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**D E C I S I O N**  
of 17 November 1998

**Case Number:** T 0574/95 - 3.3.5

**Application Number:** 90850366.7

**Publication Number:** 0428489

**IPC:** D21H 21/40

**Language of the proceedings:** EN

**Title of invention:**

The use of a coated paper for the manufacture of an instant lottery ticket

**Patentee:**

AB Tumba Bruk

**Opponent:**

Arjo Wiggins S.A.  
Cartiera di Cordenons S.p.A.

**Headword:**

Instant Lottery Ticket/AB TUMBA BRUK

**Relevant legal provisions:**

EPC Art. 54, 56

**Keyword:**

"Novelty (yes)"  
"Inventive step (no); aggregation"

**Decisions cited:**

T 0229/85; T 0330/87

**Catchword:**

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Case Number: T 0574/95 - 3.3.5

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.5  
of 17 November 1998

**Appellant:** Arjo Wiggins S.A.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 19 May 1995  
rejecting the opposition filed against European  
patent No. 0 428 489 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** R. K. Spangenberg  
**Members:** G. Dischinger-Höppler  
J. H. van Moer

## Summary of Facts and Submissions

I. This appeal is against the decision of the Opposition Division to reject two Oppositions against European Patent No. 0 428 489. The decision under appeal was based on the claims as granted, Claim 1 reading:

"1. The use of a coated paper for the manufacture of instant lottery tickets wherein the paper comprising a coloured and totally opaque base paper and a coating composition on both sides of said base paper giving the paper suitable printing surfaces, said composition comprising at least one pigment, a filler, a binder solution, and optionally viscosity regulating agents."

II. The Opposition Division considered 13 documents, among them

D1: GB-A-1 435 686

D6: US-A-4 241 942

D8: FR-A-2 038 519

D12: J. P. Casey, "Pulp and Paper, Chemistry and Chemical Technology", 3rd edn., John Wiley & Sons, New York,  
vol. III, 1981, pages 1739, 1740, 1854-1857, 1878, 1879 and  
vol. IV, 1983, pages 2014-2018, 2518-2520;

and held that the subject-matter of the opposed patent met the requirements of the EPC. In particular it was held that in view of D6 as the closest prior art document, which disclosed an instant lottery ticket using an aluminium laminated base paper for obtaining total opacity, the objective problem was to replace said aluminium foil by another suitable medium. Even

though containing a statement which vaguely hinted at such a replacement, D6 did not lead to the solution proposed in the contested patent, neither taken alone nor in combination with the other cited documents, since the prior art papers were not totally opaque and thus not suitable for the manufacture of instant lottery tickets and/or were disclosed for use in different technical fields such as playing cards or photographic papers. Moreover, an instant lottery ticket not using aluminium foil for providing the required total opacity was not disclosed in the cited prior art.

- III. Both Appellants (Opponents) lodged an appeal against this decision. Appellant I, in his statement of grounds of appeal, cited two further documents, among them

D15: FR-A-2 136 374.

- IV. Oral Proceedings were held on 17 November 1998 in the absence of Appellant I, who had in advance informed the Board of his intention not to attend the hearing. In the course of these proceedings, the Respondent filed two auxiliary requests, the first one specifying the grammage of the base paper and the second one additionally specifying the grammage of the coating.

- V. Appellant I submitted the following line of argument:

The subject-matter of the contested patent was not novel in view of D15. Further, considering D6 as the closest prior art, it was not based on an inventive step. D8 already taught that black paper and metal sheets were equivalent with respect to their opacity. It was, therefore, obvious for the skilled person to replace the aluminium foil in the card stock of D6 by black paper, thereby arriving at the claimed subject-matter.

VI. The arguments presented by Appellant II may be summarized as follows:

D6 as the closest prior art already taught that the card stock material was not critical and suggested that the card stock containing the aluminium foil be replaced by another suitable printing medium. The skilled person knew from D12 that black paper was sufficiently opaque, because it was suitable as a wrapping paper for photographic films. In addition, D12 disclosed the relationship between paper coating and printability as well as the composition of the coating as such. Since the black wrapping paper for photographic films was generally coated on one side, it was obviously suitable for the particular purpose of producing instant lottery tickets. Therefore, the skilled person not only could, but actually would have used one of the papers of this kind which were available on the market. Whether or not such an available paper was coated on only one side or on both sides as claimed in the patent in suit, was not relevant because it was not essential with respect to the problem to be solved. Appellant II further argued that there had never existed a long felt need to replace the aluminium foil which, on the contrary, was still used for the manufacture of instant lottery tickets. Should, however, the necessity for such a replacement arise, the proposed solution was obvious in view of the teaching of D12.

With respect to the problem of delamination mentioned in the patent in suit, Appellant II pointed out that the only printable paper not subject to delamination was, notoriously, coated paper.

Concerning the auxiliary requests, he argued that the grammage of the paper and coating, as claimed therein, was common in the art. This was shown in D1 and D12.

VII. The Respondent requested that, pursuant to Article 114(2) EPC, D15 be disregarded. Further, he rejected all the arguments presented by the Appellants. Firstly, the disclosure of D15 was not novelty-destroying, since the base paper used therein was not totally opaque and its reverse side was not coated. Secondly, the Appellants' allegations were based on hindsight by starting from the knowledge of the new idea and by unacceptably deriving the objective problem from the difference to the closest prior art. The Respondent, in particular, denied that D6 contained any sufficiently enabling disclosure concerning the replacement of the laminate containing metal foil by another equivalent material. He further contested that the paper used according to Claim 1 of the patent in suit was known before the priority date. In addition, neither D8 nor D12 taught that the black paper mentioned therein was totally opaque such that it was impossible to see through even under intensive light. The same applied to the base paper of D15.

Moreover, the problems associated with the use of aluminium foils existed from the very beginning of instant lottery ticket production, i.e. since about 1970. However, no solution was offered in the prior art, although coated paper had been on the market since 1920. This clearly showed that nobody skilled in the art had expected that coated black paper met the requirements for that particular purpose. Hence, the claimed use was new and unobvious, since it was surprisingly advantageous. As in T 330/87, the claimed subject-matter further satisfied a long felt need by providing not the sole possible, but a simple solution which was without precedent in the prior art and, moreover, commercially successful.

With respect to the purpose of the auxiliary requests, the Respondent referred to the advantageous low weight of the product.

VIII. The Appellants (Appellant I in writing) requested that the decision of the Opposition Division be set aside and the patent be revoked.

The Respondent requested as a main request that the appeal be dismissed and that the patent be maintained as granted, as first auxiliary request that the patent be maintained with Claims 1 to 5 submitted during the oral proceedings and the description as granted, as second auxiliary request with Claims 1 to 4 and an amended description submitted during the oral proceedings.

**Reasons for the Decision**

1. The appeal is admissible.

2. *Late filed documents*

The Board considers that D15, filed by Appellant I during the appeal proceedings, is sufficiently relevant to be taken into account. In addition, this document is not considered to be late filed in the sense of Article 114(2) EPC, since it was submitted in direct response to the statement in the decision under appeal that the production of instant lottery tickets not containing an aluminium foil was unknown.

3. Amendments made to the claims of the auxiliary requests

The amendments made to Claim 1 of the first auxiliary request consist in a restriction of the opaque base paper to one having a grammage of about 100 to 300 g/m<sup>2</sup>.

Claim 1 of the second auxiliary request further contains a restriction of the amount of coating composition applied to the base paper to a substance equivalent to 10 to 30 g of dry solid matter/m<sup>2</sup> of coated side. A basis for these amendments can be found in the application as originally filed (see Claim 2, and page 3, lines 3 to 4 and 24 to 26). The requirements of Article 123(2) and (3) EPC are therefore met.

4. *Novelty*

During the appeal proceedings, Appellant I raised the objection of lack of novelty in view of D15. However, the Board has verified that the subject-matter as claimed in the main and auxiliary request is novel in view of the cited prior art including the disclosure of D15. Since the appeal is successful for the reasons given below, the Board considers it unnecessary to give reasons for this finding.

5. *Inventive step*

The patent in suit relates to the use of a coated paper for the manufacture of instant lottery tickets (see page 1, lines 3/4). As was agreed by the parties, the term "instant lottery tickets" denotes lottery tickets containing, on a base paper, information which - in contrast to normal lottery tickets - is concealed by an opaque mask, and which can be revealed by removing the mask, for example by rubbing off or washing off.

5.1 *Main request*

The Board agrees with the parties that D6 represents the closest prior art. It discloses an instant lottery ticket which is secure against photocopying and comprises, lying on top of each other, a card stock



material, a printing layer and an opaque abradable mask. The card stock material preferably includes a layer of metallic foil, in particular an aluminium foil, in order to prevent transmission of light, or in other words to make it impossible to see through the ticket (see column 1, lines 6 to 36, column 2, lines 30 to 37). Since, in principle, such card stocks containing metal foil are laminates, this prior art corresponds to the prior art mentioned in the patent in suit (see description of the patent in suit, column 1, lines 8 to 11).

According to the patent in suit, the problem to be solved in view of such prior art consists in the avoidance of several disadvantages resulting from the use of an aluminium foil, such as manufacturing problems, environmental problems associated with the foil itself and with the necessity to use special and hazardous printing inks (see column 1, lines 11 to 29). Another problem to be solved arises from the multilayer structure of the laminates containing aluminium foil, which are open to delamination or forgery and difficult to count on existing counting equipment (see column 1, lines 30 to 41). In summary, the problem underlying the patent in suit might be seen in the provision of an instant lottery ticket wherein the use of a laminate containing aluminium foil and, hence, its disadvantages are avoided.

However, the Board has some reservations with respect to this formulation of the problem, since it apparently partially anticipates the solution (see T 229/85, OJ EPO 1987, 237, reasons No. 5). In order to avoid an ex post facto view, which necessarily results if inventiveness is assessed on the basis of a problem which includes part of its solution, the Board, while leaving the essence of the problem unchanged, considers it more appropriate to reformulate it so as to consist

in the provision of a further material which is also suitable for the production of non-see-through instant lottery tickets and offers inter alia the advantages of being easy to produce, difficult to forge and machine countable (see the patent in suit, column 1, line 57 to column 2, line 4).

As a solution of this problem, it is proposed in Claim 1 of the main request to use, in replacement of the card stock containing metal foil of D6, a coloured and totally opaque base paper which is coated on both sides with a composition comprising a pigment, a filler and a binder, thereby providing printability. Having regard to the examples of the patent in suit, and the evaluation of the products obtained (see column 5, lines 5 to 15), the Board is satisfied that the stated problem has thereby been solved.

In D6, card stock containing metal foil is explicitly preferred. As the Respondent agrees, D6 is not concerned with the replacement of such card stock but rather with protection against possible compromise of instant lottery tickets, for example by using photocopying machines (see column 1, lines 37 to 58). This object is accomplished by utilizing patterned layers which render visually hidden indicia on a contest card indistinguishable to a photocopying machine (column 2, lines 10 to 27). Accordingly, D6 does not suggest replacing the card stock by a specific equivalent material. It is, however, mentioned that the card stock material is not critical as long as it is suitable for printing and does not permit transmission of light. In addition, D6 contains the statement that other types of printing paper or some other suitable medium could be used in place of the card stock (see column 2, lines 28 to 39 and column 3, lines 57 to 68).

Hence, upon reading D6 the skilled person is, in the Board's view, principally encouraged to search for other suitable materials to replace the card stock containing metal foil.

At the filing date of D6, instant lottery tickets containing no metal foil were known from D15. This document discloses tickets comprising a very opaque base paper which on its reverse side is imprinted with a negative inscription on a black colour layer and on the front side with a game picture, but nothing from which it could be inferred that the base paper carries a coating composition comprising a filler, a pigment and a binder as set out in the contested patent.

Contrary to the Respondent's opinion, the skilled person - who in the present case is certainly someone experienced in the whole technical field of paper making and aware of the content of D15 - would not, therefore, limit his search to materials containing metal sheets, but would of course consider all printable paper materials which are known to be sufficiently opaque. He would, consequently, also consider D8 which teaches that in a laminated paper composite, an intermediate layer of black or dark coloured paper is equivalent to an intermediate metallic layer with regard to the opacity of the composite (see page 1, 25 to 29).

According to the Respondent, the black paper of D8 was not "totally opaque" in the sense of the contested patent, i.e. even under intensive light (see patent in suit, column 2, lines 29 to 31), such as provided by xenon lamps, since such an opacity was not required by the intended use of the paper composite of D8, for example for letter cards. However, this line of argument is not convincing, since it is the express object of D8 to provide a paper which cannot be seen through even under intensive light, so that any

inscriptions on the front side do not interfere with those present on the reverse side (see page 1, lines 5 to 11). It is, further, in contradiction to the common general knowledge of someone skilled in the art of paper making, as represented by D12. According to such knowledge, black paper is used as a wrapping paper for photographic films (see D12, page 1854, first paragraph). It is evident that in this field of application, the slightest transmission of light would affect the quality of the film. Consequently, such wrapping paper obviously does have the required "total opacity" within the meaning of the patent in suit. It is, therefore, the Board's opinion that the skilled person would, as a matter of course, have realized that a composite containing black paper such as, for example, that disclosed in D8 would also be suitable for the purpose of the patent in suit with regard to the opacity required to make it impossible to see through the composite.

Being a laminate, the paper of D8 is not necessarily easy to produce, difficult to forge or easily machine countable. However, this part of the problem is not related to the problem of opacity, so that a skilled person would not disregard any prior art hinting at the solution of the opacity problem merely because it does not, at the same time, suggest a solution to the other parts of the problem. If, therefore, the skilled man is not satisfied by the laminate of D8 with respect to its production and stability related properties, he would of course search for further suitable materials in the prior art. In doing so and encouraged by D8 to look for black paper having surfaces which are imprintable in the usual way, he would not overlook the black paper used in D1 for security documents, such as travel and admission tickets, cheques, receipts and even normal lottery tickets (see page 1, lines 10 to 14 and page 3, lines 39 to 51). This paper is coated on both sides

with an imprintable top coating composition comprising a pigment and/or filler and a binder (see Claim 1, page 1, lines 60 to 70, page 2, lines 36 to 39 and page 3, lines 20 to 25). It is apparent from the above field of application that the product is a mass product which must be easy to produce and machine countable. While realizing that the coating in D1 is abradable in order to make the paper tamperproof in the sense that any inscription applied thereon cannot be removed without damage to the coating, thereby revealing the black base layer (see page 1, lines 32 to 43 and 66 to 82), the Board is unable to detect any feature by which the coating of D1 could be distinguished from that defined in Claim 1 of the contested patent.

The Board has doubts whether the general definition given in D1 to the term "opaque", namely meaning an opacity as, for example, represented by a bank note which, under normal conditions of illumination, reveals the presence of a metallic strip (see in D1, page 1, lines 44 to 48), so that the paper of D1 is not totally opaque in the sense of the patent in suit, indeed applies to the embodiment of D1 comprising a black paper base, as alleged by the Respondent. This question need not, however, be answered here, since it is not decisive in the present case whether or not the black base paper of D1 actually fulfils the opacity requirement, because the above-mentioned two partial problems are technically independent. The skilled person would not, therefore, pay much attention to the statements in D1 concerning the problem of opacity, the solution of which he had already derived from D8 and D12, but would concentrate on information concerning the remaining problem of printability, which is expressly addressed in D1.

Consequently, in view of the common general knowledge as represented by D12, a person skilled in the art would, in the Board's judgment, have realised without the exercise of inventive skill and without any knowledge of the invention, that there exists black paper that, when coated as in D1, not only would have the required opacity and printability (see D12, vol. III, page 1854, first paragraph and vol. IV, page 2016 to 2017: "Coating process"), which are necessary for a paper suitable for the manufacture of instant lottery tickets, but would also provide the desired advantages concerning easy manufacturing and mechanical stability, which inevitably result from the fact that such papers are not laminated. The Board therefore holds that it was obvious for a person skilled in the art to use coated black paper in replacement of a card stock containing metal foil in order to arrive at the above-mentioned solution of the stated problem.

The Respondent further strongly relied on so-called "secondary indicia", such as a long-felt need or commercial success. However, he failed to substantiate his allegation of a long-felt need by evidence, for example by indicating a document which stated any problems associated with the aluminium foils. Nor has he demonstrated or even indicated that any existing commercial success was related to properties of the material used in accordance with the patent in suit. These allegations cannot, therefore, be considered in the Respondent's favour, and the decision he cites (T 330/87 of 24 February 1988, not published in OJ EPO) is not applicable in the present case.

The subject-matter of Claim 1 as granted does not, therefore, involve an inventive step, so that the main request must fail.

## 5.2 Auxiliary requests

The Respondent indicated that the amendments made to the auxiliary requests were intended to further delimit the scope of the claims from the teaching of D6. In addition, by selecting the restricted grammage of the base paper and the coating in accordance with the auxiliary requests, the claimed subject-matter guaranteed low mailing expenses and facilitated storage of the finished product owing to its low weight (see the contested patent, column 1, lines 55 to 57 and column 5, lines 10 to 12).

Again, these features and the problem (low weight) thereby solved are not functionally linked with the problems solved by the other features (opacity and stability), but merely aggregated. In other words, the features used to define the claimed subject-matter do not mutually influence each other in the sense of a combination invention to bring about a technical success over and above the sum of their individual effects. Therefore, the addition of the features mentioned in the preceding paragraph cannot contribute to the presence of an inventive step if the state of the art suggests that the corresponding additional partial problems can be solved by them, i.e. if the particular choice of grammage as such is obvious in the light of the prior art.

In this respect, the Board cannot but agree with Appellant II in inferring from the common general knowledge, as represented by D12, that the selected grammage is usual in the art, having regard to the fact that coated paper normally has a grammage of 89 to 148 g/m<sup>2</sup> (see D12, vol. IV, page 2014, first full paragraph). Thus, the solution of the weight problem according to the first auxiliary request is automatically obtained by the choice of black paper as

a replacement of aluminium foil for the purpose of solving the other problems associated with the use of aluminium foil in instant lottery tickets (see point 5.1 above). This conclusion is strongly confirmed by the fact that the patent in suit never contemplated using a base paper with a grammage outside this range, as follows from the fact that the amendment of Claim 1 according to the first auxiliary request did not require any corresponding amendment of the description.

Concerning the additional use of a grammage of the coating as specified in the second auxiliary request the Board considers that D1 discloses that the grammage of a thin coating may be as low as 5 to 15 g/m<sup>2</sup> (see D1, page 2, lines 30 to 32) and that such a coating still provides sufficient printability, so that a skilled person aiming at an instant lottery ticket of low weight in order to lower mailing expenses and storage volume would have chosen a grammage of the coating within this range, without exercising inventive skill.

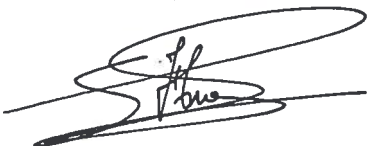
Therefore, the auxiliary requests must also fail.

## Order

**For these reasons it is decided that:**


1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:



S. Hue

The Chairman:



R. Spangenberg