Oct. 24, 1967 N. GOLDSTERN 3,349,226

REGISTRATION RECORD

Filed March 4, 1963 2 Sheets-Sheet 1

FIG. 1

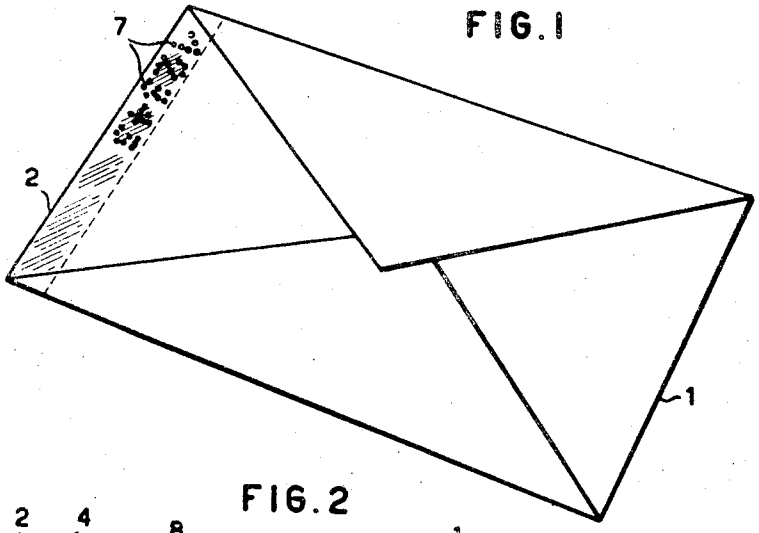



FIG. 2

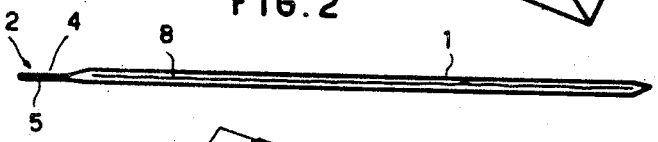



FIG. 3

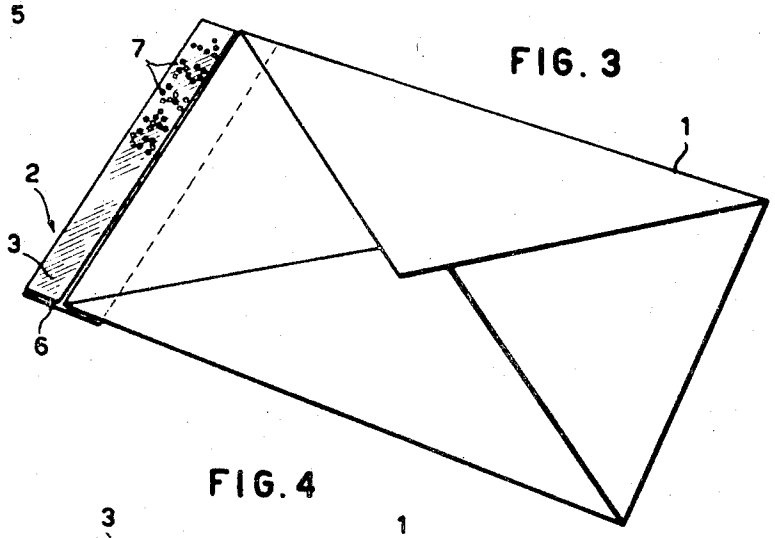



FIG. 4



Oct. 24, 1967 N. GOLDSTERN 3,349,226

REGISTRATION RECORD

Filed March 4, 1963 2 Sheets-Sheet 2

FIG. 5

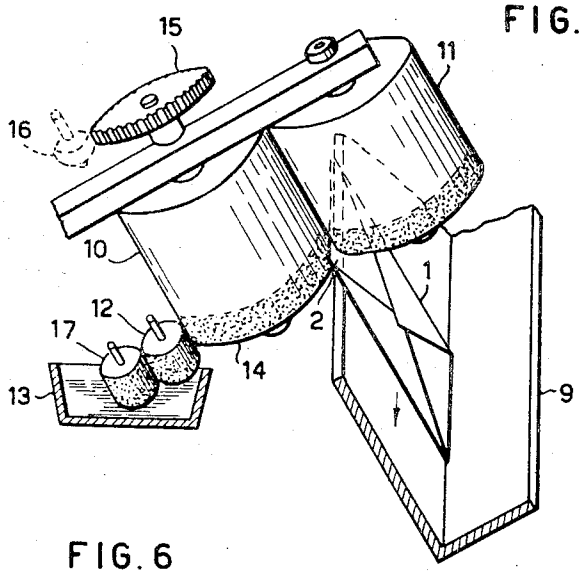
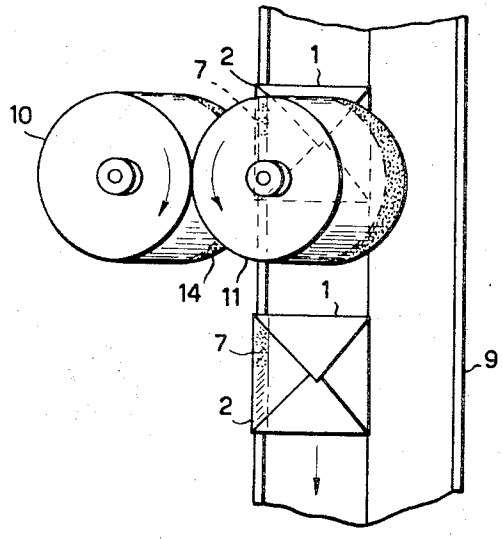



FIG. 6



United States Patent Office

3,349,226

Patented Oct. 24, 1967



3,349,226

# REGISTRATION RECORD

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Claims priority, application Germany, Mar. 6, 1962, G 34,408
3 Claims. (Cl. 235—61.12)

## ABSTRACT OF THE DISCLOSURE

A registration record in the form of a card, sheet, etc., having formed therein visually legible characters in the form of equally large perforations, the perforations arranged to permit photo-electric scanning of the record. The perforations are covered by a transparent layer forming an airtight seal over the perforations preventing the edges of the perforations from catching on perforation edges of adjacent records. A set of rollers for applying a coating layer to the perforated registration records as they move along a transport device.

My United States Patent 2,944,735 discloses a registration record in the form of cards, sheets, slips or the like with visually legible characters, the optically active surface of which defines the identity of the character, for information handling machines or devices in which the characters as a whole are photo-electrically scanned in a single scanning operation and consist of different numbers of equally large perforations.

The purpose of the invention is to provide an improvement of the prior art registration record to such effect that its trouble-free handling in sorting-apparatus, scanning devices and especially in postal manipulation is more positively secured.

The presence of light-pervious perforations may cause difficulties in postal manipulation or any other handling of the registration records as per the main patent especially if beyond a determined diameter of the perforations the latter cause the registration records, when being shuffled, to mutually catch in their perforations or, in applying pneumatic transport or other handling devices, cause pressure differences in the operating medium to be multiplied or reduced in consequence or leakage through the perforations.

Said disadvantages of the prior art registration record are avoided by the invention in a very simple and cheap way without affecting the registration properties and correct copying quality of the information to be transmitted in that the perforations are covered by a light transparent coated or self-supporting layer, preferably by a layer of light transparent lacquer.

As per the invention said layer may be applied in a very simple manner such way that in the path of the registration records as they are propelled by the perforating device along a guiding or transport device, at least one pair of rollers is provided, at least one roller of which on such part of its surface as gets in contact with the registration record is provided with a roughening, etching, screen or coating for the equally spread reception of a solution of a translucent or transparent lacquer or the like, to which surface part the lacquer or the like to be spread is fed from a container through at least one adjacent coating roller.

As per the invention the coating device for efficiency's sake may be incorporated in the perforating device or be built directly together with same.

For speeding up the preparation of the registration records for their further handling it is recommendable as



per the invention to combine the coating device with a drying device operating with heated blowing and/or suction-air, through which device the registration records will pass after their being coated.

The drawing will explain the invention with the help of embodiments.

FIG. 1 shows a front view of a registration record as per the invention, fixed to an envelope;

FIG. 2 shows a section through the registration record shown in FIG. 1;

FIG. 3 shows a view of a different embodiment of the registration record as per the invention;

FIG. 4 shows a section through the registration record shown in FIG. 3;

FIG. 5 is a schematic simplified perspective, partially sectional representation of a device for applying the layer to the registration record as per the invention in cooperation with a registration record made to pass through it, and,

FIG. 6 is a top view of the device shown in FIG. 5 in which such parts have been left out as are not essential for a clear understanding of its working-method.

The registration record consisting of a card, a sheet, a slip or the like **2**, with perforations **7** made in it in the form of a visually legible character, has been shaped e.g. as part of an envelope **1** which has been stuck together at one of its narrow sides **4**, **5** and has been provided with the perforations **7**, whereby as per the invention said perforations (or alternately, if desired, the whole slick **2**) have been, covered with a light-pervious preferably transparent coated or self-supporting layer, preferably a layer of lacquer. Said layer may be applied by use of any desired kinds of coating process, e.g. by pressing, rolling, painting, spraying, dipping, adhering, welding or the like. FIGS. 3 and 4 show the registration record **2** in the form of a slip **6**, **3**, connected to an envelope **1** by adhering whereby the slip **3** has been applied for reinforcing the slip **6** of paper, cardboard, a synthetic product or the like, which has been adhered to one of the narrow sides of the envelope **1** and protrudes beyond said narrow side. Also in said embodiment the slip **2**, **3**, **6**, at least within the scope of the perforations **7** made in it, is provided with the light-pervious, preferably transparent coated or self-supporting layer. The latter mechanically covers the perforations **7** of the registration record **2** in a lasting manner such way that the automatical scanning of the information contained in the perforations is not affected, whereas at the same time an airtight seal of the perforations has been secured. So, in handling the registration record embodied as per the invention neither interferences in consequence of registration records sticking to each other will occur nor owing to leakage through the perforations a decrease of the air-pressure acting on the registration record in pneumatic transport, separating or other handling installations. Furthermore the chance of a perforation being torn is materially reduced.

Externally the registration records embodied as per the invention need not otherwise appreciably differ in practice from the prior art registration records. In special the light-pervious cover of the perforations **7** of the registration record **2** may be made so thin that the thickness of the registration record is practically no more affected by said cover than the record's weight or its flexibility. The application of the coated layer to the perforations, preferably its filling up the latter, may be easily carried out with the aid of the device shown in FIGS. 5 and 6, which actually consist of two rollers **10**, **11** positioned axially parallel to and resiliently in contact with each other, preferably with an elastic coating of rubber or the like, of which preferably the roller **10** effectuating the coating is driven in a suitable way e.g. through gears **15**, **16**, whereas its circumference, within the reach of the registra-

tion record **2** to be provided with the coating and to be led between the rollers, a roughening, etching, a screen or coating **14** is provided, serving if necessary for the equally spread reception of a solution of light transparent lacquer or the like.

The lacquer e.g. may be transferred from a container **13** by way of a dipping roller **17** and an intermediate roller **12** to the coating surface **14** of the coating cylinder **10** which delivers it to one side of the registration record **2** as the latter is passed between it and the adjacent counter roller **11** on the guiding or transport device **9**. The guiding or transport device **9** may consist e.g. of two angle-shaped jointed smooth planes on which e.g. envelopes **1** with the registration records **2** inserted into them and provided with perforations **7** pass between the rollers **10** and **11** as they are delivered from the perforating device.

In connection with the coating device **10**, **11** a drying device of any desired design and not shown in the drawing may be provided which by heating, air-blowing and/or sucking or the like may effectuate and accelerate drying of the lacquer coating on the registration records.

If the layer used for covering the perforations is applied in the form of a self-supporting layer, this may be done by feeding the self-supporting layer from a stock-roll. The self-supporting layer may be coated with a layer of a thermo-active glue. A cutting device for cutting the self-supporting layer roll may be connected to the coating device which for adaptation to different lengths of the areas to be coated, may eventually be controlled photo-electrically.

I claim:

**1.** A registration record comprising a card, slip, sheet, or the like, for use in identifying characteristics of an object, the record comprising visually legible characters



formed by a number of equally large perforations, the said characters being arranged on the record so that the characters as a whole can be photo-electrically scanned in a single scanning operation, and a light transparent layer covering the said perforations of the registration record, whereby the layer at least (a) provides a smooth surface covering the edges of the perforations to prevent perforation edges of adjacent records in a pile from catching onto each other and (b) provides an airtight seal to prevent the flow of air through the perforations.

**2.** A registration record as claimed in claim **1** wherein the said layer is a coating of light transparent lacquer.

**3.** A registration record as claimed in claim **1** wherein the said layer is a light transparent self-supporting layer attached to the said record.


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