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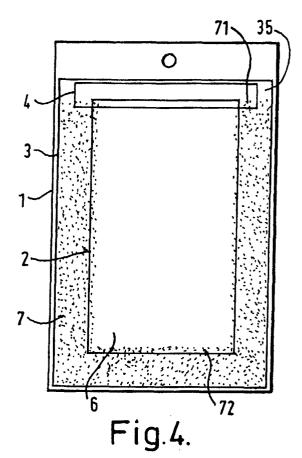
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## (54) Printable form with bag

(57) A bag and form product including a front sheet (1) of printable material a front surface (11) of which is exposed for printing, a front (2) and a rear (3) bag wall layer of plastics material superimposed one behind the other and attached to the rear surface of the front sheet (1), the front and rear bag wall layers (2,3) being joined together around a central region so as to form a join which defines a bag cavity (6), a gap being provided in the join at one end of the bag cavity to define a bag opening, a distributed join (7) being provided on the outside of the bag cavity (6) to attach the rear bag wall (3) layer to the front sheet so that the bag wall layers (2,3) are positioned over most or substantially all of their respective areas against the rear surface of the front sheet (1).



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## Description

**[0001]** This invention relates to products which combine a printable form of paper, card or the like material with a bag of plastics material which can be sealed. Our preferred implementations of the invention relate to specimen bags of the kind used for transport of clinical or diagnostic specimens such as urine and blood samples, but the invention may have other uses.

**[0002]** Currently there is a widespread need for conveying specimens, with their source, nature and destination clearly identified, from one place to another e.g. for analysis.

The specimen containment must be leakproof, tamper proof and the necessary specimen data - for example the names/numbers of patient, hospital, department, consultant etc. - attached to it reliably. A conventional product consists of a flat rectangular plastic bag large enough to receive a specimen bottle, permanently glued along one edge of its opening (which is at the short side of the rectangle) along a corresponding edge of a printable paper form of the same rectangular shape. The front of the paper form is pre-printed with various data appropriate to the specific user or user category, leaving blank fields in which more specific data for the particular specimen can be written in. The stuck-on top edge of the bag wall carries on its other face a permanent adhesive zone with a peelable cover layer. After inserting the specimen container (bottle, vial) the peelable cover layer is pulled away and the top edge of the bag and form are folded over to stick permanently to the edge of the rear face of the bag. This seals the bag.

[0003] We have noted that although these products satisfy the need for a printed identification form permanently attached to a sealable specimen bag, it would be highly desirable if they could be more easily printed. Currently the preparation of the so-called "request forms" is time-consuming because of the many and varied specifics that different users may want to put on the forms. There is a high degree of wastage when preprinted forms which have already been attached to their bags cannot be used because the specifics are inappropriate or have gone out of date. There can also be confusion caused by poor handwriting in the blank fields.

**[0004]** What we now propose is a product of the kind described combining a printable form and a bag which can be passed together through a printer. This represents a major advantage over the previous products, where the forms had to be printed and after being permanently attached to the bags could be filled in only by hand. The conventional bag/form product cannot practically be passed through printers without melting, tearing or jamming.

**[0005]** More specifically, one aspect of the invention is a bag and form product comprising

a front sheet of printable material, preferably a paper sheet, with a front surface exposed for printing,

and

front and rear bag wall layers of plastics material superimposed and joined on behind the front sheet, the bag wall layers having a peripheral join with a gap at one side so as to define a bag cavity at a central region between them and a bag opening at the gap.

**[0006]** According to a preferred embodiment, a distributed join which may be an adhesive join, holding the bag wall layers onto the rear surface of the front sheet is distributed around the bag cavity and is preferably present at least at opposite sides of the bag cavity. This distributed join holds the plastic bag formation over most or substantially all of its area against the rear surface of the front sheet so that the bag and form product can be passed in its entirety through a printer for printing on the front surface of the front sheet. To this end the distributed join preferably holds the bag layers fully extended in two dimensions against the rear surface of the front sheet so that the product is substantially flat.

**[0007]** Further proposals herein relate to the construction of a bag and form product of the kind described in such a way as to facilitate mass production while also promoting the printability of the product. Firstly, as regards the bag wall layers, these are preferably discrete sheets which are given the requisite peripheral join to form the bag by surface bonding. This can avoid the need to handle folded or bag-form plastic on a production line.

[0008] Secondly, it is generally more difficult to get a strong plastic-plastic bond than a plastic-paper bond. To this end we prefer that rear layer is bonded directly to the rear surface of the front sheet around the peripheral join, at a region where it extends beyond the boundary of the front bag layer. So, the intermediate layer (front bag wall layer) can be made smaller than the rear layer and be bonded down to the front sheet leaving an exposed bonding margin around the rear surface of the front sheet, at least around what is to be the peripheral join defining the bag cavity e.g. three sides of a rectangle. The rear bag wall layer preferably bonds down onto this bonding margin but also onto a peripheral region of the intermediate (front bag wall) layer. While this latter bond may not have the strength of the outer bond, it provides a better sealed bag cavity.

**[0009]** Nevertheless a rear bag wall layer which is attached only to the front bag wall layer i.e. an entirely plastic-plastic join so that it is only indirectly attached to the front sheet is also envisaged.

**[0010]** For the reasons above, while it is conceivable to provide the front plastics bag wall layer as an integral lamination coextensive with the front (paper) sheet, it is preferred to provide the front bag wall layer as a separate sheet or patch laminated onto the front sheet in the manufacturing process so that the bonding margin referred to above can be left clear.

[0011] So that the bag can be closed, it is preferred

to provide an adhesive zone with a release cover along the bag opening. When the appropriate item e.g. a specimen vial has been put in the bag, the release cover can be removed and the opposed wall of the bag opening stuck down onto the adhesive zone to close the bag.

**[0012]** In uses requiring an essentially sealed bag the peripheral join of the bag wall layers should extend continuously around the bag cavity. Preferably it is contiguous with the adhesive zone used to close the bag as mentioned above.

**[0013]** A rectangular format is preferred, in which the front sheet and the front and rear bag wall layers are all substantially rectangular.

**[0014]** The bag opening may then preferably be along one straight side of the bag cavity. This helps to keep the necessarily unbonded edge at the open side of the bag lying flat for passage through a printer without catching.

**[0015]** For the same reason it is preferred that all exposed bag wall layer edges be bonded against the front sheet, i.e. that a region of adhesive bonding extends substantially out to these edges so that they do not fall away form the front sheet.

**[0016]** In the preferred construction described above the intermediate layer (front bag wall layer) may be substantially or entirely covered by the rear bag wall layer so that only the edges of the rear layer will be a concern in that respect.

[0017] The choices of materials are generally not critical, and may be made in accordance with the end use of the bag/form product and the printing conditions envisaged. At least the rearmost bag wall layer and preferably both bag wall layers may be transparent. Instructions for use may then be printed on the rear surface of the front sheet and visible through the bag wall layers. Polyester is one suitable material combining low cost with desirable properties.

**[0018]** The distributed join may preferably be bonded by an adhesive, the adhesive used is again not critical and may be selected using conventional knowledge in order to bond the plastic films to the material - usually paper - of the front sheet and may also be selected to provide a suitable bond to the periphery of the front wall layer.

**[0019]** According to a preferred embodiment, the bag and form product is provided with an extension sheet of printable material, a peripheral edge of which is attached at a peripheral edge of the front sheet of printable material so as to provide an extension of the printable surface beyond the area corresponding to the front and rear bag wall layers. The extension sheet may be printable with data relevant to the contents of the bag and may preferably be detachable from said front sheet to provide, for example, a paper file copy and such like of the data.

**[0020]** The extension sheet of printable material may be integrally formed with the front sheet of printable material, however the extension sheet may be attached to

the front sheet by any conventional means of adhesion and the invention is therefore not restricted to any particular means by which the sheets are attached together. The intersection of the two sheets may preferably include a folded or creased portion which enables the further sheet to fold relative to the front sheet so as to be capable of lying substantially flat with the front sheet and in contact with either the printable surface of the front sheet or the bag to the rear of the front sheet.

[0021] According to one preferred embodiment, the intersection of the two sheets may be such that the extension sheet is detachable from the front sheet. In order to achieve this the intersecting portion between the front and the further sheet may include perforations, scoring or other such similar measures which would enable the extension to be easily manually separated from the front sheet. However this is not necessarily the case and the transition between front sheet and further sheet may be a continuous, the front sheet and further sheet having been made from the same original piece of printable material. It is then possible to apply folding, perforations, scoring etc. by other external means at a point in time after manufacture.

However the front sheet and further sheet can be detached from one another by manual cutting in which case perforations etc are not necessary.

**[0022]** The extension sheet of printable material may preferably be attached to the peripheral edge of the front sheet at the opposite end from the edge nearest to the open side of the bag cavity.

**[0023]** According to a preferred embodiment of the invention, the extension of printable material may include a label portion having one or more removable printable labels. The removable printable labels may preferably be self-adhesive on one side and printable on the other. They may be removably attached to a backing sheet which is included, for example at the manufacturing stage, as an integral part of the extension sheet. However this is not necessarily the case and the label portion may be itself attached manually to the extension sheet, for example the backing sheet of the removable printable labels may itself be self-adhesive.

**[0024]** Preferably the extension sheet includes, in addition to the label portion, a filing portion consisting of an area of printable material additional to the area provided by the label portion. The filing portion may for example be detachable from the label portion by means of an intersecting portion which is scored or perforated and such like to enable the filing portion to be easily detachable from the label portion.

**[0025]** Similarly the filing portion may be situated between the front sheet of printable material and the label portion, the filing portion and the label portion being attached at opposite ends respectively of the front sheet. Each of the three portions may then intersect at either a continuous, folded, scored or perforated region and such like and may therefore be such that the portions can be manually detached from each other.

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**[0026]** According to a preferred embodiment, one or more additional sheets of printable material may be provided in addition to said extension sheet. These may for example be of similar or identical material to the extension sheet and be attached to a different peripheral edge of the front sheet than the edge at which the extension sheet is attached. Preferably an additional sheet is attached at an opposite peripheral edge to the peripheral edge at which the extension sheet is attached. The extension sheet attached at one edge of the front sheet may for example include a label portion at the same time as the additional sheet attached to the opposite peripheral edge of the front sheet includes a filing portion.

**[0027]** The label portion may, according to one embodiment of the invention, be located between the front sheet of printable material and the filing portion, once again each of the three parts may be joined at a section which enables said portions to be individually manually detached from the front sheet.

**[0028]** The bag and form product of the invention however envisages any side by side configuration of front sheet, label portion and filing portion which makes it suitable for passing through a printer.

**[0029]** According to a preferred embodiment the attachment between the extension sheet and the front sheet or between the label portion and/or the filing portion respectively and the front sheet may include a folded portion which has been preferably introduced during the manufacture of the product. The folded portion enabling both the label portion and the filing portion to fold relative to the front sheet and lie substantially flat with the front sheet whilst contacting either the printable front side or the bag on the rear side of the front sheet.

[0030] For use in laser printers it is normally preferable to provide the bag/form products as discrete sheets. [0031] Alternatively, the combined form/bag product is in a continuous stationery format, with a series of the printable front sheets being provided as a longitudinal series of regions of a long strip of paper, card or board and demarcated by perforations or the like, each printable form region having the plastics layers applied to its rear surface in the way described.

[0032] Another aspect of the invention is a method of use of the form, e.g. for packaging clinical specimens. A data processor e.g. a standard PC at the relevant medical center has a stored form template with fixed or selectable data identifiers. These may include data items specific to the medical center concerned. They may include one or more field identifiers which identify any of a range of tests which have been or should be carried out on the specimen. The template may also include fields for personal data relating to the patient and/ or specimen data relating to the specimens. The data processor is programmed to fill selected fields in the template with data which may be input into the processor directly e.g. via keyboard or picked up from other stored data either automatically or on an operator instruction. For example the computer may fill in patient

data fields using patient data stored in an electronic patient database available at the medical center.

**[0033]** The bag/form product as described above is fed through a printer which prints the standard template (e.g. a form layout, grid or table) onto the front sheet with the appropriate data fields completed in print.

**[0034]** Subsequently the relevant item e.g. a clinical specimen in a specimen container such as a vial is put into the bag cavity of the bag/form product which is then closed or sealed.

[0035] Because all the data needed can be taken from the template and input specifics and printed onto the form, the use of handwriting on the forms can be avoided. Also the need to pre-print the front sheets with various forms, templates or tables - which as mentioned may go out of date, or be inappropriate for some uses can be avoided.

Indeed the front of the sheet can be essentially or entirely blank. This avoids product wastage and mistakes.

[0036] Examples of the invention are now described, with reference to the accompanying drawings in which

Fig 1 is a front view of a set of form/bag combinations;

Fig 2 is a back view;

Fig 3 is a schematic sectional view with the layers thickened for clarity of presentation;

Figs 4 and 5 are respectively rear and front vies of a separate embodiment, and

Fig 6 is an exploded oblique view of the second embodiment;

Fig 7 shows schematically a workstation at a medical center, and

Fig 8 shows a sequence of steps in processing a clinical specimen for dispatch.

Figs 9A-9E show various examples of the form and bag product with optional labelling and filing portions.

[0037] The illustrated first embodiment (Figs 1-3) is presented in a "fanfold" format based on a long strip of paper material divided by transverse lines of perforation 15 into equally-sized rectangular portions 1. In this particular embodiment the paper material is "thermal board", which is a known sheet material adapted for printing in a thermal transfer printer. Other printable materials may be used according to the practical requirements.

**[0038]** This paper strip is used as a substrate on which a series of bag formations is created by the application of bonded plastics layers 2,3 as seen in Figs 2 and 3. The application of these layers can be done on a production line by machine.

**[0039]** A first series of rectangular plastics film patches 2 is applied centrally to the rear surfaces of the form substrates 1. This intermediate plastic patch 2 has a fully-adhesive front surface which bonds over its entire area to the form substrate 1. It is smaller than the substrate

but has substantially the same rectangular proportions so that a margin of the substrate rear surface remains all around it.

[0040] Then a wider, rear plastics film is applied over the intermediate film. The rear film patch 3 has bonding adhesive along its long sides and bottom edge, but not in its centre nor in the centre of its top edge. It is positioned over the intermediate film 2 as shown, overlapping the intermediate film's long sides and bottom edges onto the bonding margin and thereby bonding directly onto the substrate layer, whereas at the top the top edge of the intermediate film projects beyond the (non-bonding) top edge of the rear film. A pocket 6 is therefore formed between the films by this non-bonding region, sealed around its side and bottom edges by the bonding region of the rear film 3.

**[0041]** This region-selective bonding of the rear film may be by selective application of adhesive to its surface, or by selective "killing" or deactivation of adhesive in the appropriate regions of an originally fully-adhesive sheet.

**[0042]** A strip 4 of permanent adhesive appropriate for the material of the plastics layers is bonded across the top edge of the intermediate plastics layer 2, projecting beyond the top edge of the rear layer 3. This adhesive strip 4, carrying a peelable cover layer, may be in itself conventional. It may be applied either before or after application of the rear plastics layer.

**[0043]** Equally, formation of the lines of perforation 15 between the respective formed substrates, and of larger central hanging holes towards their top edges, may be done after but preferably before application of the plastics film elements 2,3.

[0044] The skilled person will appreciate that while the illustrated disposition of plastics elements is a preferred one, others are possible. Thus for example smaller form substrates might have the bags formed transversely across the fanfold strip, i.e. with their open edges towards the side of the fanfold. Equally the exact disposition of bonding regions as between the intermediate and rear plastics layers and the front substrate layer may be modified, provided that the layers as a whole are sufficiently retained against the substrate layer over their extent in order to be passed through a printer of the relevant kind.

**[0045]** Figs 4-6 show a second embodiment. This one is designed for feeding through a laser printer and is presented in single-sheet format. The front sheet 1 is a rectangle, say  $5.75 \times 10$  inches of standard laser-printable paper (e.g.  $90g/m^2$ ). Its front surface 11 (Fig 5) is completely plain. Its rear surface (Fig 4) may carry user instructions (not shown).

**[0046]** The front and rear bag wall layers 2, 3 are each of a  $36\mu m$  clear polyester film. This is a reasonably economical material which is not liable to stretching and which can tolerate temperatures up to about 130°C; it is therefore able to withstand laser printing.

[0047] As in the preceding embodiment, the front

plastic sheet 2 is a rectangular patch glued over its entire area to the rear surface of the front sheet 1 and leaving a bonding margin all the way around. The rear bag wall layer 3 in this embodiment extends substantially to the side and bottom edges of the front sheet 1. Unlike the first embodiment it also extends up beyond the top edge of the intermediate sheet 2. See Fig 4. The rear sheet 3 is bonded to the front sheet 1 by a U-shaped adhered region 7. This adhesive can be applied by a corresponding U-shaped applicator on the production line before the sheets are brought together. The bonded region 7 extends substantially out to the edges of the plastics sheet 3. It need not extend right out to the edge. The polyester film has a reasonably high modulus and even free edges will not spontaneously curl or droop away from the paper sheet in front. The bonding region 7 also includes an inner marginal part 72 which overlaps the periphery of the intermediate plastic sheet 2. This maximizes the impermeability of the bag cavity 6. Impermeability is not always crucial. Indeed, the front plastics layer 2 may be equally or more important in strengthening the front paper sheet in the event of the product getting wet e.g. should a liquid vial of a liquid specimen inside get broken.

[0048] The sealing arrangement is also different in this embodiment. The bonded region 7 does not reach right to the top edge of the rear sheet 3: a narrow strip 35 along its top edge is a free flap. Beneath this flap the rearward surface of the front paper sheet 1 has a stripe of adhesive extending right across the top of the bag cavity 6 and covered by a siliconised release strip 4. This covered adhesive patch is applied to the front sheet before the rear plastics layer 3, and the bonding region 7 actually encroaches slightly over the release layer 4 (71 in Fig 4). To close the bag the user lifts the free flap 35, peels away the release layer 4 to expose the adhesive and then presses the flap 35 down again to stick it in place to close the bag. The resulting bag cavity 6 is completely sealed because of the contiguity of the adhesive regions as mentioned above.

[0049] Figs. 7 and 8 shown schematically how the form/bag product can be used at a work station 10 in a medical center where clinical specimens such as blood or urine in individual labeled vials are being processed for dispatch e.g. for testing. The workstation is standard in that it has a conventional PC 101, VDU 102, keyboard 103, and laser printer 104. The operator selects an appropriate stored form template available on the computer system. The patient's personal details e.g. name, address, national insurance number, doctor's surgery, doctors name etc may be typed into the fields on-screen or retrieved from stored records. The type of test desired for the specimen can also be entered via the keyboard 103 or as appropriate. A blank form 110 which is as shown in Figs 4, 5 is then fed to the printer 104 which prints the blank front surface of the form to produce a printed form/bag 110' with all the necessary specifics. [0050] If the specimen is already available it is then

put in the bag and the bag sealed in the manner described above. This is shown schematically in Fig 8. Alternatively the form can be printed at the point of issue/request and sent to the patient or to the doctor for supply of the specimen which can then be put in the ready-printed bag and returned and sent on to the appropriate destination e.g. for testing.

**[0051]** Figs 9A-9E show various examples of the form and bag product with optional labelling and filing portions. Other configurations of these additional printing areas relative to the front sheet are also envisaged. The front and rear bag wall layers of plastics material have not been illustrated for reasons of simplicity such that only the outline of the front sheet of printable material is shown.

**[0052]** Figure 9A represents the outline of the printable form and bag product in its basic form which does not include any extension of printable material.

[0053] Figure 9B illustrates an embodiment of the present invention whereby an extension sheet (21) including self-adhesive labels (23) is attached to the front sheet of printable material (1) which carries the front and rear bag wall layers. In the illustrated embodiment, the label portion is attached to the front sheet by a perforated region (20) which enables the label portion to be detached from the front portion, for example manually. The self-adhesive labels (23) can be manually peeled away from the backing sheet (not shown) which is an integral part of label portion (21). This enables data to be printed on the self-adhesive labels (23) in addition to being directly printed on the front sheet of the form and bag product. This means that when in use, the labels relating to this bag can be attached to various other associated items, such as patient records, wrist bands, specimen vials and such like which may link an individual to the contents of the bag.

[0054] Figure 9C illustrates in addition to the front sheet (1) and label portion (21), a filing portion (22). The label portion (21) and the filing portion (22) being together regarded as the extension sheet of the present application. As can be seen from Fig 9C the label portion is located between the front sheet (1) and the filing portion (22) and connected to each respectively at perforated portions (20). The filing portion is therefore individually detachable from the other portions and would typically have printed thereon matter relating to the content of the bag as well as other data such as data relating to an individual patient linked to the content of the bag. The filing portion may then for example form part of index card records, an addressed postcard or other applications to which the use of a card containing data relevant to the contents of the bag may be put.

**[0055]** Figure 9D illustrates an alternative embodiment of the present invention similar to that illustrated in Fig 9C except that the label portion (21) is not attached directly to the front sheet of printable material but is instead attached to a filing portion (22) which is itself attached to the front sheet (1). The three elements

of the bag product can be easily manually separated by means of the perforated regions (20).

**[0056]** Figure 9E illustrates an embodiment of the present invention whereby the label portion (21) is attached at one peripheral edge of the front sheet and the filing portion (22) is attached at the opposite peripheral edge of the front sheet. Each of the portions can similarly be manually detached from the front sheet by means of perforations (20).

**[0057]** Although the present invention has been described in terms of specimens used in hospitals and such like, this in no way intends to limit the field of application of the invention. The invention may be applied to human, animal, plant, food, soil samples and such like. The invention is intended to include modifications and variations which would be readily apparent to the skilled person.

## 20 Claims

- 1. A bag and form product including a front sheet of printable material, a front surface of which is exposed for printing, a front and a rear bag wall layer of plastics material superimposed one behind the other and attached to the rear surface of the front sheet, the front and rear bag wall layers being joined together around a central region so as to form a join which defines a bag cavity, a gap being provided in the join at one end of the bag cavity to define a bag opening, a distributed join being provided on the outside of the bag cavity to attach the rear bag wall layer to the front sheet so that the bag wall layers are positioned over most or substantially all of their respective areas against the rear surface of the front sheet.
- 2. A bag and form product according to claim 1 wherein said distributed join on the outside of the bag cavity is distributed around the bag cavity so as to be present at least on opposite sides of the bag cavity.
- A bag and form product according to either claim 1 or 2 wherein said distributed join on the outside of the bag cavity holds the bag wall layers fully extended in two dimensions against the rear surface of the front sheet.
- 4. A bag and form product according to any preceding claim wherein the front and rear bag wall layers are in the form of discrete sheets which are joined around the central region by surface bonding to define the bag cavity.
- 55 S. A bag and form product according to any preceding claim wherein the rear bag layer is bonded directly to the rear surface of the front sheet by said distributed join around the join defining the bag cavity.

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- 6. A bag and form product according to any preceding claim wherein the rear surface of the front sheet has an exposed margin outside the area which is covered by the front bag wall layer, forming a bonding surface of said distributed join to which the rear bag wall layer is bonded.
- 7. A bag and form product according to claim 6 wherein the rear bag wall layer is bonded onto a peripheral region of the front bag wall layer as well as onto said exposed margin.
- **8.** A bag and form product according to any one of claims 1 to 7 wherein substantially all of the front bag wall layer is bonded to the front sheet except for a tab which extends outside the area of the front sheet which is overlapped by the bag cavity.
- 9. A bag and form product according to claim 8 wherein the tab is capable of being folded away from the front sheet, the tab or the rear bag wall layer being provided with an adhesive strip so that the tab is capable, when folded, of being bonded to the rear surface of the rear bag wall thereby closing the bag cavity.
- **10.** A bag and form product according to any one of claims 1 to 7 wherein substantially the entire front bag wall layer is bonded to the front sheet.
- 11. A bag and form product according to claim 10 wherein the rear surface of the front bag wall layer or the front surface of the rear bag wall layer is provided with an adhesive strip in the vicinity of the bag cavity opening for bonding the front and rear bag wall layers together to close the bag cavity.
- 12. A bag and form product according to either of claims 10 or 11 wherein the bonded region of said distributed join between the rear bag wall layer and the rear surface of the front sheet and/or front bag layer does not extend to the end of the rear bag wall layer at the open end of the bag cavity so that said end of the rear bag wall layer is free to move away from the front sheet in the form of a flap.
- 13. A bag and form product according to claim 12 wherein the adhesive strip for bonding the front and rear bag wall layers at the bag opening is arranged such as to overlap with the distributed join attaching the rear bag wall layer to the front sheet so that the adhesive strip and the distributed join form a continuous adhesive region around the bag opening to which the flap at the end of the rear bag layer can be bonded thereby sealing the bag cavity.
- **14.** A bag and form product according to any of claims 9 to 13 wherein said adhesive strip is in the form of

- zone of adhesive covered by a release strip which is removable to enable the adhesive zone to bond the front and rear bag wall layers together to close the bag cavity opening.
- 15. A bag and form product according to any of claims 9 to 14 wherein said adhesive strip is in the form of double sided self-adhesive tape with one side attached to a bag wall layer and the other side covered by a siliconised release tape which is removable to enable the front and rear bag wall layers to bond together to close the bag cavity opening.
- 16. A bag and form product according to any preceding claim wherein the front sheet, the front and rear bag wall layers and the bag cavity are all substantially rectangular and the bag opening is along one straight side of the bag cavity.
- 20 17. A bag and form product according to any preceding claim wherein the front sheet has one or more extensions of printable material beyond the area corresponding to the front and rear bag wall layers.
- 18. A bag and form product according to claim 17 wherein the extension is detachable from the remainder of the front sheet.
- **19.** A bag and form product according to claim 17 or 18 wherein the extension includes a label portion comprising one or more removable printable labels.
  - **20.** A bag and form product according to claim 19 wherein the removable printable labels are self-adhesive on one side and printable on the other, the labels being removably attached to a backing sheet included in said extension.
- 21. A bag and form product according to any one of claims 17 to 20 wherein a said extension includes a filing portion consisting of an area of printable material additional to the area provided by any label portion.
- 45 22. A bag and form product according to claims 19 and 21 wherein intersection of the filing portion and a label portion is such that the filing portion is detachable from the label portion.
- 23. A plurality of bag and form products according to any one of the preceding claims wherein the front sheets form a continuous band of material, the intersecting regions between adjacent products being such as to enable the products to be separated from one another.
  - 24. Method of using the bag and form product according to any one of the preceding claims, e.g. for pack-

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aging clinical specimens, wherein a computer, for example a personal computer, has a stored form template with fixed or selectable data identifiers and is programmed to fill selected fields in the template with data which is input into the computer directly e.g. via keyboard or is received from other stored data either automatically or under instructions from an operator, the bag and form product is fed through a printer which prints the standard template onto the front sheet with the appropriate data fields completed in print and then an item linked to the data such as a clinical specimen in a specimen container, for example a vial, is put into the bag cavity which is then closed or sealed.

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25. A method according to claim 24 wherein the computer fills in patient data fields using patient data stored in an electronic patient database.

**26.** A method according to claim 25 wherein the patient <sup>20</sup> data fields include data items, specific to a medical center, including one or more field identifiers which identify one or more tests which have been or will be carried out on the patient specimen and/or personal data relating to the patient and/or specimen 25 data relating to the specimen.

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