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J. W. WATKINS

2,669,791

WRITING DEVICE

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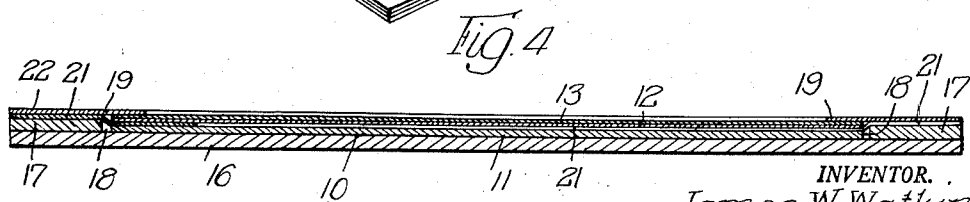
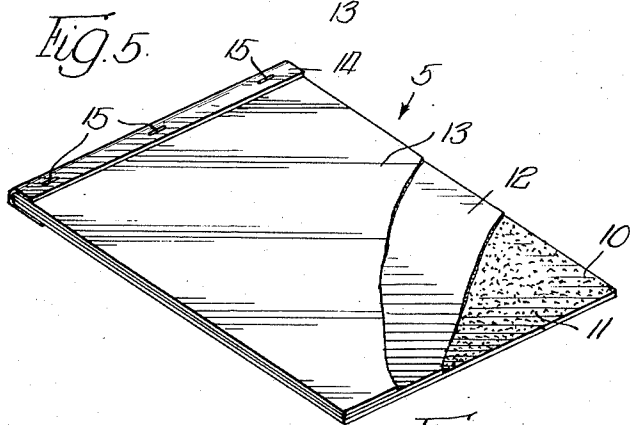
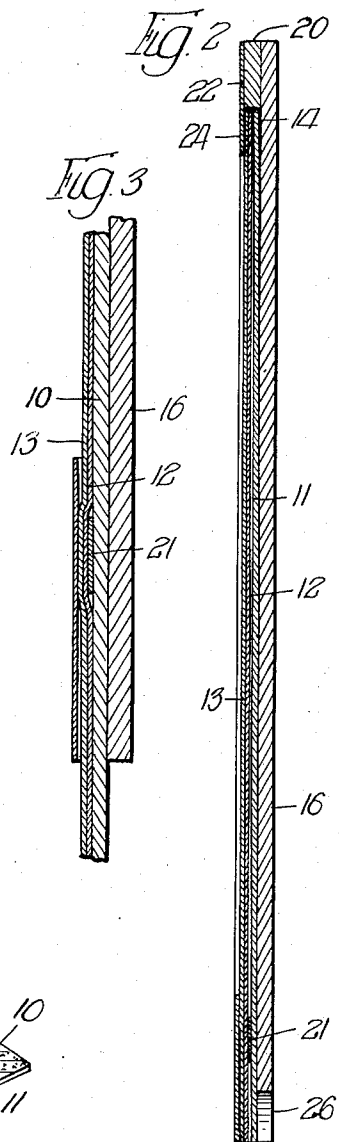
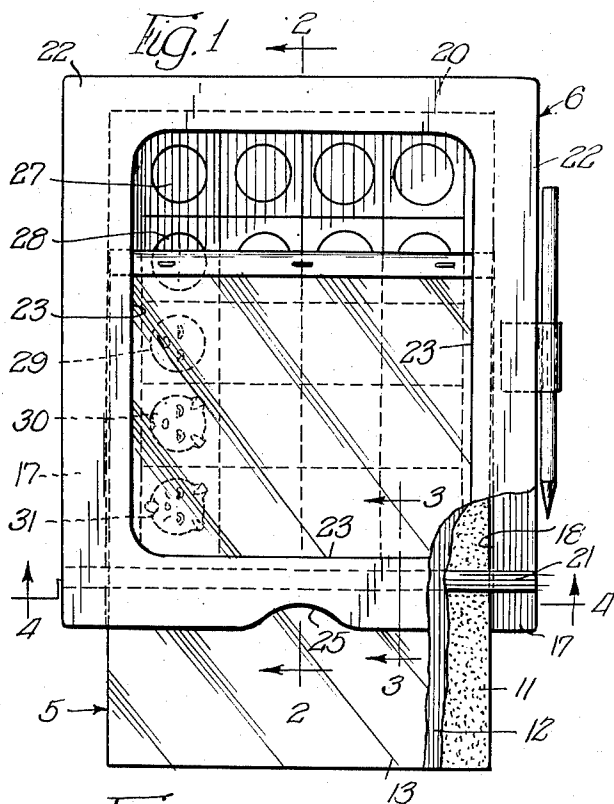


Fig. 4

Fig. 5

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## UNITED STATES PATENT OFFICE

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## WRITING DEVICE

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This invention relates to certain innovations and improvements in writing devices of the type which include a pad for receiving and temporarily retaining written matter or drawings resulting from an impression made by a stylus on a smooth film and which writing or drawings can be made to disappear without erasure. Pads of this type are disclosed, for example, in Patents Nos. 1,555,642, dated September 29, 1925, and 2,074,855, dated March 23, 1937.

The invention relates more specifically to improvements and innovations in writing and drawing devices or duplicators of the type disclosed in Deutsch Patent No. 1,512,827 wherein a writing pad of the type referred to above may be withdrawn from a supporting frame or holder so as to use this movement to cause the written matter or drawings on the pad to disappear.

The Deutsch Patent No. 1,555,642 and the Paasche Patent No. 2,074,855 disclose writing pads of the type comprising a backing member, the upper surface of which is coated with a pressure sensitive or impressionable material, usually of a waxy nature, and having sheets of translucent or diaphanous film covering the backing member and attached thereto along the one edge thereof. The coating on the backing member is black or dark colored. The diaphanous film is light colored, usually being white in appearance, semi-transparent or translucent. The translucent film and the coating material on the backing panel are of such a nature that if a smooth-pointed or round-pointed instrument such as a stylus is pressed or moved over the top of the film, the film will be caused to adhere to the impressionable pressure sensitive coating along the pressure lines with the result that the dark color shows through the film and appears as a dark-colored line.

An improved construction is obtained by making the translucent film very thin and pliable and protecting it with a transparent protective sheet formed of a tougher and heavier film. The protective film is laid on top of the thin translucent film. The writing pads shown in Deutsch Patent No. 1,555,642 and Paasche Patent No. 2,074,855 have such transparent protective top sheets. Evans Patent No. 1,455,579, dated May 15, 1923, discloses a writing pad of this general type which does not have such a transparent top protective film or sheet but instead has only the thin translucent, light-colored sheet lying over the coating on the backing member.

After one of the pads of the type referred to above has been written on, the written matter or

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drawings may be caused to disappear by separating the films or sheets from the backing member. The simplest way of effecting such a separation is to lift the sheets from the surface of the backing member. Another method of separating the sheets from the backing member is to part the sheets by means of a wire or a thread moved therebetween. Deutsch Patent No. 1,512,827 referred to above discloses one of these writing pads disposed in a supporting holder so as to make use of a parting wire or paper strip which serves to separate or part the thin films from the backing member upon withdrawal of the pad from the holder. However, the structure disclosed in the Deutsch Patent No. 1,512,827 has certain disadvantages. In the first place the construction disclosed in that patent is not neat but is bulky and the pad has a sloppy fit within the holder. In addition, that structure requires the use of metal binding strips at the edges and is costly to manufacture and assemble.

The object of the present invention is the provision of an improved supporting frame and holder, of cardboard or paperboard construction, for a writing and drawing device of the type which comprises a pad or slate of the type which receives temporary impressions which can be removed by separation of a thin pliable translucent over-sheet from the dark waxy coating of a backing member, the pad or slate being slidable in the frame and holder which has a parting strip for separating the over-sheet of the pad from the backing member thereby causing written matter or drawings to disappear. Certain other objects of the invention will, in part, be obvious and will, in part, be apparent from the following detailed description.

For a more complete understanding of the nature and scope of the present invention, reference may now be had to the following detailed description of one preferred embodiment thereof taken in connection with the accompanying drawings, wherein:

Fig. 1 is a top plan view, partly broken away, of a device made in accordance with the present invention and comprising a writing pad of the type described which is slidably mounted in a supporting frame and holder;

Fig. 2 is a sectional view on enlarged scale taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary detail sectional view on enlarged scale taken on line 3—3 of Fig. 1;

Fig. 4 is a sectional view on enlarged scale taken on line 4—4 of Fig. 1; and

Fig. 5 is a top perspective view of the pad used

in the embodiment shown in Fig. 1 with parts of certain sheets torn away.

Referring to the drawings, the reference numeral 5 designates generally a writing pad of the type adapted to receive disappearing written matter and drawings as described above and the reference numeral 6 designates generally the supporting frame and holder for the pad. The pad 5 is of known type and consists of a backing member 10 formed of relatively heavy cardboard or similar material, the top surface of which is coated with a dark-colored or black waxy coating 11 of known composition which is somewhat tacky in nature and which is impressionable along narrow pressure lines. A translucent or semi-opaque impression sheet 12 of thin film lies over the coating 11. For example, a lightly pigmented film of rubber hydrochloride film (e. g., "Plio-film") serves very well for this sheet 12 although it will be understood that other films may likewise be used satisfactorily.

As mentioned above, it is usually desirable to use a film for the sheet 12 which is very pliable, thin and which does not take on a permanent set. Although such films may be used without a protective sheet, it is usually desirable to protect them with a film or sheet 13 of clear transparent film material such as cellophane or cellulose acetate. The film or sheet 13 may be relatively stiff and heavy, so long as pressure can be transmitted therethrough along lines to the underlying film 12 and the impressionable coating 11.

The sheets 12 and 13 are secured to the backing member 10 along the upper edge thereof in any suitable manner such, for example, as by means of a strip of binding material 14 which is suitably adhered to the back marginal edge of the panel 10 as well as to the marginal edge of the top sheet 13. For greater security, the sheets 12 and 13 may be stapled to the backing member 10 as indicated at 15-15 in Fig. 5.

The supporting frame or holder 6 for the pad 5 consists of a backing panel 16 formed of heavy cardboard or similar material. A pair of cardboard guide strips 17-17 are secured to the top of the backing panel 16 along the opposite sides thereof by use of adhesive or other securing means.

The guide strips 17 have a thickness which is approximately the same as the thickness of the pad 5. It will be seen from Fig. 4 that the side edges of the pad 5, and more particularly of the backing member 10, have a sliding fit with the inner edges of the guide strips 17-17 as indicated at 18-18. The upper ends of the guide strips 17-17 are interconnected by a top strip 20 of approximately the same thickness as the strips 17. The side strips 17 and the top strip 20 may be integrally die cut from a piece of cardboard of suitable thickness in one U-shaped piece. The top strip 20 serves as a stop to arrest the inward or upward movement of the pad 5 when it is slid into the holder 6, the top edge of the pad engaging against the inner or bottom edge of the top strip 20 as shown in Fig. 2. It will thus be seen that the guide strip 17 and the top strip 20 in effect provide an accurate border for the pad 5 which is open at the bottom. When the pad 5 is in place on the backing panel 16 in between the guide strip 17, the top surface of the pad 5 will be substantially flush or level with the top surface of the strips 17 and 20.

In order to part or separate the sheet 12 from the coating 11 and thereby cause written material or drawings on the pad to disappear, a

parting strip 21 of paper or other suitable material is placed across the bottom end of the holder 6 with the opposite ends of the strip 21 being secured by adhesive or otherwise to the lower ends of the guide strips 17-17 as shown in Fig. 4. The device is assembled with the strip 21 extending between the sheet 12 and the coating 11 on the pad 5. The assembly is retained in place by means of a retainer frame or cover 22 which may be formed of paper cut so that its outer dimensions corresponding to those of the supporting frame or holder 6. The retainer 22 is provided with a window opening 23 with the inner edges of this window opening overhanging the inner edges of the guide strips 17, as indicated at 19-19 in Fig. 4, and the bottom edge of the top strip 20, and covering the parting strip 21 as indicated at 24 in Fig. 2. Accordingly, the cover or border 22 in effect serves to provide retention grooves along opposite edges of the pad 5 and a groove at the top of the holder 6 for receiving the top edge of the pad 5 when the pad is fully inserted into the holder 6.

In order that the pad 5 may be conveniently grasped for withdrawal from the holder 6, a half-moon cutout 25 (Fig. 1) is formed in the bottom edge of the retainer 22 and another half-moon cutout 26 (Fig. 2) is formed in the bottom edge of the backing panel 16 so that the bottom edge of the pad 5 may be grasped between the forefinger and the thumb when it is desired to withdraw the same from the holder 6.

Usually the surface of the retainer frame 22 will be suitably decorated with pictures, directions and advertising. Additionally, it is desirable to print various designs on the top surface of the backing panel 16 within the area defined by the strips 17, 17 and 20 so as to be exposed and visible when the pad 5 is withdrawn from the holder. A series of such designs is shown in Fig. 1. It will be noted that the designs in the top row 27 consist merely of circles. The designs in the second row 28 consist of the circles with basic markings therein. The designs in the third row 29 have additional markings and so on through rows 30 and 31 with the designs in the last row 31 being complete caricatures or outlines.

In use a child may pull out the pad 5 sufficiently far to expose the first row 27. These outlines can then be duplicated by the child on the bottom margin of the pad 5 and after this row is completed, the pad 5 can be pulled out another row so as to expose the second row 28 and so on until the design is completed. After the designs have been completed, they may be caused to disappear by reason of the parting strip 21 separating the film or sheet 12 from the base or coating 11 when the sliding pad 5 is pushed fully into the frame 6.

If it is desired to conserve space, the first row 27 of outlines can be printed on top of the retainer 22 along the upper margin thereof.

Except for the films 12 and 13, it will be seen that the pad 5 and the holder 6 are fabricated entirely from paper or cardboard stock. All of the parts can be cut or stamped to size and readily fabricated on a mass production basis. The pads 5 can be separately manufactured and inserted in the partially fabricated supporting frame or holder 6. That is, the side guide strips 17 and the top strip 20 will be in place on the backing panel 16. The parting strip 21 can also be in place and the pad 5 inserted in place by lifting the sheets 12 and 13 so as to extend over

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the parting strip 21. Then the retainer frame or sheet 22 is secured in place and the unit is completely fabricated. The structure is compact and neat and has flat top and bottom surfaces. The fabrication can be made with such accuracy that the pad 5 slides smoothly in and out of the holder 6 without play.

It will be understood that certain minor modifications in design and details may be made in the embodiment of the invention described above in connection with the accompanying drawings. Accordingly, the particular embodiment of the invention which has been shown and described is intended to be interpreted as illustrative and not in a limiting sense.

What is claimed as new is:

1. In combination, a pad adapted to receive and temporarily retain written matter or drawings which can be made to disappear without erasure, and a supporting frame and holder for said pad: said pad comprising a backing member formed of relatively thick and stiff cardboard having a dark-colored pressure-sensitive coating on the upper surface thereof and a sheet of light-colored translucent film secured along the top edge of said backing member; and said supporting frame and holder comprising, a bottom panel formed of relatively thick and stiff cardboard, strips of cardboard extending flatwise along and over the two side margins and across the top margin of said bottom panel and having a thickness approximately the same as that of said pad, the strips along the side margins serving as guides for the adjacent side edges of said pad when said pad is withdrawn from said frame and holder and the top strip serving as a limiting stop for the top edge of said backing member when said pad is pushed back into said supporting frame and holder, a parting strip extending over the bottom margin of said bottom panel with the ends of the parting strip secured to the bottom ends of said side guide strips, said parting strip passing in between the impressionable upper surface of said pad backing member and said light-colored translucent film so as to part

said film from said upper surface of said backing member when said pad is slidably withdrawn from said frame and holder, and a cover retainer member for retaining said pad in said frame and holder secured flatwise over the upper surfaces of said side and top strips, said cover retainer having a window opening therein with the edges of the window opening located inwardly from the corresponding adjacent edges of said cardboard side and top strips so as to project over said bottom panel and define covered retaining grooves for the side and top edges of said pad.

2. The construction called for in claim 1, wherein the ends of said parting strip are pasted on top of the adjacent ends of said guide strips and the bottom side of said cover retainer is wide enough to completely cover said parting strip.

3. The device called for in claim 1, wherein the central portion of the upper surface area of said bottom panel which is exposed when said pad is withdrawn from said supporting frame and holder is printed with at least one series of designs which upon being copied progressively lead to a completed design, a basic component of said design being located at the top of said exposed area and the completed design being located towards the bottom of said exposed area with at least one intermediately completed part of the design disposed between said basic component and said completed design.

JAMES W. WATKINS.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

Number	Name	Date
1,512,827	Deutsch .....	Oct. 21, 1924
1,556,499	Deutsch .....	Oct. 6, 1925
2,359,195	Berliner et al. ....	Sept. 26, 1944

##### FOREIGN PATENTS

Number	Country	Date
5,987	Great Britain .....	July 21, 1910