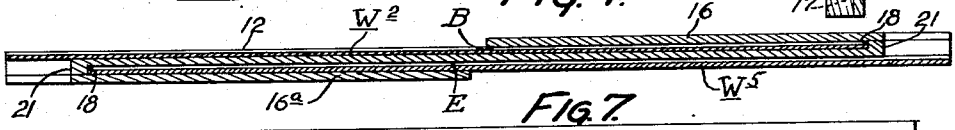
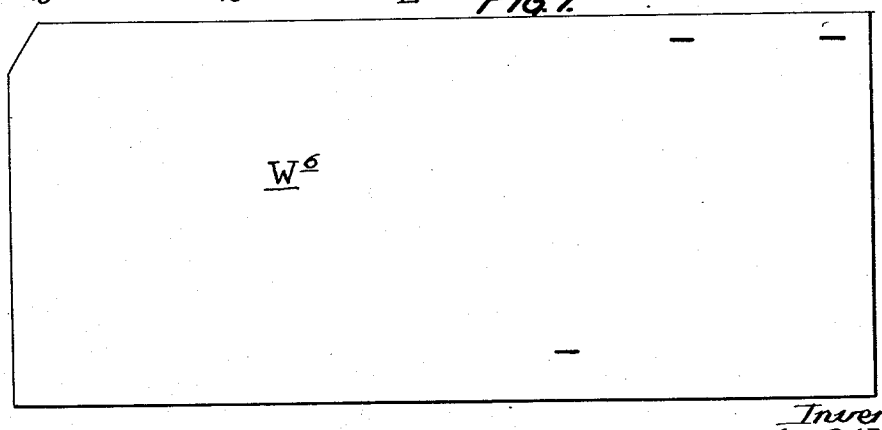


FIG. 7.



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UNITED STATES PATENT OFFICE

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MARKING RACK FOR BUSINESS FORMS

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Application March 26, 1952, Serial No. 278,732

1 Claim. (Cl. 33—174)

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This invention relates to a rack assembly having a template by means of which suitable markings can be conveniently and quickly made on pieces of cardboard such as standard business forms.

It is necessary in marking forms or papers for use in automatic business tabulating and calculating machines to make individual lines or marks on the cards as required. I have found that it is extremely more efficient and accurate to employ a rack for the cards which has means for accurately aligning one or more cards with certain slots or apertures in a template superimposed over part of the card. In the preferred form, this template forms the top of a pocket into which the individual cards are inserted.

For casualty insurance, it is desirable to use six different cards in the various bookkeeping and accounting procedures. Each of these cards can be quickly and accurately made up by means of the present invention, thereby greatly assisting the insurance salesman or adjustor as well as greatly simplifying office procedures with regard to renewals.

A primary object of the invention, therefore, is to provide a stiff backed holder or rack having a plurality of pockets therein and suitable apertures in one wall of the pockets through which a card, accurately registered in the pocket may be marked.

A further object of the invention is to provide a rack having a plurality of pockets therein and a removable slotted template for said board, and means for accurately registering the cards with the slots in the template.

A further object of the invention is to provide a convenient holder for a plurality of cards to be accurately marked with a pencil through a template.

Further objects will be apparent from the specification and drawings in which:

Fig. 1 is a front view of my improved business form rack and template;

Fig. 2 is a back view of the structure of Fig. 1;

Fig. 3 is an enlarged detail of one of the pockets shown in Fig. 2;

Fig. 4 is an enlarged sectional view as seen at 4—4 of Fig. 1;

Fig. 5 is an enlarged sectional detail as seen at 5—5 of Fig. 2;

Fig. 6 is an enlarged sectional detail as seen at 6—6 of Fig. 2; and

Fig. 7 is a view showing one of the conventional business form cards for use with the present invention.

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The invention comprises essentially the provision of a rigid board or plate having a plurality of guiding edges for positioning the conventional business form card such as used in IBM machines. The guides are so spaced with respect to each other that the cards are accurately retained and held in a predetermined position in a pocket which, in the preferred embodiment, is formed by a detachable template secured along one edge of the board. The depth of the pocket is also critical in providing accurate registry for the cards with the template. For this purpose, the interior end of the pocket is in spaced relation with the edge of the board so that when the cards are flush with the edge and positioned between the guides, they are accurately registered with one or more apertures in the template.

Referring now more particularly to the drawings, the base or body member 10 of my invention is provided with eight guides, 11, 12, 13, 14 and 11*a*, 12*a*, 13*a*, 14*a*. The upper guides 11, 11*a* extend across the top of board 10, the lower guides 14, 14*a* extend across the bottom of the board, and the intermediate guides 12, 12*a*, 13, 13*a* extend intermediately across the board.

It will be understood that the guides on either side of the board are substantially the same. They are, however, separately identified in the interests of clarity. All of the guides may be formed integrally with board 10, detachably secured to it, or adhesively secured thereto. In the event that the board is fabricated from a synthetic plastic material, it will be desirable to mold the guides integrally therewith. The spacing between the guides on the front and the back of the board is accurately controlled so that the conventional IBM card W is freely slidable therebetween, but the clearance between the guides does not permit substantial transverse movement of the card W when positioned on the board between two guides.

At the right hand edge of each side of the board, I provide removable templates 16 and 16*a*, detachably secured by means of hollow threaded bolts 17, 17. These templates extend across the guides 11–14 and 11*a*–14*a* respectively so that there are thin pockets formed at one edge of the board into which the cards W may be inserted. Each pocket has a stop on end wall 18 which is in spaced relation to the opposite edge of the body 10 with the result that when the cards are completely inserted into the pockets against the stops 18 the ends of the cards are

flush with the left hand edge of the body member 10 as shown in Fig. 1.

Each template 16, 16a is provided with a plurality of shaped apertures 20, 20 arranged in accordance with the information which must be recorded on each card W. It will be understood that the use and marking of these cards is well-known in the art and that it comprises merely the depositing of a graphite line in a control area on the card. The electrical conductivity of the graphite deposit in turn actuates various calculating and tabulating machines so that the data carried by each card can be combined or the cards can also be suitably punched to indicate the nature of the data supplied. In the preferred embodiment, it is contemplated that the templates will be formed of a comparatively thin synthetic plastic material in which the apertures 20 are molded or punched. However, it is possible to utilize a thin sheet of metal for the templates or a screen completely covered with suitable apertures, some of which are blocked out. In any event, the size and shape of the apertures is controlled by the nature of the calculating machines with which the cards are intended to be used. The above mentioned IBM machines require a thin line which is conveniently formed and positioned by means of slots 20. However, other machines, for example, the Remington-Rand, may utilize dots or circles.

The cards are conveniently distinguished by means of different colors, and I provide finger notches, 21, 21 at the edge of the board 10 so that each card may be conveniently removed when the necessary notations have been made. The preferred embodiment shown and described herewith is intended primarily for use in writing renewal policies for casualty automobile insurance. It will be understood, however, that any number of pockets may be used in the event that there are more or less than six cards per set, and that the pockets may of course be of any desired size or shape.

Referring to Fig. 3, each template, in addition to having the proper apertures in the correct registered location with respect to each card will be provided with suitable indicia or notations so that the operator can determine which apertures should be used in any given case. By way of example, let it be assumed that pocket A in Fig. 1 is used for the name card W1. This card is usually pre-punched to give the name, address, and other required information concerning the insured. It may be assumed, for the purposes of description herein, that the apertures on the templates are arranged in vertical columns from left to right. For pocket A there are no apertures in column 1. Columns 2 and 3 are used to designate the particular car covered by the policy and to indicate which car of a group is insured. For this purpose column 3 is used to denote the total number of cars owned by the particular insured, so that columns 2 and 3, when suitably marked, record for example that the present car is number 2 of a total of 5 cars. Column 4 is used to give the year of the car, and columns 6–9 suitably marked with groups of letters, are used to record the make of the car. Columns 10 and 11 are used to record the number of months the particular car has been owned by the present insured. Assuming that card W1 has been inserted in pocket A, it will be understood that simply by drawing lines through the correct apertures in the various columns described above, this information can be transferred to the card for use in calculating machines.

Card W2 pertaining to comprehensive and/or fire and theft coverage is used in pocket B. Here column 1 contains the rating symbols indicating the value of the car. Column 2 is blank. Column 3 is used for the coverage code; namely, cash value or stated amount. The top row in columns 4–7 gives the age group of the car. Column 4 gives the tax; column 5, the form code; column 6, the encumberance code; and columns 7 and 8, the class code. Columns 9–11 indicate the premium in dollars.

Collision coverage card W3 is used in pocket C, where columns 3–6 designate the amount deductible. The top row of column 11 gives the discount, and the lower rows in columns 9–11 are marked to record the premium in dollars.

Pocket D, in which card W4 is used, pertains to bodily injury liability. Column 2 is used for the commision rates; columns 3–10 in the top row show the bodily injury limits. Column 11 in the top row gives the discount; column 4, the tax; and columns 5–6 indicate the merit code rating.

Pocket E, for use with card W5, records data concerning medical payments. Column 2 indicates the commission rate, and columns 3–10 are marked for the medical coverage limits.

Pocket F, which is shown in Fig. 3 on a sufficiently large scale to illustrate the manner in which the individual apertures 20, 20 may be marked, is used for recording property damage data on card W6. Here, column 2 is for the commission rate, which may be either 20%, 20½%, or 25%. Columns 4–8 are marked $5,000; $10,000; $20,000; $25,000; and $50,000 respectively to show property damage limits. Column 11 is marked merit discount. Fig. 3 shows the card W6 after it has been marked in pocket F, and the position of the lead pencil lines correspond with the particular apertures which may have been applicable to the policy in question. This also illustrates the fact that it is not necessary to print any subject matter on the cards other than that necessary to identify them.

I will thus be clear that the apertures are selectively used to provide the machine controlling marks at the correct locations on the cards W to convey the information pertinent to all phases of a particular policy. After the cards have been suitably marked, they are removed from the pockets A–F and stacked in a predetermined order for running through the calculating and tabulating machines.

The ability to properly collate and accurately mark a set of calculator cards as described above removes inaccuracies in preparing insurance policies and enables the business of writing renewal policies to be done quickly and efficiently.

Having thus described my invention, I claim:

A rack assembly for transferring data to business forms of the type used in graphite-sensitive calculating machines and having a plurality of control areas, comprising a flat body member, four spaced parallel longitudinal guide walls integrally connected to said body member, the spacing between said guide walls being sufficient to provide a free sliding fit for a business form, a template spanning said guide walls in spaced parallel relation to said body member, means to detachably secure said template to said body member to form three pockets transversely of the rack, a stop in each pocket positioning the form longitudinally in said pocket, and means defining a plurality of apertures in said template each

in predetermined spaced relation to said guides and said end stop, whereby each said aperture registers with a predetermined control area of the form the apertures in the first of said pockets registering with a preselected group of control areas of the form, the apertures in the second of said pockets registering with a different preselected group of control areas, and the apertures in the third of said pockets registering with a third preselected group of control areas.

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