March 23, 1937. J. A. PAASCHE 2,074,855

IMPRESSION RECEIVING DEVICE

Filed Jan. 24, 1934

Fig. 1.

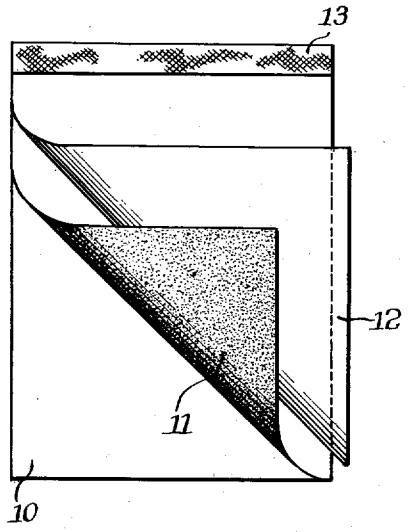


Fig. 2.

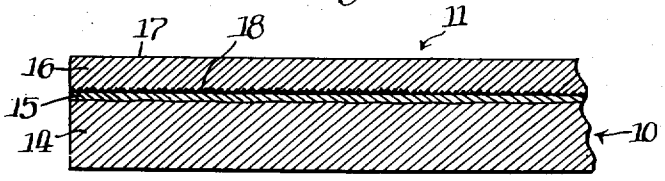
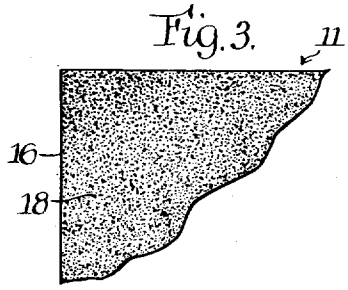


Fig. 3.



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IMPRESSION RECEIVING DEVICE

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Application January 24, 1934, Serial No. 708,037

9 Claims. (Cl. 35—66)

The invention relates to impression receiving devices and more particularly to devices of the type embodying a permanent arrangement for receiving writing or drawing impressions and for preserving such impressions as long as desired and from which the impressions can be instantly obliterated without injury to the parts or the use of any erasing instrumentality.

A general object of the invention is to provide an improved device of this nature which is exceedingly durable and may be produced by a novel process wherein the cost of manufacture is materially reduced.

Another object of the invention resides in the provision of an improved device embodying a base of plastic material having superposed thereon a sheet of transparent material which comprises the impression surface proper and is treated on the side contacting the base material to render the transparent sheet at least semi-opaque.

More specifically stated, a further object resides in the provision of a flexible impression sheet for a device of this character having on one surface a thin film or layer which is intimately and permanently united therewith and is comprised of a great number of exceedingly small non-transparent particles to produce a semi-opaque sheet which will adhere to a plastic base whereever it is pressed thereagainst and will appear to be transparent throughout such adhering portions.

Another object is to provide a novel sheet of transparent material which is treated to impart to one surface thereof roughened and semi-opaque characteristics.

A further object, more specifically stated, is to provide a novel transparent sheet of flexible material which has applied to one face thereof preferably by a spraying operation a great number of evenly dispersed and finely divided particles of opaque or semi-opaque material which includes a fluid carrying agent capable of acting as a solvent of the transparent sheet whereby each particle will become permanently affixed to said sheet.

Other objects and advantages will become apparent in the following description and from the accompanying drawing, in which:

Figure 1 is a plan view of a device embodying the features of the invention.

Fig. 2 is a fragmentary transverse sectional view of the device on a greatly enlarged scale.

Fig. 3 is a fragmentary plan view of the treated face of the impression sheet also on an enlarged scale.

While the invention is susceptible of various modifications and alternative constructions, I have shown in the drawing and will herein describe in detail the preferred embodiment, but it is to be understood that I do not thereby intend to limit the invention to the specific form disclosed, but intend to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claims.

With reference to the drawing, a form of device is shown for illustrative purposes as comprising a tablet or pad embodying a base 10, an impression sheet 11 and a protecting cover 12 all secured together along one edge, as at 13, for relative separation. The base 10 includes a firm inflexible supporting part 14 (Fig. 2) having on one face thereof a coating 15 of a colored and relatively plastic material such as a wax having pigment therein. The material should be firm yet sufficiently plastic to receive impressions made by a marking instrument and should be non-drying so that it will remain relatively soft. Preferably the material is spread upon the supporting part while the material and part are in a heated condition by a spray coating operation so that the material will be evenly and uniformly distributed.

The impression sheet comprises generally a thin, flexible and transparent sheet which preferably presents a smooth outer surface and is treated on the surface opposing the base material to provide a somewhat rough and opaque or semi-opaque face. When certain areas of such a surface are pressed against the base material, as by moving a writing instrument across the smooth outer surface of the impression sheet, the roughened face adheres to the plastic material throughout such areas and the intimate contact therebetween eliminates the opacity of the face with the result that the colored base is clearly visible through these areas.

The impression sheet is preferably treated in the following manner to produce the rough and at least semi-opaque face thereon. A solution is prepared using, as a base, a commercial type of synthetic enamel or a lacquer having an opaque pigment therein. The color is preferably white. Such enamel or lacquer is mixed with a suitable fluid to produce a quite dilute or thin mixture which has somewhat of a milky appearance and consistency. The dilutent which is employed should be an effective and somewhat volatile solvent of the material from which the impression sheet is formed. For example, if the sheet

is a derivative of cellulose, the dilutent may be a lacquer thinner which is a solvent of such a sheet. Amyl acetate is an example of a suitable dilutent.

The diluted solution preferably is applied to one face of the impression sheet by an air coating operation whereby a thin and even coat of very finely divided particles is produced on the face. Since the solution is so diluted with a solvent of the sheet material, the particles thereof are relatively moist as they impinge against the sheet. Hence the surface of the sheet will be superficially attacked by the excess solvent in each moist particle with the result that the particles, in effect, become fused to the sheet. The one surface of the sheet, therefore, becomes coated with exceedingly finely divided particles of an opaque or semi-opaque material having a permanent and inseparable union therewith.

Fig. 2 shows a sheet thus prepared wherein the sheet material 16 has a smooth outer writing surface 17 and an opposite surface 18 to which the particles have been applied. In Fig. 3 the stippling is generally representative of the particles on the impression sheet.

In operation, pressure applied to the smooth surface of the impression sheet causes the underlying particles on the opposite side to become embedded or impressed into the surface of the plastic material. This material appears to fill the interstices between the particles and throughout the impressed area the sheet is to all appearances transparent. Hence, the color of the plastic material is presented in sharp contrast to the otherwise semi-opaque impression sheet. When the impression is to be removed, it is only necessary to separate the impression sheet from the plastic material on the base, the impression disappears, and the device is ready to be used again.

It will be evident from the foregoing that a device of simple form and improved construction has been produced whereby the cost of manufacture may be materially reduced.

I claim as my invention:

1. An impression receiving device comprising, in combination, a base having a relatively plastic dark colored material thereon capable of being impressed, and a thin and flexible sheet of normally transparent material superposed on said base and overlying said plastic material, said sheet having a smooth exposed writing surface for engagement by an instrument and having a relatively thin layer of finely divided particles of a substance possessing light reflecting properties intimately and permanently disposed upon the surface of said sheet which engages the plastic material, said layer being thin enough so that an impression on said flexible sheet presses the underlying particles thereon into the plastic material to eliminate light reflection by the particles and render said material visible through the sheet in the impressed areas.

2. A translucent impression revealing device including in combination a colored base including a relatively plastic material, a thin, flexible sheet of normally transparent material treated on one face to render the same light reflective and substantially frosted light colored and opaque in appearance, said treated face being superimposed on said base and adapted to be impressed against said plastic material so that the impressed portions of the face will adhere to the base and the color will show therethrough, and means for permanently connecting said sheet to said base near one edge thereof so that the sheet may be moved relative to the base without detachment to separate the same to obliterate impressions.

3. An impression receiving device comprising, in combination, a colored base including a plastic impression receiving material and a flexible normally transparent sheet disposed in separable overlying relation to said material, that surface of said sheet which is disposed in opposition to said base material being superficially treated to impart a roughened and semi-opaque light colored appearance thereto while leaving the body of the sheet transparent to afford complete visibility therethrough to said treated surface, the opposite surface of the sheet being smooth and of a character substantially unaffected by a writing instrument such as a pencil or stylus moved in contact therewith for impressing parts of said semi-opaque surface into adhering relation with said base material to render the colored base visible through the transparent body of the sheet.

4. As a new article of manufacture, an impression sheet which is normally translucent throughout to permit colored objects to be seen therethrough and soluble in certain solvents, one face of the sheet having applied thereto a light colored dulling substance including a small quantity of a solvent of said sheet adapted to attack said one face superficially and upon drying leave said substance in permanent association with the sheet whereby said one face has a frosted appearance, and a colored base including a plastic impression receiving material, said one face being superimposed on said base so as to adhere thereto in such areas as receive the pressure of an impression on said sheet.

5. For use with an impression receiving device having a dark base including a plastic face, an impression sheet comprising a flexible and transparent body having one glass-smooth surface characterized by its inadaptability for receiving normally visible markings from a common lead pencil, and an opposite surface treated only on the face thereof to present a visibly frosted light colored appearance when viewed directly or through the body of the sheet and being adapted when opposed to the plastic face of the device substantially to conceal said plastic face but to be impressed into adherence therewith by the movement of pencil-like means across said smooth surface to render said base visible in the impressed areas.

6. For use with an impression receiving device having a dark base including a plastic face, a thin and flexible sheet comprising a normally translucent body having one smooth surface and permitting the color of the base to be seen therethrough, said sheet having on its opposite surface a relatively thin and superficially disposed layer of finely divided light colored particles of substantially opaque substance permanently united thereto to provide a light filter rendering the dark base substantially invisible through the sheet when the sheet is superimposed upon said base with said layer against said plastic face but permitting clear visibility of the color of said base through said translucent body when an instrument is moved over said smooth surface to impress a portion of said layer into adherence with the plastic base.

7. For use with an impression receiving device of the character described, an impression sheet comprising a body of thin, flexible and normally translucent material which is readily soluble in certain solvents and through which an adjoining dark colored surface may be observed, one

surface of said body being of glassy smoothness, and the opposite surface of said body having thereon a dulling substance consisting of minute light colored particles each applied to the sheet in the presence of a small quantity of a volatile solvent of the body acting to dissolve said opposite face superficially and without affecting the remaining thickness of said body to effect a permanent union of the particles with the sheet and impart a frosted appearance to said opposite surface to avoid visibility of such an adjoining dark colored surface.

8. An impression revealing device comprising, in combination, a base having an impression receiving material thereon, and a flexible sheet disposed in separable overlying relation to said material and providing a smooth surface upon which impressions may be made, said sheet being transparent and having only the base opposing surface thereof treated to impart light reflecting properties superficially to said opposing surface to give the latter surface an opaque light colored appearance capable of substantially concealing the base, said impression receiving material being of a dark color and plastic to adhere to such portions of said opposing surface as may be pressed thereagainst by an instrument passed across said smooth impression surface and by such adherence to prevent light reflection whereby the dark color of the base will show clearly through the transparent sheet.

9. An impression device of the character described comprising, in combination, a substantially rigid base having on one surface thereof a dark color plastic impression surface and a flexible sheet superimposed in separable relation to said impression surface, said sheet being of substantially transparent material and having a smooth outer writing face and an opposite face for contact with the impression surface on said base, only said last mentioned face embodying an exceedingly thin superficial surface of light reflecting particles imparting an opaque frosted appearance to the sheet.

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CERTIFICATE OF CORRECTION.

Patent No. 2,074,855. March 23, 1937.

JENS A. PAASCHE.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, first column, line 68, claim 2, strike out the word "frosted"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of June, A. D. 1937.

Henry Van Arsdale

(Seal)

Acting Commissioner of Patents.

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