Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte PAUL G. ROBINSON

Appeal No. 2000-1789
Application No. 08/699,572

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 and 4 to 18, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellant's invention relates generally to blanks formed of cardboard or similar carton stock material that can be assembled readily into packages and containers for various goods (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Kaplan	2,072,371	March 2, 1937
Giacovas	3,306,521	Feb. 28, 1967
Sogi	3,620,435	Nov. 16, 1971

Claims 1, 4 to 7 and 9 to 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kaplan in view of Giacovas.

Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kaplan in view of Giacovas and Sogi.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 21, mailed November 23, 1999) for the examiner's complete reasoning in

support of the rejections, and to the brief (Paper No. 20, filed September 10, 1999) and reply brief (Paper No. 22, filed January 27, 2000) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is sufficient to establish a case of obviousness only with respect to claim 16. Accordingly, we will sustain the examiner's rejection of claim 16 under 35 U.S.C. § 103. We will not sustain the examiner's rejection of claims 1, 4 to 15, 17 and 18 under 35 U.S.C. § 103. Our reasoning for these determinations follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 458 F.2d 1013, 1016,

173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Claims 1 and 16, the only independent claims on appeal, read as follows:

1. A knocked-down flat container blank comprising:
A) a substantially flat blank of carton stock material having a shape;
B) said blank having a pattern of fold lines formed thereon;
C) said pattern of fold lines being configured to define with said shape, at least one captured flap and at least one capturing flap foldable and alignable in layered overlapping relationship wherein said capturing flap is configured for capturing at least one thickness of carton stock of said captured flap in a sandwich-like relationship between two thicknesses of carton stock of said capturing flap when said blank is fully assembled in the form of a three-dimensional structure have a container shape;

D) an elongated generally rectangular portion of the surface area of said capturing flap, proximate a distal edge of said capturing flap, having a separable strip of non-stick material adhered thereto, said strip having a finite thickness;

E) said separable strip being adhered to said portion of the said surface area on said capturing flap portion by an adhesive contacting both of said capturing flap portion of said blank of carton stock material and said separable strip in an elongated generally rectangular area coextensive with said strip, and characterized by a greater adherence force between said adhesive and the carton stock material of said blank than the adherence force between said adhesive and the surface of said strip of non-stick material, and wherein said adhesive and said strip are applied only to the capturing flap of the capturing and captured flaps.

16. A plurality of knocked-down flat carton blanks comprising:

A) a plurality of substantially flat, unfolded blanks of carton stock material each having the same configuration.

B) each blank having a pattern of fold lines for folding said blank into a three-dimensional structure having a container shape;

C) each blank having at least one flap positionably adjacent to another portion of the blank such that secured attachment of said flap to said other portion of the blank retains the blank in said three-dimensional structure having a container shape;

D) an elongated generally rectangular area of adhesive applied to the carton blank along a peripheral edge thereof for securing said flap to said other portion of the blank;

E) an elongated generally rectangular strip of non-stick material coextensive with and positioned over the adhesive and separable therefrom to expose the adhesive for securing the flap to said other portion of the blank, said strip of non-stick material forming a surface discontinuity extending to an edge of said blank creating an air passage for precluding formation of an air vacuum suction lock between abutting blanks; and

F) said plurality of substantially flat, unfolded blanks arranged in an aligned stack with air passages formed by the strip of non-stick material extending to the edge of the stack to permit easy separation of abutting stacked blanks.

Kaplan's object of his invention was to provide in a paperboard, fibreboard, cardboard or like box a novel arrangement of fastening members each coated with a dry, cohesive but non-adhesive substance whereby the box may be securely fastened in closed position merely by placing the coated surfaces one on the other and pressing them together. Figures 1 and 2 illustrate the blanks of sheet material for the body and cover respectively of a box of the telescoping type. As shown in Figure 1, the bottom or inner section of the box has a main bottom panel 10 to which is foldably joined, along crease lines 11, a pair of side walls 12. End walls 13 are joined to the panel 10 along crease lines 14. The crease lines 11 and 14 extend entirely across the blank and define corner portions 15 which are creased diagonally along lines 16. Integral with the side walls 12 are fastening flaps 17 adapted to fold inward upon the inner surfaces of the walls 12 and corner portions 15 when the blank is folded to box form. The cover or outer section of the box is creased as indicated in Figure 2 to form a main panel 20, side walls 21, end walls 22, corner portions 23 and fastening folds 24 integral with the walls 21. Diagonal creases 27 facilitate the folding of the corner portions 23 to the triangular shape best shown in Figure 4 when the blank is folded to box form. The surfaces of the blank indicated by stippling in the figures are coated with a gum or like substance of cohesive but non-adhesive character. The blanks have this coating on one surface only so that they may be stacked for shipping and storage front to back without danger of their adhering to each other.

Kaplan's complete box may be quickly and easily formed by folding the blanks shown in Figures 1 and 2 along the crease or score lines and the several walls are secured in proper rectangular position relative to the main top and bottom panels by folding the corner portions 15 and 23, as indicated in Figure 4, and then turning down the folds 17 and 24 and pressing them upon the inner surfaces of the triangular corner portions and walls 12 and 21. No moistening is required and the mere pressing of the gummed surfaces together forms a secure bond. Kaplan provides (page 2, left column, lines 6-18) that

> [i]t is to be understood that my characterization of the coating or gum as cohesive but nonadhesive refers to the condition of the composition after it has been caused to penetrate and adhere to the surfaces of the blanks and has been dried. In this condition two coated members may be firmly bonded together by merely pressing the coated surfaces one on the other, but the coating is non-adherent in that the blanks can be handled or packed in stacks front to back, one upon the other, without adherence to each other or to other objects with which the blanks normally come in contact.

Giacovas' invention relates to improvements in self-sealing paperboard cartons and to a method of coating the closure flaps with pressure-sensitive adhesive so as to prevent a stack of the collapsed cartons from sticking together and so as to ensure that the flaps adhere. Giacovas provides (column 1, lines 15-47) that

> [n]umerous attempts have been made to devise a self-sealing paperboard carton having overlapping flaps bearing pressure-sensitive adhesive which when collapsed, the flaps will not become stuck to each other or to other individual cartons of a similar type upon being stacked one upon the other for storage or shipment and before being used.

> To this end, the manufacture of such cartons has required a drying of the tacky adhesive before the blanks could be assembled and the knocked-down structure stacked for storage and shipment. The blanks have to be kept separated from each other until the necessary drying has been obtained. Similarly, even after the adhesive has been dried so as to be non-tacky, care must be taken to see that the adhesive areas are not united when the carton walls and flaps are folded upon one another and the flat-folded cartons are so stacked that the adhesively coated flaps of one carton do not contact the adhesively coated flaps of the adjacent carton. Such special handling not only reduces the speed at which the carton can be fabricated but increases its cost. Furthermore, undue pressure must be brought to bear against the adhesive areas in order to seal the flaps, and to permit safe folding and stacking the adhesive areas have had to be located on the flaps where it is difficult upon erecting the carton to apply the pressure required to adequately seal the flaps.
>
> Accordingly, it is the principal object of the present invention to provide a paperboard carton structure having self-sealing end closures which can be fabricated at high speeds and the flat folded cartons immediately stacked for storage and shipment without drying the adhesive coatings.

Giacovas further provides (column 2, lines 1-17) that

> [y]et another object is to provide a self-sealing carton with a tape adapted to be glued to a closure flap, the tape carrying a coating of adhesive and a protective strip, the coating of adhesive adapted to preserve its strength until used.
>
> A further object of the invention is to provide a self-sealing carton structure with detachable cover strips which serve to protect undried adhesive coatings at all times and positively prevent the coated area of the cartons from coming into contact with each other or with any portion of the next adjacent structure when the structures are stacked one upon the other and this being equally applicable for all size cartons.
>
> A further object of the invention is to eliminate the need for mating adhesive areas, the pre-drying operation needed for mating adhesive areas and time lost before being able to fold and stack the collapsed cartons.

Giacovas' carton blank is shown in Figure 1. The carton blank includes end and side walls 11, 12, 14, 16; a side glue flap 18 articulated to the free side edge of the body side wall 16 and adapted to be connected to the end wall 11; top closure flaps 20, 22, 24, 26; and bottom closure flaps 28, 30, 32, 34. Each of the flaps 20, 24, 28, 32 is provided on its outer surface when folded inwardly to closure position, with a strip of paper (see Figure 1A) constituting a tape 42 having a coating of water glue 49 over one surface thereof and a coating of tacky adhesive 50 over the entire opposite surface thereof. The tapes are applied along the base portions of the end flaps 20, 24, 28, 32 adjacent to their hinge and articulated connections with the end walls 11 and 14. The water glue surface 49 of the tape is placed in contact with the base portion of the end flap in order to fasten the tape to the flap. The surface of the tape with the tacky adhesive 50 is thus exposed and keeps its strength as it cannot be absorbed by either the paper material of the tape or the material of the flap, the water glue surface 49 preventing such absorption. In order to protect the tacky adhesive 50 on the tapes and prevent it from adhering to anything before the carton is sealed, the coating of tacky adhesive 50 on each flap is covered by a suitable releasable paper cover strip which extends entirely over and along the tacky adhesive 50. Thus, the tacky adhesive areas of the flaps are protected by elongated rectangular cover paper strips indicated at 52, 53, 54, 55.

After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Based on our analysis and review of Kaplan and claims 1 and 16, it is our opinion that the differences are as follows: (1) an elongated generally rectangular portion of the surface area of the capturing flap, proximate a distal edge of the capturing flap, having a separable strip of non-stick material adhered thereto as recited in clause D of claim 1; (2) the separable strip being adhered to the capturing flap portion by an adhesive contacting both of the capturing flap portion and the separable strip and characterized by a greater adherence force between the adhesive and the carton stock material of the blank than the adherence force between the adhesive and the surface of the strip of non-stick material as recited in clause E of claim 1; (3) the adhesive and the strip being applied only to the capturing flap of the capturing and captured flaps as recited in clause E of claim 1; (4) an elongated generally rectangular area of adhesive applied to the carton blank along a peripheral edge thereof for securing the flap to the other portion of the blank as recited in clause D of claim 16; (5) an elongated generally rectangular strip of non-stick material coextensive with and positioned over the adhesive and separable therefrom to expose the adhesive for securing the flap to the other portion of the blank as recited in clause E of claim 16;

(6) the strip of non-stick material forming a surface discontinuity extending to an edge of the blank creating an air passage for precluding formation of an air vacuum suction lock between abutting blanks as recited in clause E of claim 16; and (7) the plurality of substantially flat, unfolded blanks arranged in an aligned stack with air passages formed by the strip of non-stick material extending to the edge of the stack to permit easy separation of abutting stacked blanks as recited in clause F of claim 16.

With regard to these differences, the examiner determined (answer, pages 3-4) that

> [i]t would have been obvious to one of ordinary skill in the art to have employed adhesive areas covered by release strips in the construction of the blank of Kaplan in view of the teachings of Giacovas, motivated by the ease of using pressure sensitive adhesive areas covered by release strips instead of cohesive glue.

With respect to claim 1, the appellant states (brief, page 16) that "the only fair reading of the references [Kaplan and Giacovas] and the combination of them would be to place the Giacovas' adhesive areas [e.g., Giacovas' tape 42, water glue 49, adhesive 50 and cover strip 53 shown in Figure 1A] in the locations of Kaplan's cohesive material." We agree with that statement and believe that to be the examiner's position as set forth in the rejection of claim 1 before us in this appeal.

The appellant then argues (brief, page 16) that claim 1 specifies that the adhesive is placed only on the capturing flap (i.e., no adhesive on the captured flap) and that this limitation is not taught or suggested by the applied prior art. We agree. In our view, the combined teachings of the applied prior art (i.e., Kaplan and Giacovas) would have made it obvious at the time the invention was made to a person of ordinary skill in the art to have replaced all the cohesive material on Kaplan's blank with adhesive covered by release strips for the advantages taught by Giacovas. However, this modification of Kaplan would result in a blank having adhesive placed on both the capturing flap and the captured flap, contrary to the limitations of claim 1.[1]

The appellant also argues (brief, page 17) that claim 1 specifies that the adhesive is in contact with both the capturing flap and the separable strip and that this limitation is not taught or suggested by the applied prior art. We agree. In our view, the combined teachings of the applied prior art (i.e., Kaplan and Giacovas) would have made it obvious at the time the invention was made to a person of ordinary skill in the art to have replaced all the cohesive material on Kaplan's blank with adhesive covered by release strips as taught by Giacovas. Thus the capturing flap of Kaplan would be

[1] The examiner did not respond to this argument of the appellant in the answer.

contacted by Giacovas' water glue not Giacovas' adhesive which contacts only the cover strip and the tape.[2]

For the reasons set forth above, the subject matter of claim 1 is not suggested by the combined teachings of the applied prior art. Accordingly, the decision of the examiner to reject claim 1, and claims 4 to 15, 17 and 18 dependent thereon, under 35 U.S.C. § 103 is reversed.[3]

Turning now to claim 16, the appellant argues (brief, pages 24-25) that appellant identified the problem (i.e., difficulty in separating stored blanks) and solved it with structure not found in either Kaplan or Giacovas. The appellant then admits that "[i]f one puts Giacovas's tape on Kaplan's carton blank, the problem is solved." The appellant asserts (brief, pages 24-25; reply brief, page 3) that with no recognition of the problem, there is no suggestion, teaching or motivation to combine the teachings of Kaplan and Giacovas absent the use of impermissible hindsight.

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[2] The examiner also did not respond to this argument of the appellant in the answer.

[3] We have also reviewed the reference to Sogi additionally applied in the rejection of claim 8 (dependent on claim 1) but find nothing therein which makes up for the deficiencies of Kaplan and Giacovas discussed above regarding claim 1.

The appellant's argument with respect to claim 16 is unpersuasive for the following reasons.

First, as set forth above, both Kaplan and Giacovas implicitly deal with the difficulty in separating stored blanks. Kaplan deals with this problem by using a cohesive coating on only one side of the blank which is non-adherent so that the blanks can be packed in stacks front to back, one upon the other, without adherence to each other. Giacovas treats this problem by using a pressure-sensitive adhesive so as to prevent a stack of the collapsed cartons from sticking together. Furthermore, it would appear that stacks of Giacovas' cartons would have a cover strip forming a surface discontinuity extending to an edge of the blank creating an air passage for precluding formation of an air vacuum suction lock between abutting blanks due to the increased thickness provided by the adhesive tape as shown in Figure 1A of Giacovas.

Second, the argument is not persuasive that any error in the examiner's determination regarding the obviousness of the subject matter of claim 16 has occurred. As long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor. See In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990)(en banc), cert. denied, 500 U.S. 904

(1991) and In re Beattie, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992). In this case, there is ample motivation in the above-noted teachings of Giacovas for a person of ordinary skill in the art at the time the invention was made to have replaced all the cohesive material on Kaplan's blank with adhesive tape covered by release strips. In that regard, the advantages taught by Giacovas (column 1, line 15, to column 2, line 17) include (1) that the carton can be fabricated at high speeds and the flat folded cartons can be immediately stacked for storage and shipment without drying the adhesive coatings (Kaplan's cohesive coatings require drying prior to be stacked); and (2) eliminating the need for mating adhesive areas (Kaplan's cohesive coatings require mating areas).

For the reasons set forth above, the decision of the examiner to reject claim 16 under 35 U.S.C. § 103 is affirmed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 4 to 15, 17 and 18 under 35 U.S.C. § 103 is reversed and the decision of the examiner to reject claim 16 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

CHARLES E. FRANKFORT Administrative Patent Judge	)
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