The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RAMENDRA NATH MAJUMDAR,
SUSAN LYNN DEEVERS and JENNIFER LEIGH GABOR

Appeal No. 2004-0461
Application No. 09/532,371

ON BRIEF

Before KIMLIN, WARREN and TIMM, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 14-21 and 25-37. Claims 14 and 25 are illustrative:

14. A tire having a phosphorescent glow-in-the-dark layer thereon, comprising:

a substrate rubber;

a non-black rubber residing on at least a portion of said substrate rubber;

a phosphorescent layer residing on an outer surface of at least a portion of said non-black rubber, said substrate

rubber and said non-black rubber being cured, said phosphorescent layer being substantially free of fluorescent material and substantially free of rubber.

25. A tire comprising:

a sidewall component; said sidewall component comprising a black rubber component and a non-black rubber component, wherein at least a portion of said non-black rubber component includes a phosphorescent layer thereon, wherein said phosphorescent layer is a phosphorescent pigment or a blend comprising a phosphorescent pigment and a carrier, or combinations thereof, wherein said carrier is substantially free of rubber, wherein said tire has been cured, and said phosphorescent layer being substantially free of fluorescent material.

The examiner relies upon the following references as evidence of obviousness:

Young	3,253,634	May 31, 1966
Kubota	3,607,498	Sep. 21, 1971
Pollard	3,844,810	Oct. 29, 1974
Santilli et al. (Santilli)	4,865,937	Sep. 12, 1989
Nguyen et al. (Nguyen)	5,374,377	Dec. 20, 1994
Smith et al. (Smith)	5,932,309	Aug. 03, 1999
Shimizu et al. (Shimizu)	6,162,539	Dec. 19, 2000
Anderson et al. (Anderson)	6,184,279	Feb. 06, 2001
Kanenari et al. (Kaneari)	6,431,236	Aug. 13, 2002
Fukumoto (Japanese Patent)	Hei 3-160039	Jul. 10, 1991
Majumdar et al. (Majumdar) (European Patent Application)	0,744,304	Nov. 27, 1996
Rogal (German Patent Publication)	DE 19613801	Oct. 09, 1997

Appellants' claimed invention is directed to a tire having a phosphorescent glow-in-the-dark layer on its outer surface.

Independent claim 14 recites that the phosphorescent layer is "substantially free of rubber." Claim 25, the other independent claim on appeal, recites that the "phosphorescent layer is a phosphorescent pigment or a blend comprising a phosphorescent pigment and a carrier . . . wherein said carrier is substantially free of rubber." According to appellants, "the glow-in-the-dark tire of the present invention offers a safety tire which can be more easily seen in low visibility or nighttime conditions when compared to conventional tires without a phosphorescent layer" (page 3 of principal brief, second paragraph).

The appealed claims stand rejected under 35 U.S.C. § 103 as follows:

(a) claims 14 and 25 over Rogal in view of Kanenari, Kubota and De Young;

(b) claims 15-20, 26-29 and 33 over the references stated in (a) above further in view of Majumdar;

(c) claims 21, 30, 31 and 36 over the references stated in (a) above further in view of Shimizu and Anderson;

(d) claims 32 and 37 over the references stated in (c) above further in view of either Santilli, Pollard or Nguyen; and

(e) claims 34 and 35 over the references stated in (a) above further in view of Smith and Fukumoto.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we find that the examiner has failed to establish a prima facie case of obviousness for the subject matter defined by claims 14-21 on appeal. On the other hand, we find ourselves in agreement with the examiner that the subject matter of claims 25-37 would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, whereas we will not sustain the examiner's § 103 rejection of claims 14-21, we will sustain the examiner's rejections of claims 25-37 for essentially those reasons expressed by the examiner.

Appealed claim 14, and claims dependent thereon, require that the phosphorescent layer residing on the outer surface of the tire be "substantially free of rubber." For evidence of the obviousness of this claimed feature the examiner relies upon the disclosures of Rogal and Kubota. It is the examiner's position that Rogal, which discloses the inclusion of phosphorescent material visible on the outside surface of a tire, teaches that the phosphorescent material "is either embedded within a side rubber layer or applied to an outside of said side rubber layer as a color film or layer (Page 6, Paragraph 2)" (page 6 of Answer, lines 5-7). The examiner reasons that since Rogal does

not describe the phosphorescent layer of the second embodiment as containing rubber and "Rogal gives no examples in which rubber is described as being a component in the phosphorescent layer when it is applied to the outside of the sidewall rubber layer" (page 13 of Answer, second paragraph), one of ordinary skill in the art would have understood that Rogal teaches a phosphorescent layer that is substantially free of rubber on the outer surface of a tire. Although appellants urge that the so-called second embodiment of Rogal vulcanizes the phosphorescent layer on the side of the tire during pressing and vulcanizing, the examiner responds that "it appears that Rogal intended the language 'vulcanize' to describe the color film as being applied and joined during the vulcanization of the new tread rubber" (page 7 of Answer, second paragraph). As further evidence, the examiner cites Kubota for using "the term 'vulcanizer' when describing a component of the fluorescent layer - in this instance, though, there is no rubber in the fluorescent layer" (page 8 of Answer, first paragraph). Thus, the examiner concludes that "the use of the term 'vulcanizer' or 'vulcanization' fails to require the presence of rubber but rather identifies the respective layer as being bonded or adhered during the vulcanization process" (id.).

The flaw in the examiner's position regarding Rogal is that the examiner has failed to satisfy the initial burden of establishing, in fact, that Rogal discloses a phosphorescent layer that is substantially free of rubber. The most that can be said of the Rogal disclosure is that it is silent with respect to the composition of a phosphorescent layer in the second embodiment referred to by the examiner. While it is true, as stated by the examiner, that Rogal gives no examples wherein rubber is a component of a phosphorescent layer that is applied to the outside of the tire sidewall, this statement is quite misleading because the reference gives absolutely no examples. Simply put, Rogal's failure to describe the composition of the color film that is applied to the side layers during the vulcanization of new treads cannot serve as a teaching that the phosphorescent layer fails to include any component that is not mentioned, including rubber.

The examiner's position is also not aided by the disclosures of Kubota and Kanenari. While the examiner cites Kubota for teaching the absence of rubber in a fluorescent layer that is applied to a tire, appellants' Reply Brief provides objective evidence that the portion of Kubota cited by the examiner does, indeed, disclose that the fluorescent paint comprises a synthetic

rubber of chlorosulfonated polyethylene and magnesium oxide as a vulcanizer. We note that the examiner has not rebutted this evidence. Furthermore, Kanenari represents additional evidence that a phosphorescent layer on the sidewall of a tire comprises rubber. Consequently, we find that the examiner's conclusion of obviousness for the subject matter defined by claims 14-21 lacks the requisite factual support.

The examiner's rejection of claims 25-37 is another matter. These claims do not require that the phosphorescent layer is substantially free of rubber. Claim 25, in relevant part, recites that "said phosphorescent layer is a phosphorescent pigment or a blend comprising a phosphorescent pigment and a carrier, or combinations thereof, wherein said carrier is substantially free of rubber." Accordingly, claim 25 recites two alternatives for the phosphorescent layer, with the second alternative comprising a carrier that is substantially free of rubber. The first alternative is a phosphorescent layer that is defined sufficiently broad that it comprises a phosphorescent pigment and any non-recited components, including rubber. Accordingly, since appealed claim 25 encompasses tires comprising a phosphorescent layer including rubber, we will sustain the examiner's rejection of claims 25-37. We note that claim 30,

ultimately dependent on claim 25, sets forth that the carrier may comprise five parts of rubber, and appellants have not separately argued claim 30 with respect to this feature. Appellants, at page 13 of the principal brief, only argue that claims 21 and 30 recite that the phosphorescent layer is a phosphorescent pigment and a carrier, and we concur with the examiner's reasoning that this combination would have been obvious to one of ordinary skill in the art.

As a final point, we note that although appellants maintain that "[i]t has been unexpectedly found by the Applicant that when the phosphorescent layer is applied to the surface of the non-black rubber and tire and cured, the phosphorescent layer is chemically adhered or bonded thereto and does not come off upon washing, etc." (page 3 of principal brief, first paragraph), appellants have not proffered objective evidence of unexpected results on this record.

In conclusion, based on the foregoing, the examiner's rejection of claims 14-21 is reversed, whereas the examiner's rejection of claims 25-37 is affirmed. Accordingly, the examiner's decision rejecting the appealed claims is affirmed-in-part.

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

EDWARD C. KIMLIN Administrative Patent Judge	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)	

ECK:clm

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