

Commissioner's Decision #1261

Décision du commissaire #1261

TOPIC: O

SUJET: O

Application No: 2,112,044 (Class H05B-033/04)

Demande No: 2,112,044 (Classe H05B-033/04)

COMMISSIONER'S DECISION SUMMARY

C.D. 1261 App'n 2,112,044

Obviousness

The examiner rejected this application on the basis that the invention was obvious, at the claim date, over the cited prior art consisting of a Canadian patent and a United States patent. The Board agreed with the examiner .

The application was refused by the Commissioner of Patents

Subject: O

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application 2,112,044 having been rejected under Rule 30(4) of the Patent Rules, the Applicant asked that the Final Action of the Examiner be reviewed. The rejection has consequently been considered by the Patent Appeal Board and by the Commissioner of Patents. The findings of the Board and the ruling of the Commissioner are as follows:

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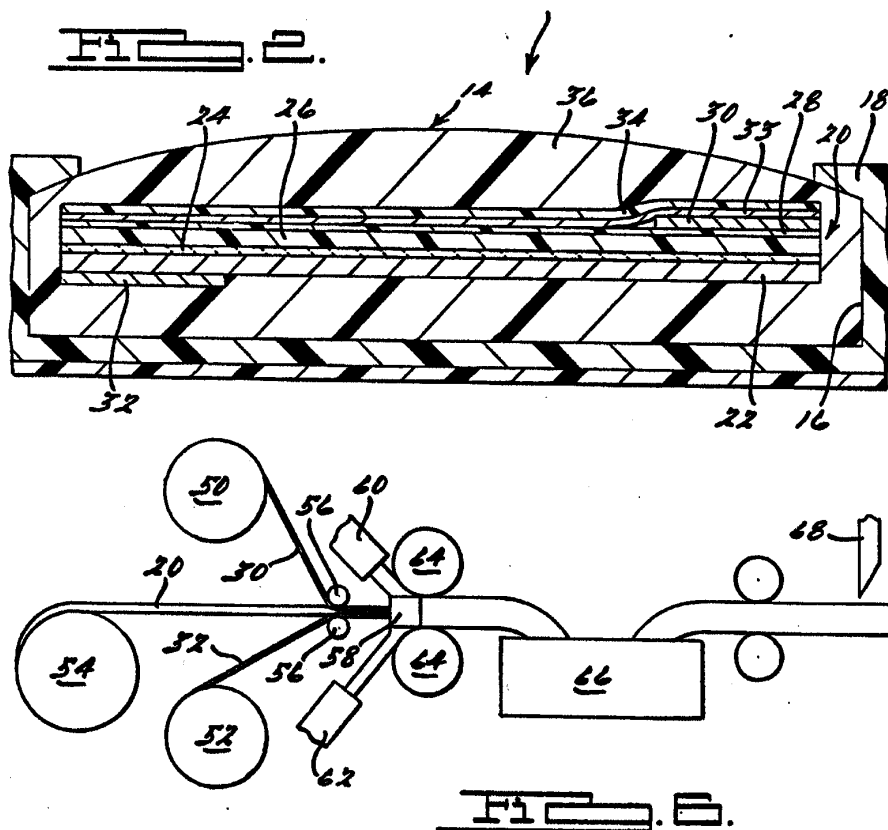
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K1P 5T4

This decision deals with the Applicant's request for a review by the Commissioner of Patents of the Examiner's Final Action dated November 13, 2001, on application 2,112,004, filed 21 December 1993 and entitled "ELECTROLUMINESCENT LIGHT STRIP". The Applicant is The Standard Products Company, assignee of Marc Arthur Brookman and Thomas Lloyd Gustafson.

The application relates to a process for manufacturing elongated electroluminescent light strips.

Figure 2 of the application shows a cross sectional view of a light strip which is manufactured using the process of the instant application and Figure 6 shows a schematic view of the process.



In Figure 2, an electroluminescent lamp 20 is comprised of a base electrode 22, dielectric coating 24, phosphor matrix layer 26, transparent conductive layer 28, bus strips 30 and 32, metalized film 34 and cover 36. In order to make the phosphor matrix layer moisture resistant, the phosphors are coated with hydrolyzed alkylaluminum. In Figure 6, bus strip 30 fed from roll 50 and bus strip 32 fed from roll 52 are joined with electroluminescent lamp 20 from roll 54 and then pass between feeder rolls 56, through die 58 where extruders 60 and 62 provide cover 36. The strip passes between shaping rollers and is then cooled in tank 66.

Claim 1 of the application reads as follows:

A process for the manufacture of an elongated electroluminescent light strip comprising the steps of:

a) forming an elongated electroluminescent lamp which includes an electrically conductive layer, a substantially moisture resistant phosphor matrix layer including a coating of hydrolyzed trimethylaluminum, spaced apart bus strips, wherein said bus strips extend from said electroluminescent lamp, and a layer of semi-transparent metallized film overlying said phosphor matrix layer and one of said bus strips to an extruder; and

b) encapsulating the elongated electroluminescent lamp in an extrudate by continuously extruding a polymeric material about said electroluminescent lamp to fully encapsulate said electroluminescent lamp.

In the Final Action, the Examiner cited the following references to reject all of the claims, as well as the application itself:

Canadian patent

2,051,181	September 14, 1992	Gustafson et al
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United States Patent

5,080,928	January 14, 1992	Klinedinst et al
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Canadian patent 2,051,181 is entitled "Electroluminescent Light Strip" and names the same inventors and owner as the instant application. Figure 2 of the reference appears to be identical to figure 2 of the instant application and the elements identified by reference number in each Figure 2 have the same names.

United States patent 5,080,928 is entitled "Method for making moisture insensitive zinc sulfide luminescent materials". The process disclosed in the USP is used to coat phosphors with hydrolyzed alkylaluminum, making the phosphors insensitive to moisture and, as a result these

phosphors are particularly useful in electroluminescent lamps.

In his Final Action, the Examiner stated, in part:

Claim 1 defines the same process for the manufacture of an elongated electroluminescent (EL) light strip 14 as taught by Gustafson et al in CP 2 051 181. As seen in figure 2, an elongated EL lamp 20, including (sic) an electrically conductive layer 22, a phosphor matrix layer 26, spaced apart bus strips 30, 32, which extend from the EL lamp 20, and a layer of semi-transparent film metalized film 33 overlying the phosphor matrix layer 26 and bus strips 30, all of which is encapsulated in a polymeric material 36. The phosphor matrix layer is referred to on page 5 line 16.

The difference between present claim 1 and the teachings of Gustafson et al. in CP 2 051 181 is that claim 1 includes a coating of trimethyl aluminum (TMA) on the phosphor matrix layer. The process of forming TMA on the outer surfaces of phosphor particles is taught by Klinedinst et al. Klinedinst et al. also teach the use of TMA coated phosphor as a layer between electrodes to form an electroluminescent lamp which is resistant to atmospheric moisture(column 1, lines 46 to 64). Therefore, the process of claim 1 does not patentably distinguish over the references as one of ordinary skill in the art would have recognized at the time of the invention to have included the step of coating of TMA on the phosphor matrix layer in order to obtain improved moisture resistance.

In its reply of May 13, 2002 to the Final Action, the Applicant stated, in part:

Fourthly, reconsideration of the Examiner=s continuing assertions that the claims define subject matter deemed obvious in view of the combined teachings of Gustafson et al and Klinedinst et al is hereby respectfully requested. Applicant has again considered the teachings of those citations and is concerned that the Examiner=s position is one based on hindsight, having become aware of the Klinedinst et al citation as a result of his enquiry into the prosecution of the corresponding United States application. As indicated previously, claims similar in scope to those previously on file were found to be allowable by the United States examiner, notwithstanding his awareness of the teachings of Klinedinst et al. In this regard, while Klinedinst et al suggest that their process of coating phosphors with hydrolized methylaluminum is particularly useful in electroluminescent lamps, there is no direction in Gustafson et al to suggest that there is any need to coat the phosphor layer

in such a manner and hence it cannot be said that it would be obvious to effect such a coating in the first place. Gustafson et al address the issue of moisture protection with the particular structure and process described and claimed therein without any suggestion that a process such as that described by Klindedinst et al would be needed or even desirable as an option. Absent any motivation for a skilled person in the art to consider to go beyond the teachings of Gustafson et al applicant is unable to agree that there is any reason to consider the claimed invention to be unpatentable in view of the teachings of Gustafson et al and Klindedinst et al.

In the Final Action, the Examiner also rejected claim 1 as being indefinite and for not being supported by the disclosure. In the reply to the Final Action, the Applicant proposed amendments to the claims. The Examiner has indicated that the proposed amendments overcome these rejections.

Therefore the only question left for the Board concerns the rejection of the claims and the application as being obvious over Gustafson et al in view of the teachings of Klindedinst et al.

As stated above, Gustafson et al sets out an electroluminescent light strip. This patent recognizes that the phosphor matrix layer is extremely sensitive to atmospheric moisture and sets out a construction for the light strip which attempts to overcome this problem by encapsulating the strip in a continuous, moisture impermeable extruded polymer. This is the same construction that is used in the instant application. The difference between the Gustafson et al light strip and the light strip of the instant application is that Gustafson et al includes an uncoated phosphor matrix layer while the phosphor layer in the instant application is comprised of phosphors which have been coated with hydrolyzed alkylaluminum which reduces the

phosphor sensitivity to atmospheric moisture

United States patent 5,080,928 provides instructions on how to prepare phosphor particles which have been coated with hydrolyzed alkylaluminum. It also discloses that these coated particles are insensitive to moisture, that moisture is an important problem in electroluminescent light strips and that these particles can be used in electroluminescent light strips.

The requirement that an invention not be obvious is set out in Subsection 28.3 of the *Patent Act* which reads as follows:

The subject-matter defined by a claim in an application for a patent in Canada must be subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to (a) information disclosed more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere ; and (b) information disclosed before the claim date by a person not mentioned in paragraph (a) in such a manner that the information became available to the public in Canada or elsewhere.

A test for obviousness was set out in *Beecham Canada Ltd v Proctor & Gamble* (1982), 61 CPR (2d), 1 at 27 by Urie JA, where he stated:

The question to be answered is whether at the date of invention (August-September 1964) an unimaginative skilled technician, in light of his general knowledge and the literature and information on the subject available to him on that date, would have been led directly and without difficulty to Gaiser's invention.

To follow this test for obviousness, the Board must determine what was the state of the art in this field of technology at the claim date (December 21, 1993). CP 2,051,181 shows that electroluminescent light strips of the same structure as shown in the instant application were

known. USP 5,080,928 shows that the use of phosphor particles coated with hydrolized alkylaluminum was known and that this particle could be used in light strips to overcome the well-known problem of moisture. The Applicant uses the same commercially available phosphor that Klinedinst et al mentions [type 723 from Sylvania].

The Board is led directly and without difficulty to the conclusion that the process for the manufacture of electroluminescent light strips which is disclosed and claimed in the instant application would have been obvious to a person skilled in this field of technology at the claim date. The Applicant has merely used a known material in a known manner to overcome a known problem.

The claims on file do not comply with Section 28.3 of the Patent Act. The subject matter of these claims would have been obvious on the claim date to a person skilled in the art or science to which they pertain having regard to Gustafson et al and Klinedinst et al and common general knowledge in the art.

The Board therefore recommends that the Examiner's rejection of the application be affirmed

Cavar

M. Wilson

Chairman

Member

Member

I concur with the findings and the recommendation of the Patent Appeal Board. Accordingly,
I refuse to grant a patent on this application. Under Section 41 of the Patent Act, the Applicant
has six months within which to appeal my decision to the Federal Court of Canada.

David Tobin

Commissioner of Patents

Dated at Gatineau, Quebec

this 21st day of April, 2005