09333

COMMONWEALTH OF AUSTRALIA

Patents Act 1952

CONVENTION

APPLICATION FOR A STANDARD PATENT

WE PELIKAN AKTIENGESELLSCHAFT

OF Podbielskistrabe 141, 3000 Hannover 1, West Germany

hereby apply for the grant of a Patent for an invention entitled

"HAND-OPERATED IMPLEMENT FOR TRANSFERRING A FILM FROM A CARRIER SHEET TO A SUBSTRATE".

which is described in the accompanying complete specification. This application is a Convention Application and is based on application number p 38 32 163.7 for a patent or similar protection made in West Germany on 22 September, 1988.

OUR Address for Service is:

PIZZEY & COMPANY PATENT ATTORNEYS,
G.P.O. Box 1374,
BRISBANE. QLD. 4001.

DATED THIS fifteenth DAY OF September, 1989.

B003252 15/09/89

by
PIZZEY & COMPANY PATENT ATTORNEYS

To: The Commissioner of Patents.
Commonwealth of Australia.

.....
J.K. Pizzey

APPLICATION ACCEPTED AND AMENDMENTS ALLOWED 25 · 1 · 91

u. Z. 88/111 AU

P/00/008

COMMONWEALTH OF AUSTRALIA
Patents Act 1952

DECLARATION IN SUPPORT OF A CONVENTION APPLICATION FOR A PATENT

In support of the Convention application made for a patent for an invention entitled: "HAND-OPERATED IMPLEMENT FOR TRANSFERRING A FILM FROM A CARRIER SHEET TO A SUBSTRATE".

I, Dr Peter Volker, of i Hause Pelikan AG Podbielskistr 141 Postfach 103 3000 HANNOVER. WEST GERMANY do solemnly and sincerely declare as follows:-

1. I am authorized by PELIKAN AKTIENGESELLSCHAFT, the applicant for the patent to make this declaration on its behalf.

2. The basic application as defined by Section 141 of the Act was made in Federal Republic of Germany on the Twenty-second day of September, 1988, by Pelikan Aktiengesellschaft.

3. Christoph Manusch, 8 B Berliner Street, 3005 Hemmingen 1 (Fed Rep Germany) is the actual inventor of the invention and the facts upon which Pelikan Aktiengesellschaft is entitled to make the application are as follows:- The said Pelikan Aktiengesellschaft is the assignee of the said Christoph Manusch.

4. The basic application referred to in paragraph 2 of this Declaration was the first application made in a Convention country in respect of the invention the subject of the application.

DECLARED AT Hannover this 27th day of August , 1990

.....
(Dr Peter Volker)

TO: THE COMMISSIONER OF PATENTS

(12) PATENT ABRIDGMENT (11) Document No. AU-B-41447/89
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 609333

(54) Title
HAND-OPERATED IMPLEMENT FOR TRANSFERRING A FILM FROM A CARRIER SHEET TO A SUBSTRATE

International Patent Classification(s)
(51)[4] B05C 001/06

(21) Application No. : 41447/89 (22) Application Date : 15.09.89

(30) Priority Data

(31) Number	(32) Date	(33) Country
3832163	22.09.88	DE FEDERAL REPUBLIC OF GERMANY

(43) Publication Date : 12.04.90

(44) Publication Date of Accepted Application : 26.04.91

(71) Applicant(s)
PELIKAN AKTIENGESELLSCHAFT

(72) Inventor(s)
CHRISTOPH MANUSCH

(74) Attorney or Agent
PIZZEY & COMPANY, GPO Box 1374, BRISBANE QLD 4001

(56) Prior Art Documents
AU 454160 31273/71 B05C 1/06

(57) Claim

1. Hand-operated implement for transferring a film from a carrier sheet to a substrate, with a casing from which projects in sloping manner an applicator in the form of an elongated support foot having a free end, which springs out elastically under pressure with a rigid application strip forming a pressing edge at its end over which the carrier sheet coming from the casing is guided for pressing its film side against the substrate and from where it is returned into the casing, characterized in that at the free end of the rigid applicator strip (4) projects an end region (5) which can elastically spring out relative thereto, which shapes the pressing edge (9) and comprises juxtaposed portions (5.1, 5.2 ... 5.7; 5.1', 5.2', ... 5.6'), which substantially independently of one another can elastically spring out at right angles to the median longitudinal plane (M-M) of applicator strip (4), but are non-flexible in the direction of said median longitudinal plane (M-M).

609333

COMMONWEALTH OF AUSTRALIA

Patents Act 1952

PELIKAN AKTIENGESELLSCHAFT

Corresponding to West German Patent Application
No. P 38 32 163.7

CONVENTION PATENT APPLICATION FOR THE INVENTION ENTITLED:-

"HAND-OPERATED IMPLEMENT FOR TRANSFERRING A FILM FROM A CARRIER SHEET TO A SUBSTRATE"

The following statement is full description of this invention, including the best method of performing it know to us:-

Pelikan AG

(88/11)

Hanover, 20.9.1988

HAND-OPERATED IMPLEMENT FOR TRANSFERRING A FILM FROM A CARRIER SHEET TO A SUBSTRATE

The invention relates to a hand-operated implement for transferring a film from a carrier sheet to a substrate, with a casing from which slopes in projecting manner an applicator in the form of an elongated reinforcing or support foot which springs out elastically under pressure and with at its end an applicator strip having a pressing edge, the carrier sheet passing out of the casing being guided by means of the support foot for pressing its film side against the substrate and back from it into the casing.

Of late an implement has become known (described in the earlier-dated German application P 37 36 367.0-27), which in the case of an attractive external shape, small dimensions and very easy handling characteristics for the user, gives a precisely defined and easily establishable position of the tear-off edge of the film applied. The known hand-operated implement makes it possible to insert carrier sheets (contained in fast-change cassettes) in which the film to be transferred comprises an appropriate adhesive or a correcting cover film. The known hand-operated implement can be used with particular advantage when an adhesive film is used on the carrier sheet. However, if on the carrier sheet use is made of a cover film, e.g. for applying to written matter and which acts purely as a cover coating unlike in the case of an intrinsically viscous adhesive film and has virtually no inherent viscosity, in the case of local unevennesses on the substrate or if said substrate locally gives way under the action of the pressing forces of the applicator foot (e.g. in the case of a resilient substrate, uneven substrate, under a paper sheet, etc.), there can be a local or even strip-like tear-off of the cover film transferred to the substrate and it is therefore only transferred to the higher points thereof, whilst the lower lying points of the uneven substrate remain without film application.

On the basis of this, the problem of the present invention is to so further develop said known hand-operated implement, that on applying the

film coating, particularly a cover film coating, even in the case of local surface unevennesses or resilience of the substrate, there is a complete transfer of the film from the carrier strip to the substrate, as well as a surface-covering transfer without any intermediate tearing.

According to the invention this problem is solved in the case of a hand-operated implement of the aforementioned type in that on the free end of the rigid applicator strip projects an end region elastically deformable or which can spring out relative thereto, which shapes the pressing edge and comprises juxtaposed portions, which in substantially independent manner can be elastically sprung out or deformed at right angles to the median longitudinal plane thereof or that of the applicator strip, whilst they are not elastically deformable and are instead non-flexible in the direction of said median longitudinal plane.

As a result of the inventive measures a hand-operated implement is obtained, in which over the entire foot width of the applicator foot (pressing strip) a flexibility is achieved in such a way that juxtaposed partial regions can be deflected or deformed independently of one another by unevennesses or flexibility of the substrate surface to which the film is to be transferred, which leads to a good adaptation of the surface and therefore also to a complete transfer of the film (particularly cover film) to be transferred there, so that it can also pass into the letter contours depressed through the typewriter striking the paper surface and can cover the same. This leads to a closed, complete transfer of the film to be transferred from the carrier strip, so that even in the case of cover films there is an undisturbed, complete transfer of the complete film to the substrate surface over and beyond the entire width of the applicator strip of the support foot. Unlike in the case of the rigid applicator strip of the known implement over the entire width thereof and which cannot adapt to such local depressions of the substrate surface, practical tests have revealed that in the case of the inventive construction of the applicator strip excellent transfer results occur with regards to a surface-covering transfer of the film. Thus, if e.g. areas of a document are to be covered by means of such a cover-up film and this takes place on a soft desk substrate or on the first page of a multipage,

intrinsically somewhat flexible document, then the rigid applicator foot of the known implement is only applied to the two lateral edges, whereas in the central region on the substrate flexibility occurs under the pressure action of the applicator foot. Thus, the adhesiveness is not sufficient to detach the coating from the carrier strip and bind it to the substrate, so that, as a function of the substrate, the aforementioned uncovered portions or islands occur. When the inventive implement is used, through the local flexibility obtained at the applicator strip tip the necessary adaptability is achieved in the vicinity of the pressing edge to permit an elastic following of the surface changes on the substrate under the contact pressure, so that there is a real surface-covering transfer of the film, even in the case of cover-up strips.

The choice of the length and thickness of the end region, which shapes the pressing edge in the case of the invention, is carried out in such a way that it is possible to ensure a suitable springing out action, with a simultaneously adequate non-flexibility in the direction of the median longitudinal plane of the applicator strip. However, compared with the applicator strip, the end region is preferably thinner and shorter, because no great springing out distances are required and therefore no great length of the end region and an adequately thin construction of the end region leads to a particularly favourable flexibility along the applicator strip, whilst simultaneously bringing about an extensive independence of the individual juxtaposed portions with respect to their springing out capacity.

The construction of the juxtaposed portions of the end region can take place in any way achieving the sought function. In particularly preferred manner the portions of the end regions are formed from juxtaposed, elastic tongues, which are directly juxtaposed and each tongue can be deflected completely independently of the adjacent tongue. The tongues are preferably made from spring steel, but can also be made from a suitable plastics material. If desired, these metal tongues can be individually fixed to the rigid applicator strip and are preferably interchangeably secured in or on the same. However, they can also be advantageously produced in such a way that the tongues are merely stamped from a corres-

pondingly shaped metal plate, but at the upper end thereof are connected in one piece to one another via the remainder of the metal plate, which leads to an easier fixing to the applicator strip (e.g. by inserting in a corresponding reception gap thereof), but it is not then possible to replace an individual tongue. If the tongues are made from plastic, they are advantageously constructed in one piece with the applicator strip, the complete part being e.g. injection moulded and subsequently the individual tongues are cut out in the lower end portion using suitable thin cutting devices. In certain circumstances it can also be advantageous to use for the tongues a material union, in such a way that the plastic tongues have a metal insert increasing their elasticity and breaking strength, which can be moulded in at the time of tongue production. This is particularly advantageous if for any reason pure metal tongues are not desired, but still a considerable spring constant is to be obtained.

In particularly preferred manner all the elastic tongues have the same shape, preferably with the thickness decreasing constantly towards their ends, which is of particular interest when they are made from plastic.

The flexibility or adaptability of the pressing edge to the substrate, apart from the material chosen for the tongues, is also decisively dependent on the ratio of the length of the pressing edge to the width of the individual tongue. The ratio of the total length of the pressing edge to the width of an individual tongue, particularly in the case of carrier sheet widths of up to 10 mm, has proved to be particularly advantageous when in the range 4 to 8 and more particularly 4 to 6.

In the case of an inventive hand-operated implement, a particularly preferred construction of the juxtaposed portions of the end region is obtained if the portions are not constructed as reciprocally separated portions (as in the case of the tongues) and instead the applicator strip and end region are integrally made from plastic and the end region is a very thin strip, which is cross-sectionally tongue-like, for good adaptation to the substrate roughness and on which supporting or reinforcing ribs are provided for forming the juxtaposed portions and which, viewed

in the strip width direction, are spacedly displaced, extend in the longitudinal direction of the end region (i.e. also in the longitudinal direction of the applicator strip or the complete support foot) to close to the pressing edge and there locally pass at right angles to the median longitudinal plane of the applicator strip. This achieves a construction of the end region, such that the longitudinally extending, spaced reinforcing ribs are interconnected in much the same manner as with "membranes", namely through the thin strip portions located there. The end region acts in the same way as the teeth of a comb, to which correspond the reinforcing ribs of the end region and which, when passed over an uneven or flexible substrate, independently of one another adapt thereto in each phase in an appropriate sprung-out sloping position. This initially leads to a width-through, but laminated transfer of the film under the area of a reinforcing rib. As a result of the "membranes" formed between the reinforcing ribs and obtained through the extremely thin-walled strip, there is also a coverage in resiliently adapted manner of this area of the intermediate portion and finally a surface-covering transfer over the entire width of the applicator strip. This leads to an excellent springing out capacity at right angles to the median plane of the end region or the applicator strip in the case of an excellent adaptability to the substrate over the entire width of the pressing edge, but the desired non-flexibility is still achieved in the direction of the median longitudinal plane, because the reinforcing ribs and the interposed tensioned "membranes" do not give way in the case of loading in the direction of the median plane, i.e. remain "rigid". The applicator strip edge facing the carrier strip is very suitable as a result of its very small rounding, to transfer the necessary large specific surface pressure for the contacting of the coating to be transferred with the substrate, without having any unfavourable influence on the springing out characteristics for adapting to the substrate roughness.

In a particularly preferred manner the cross-section of the strip in a front area emanating from the pressing edge and whose extension roughly corresponds to the final thickness of the strip, is chosen substantially constant (the rounding at the front on the edge being covered by the term "constant thickness"), whilst in a following second area the strip thick-

ness constantly increases until entering the rigid applicator strip and in particularly preferred manner the top of the strip in the second area is cross-sectionally circular segmental and the underside of the strip is planar there. The applicator strip side remote from the carrier strip is constructed here in the form of a fillet or cavetto for forming the elastic area and for the contour thereof a circular arc is chosen, which permits simple production in the injection mould by inserting a crossbolt and a reliable venting of the extremely tapering blind hole in the mould by means of a suitable clearance of the cross-bolt at its deepest edge. Said ribbing can also be incorporated in a production-advantageous manner into the crossbolt and by radial adjustment thereof the position of the ribbing within the fillet, as a function of the intended use of the foot can be freely selected with respect to the position in the mould relative to the applicator strip elasticity.

If the end region of the inventive hand-operated implement is to be made from plastic, particular preference is given to the use of polypropylene or POM.

In a preferred further development of the inventive hand-operated implement, the ratio of the spacing of two adjacent reinforcing ribs to the maximum width of one rib is at least 8 to max 12 and is particularly preferably 9 to 10. The spacing between two adjacent reinforcing ribs is preferably at least 0.8 and max 1.2 times the length of the end region and in particularly advantageous manner both values are approximately the same.

In the case of the inventive hand-operated implement, it is also advantageous to fit the outermost reinforcing rib at a distance from the end of the strip, so that the laterally projecting strip in this area can freely spring out and on application to the two laterally outermost ends of the strip via reinforcing ribs, there is no introduction of pressing forces. Test results have shown that as a result of this advantageous construction in the edge regions particularly favourable application conditions can be obtained.

In particularly preferred manner the end thickness of the strip forming

the end region alongside the reinforcing ribs is 0.1 to 0.25 mm and in particularly preferred manner 0.15 to 0.20 mm. Maintaining such plastic strip thicknesses in practical use gives very favourable transfer results, accompanied by ease of manufacture.

The invention is described in greater detail hereinafter relative to the drawings, wherein show:

Fig. 1 A side view of an inventive hand-operated implement in use.

Fig. 2 A greatly enlarged detail of the construction of the elastic end region in the form of individual tongues.

fig. 3 A sectional representation through a tongue along line III-III of fig. 2.

Fig. 4 A greatly enlarged diagrammatic-perspective view of the elastic end region of an inventive hand-operated implement when sliding over an uneven substrate (the front ends of the individual tongues being partly cut off).

Fig. 5 A larger-scale, diagrammatic-perspective view similar to fig. 4 of another embodiment for the end region of an inventive hand-operated implement, in the form of an elastic, thin end strip with reinforcing ribs (shown in the use position, but without showing the substrate).

Fig. 1 is a diagrammatic side view of a hand-operated implement in the use position during the application of a film from a carrier sheet to a substrate. The implement has a casing 1, which houses a delivery spool. It is possible to check the material 3 stored on the delivery spool from the outside through an inspection window 2 in casing 1. From the latter slopes outwards a reinforcing or support foot, which carries at its front end a rigid applicator strip 4, to which is connected an area 5 which springs out elastically and which forms at its free end a pressing edge 9 of length l (cf. fig. 5).

A carrier sheet 6 passing from the delivery spool is provided on its side facing the surface of a substrate 8 with a film 7 and runs from the spool out of the casing over the terminal edge 9 on the end region 5 of applicator strip 4 and from here back into the casing 1, where it is passed onto a not shown take-up spool. The delivery and take-up spools are interconnected in an appropriate manner in casing 1, so that the necessary tension of the carrier sheet 6 is always ensured. Fig. 1 also shows how the film 7 adheres to the carrier sheet 6 up to the pressing edge 9 and is transferred therefrom to the surface of substrate 8, whilst the carrier sheet 6, freed from the film 7 returns to the casing 1.

Reference is firstly made to figs. 2 and 3 to show the circumstances in the end region 5 and they show a larger-scale partial detail of an embodiment for the construction of said end region.

As can be gathered from fig. 2, on the applicator strip 4, which is constructed as a rigid element (whereas the support foot located above it and not visible in fig. 1 is constructed as a resilient element) are fixed a plurality of directly juxtaposed individual tongues 5.1, 5.2, 5.3, 5,4, 5.5 and 5.6. As is shown in the larger-scale sectional representation of fig. 3, the tongues are provided at the top with a shaped head, which is held in a correspondingly shaped reception slot formed in the rigid applicator strip 4. Fig. 3 shows such a tongue 5.4 in its inclined position corresponding to the use position, but without a contact pressure being exerted thereon, so that the tongue has not yet sprung out symmetrically to its median longitudinal plane M-M. Tongue 5.4 tapers over its length l projecting from the rigid applicator strip 4 and which represents the length of the end region 5, in a constant manner towards the cross-sectionally rounded pressing edge 9, so that its springing out capacity increases as it approaches the pressing edge 9. The tongue shown in fig. 3 can spring out in material and in its selected shaping at right angles to the median longitudinal plane M-M, namely in the direction of arrow F, whilst in the direction of plane M-M it is non-flexible. As can be gathered from fig. 1, the median longitudinal plane M-M of tongue 5.4 is also the median longitudinal plane of the rigid applicator strip 4 and the not shown support foot.

As it is possible to choose for the construction of the pressing edge 9, a very small rounding (with a radius of 0.05 to 0.125 and preferably 0,075 to 0.1 mm), over the pressing edge 9 facing the support sheet 6 it is possible to achieve a large specific surface pressure for contacting the film coating 7 to be transferred with the substrate. If an unevenness occurs on the substrate surface, each tongue affected by it, can easily elastically give way or spring out, so that the necessary contact pressure is always maintained. As when using the implement the user exerts a pressing force, in order to transfer the film, this means that fundamentally under the action of said force all the tongues are elastically deformed or spring out in the direction of arrow F. If e.g. a depression 13 or protuberance 12 then occurs on the substrate surface (cf. fig. 4), in the case of a protuberance any tongue contacting it can spring out further or in the case of a depression, due to the elastic restoring force can pass out of the sprung-out situation following said depression and sliding into the same. Fig. 4 shows such a protuberance 12 and depression 13 on the surface of substrate 8 and in the case of fig. 4 the implement is moved in the direction of arrow V. For better representation purposes, fig. 4 shows the strip configuration of the carrier sheet 6 after transferring the film 7 to the surface of substrate 8 is shown in dot-dash line manner on pressing edge 9. Fig. 4 reveals how the different individual tongues 5.1, 5.2, ..., 5.7 can be differently deflected.

As can be seen from figs. 4 and 2, the shape of the individual tongues 5.1, 5.2, ..., 5.7 is identical. Each tongue has a width a chosen in such a way that, in view of the expected unevennesses on the substrate surface, an adequate individual springing out of the individual tongues is achieved, without having to use an excessive number of tongues. In the case of practically used carrier sheets having widths up to 10 mm, good results are obtained regarding the completeness of the film transfer when using 4 to 8 and preferably 4 to 6 tongues (corresponding to a l/a ratio between 0.125 and 0.25).

The spring tongues 5.1, 5.2, ..., 5.7 shown in fig. 4 have a shape revealing that they are made from plastic (preferably polypropylene or POM). However, it would also be possible to use spring steel tongues, in

which there is then preferably a uniform thickness over the length L of the end region 5 and it would then only be necessary in the vicinity of pressing edge 9 to have a slight terminal rounding in the bending up sense.

Fig. 5 shows another construction of the end region 5, in which there are no individual, juxtaposed tongues and instead there is an end or terminal strip 5' shaped integrally onto the end of the rigid applicator strip 4, both being made from plastic. Compared with the much greater thickness D of the rigid applicator strip 4, the thickness D of end strip 5' decreases considerably up to its terminal edge 9, a minimum end thickness d' being obtained at said edge 9, which is only approximately 0.10 to 0.25 mm (as a function of the intended use). Starting from the pressing edge 9, said thickness d is initially constant over a short length, whose size roughly corresponds to the minimum thickness d' and only in a following second surface area does it continuously increase in the direction of the rigid applicator strip 4. The surface of the end region 5', as shown in fig. 5, is shaped like a fillet or cavetto, which in cross-section describes a circular path.

Considered in the direction of the width of end region 5', several reinforcing ribs 10 are distributed over the length l of the terminal edge 9 and each extends in the longitudinal direction of the applicator strip 4 or the end region 5' (i.e. parallel to the median longitudinal plane thereof). The spacing a' between two juxtaposed reinforcing ribs 10 is chosen in such a way that the width B, measured in the same direction, of each reinforcing rib 10 is only approximately 1/12 to 1/8 of the size of spacing a'. As is also clearly shown in fig. 5, although the reinforcing ribs 10 extend almost over the entire length L of the end region 5', they end shortly before and not at the pressing edge 9, so that in the projecting, but very small end region (the projecting length being only approximately 0.2 mm), a good local flexibility of strip 5' is achieved over the entire length l of edge 9.

The two lateral, outermost reinforcing ribs 10 are spaced from the lateral end of strip 5', i.e. they are not directly located on the corresponding lateral terminal edge of strip 5', so that in this projecting

area strip 5' is also able to spring upwards or downwards corresponding to the substrate surface. It has been found that this leads to more favourable transfer conditions than when the two outermost, lateral reinforcing ribs are located on said terminal edges. Portions 5.1', 5.2', 5.3', 5.4', 5.5' and 5.6' of strip 5' are formed between the reinforcing ribs 10 and are in the form of "membranes".

Fig. 5 shows a shaping of strip 5', which is obtained when said strip has sprung upwards somewhat at its terminal edge 9 under the action of the compressive force exerted by the user, so that the overall configuration of strip 5' has a slight upwards curvature. Independently of one another, reinforcing ribs 10 can locally follow the substrate 8 in a very adequate manner and spring out to a greater or lesser extent. As a result of the individual portions 5.1', 5.2', ... 5.6' located between them, any level difference between two juxtaposed reinforcing ribs 10 is compensated in "membrane-like" manner. Any roughnesses can be compensated without difficulty through the very limited thickness d of the "membrane" located there.

Thus, the thickness d of end region 5' decisive for the elastic deformation or springing out effect is much thinner than the thickness D of the applicator strip 4 and the length L of end region 5' is also much smaller than that of the rigid applicator strip 4. The end region 5 or 5' is preferably constructed in tongue-like manner (either in the form of juxtaposed individual tongues, or in the form of a cross-sectionally tongue-like transverse strip 5'), because this leads to a particularly favourable springing out behaviour on sliding over an uneven substrate surface.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. Hand-operated implement for transferring a film from a carrier sheet to a substrate, with a casing from which projects in sloping manner an applicator in the form of an elongated support foot having a free end, which springs out elastically under pressure with a rigid application strip forming a pressing edge at its end over which the carrier sheet coming from the casing is guided for pressing its film side against the substrate and from where it is returned into the casing, characterized in that at the free end of the rigid applicator strip (4) projects an end region (5) which can elastically spring out relative thereto, which shapes the pressing edge (9) and comprises juxtaposed portions (5.1, 5.2 ... 5.7; 5.1', 5.2', ... 5.6'), which substantially independently of one another can elastically spring out at right angles to the median longitudinal plane (M-M) of applicator strip (4), but are non-flexible in the direction of said median longitudinal plane (M-M).

2. Hand-operated implement according to claim 1, characterized in that the end region (5) is thinner (d) and shorter than the applicator strip (4).

3. Hand-operated implement according to claims 1 or 2, characterized in that the portions of the end region (5) comprise juxtaposed elastic tongues (5.1, 5.2 ... 5.7).

4. Hand-operated implement according to claim 3, characterized in that all the elastic tongues (5.1, 5.2, ... 5.7) have an identical shaping with a thickness (d) decreasing constantly towards the ends thereof.

5. Hand-operated implement according to claims 3 or 4, characterized in that the elastic tongues (5.1, 5.2, ... 5.7) are interchangeably fixed to the rigid applicator strip (4).

6. Hand-operated implement according to claims 3 or 5, characterized in that the tongues (5.1, 5.2, ... 5.7) are made from spring steel.

7. Hand-operated implement according to one of the claims 3 to 6,

characterized in that the ratio of the length (l) of the pressing edge (9) to the width (a) of a tongue (5.1, 5.2, ... 5.7) is in the range 4 to 8 and preferably 4 to 6.

8. Hand-operated implement according to claims 1 or 2, characterized in that the applicator strip (4) and end region (5) are integrally made from plastic, the end region being shaped as a cross-sectionally tongue-like, thin strip (5') and to which, for forming the juxtaposed portions, are applied reinforcing ribs (5.1', 5.2', ... 5.6') reciprocally displaced in the spacing (a') in the direction of the strip width and which in the longitudinal direction of the end region extend close to the pressing edge (9).

9. Hand-operated implement according to claim 8, characterized in that the cross-section of strip (5') in a front area emanating from the pressing edge (9), whose extension roughly corresponds to the end thickness (d') of strip (5'), is substantially constant and then in a following second area the thickness (d) of strip (5') constantly increases until issuing into the rigid applicator strip (4).

10. Hand-operated implement according to claim 9, characterized in that the top (11) of strip (5') is cross-sectionally circular segmental in the second area, but the botton (14) of strip (5') is planar there.

11. Hand-operated implement according to one of the claims 1 to 5 or 7 to 10, characterized in that the end region (5) is made from polypropylene or POM.

12. Hand-operated implement according to one of the claims 8 to 11, characterized in that the ratio of the spacing (a') of two adjacent reinforcing ribs (10) to the greatest width (B) of a reinforcing rib (10) is min 8 to max 12, but preferably 9 to 10.

13. Hand-operated implement according to one of the claims 8 to 12, characterized in that the spacing (a') between two adjacent reinforcing ribs (10) is min 0.8 and max 1.2 times the length (L) of the end region

(5), but preferably both values are approximately the same.

14. Hand-operated implement according to one of the claims 8 to 13, characterized in that the lateral outermost reinforcing ribs (10) are fitted at a distance from the particular end of the strip (5').

15. Hand-operated implement according to one of the claims 9 to 14, characterized in that the end thickness (d') of strip (5') is 0.10 to 0.25 mm and preferably 0.15 to 0.20 mm.

DATED THIS fifteenth DAY OF September, 1989

PELIKAN AKTIENGESELLSCHAFT

by

PIZZEY & COMPANY PATENT ATTORNEYS

ABSTRACT

In a hand-operated implement for transferring a film (7) from a carrier sheet (6) to a substrate (8), a support foot, which can spring out and project from a casing is provided, which has at its end a rigid applicator strip (4). The carrier sheet (6) from the casing is guided over said applicator strip (4) for the pressing of its film side (7) against the substrate (8) and from there back into the casing.

At the free end of the rigid applicator strip (4) projects an end region (5) which elastically springs out relative thereto, which shapes a pressing edge (9) and comprises juxtaposed portions (5.1, 5.2, ... 5.7), which substantially independently of one another elastically spring out at right angles to the median longitudinal plane of the applicator strip (4), but which are non-flexible in the direction of said median longitudinal plane.

(Fig. 4)

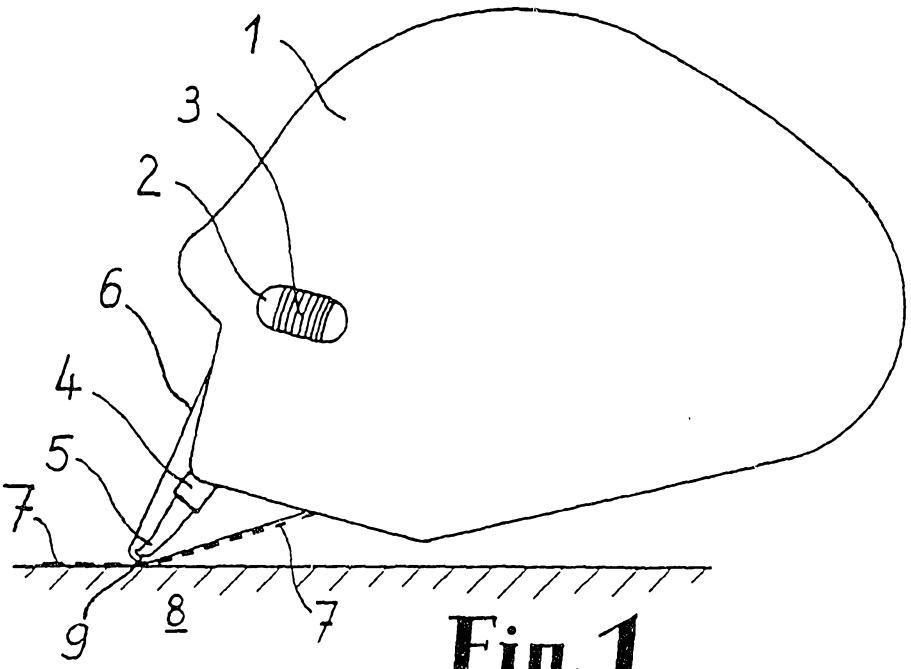
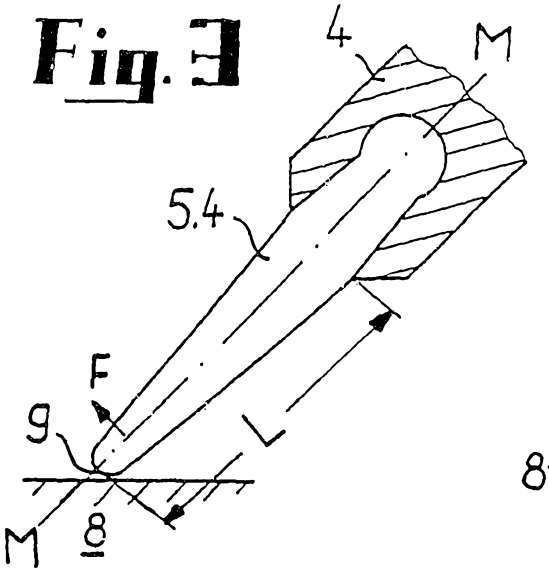


Fig. 1

Fig. 3



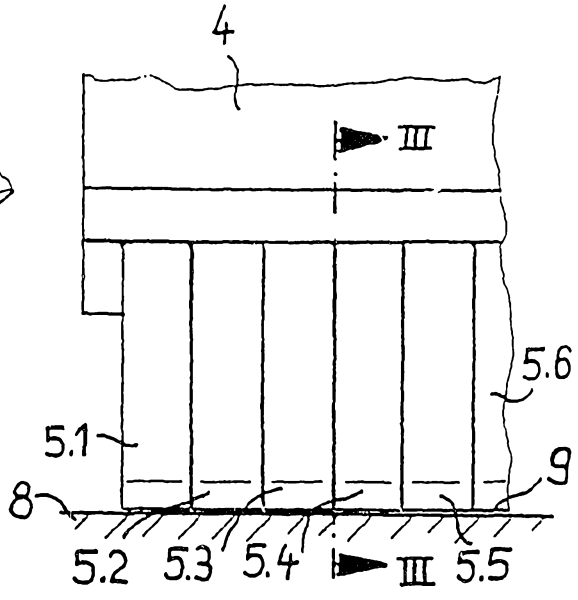


Fig. 2

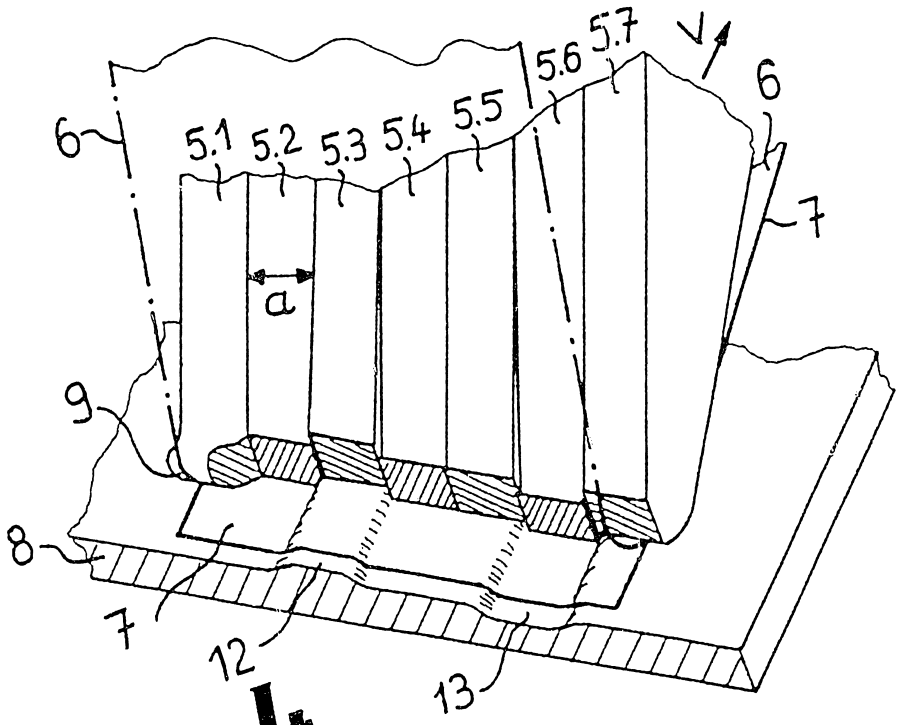

5.1
5.2
5.3
5.4
5.5
5.6
5.7
V
6
6
7
a
9
8
7
12
13

Fig.4

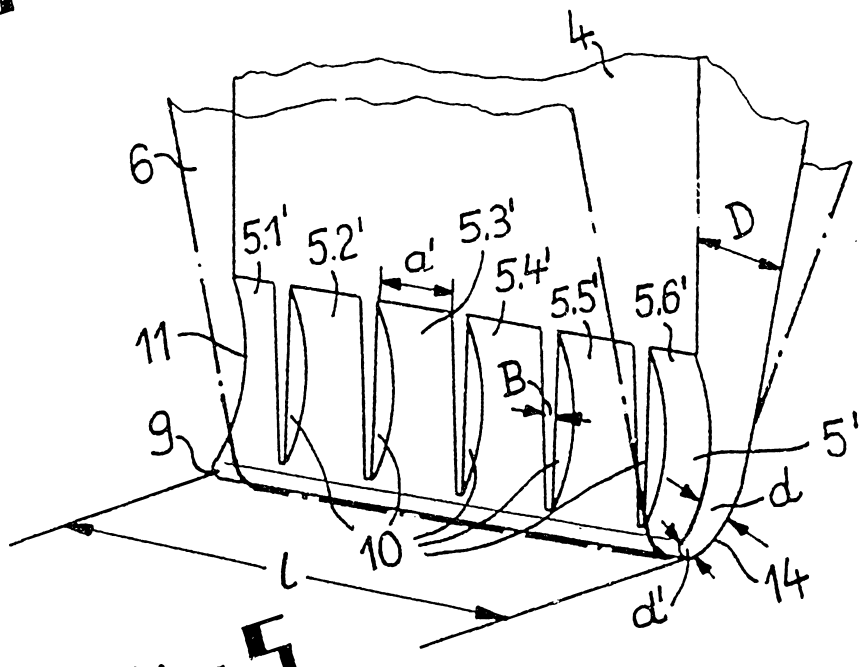

4
6
5.1'
5.2'
a'
5.3'
5.4'
5.5'
5.6'
D
11
B
9
5'
d
10
l
14
d'

Fig.5