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CARD-HOLDING INDICATING DEVICE

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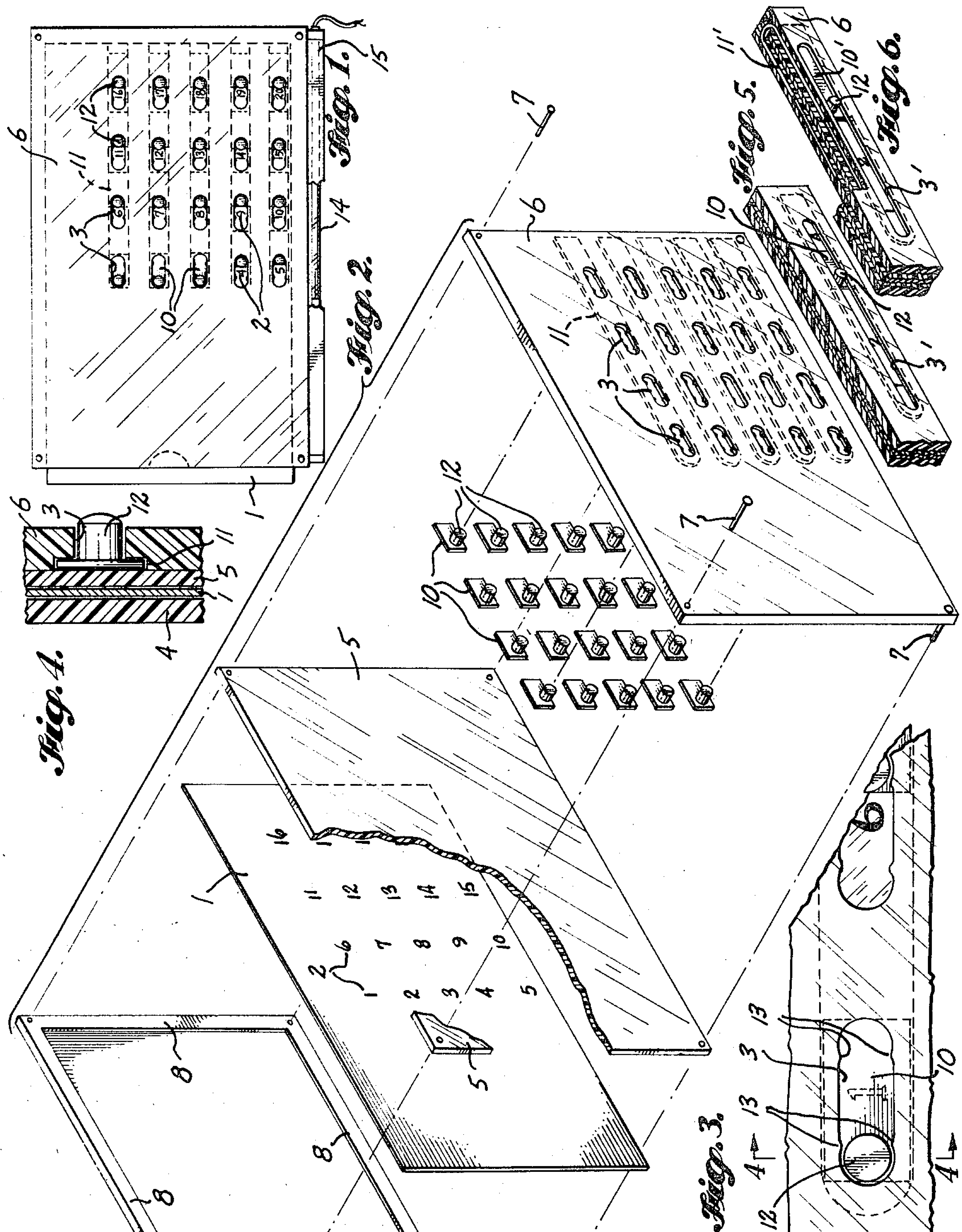


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# CARD-HOLDING INDICATING DEVICE

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## ABSTRACT OF THE DISCLOSURE

Three layers secured in overlying registry form a laminated body of rectangular shape. Inner marginal ribs around three sides of a back layer define a card-receiving cavity adjacent to a transparent intermediate layer. At the side of the transparent intermediate layer opposite the back layer, a face layer has parallel grooves in its side adjacent to the transparent intermediate layer in which sliders are received; and such sliders have knobs **12** projecting through elongated slots in the face layer in registry with the grooves. The slots have their lengths extending lengthwise of the grooves and are spaced apart lengthwise of the grooves.

The card-holding indicating device will provide desired indications relative to indicia on cards for the purpose of providing reminders, indications of accomplishments, procedure checking, scheduling information, or educational or recreational data.

A principal object is to provide a card-holding indicating device which is attractive, compact and easy to use, not requiring any marking instrument.

It is also an object to provide such a device which is very versatile, enabling several types of cards intended.

A further object is to provide such a card-holding indicating device which can be constructed very economically, if desired, or which can be made of more durable and permanent construction. An incidental object is to provide such a device which can be manufactured in different ways, such as by being molded from plastic, or by being fabricated from sheet material.

The foregoing objects can be accomplished by a card-holding indicating device in which the sliders are movable along such slots to reveal, or to conceal, indicia on a card in the card-holding cavity, depending upon the purpose for which it is desired to expose, or conceal, the indicia borne by such a card.

FIGURE 1 is a face view of the card-holding indicating device and FIGURE 2 is a top perspective of the card-holding device showing its parts in exploded relationship, and having portions broken away.

FIGURE 3 is an enlarged detail of a portion of the face of the device and FIGURE 4 is a transverse section through a portion of the device on line **4—4** of FIGURE 3.

FIGURE 5 is a top perspective of a fragmentary portion of the device, showing an alternative type of construction, and FIGURE 6 is a top perspective of a similar portion of the device illustrating still another type of construction.

While the indicating device shown in FIGURES 1 to 4, inclusive, can be of the type of construction shown in the drawings, such a device can accommodate cards providing different functions and having different purposes. It will be understood, therefore, that the card **1** shown in connection with this device is illustrated as having only representative indicia in the form of columns and rows of numbers **2** arranged in positions corresponding to window slots **3**.

The device is constructed as a laminated body including a backing layer **4**, which may be either opaque or



transparent, an intermediate layer **5** which is transparent, and a face layer **6** which is transparent over card-indicia areas. These layers are secured in overlying registry, such as by being pinned, or bonded, together. Pins in the form of rivets **7** can be provided one in each corner to penetrate the layers and secure them together. Alternatively, the contacting base portions of the layers can be bonded together by a suitable adhesive so that a unitary structure is formed.

Between the backing layer **4** and the intermediate layer **5** a cavity is formed which will accommodate the card **1**. The adjacent surfaces of such layers are spaced apart a distance slightly exceeding the thickness of the card by spacer means which conveniently may be marginal rib means provided on one or the other, or both, of such layers. In the particular construction shown the marginal ribs **8** extending along three edges of the backing layer **4** engage the adjacent surface of the intermediate layer **5** to constitute such spacing means. The edge **9** of the backing layer **4** does not have a rib, so that a space is provided between this edge of the backing sheet and the corresponding edge of the intermediate layer **5** to provide a slot through which the card **1** can be inserted into the cavity between the backing layer and the intermediate layer.

It may be desirable to have portions of the card **1** visible in addition to those portions in registry with window slots **3**. For such purpose it is necessary for both of the layers **5** and **6** to be transparent in registering areas corresponding to the portions of card **1** which are to be visible, and, as mentioned, layer **5** is preferably entirely transparent. The important consideration, however, is that means be provided to obscure, at will, portions of the indicia **2** on the card **1**, which are located in registry with the respective window slots **3**. Observation of such indicia through the window slots is controlled by providing opaque sliders **10**, one for each slot **3**, which can be moved relative to such slots for covering and uncovering portions of such slots.

To accommodate each slider in registry with a portion or all of a window slot **3**, a channel **11** is provided behind the respective slot in which such slider is slidably received. Such channel preferably is provided in one of the adjacent faces of the layers **5** and **6**, and in the drawing the channels **11** are shown as being formed in the surface of layer **6** adjacent to layer **5**. Such channels are elongated lengthwise of the slots **3**, and in the form of device shown in FIGURES 1, 2 and 3 such channels are shown as being of a length to extend continuously along the lengths of the several window slots **3** in a row, although such continuity is not necessary if the slots **3** are spaced apart a sufficient distance and the travel of the sliders along the slots is sufficiently limited.

In order to enable each slider **10** received in a channel **11** to be moved lengthwise of its channel a slot **3** each slider has a knob **12** projecting through its slot, as shown best in FIGURE 4. Such knob constitutes a handle by which the slider can be moved along the slot guided by the channel in which it is received. It is desirable for each slider to be movable between extreme positions, in one of which a greater portion of the slot is covered by the slider than in the other position. Also, it is desirable for each slider to be retained against inadvertent displacement, either in the slot-covering or in the slot-uncovered position. The opposite ends of the slot can define limiting positions of the slider knob **12** in each instance, and the intermediate layer **5** constitutes retaining means engageable by the slider to prevent it from being displaced from its channel and its knob from coming out of its groove, as shown in FIGURE 4. A small projection **13** can be provided on one or both edges of a slot **3** spaced from a slot end a distance corresponding to the width of a knob **12** so that

the knob can snap by such a projection, or projections, into the movement-limiting end portion of the slot. Such a projection, or projections, constitutes detent means acting to retain the knob in such limiting position in the end portion of the slot to deter inadvertent movement of the slider **10** along the slot. As shown in FIGURE 3, such detent projections can be provided adjacent to opposite ends of each slot **3**.

As seen best in FIGURE 3, it is preferred that the length of each slider **10** be sufficiently great to cover the entire length of a slot **3**. When the knob **12** is in the extreme left position shown in FIGURES 1 and 3, therefore, the slot **3** will be covered so that the opaque slider will obscure such indicia on card **1** as is located in registry with that window slot **3** of the face layer **6**. When the slider is moved fully to the right, however, a sufficient portion of the slot will be uncovered to reveal the indicia on card **1** is registry with the slot, as indicated at the right of FIGURES 1 and 3.

For purposes of illustration it may be assumed that the indicia numerals **2** on card **1** represent sequential operations. At the beginning of the operation sequence all of the sliders **10** will be at the right, so that all of the numerals **2** can be viewed through their respective slots **3**. As each operation in the sequence is performed the appropriate slider **10** will be moved into its extreme left position by applying force to the left on the slider knob **12**. In FIGURE 1 three sliders, corresponding to the slots through which numerals **1**, **2** and **3** of the indicia **2** would be viewed, have been moved to the left to cover such slots. As subsequent operations are performed in sequence, the user may move each slider in turn from left to right until the sequence of operations has been completed.

Each of the numerals of the indicia **2** can correspond to an operation to be performed in preparing an aircraft or a boat, for example, for operation. Instead of the indicia being numerals such indicia could be legends arranged in the proper sequence. As another example, the numerals of indicia **2** could correspond to steps in food preparation, such as in following a recipe, or, again, legends could be used in place of numerals for this purpose.

Other representative types of cards which could be used with the present indicating device include reminder cards such as for servicing an automobile in connection with a warranty and maintenance guide, or an agricultural planting time schedule. Such a card could represent other types of scheduling such as for factory production. Formation of good habits for children can be promoted by the indicia representing duties to be performed daily, such as toothbrushing, washing, hair combing, shoe polishing and eating of particular foods. Also, appropriate cards could be provided for educational and amusement purposes. In teaching arithmetic, for example, numerals could be provided in transparent areas of layers **5** and **6** adjacent to and above the respective slots **3**, and the slots could be covered by sliders **10**. The answer sum for each problem could then be in registry with the appropriate slot and the slider can be moved to the right to check the answer. For game purposes random numbers could be located on a card **1** in registry with the various slots. In playing bingo, for example, as a player's number is called a slider **10** could be moved to cover such number.

While the present device will probably find its greatest usefulness as a small device which can be held in the hand, it can be made of any size and in larger sizes where it may be desirable to observe indicia at a distance the slots **3** can be illuminated. In FIGURE 1 a tube light **14** is shown as being enclosed in a shield **15** extending along an edge portion of the device. Such light can project illumination edgewise into the sheet **6** and if such sheet is made of transparent acrylic material, for example, the light can escape from the edges of the slots **3** if they are roughened, or frosted, to illuminate the indicia on card **1** exposed through such slots when they are uncovered. Alternatively,



each slot area could simply be illuminated by an individual light, but such a construction would usually be appropriate only for devices which are quite large.

The arrangement of the slots **3** in rows and columns, as shown in FIGURES 1 and 2, probably constitutes the most useful arrangement of the slots. Alternatively, however, the slots could be of different size and arrangement and examples of alternates are shown in FIGURES 5 and 6. In FIGURE 5 the slot **3'** extends continuously along a row of indicia on card **1** and the slider **10** is much shorter than the slot **3'**. Such slider can be moved into selected positions in each of which only one indicia on the card **1** is obscured. The position of the slider in this instance will represent the next operation in a sequence of operations to be performed, for example.

In FIGURE 6 the slider is in the form of a strip **10'** which is received in a return-bent channel **11'** having one leg between the card **1** and the face layer **6** and its other leg behind the card **1**. When the knob **12** is moved to shift the strip fully to the left all of the indicia of card **1** in registry with slot **3'** in the face layer **6** will be covered. As the slot-covering portion of the strip is moved to the right, as seen in FIGURE 6, indicia items of card **1** will be uncovered progressively from the left so that the indicia uncovered would, for example, represent operations which have been performed, or are being performed.

Particularly in small sizes the device described above can be made most conveniently from molded plastic, and, while the construction has been described as including a backing layer **4** and an intermediate layer **5**, it is not essential that such layers be formed separately and subsequently secured together, but the card-receiving cavity could be molded in a unitary piece of material. Also, even though all of the items are made of plastic some parts could be molded and others could be formed by machining. Alternatively, the layers can be made of metal, of card stock, or of wood, or some of the layers could be made of one type of material and others of a different type of material. As has been mentioned, however, it is desirable for the intermediate layer **5** to be transparent, or at least for those portions of such layer in registry with the slots **3**, or **3'**, to be transparent, so as to provide a backing for holding the sliders **10** in place while enabling indicia on the card to be viewed through the slots **3**, or **3'**, and corresponding transparent portions of the layer **5**.

I claim:

**1.** A card-holding indicating device comprising a laminated body including in overlying registry a backing layer, a face layer and means securing said backing layer and said face layer in overlying registry, the side of said face layer adjacent to said backing layer having therein an elongated channel and said face layer having therethrough an elongated slot in registry with said channel and with its length extending lengthwise of said channel, a slider received in said channel and guided thereby for movement therealong and having a knob projecting through said slot, and retaining means at the side of said face layer adjacent to said backing layer closing said channel for retaining said slider therein, said backing layer and said retaining means having portions thereof spaced apart to define a card-holding cavity therebetween.

**2.** The card-holding indicating device defined in claim **1**, in which the slider is a flexible strip and the slider-receiving channel is of return-bent shape having a leg on each side of the card-holding cavity.

**3.** The card-holding indicating device defined in claim **2**, and detent means including interengageable elements carried by the face layer and the slider, respectively, engageable for deterring movement of such slider along the slot out of a predetermined position.

**4.** The card-holding indicating device defined in claim **3**, in which the detent means include an element projecting from the face layer slot engageable with the slider knob.

5. The card-holding indicating device defined in claim 1, in which the slot is of a length substantially greater than the length of the slider in registry with such slot.

6. The card-holding indicating device defined in claim 1, and ribs extending along opposite edges of the side of the backing layer adjacent to the face layer and defining the card-holding cavity therebetween.

7. The card-holding indicating device defined in claim 1, in which the retaining means is an intermediate layer substantially coextensive with at least one of the other layers.

8. The card-holding indicating device defined in claim 7, in which the retaining means are transparent.

9. The card-holding indicating device defined in claim 1, in which the face layer has a plurality of elongated slots spaced lengthwise of the channel, each of said slots having its length extending lengthwise of the channel.


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LOUIS J. CAPOZI, *Primary Examiner.*

# U.S. DEPARTMENT OF COMMERCE

## PATENT OFFICE

Washington, D.C. 20231

UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

Patent No. 3,402,694 September 24, 1968

Marvin O. Christman

It is certified that error appears in the above identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 67, claim reference numeral "2" should read -- 1 --.

Signed and sealed this 3rd day of March 1970.

(SEAL)
Attest:

Edward M. Fletcher, Jr.
Attesting Officer

WILLIAM E. SCHUYLER, JR
Commissioner of Patents