

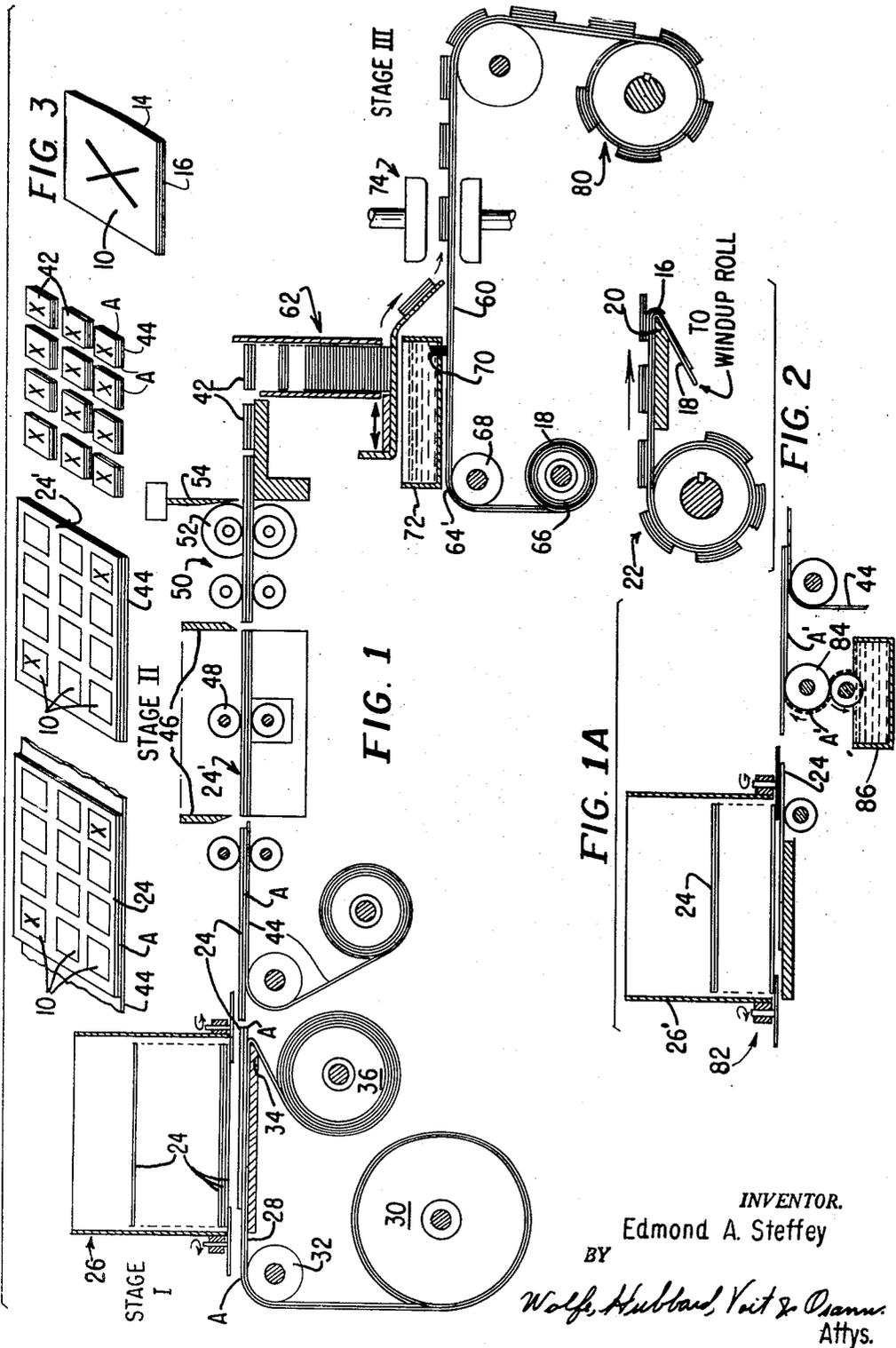
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METHOD FOR PACKAGING APPLIQUES

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METHOD FOR PACKAGING APPLIQUES

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This invention relates to an improved method for packaging appliques in continuous roll form.

Appliques of different types and made with various base materials on which written designs or ornamentation are superposed are presently in widespread use industrially. One class of such appliques employs flexible materials such as metal foil, plastic, or combinations of metal and plastic as a more durable base material on which the desired information or ornamentation may be permanently dyed or imprinted. An applique of this class is shown in my Patent No. 2,889,233, which discloses a base material of resin coated aluminum foil where the resin coating is imprinted with the desired writing or design. As described in the aforesaid patent, the applique may have a film of adhesive on its reverse side to facilitate fastening it to another article, for example, a metal or plastic machine or object of any kind. This type of applique is used on various manufactured items and is customarily applied to the latter on the production line.

Heretofore in the manufacture of such appliques, one practice followed has been to make sheets of appliques, then to coat the reverse side of each sheet with an adhesive, and finally to cut the sheet with the adhesive backing into the individual appliques. Various types of adhesives have been used, for example, pressure sensitive adhesives, and heat or solvent activated adhesives. With pressure sensitive adhesives, which are available as a film on a liner by the manufacturer, the exposed surface of the adhesive film is applied to the reverse side of the sheet of appliques. The sheet is then cut into the individual appliques which leaves a film of adhesive on the reverse side of each applique with the liner covering the adhesive, it being a simple matter to strip off the liner as a preliminary step to actually applying the applique to the object or article. Similarly, with a solvent activated type of adhesive it has been the practice to apply the adhesive to the reverse side of the sheet of appliques prior to the cutting of the sheet to separate the individual appliques. In either case, the appliques are in the form of separate pieces and must be individually handled to package the latter and when used, as for example, when the appliques are applied to a manufactured article as one of the steps in its production.

One object of the present invention is to provide for packaging individual appliques or parts which have been prepared in the foregoing manner to have a layer of adhesive on the reverse side, in continuous roll form.

Other objects will appear from the following description taken in connection with the accompanying drawings wherein:

FIGURE 1 is a schematic view illustrating the present method of packaging appliques in continuous rolls;

FIG. 1A illustrates an adhesive applicator;

FIG. 2 schematically illustrates means for dispensing appliques packaged in continuous rolls; and

FIG. 3 is a perspective view of an illustrative design bearing applique or part with adhesive applied to the reverse side and having a liner covering the adhesive.

While the invention has been described in connection with the preferred embodiment thereof, it will be understood that it is not intended to be limited to such embodiment but is intended to include all modifications, alterna-

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tive constructions and equivalents which are included within the spirit and scope of the appended claims.

An applique 10 is shown in FIG. 3 having a design or ornamentation on the face, adhesive 14 applied to the reverse side, and a liner 16 covering the adhesive which liner is treated on the side facing the adhesive for ready release of said adhesive. In accordance with the method of the present invention, such appliques are attached to a web 18 and packaged in continuous rolls as shown in FIG. 1. Such rolls, as shown in FIG. 2, provide a convenient package for the individual appliques or parts which may readily be split from the individual liners 16 and thereby from the roll web 18 by drawing the web sharply back over a knife edge 20. This may be accomplished in a particularly convenient manner in the dispensing apparatus 22 of FIG. 2 and the individual parts dispensed from the web.

Turning now to FIG. 1 for details of the present method, the appliques 10 are initially prepared in sheets 24 which may be letter size or larger or smaller as desired. The particular process used to print or otherwise manufacture the applique or label designs is not part of the present invention, and the present method is suited to packaging in continuous roll form appliques made by various processes. Various materials may be used for the appliques, however, it is contemplated that relatively stiff material will be preferred so that the appliques or labels may be dispensed in the manner shown in FIG. 2. As an illustration of a process which may be used, reference may be made to the above-mentioned Steffey patent which discloses a method for printing appliques on sheets 24 of aluminum foil or the like which are uncoated on the reverse side.

In carrying out the method, such sheets 24 are placed in a sheet dispenser 26 as shown on the left-hand end of the flow diagram of FIG. 1 from which such dispenser the individual sheets are released for application of adhesive. A preferred means for applying the adhesive is shown in FIG. 1, wherein such sheets 24 are placed one by one reverse side in contact with a continuously moving transfer tape 28. This tape 28 supports a layer of adhesive A for the purpose of applying such adhesive to the reverse sides of the sheets 24. To this end the transfer tape 28 is wound from a supply roll 30 over the idler roller 32 and horizontally across the underside of the sheets dispenser. It is brought sharply back over a knife edge 34 positioned below the continuously moving tape and rewound on a windup roll 36. By bringing the tape sharply back over the knife edge 34, the sheets of foil on which the parts are printed is split from the tape, the adhesive A on the tape adhering to the reverse side of the sheets 24. Such sheets are transferred across to a stage II section of the packaging line.

In the stage II section, means are provided for carrying out the steps of laminating the adhesive backed sheets 24 to a liner tape 44 which overlays the adhesive A, and cutting the lined sheets 24' of appliques into individual parts 42. In the laminating step the sheets 24 are laminated to a release coated strip 44. In accordance with the invention, the side of such strip 44 which is brought into contact with the adhesive A on the reverse surfaces of the sheets 24 is treated with a release coating which will readily release the adhesive. Accordingly, the adhesive and the release coating are chosen so as to have this feature of ready release. The adhesive on the reverse sides of the appliques may be heat or solvent actuated according to the particular type of adhesive desired. Alternatively it may be pressure sensitive adhesive. Whatever adhesive is chosen, the liner strip 44 must be release coated according to the

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type of adhesive on one side only, the side facing the adhesive layer A. The opposite side of the strip 44 is left uncoated. The laminated strip and sheets 24' is then cut to sheet size by means herein shown as a pair of transverse knife blades 46 which are brought downward into contact with the strip 44. A pair of pinch rollers 48 is shown between the knife blades 46 to move the sheet length 24' from the blades 46 to clear the same for receipt of the end of the strip 44.

The sheets 24' after cut to sheet size are then fed through cutters 50 which cut the sheets 24' into individual appliques 42. This may be achieved with slitters 52, shears 54, or combinations of such to provide longitudinal and transverse cutting devices. From the cutting devices, the individual parts 42 are then fed to a third stage III in the packaging line.

In stage III, means are provided for carrying out the step of tacking individual parts to a package tape 60. For this purpose the parts or appliques 42 are fed to a dispenser 62 for such parts from which they are ejected one by one and placed in series fashion on the package tape 60. The package tape 60 in the present case, is a paper tape with a dry coating of tacking adhesive 64'. Mucilage which may be activated with water is suitable for the adhesive although other tacking adhesives may be used. For example, instead of having a continuous layer of tacking adhesive on the tape 60, a suitable adhesive could be applied in periodic spots to tack the individual appliques to such spots on the package tape. In the present case, the package tape 60 is taken from a supply roll 66 over an idler roll 68 past an applicator brush 70 which is fed with water from a tank 72 and used to apply activating fluid to the tacking adhesive on the tape. The tape 60 is then moved past the discharge slot of the parts dispenser 62 where appliques are received and placed on the tape 60. Due to the adhesive on the tape being lightly activated, the liner 44 on each applique adheres to the tape. It will be noted that the liner 44 will thereby be permanently tacked to the tape, but because the side of the liner 44 which faces the applique is treated with a release coating, the applique and its adhesive may be readily separated from the tape. The tape 60 is then passed through a drying stage, for example past drying heaters 74, to dry the water activated mucilage 64'.

After leaving the drying stage, which might be found unnecessary with pressure sensitive or other types of tacking adhesive or method of their application, the package tape with attached appliques is wound into a package roll 80. Such appliques in roll form may be dispensed from the liner and fastened to another object by activating the adhesive. It will be noted that because of the layer of adhesive on the package tape 60 the liners 44 on the reverse sides of the individual parts is caused to adhere to the surface of the package tape. Such liner, as above noted, is coated with a release coating on the side of the liner facing the part and thus the adhesive will readily separate from the surface of the liner. The opposite side of the liner, however, is untreated or, alternatively, is coated with an adhesive so that it will adhere to the package tape.

Packaged in roll form, therefore, the individual parts are adhered by the tacking adhesive and liner to the pack-

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age tape. The package tape thus serves as a carrier for the parts for the packaging thereof and for the dispensing operation.

In FIG. 1A an alternative means is shown for applying adhesive A' to the sheets 24 of integrally joined appliques. As shown in this figure, individual sheets 24 are separated from a stack in the sheets dispenser 26' and transferred as by any suitable sheet transfer means 82 to applicator rolls 84 which apply adhesive A' from a reservoir 86 directly to the reverse sides of the sheets 24. Such adhesive backed sheets are then laminated to a liner 44 release coated on the side facing the adhesive A'. The subsequent steps of the process will be as depicted in FIG. 1.

I claim as my invention:

1. The method of packaging appliques or the like in continuous strip form, each of said appliques having adhesive on the reverse side, which comprises taking a sheet of integrally joined appliques, coating the reverse side of such sheet with said adhesive, laminating said adhesive coated sheet with a liner treated on the one side only contacting said adhesive with a release agent for ready release of said adhesive, cutting said laminated sheet, adhesive and liner into individual applique assemblies, placing said applique assemblies in series fashion on a package tape with the respective liner facing the tape, and adhering said appliques to said package tape by adhesively tacking the respective liner to said tape.

2. The method of packaging appliques or the like in continuous strip form, each of said appliques having adhesive on the reverse side, which comprises preparing applique assemblies by laminating said adhesive backed appliques with matching liner elements treated on the one side only contacting said adhesive with a release agent for ready release of said adhesive, placing said applique assemblies in series fashion on a package tape with the untreated side of the liner element of each assembly facing the tape, and adhering said appliques to said package tape by adhesively tacking the liner elements to said tape.

3. The method of packaging appliques or the like in continuous strip form, each of said appliques having adhesive on the reverse side, which comprises taking sheets of integrally joined appliques, coating the reverse side of such sheets with said adhesive, laminating said adhesive coated sheets with a continuous liner treated on the one side only contacting said adhesive with a release agent for ready release of said adhesive, cutting said laminated sheets, adhesive and continuous liner into individual applique assemblies, placing said applique assemblies in series fashion on a continuous package tape with the untreated side of the liner of each assembly facing the tape, adhering said appliques to said package tape by adhesively tacking the liners to said tape, and winding said package tape with applique assemblies into package rolls.

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