

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

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD J. HAYWARD

Appeal No. 2004-1334
Application 09/526,457

ON BRIEF

Before GARRIS, WARREN and KRATZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 3, 5, 6 and 8 through 15, all of the claims in the application. Claims 14 and 15 are illustrative of the claims on appeal:

14. A fire safety unit comprising:
a modular, self contained room,
said self contained room having a floor, walls and a top,
means for supplying electricity to said self contained room, and
means for supplying air to said self contained room, and
wherein one of said walls has means for allowing ingress and egress to said self contained room, and
wherein said walls have an inner portion and an outer portion,
said inner and outer portions are separated by a space,

said means for supplying electricity to said self contained room are positioned within said space,

means for protecting said means for supplying electricity to said self contained room, said means for protecting said means for supplying electricity being positioned within said space, and

wherein said means for protecting said means for supplying electricity is a gel.

15. A fire safety unit comprising:

a modular, self contained room,

said self contained room having a floor, walls and a top,

means for supplying electricity to said self contained room, and

means for supplying air to said self contained room, and

wherein one of said walls has means for allowing ingress and egress to said self contained room, and

wherein said walls have an inner portion and an outer portion,

said inner and outer portions are separated by a space,

said means for supplying electricity to said self contained room are positioned within said space,

means for protecting said means for supplying electricity to said self contained room,

said means for protecting said means for supplying electricity being positioned within said space, and

wherein at least an exterior surface of said walls is covered with a means for sealing said means for allowing ingress and egress to said self contained room.

The appealed claims, as represented by the above claims, are drawn to a fire safety unit comprising at least a modular, self contained room and the further components thereof as specified in the claims.

The references relied on by the examiner are:

Mallow	4,424,867	Jan. 10, 1984
Fortune	5,111,626	May 12, 1992
Ellis	5,130,184	Jul. 14, 1992

The examiner has rejected appealed claims 3, 6, 8, 11, 12 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Fortune in view of Mallow (Paper No. 10, pages 2-3), and

appealed claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Fortune in view of Ellis (*id.*, pages 3-4).¹

Appellant states that the appealed claims “do not stand or fall together” (brief, pages 5-6) and presents arguments with respect to appealed claims 8, 9, 14 and 15. Thus, we decide this appeal based on appealed claims 5, 8, 9, 14 and 15. 37 CFR § 1.192(c)(7) (2002).

We affirm the ground of rejection of claims 3, 6, 8, 11, 12 and 14 and reverse the second ground of rejection of claims 5 and 15. Accordingly, the examiner’s decision is affirmed-in-part.

Rather than reiterate the respective positions advanced by the examiner and appellant, we refer to the examiner’s answer and to appellant’s brief for a complete exposition thereof.

Opinion

In order to apply the prior art to appealed claims 8, 9, 14 and 15, the language thereof must be interpreted by giving the claim terms their broadest reasonable interpretation consistent with the written description provided in appellant’s specification as it would be interpreted by one of ordinary skill in this art, without reading into these claims any limitation or particular embodiment which is disclosed in the specification. *See In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997) (“[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.”); *In re Donaldson Co.*, 16 F.3d 1189, 1192-95, 29 USPQ2d 1845, 1848-50 (fed. Cir. 1994) (*in banc*); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent prosecution the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant’s invention and its relation to the prior art. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).”).

Where claim language recites “means for” a specified function, this claim language must be considered to determine if the strictures of 35 U. S. C. § 112, sixth paragraph, apply. If the

¹ In the Answer (pages 3), the examiner states that the grounds of rejection are set forth in Paper

claim language recites sufficient structure to perform the specified function, then the language does not come within the purview of § 112, sixth paragraph. *See Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318, 50 USPQ2d 1161, 1166 (Fed. Cir. 1999). On the other hand, if the claim language does not define structure which satisfies that function, § 112, sixth paragraph applies. *See Texas Digital Systems, Inc. v. Telegenx, Inc.*, 308 F.3d 1193, 1208, 64 USPQ2d 1812, 1822-23 (Fed. Cir. 2002), and cases cited therein. In the latter instance, the “means” language must be construed as limited to the “corresponding structure” disclosed in the written description in the specification and “equivalents” thereof. *Donaldson*, 16 F.3d at 1195, 29 USPQ2d at 1850. The “corresponding structure” is that “structure in the written description necessary to perform that function [citation omitted],” that is, “the specification . . . clearly links or associates that structure to the function recited in the claims.’ [Citation omitted.]” *Texas Digital Systems, supra*. “[A] section 112, paragraph 6 ‘equivalent[.]’ . . . [must] (1) perform the identical function and (2) be otherwise insubstantially different with respect to structure. [Citations omitted.]” *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364, 54 USPQ2d 1308, 1315-16 (Fed. Cir. 2000).

If the examiner has not interpreted the “means for” claim language in applying the prior art, such omission will result in a finding that the examiner has not established a *prima facie* case of obviousness because all of the claim limitations have not been considered. *Cf. Donaldson*, 16 F.3d at 1195-97, 29 USPQ2d at 1850-52; *see, e.g., In re Geerdes*, 491 F.2d 1260, 1262-63, 180 USPQ 789, 791-92 (CCPA 1974) (In considering grounds of rejection under 35 U.S.C. §§ 103 and 112, “every limitation in the claim must be given effect rather than considering one in isolation from the others.”).

Considering first the ground of rejection of appealed claims 14, 8 and 9, over the combined teachings of Fortune and Mallow, the plain language of the appealed claims specifies a unit comprising at least a modular, self contained room with specified components. The components of the modular, self-contained room disclosed in Fortune (e.g., col. 3, line 46, to col. 4, line 14, and Fortune **FIG. 2**) are described broadly. We point out, in this respect, that the transitional term “comprising” opens appealed claim 14 to include units containing unspecified

components, such as the “structural fire resistant, sound absorbent foam” in space **25**, which space is used for “routing all of the electrical . . . services throughout modular unit **10**” in the units of Fortune (col. 3, lines 54-58). *See, e.g., Vehicular Technologies Corp. v. Titan Wheel Int’l Inc.*, 212 F.3d 1377, 1383, 54 USPQ2d 1841, 1845 (Fed. Cir. 2000).

The sole claim limitation of appealed claim 14 that is at the center of the dispute is “means for protecting said means for supplying electricity to said self contained room” which is further limited by the claim language “said means for protecting said means for supplying electricity being positioned within said space,” and particularly by the claim language “wherein said means for protecting said means for supplying electricity is a gel.” We find that in this claim language, the term “gel” supplies sufficient structure to remove the language from the requirements of § 112, sixth paragraph. We further find that, in this respect, the “gel” can be any gel that imparts fire protection to the means for supplying electricity, and is not limited to the particular gel disclosed at page 5, lines 1-3, of the specification, because there is no basis in the claim language or in the specification to read such limitation into claim 14.

The examiner finds that Fortune discloses that electrical service is positioned in space **25** between inner wall **23** and outer wall **24**, and is protected by foam, and that Mallow discloses a gel that will protect electrical components in the event of a fire (Paper No. 10, pages 2-3; answer, page 3). *See Fortune*, e.g., col. 3, line 46, to col. 4, line 14, and Fortune **FIG. 2**; Mallow, e.g., col. 3, line 60, to col. 4, line 5, cols. 6-7 and **FIGs. 1** and **2**. On this basis, the examiner concludes that it would have been *prima facie* obvious to one of ordinary skill in this art to protect the electrical utilities within the walls of Fortune with the gel of Mallow.

With respect to appealed claims 8 and 9, wherein the former requires that the walls contain multiple layers and the latter requires that several of the layers are “metal,” the examiner finds that the use of multiple layers and metal layers, *prima facie*, would have been within the ordinary skill in this art because only duplication of materials is involved (Paper No. 10, page 3; answer, pages 3-4).

Accordingly, since a *prima facie* case of obviousness has been established by the examiner over the combined teachings of Fortune and Mallow, we have again evaluated all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellant’s arguments in the brief. *See generally, In re Oetiker*,

977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

Appellant submits two arguments. First, appellant contends that “Mallow does not disclose a gel which protects the conduit 20, which extends from the outside to the inside of wall 15, as shown in Figs 1 and 2 of Mallow” (brief, page 6). Appellant points out that space **25** of Fortune is filled with a fire resistant foam, while in Mallow, conduit **20** passes through wall **15** and is surround by gel **21** within envelope **13** (*id.*, pages 6-7). Appellant argues that Mallow discloses “only that the gel will prevent the passage of heat and fire from one side of the wall to the other,” pointing to **FIGS. 1** and **2** as showing “before” and “after” a fire, contending that “[a]s clearly shown in Fig. 2, the gel of Mallow has not protected the conduit 20, since the right side of the conduit has melted and will no longer perform” its function (*id.*, pages 7-8). Secondly, appellant contends that “there is no motivation to combine Fortune and Mallow” (brief, page 6). Appellant points out that in the room of Fortune, the electrical service structure does not extend from one side of the wall to the other, that is, through the wall, and the gel of Mallow protects the inside of a room from a fire outside the room, and thus, “[t]here is no teaching in Mallow that the gel 21 will protect the wires of Fortune, only that it will block the passage between the walls” (*id.*, pages 8-9). With respect to appealed claims 8 and 9, appellant submits that the cited references do not disclose the use of additional layers as required in these claims (brief, page 10).

The examiner responds that it is clear from Mallow that the fire protective gel stopped the fire from burning through the wall, and that the gel would function in this manner in environments other than that shown in Mallow **FIG. 2**. With respect to appealed claims 8 and 9, the examiner maintains his position with respect to duplication of materials (answer, pages 3-4).

We find that one of ordinary skill in this art would have reasonably inferred from the disclosed in Fortune of walls of “fiber glass reinforced plastic, which provides an extremely strong rigid, fire resistant shell with good wear resistant properties” and the use of “structural fire resistant, sound absorbent foam” in the space between the walls used for “routing all of the electrical . . . services” (col. 3, lines 34-35 and 63-66), that the modular housing unit disclosed therein was intended to provide fire protection to occupants as well as the components of the

unit.² Accordingly, we determine that such teachings would have reasonably suggested to one of ordinary skill in this art to improve upon such fire protection capacity as desired, including the duplication of parts. *See In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960) (“It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, and we are of the opinion that such is not the case here.”).

We agree with the examiner that Mallow would have reasonably disclosed to one of ordinary skill in this art that after the envelope burns away, the gel, which has become hardened by the heat of the fire, will provide fire protection (e.g., col. 5, lines 38-53, col. 6, lines 7-12 and 54-64). Indeed, contrary to appellant’s contentions, it would have been apparent to one of ordinary skill in this art from a comparison of Mallow **FIGs. 1 and 2**, as explained at col. 6, lines 30-64, that the portion of the conduit that burned was in fact uncovered by the gel and envelope barrier. We further find that Mallow would have taught the use of the gel barrier in walls that have other fire barriers, such as rigid silicate foam **12** in Mallow **FIGs. 1 and 2** (e.g., col. 4, lines 28-41). Thus, one of ordinary skill would have recognized from Mallow that a fire barrier foam and fire barrier gel can be used together in the reasonable expectation of improving fire protection.

Accordingly, we determine that the combined teachings of Fortune and Mallow would have reasonably suggested to one of ordinary skill in this art to apply to the electrical service in the foam filled space between the walls of Fortune a gel barrier as taught by Mallow in the reasonable expectation of further protecting the electrical service from fire. Thus, with respect to appealed claim 14, one of ordinary skill in this art routinely following the combined teachings of the references would have reasonably arrived at the claimed invention encompassed by the claim, including all of the elements thereof arranged as required, without recourse to the disclosure in appellant’s specification. *See In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988) *Dow Chem.*, 837 F.2d at 473, 5 USPQ2d at 1531-32 (“The consistent criterion for determination of obviousness is whether the prior art would have

² It is well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom, see *In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir.

suggested to one of ordinary skill in the art that [the claimed process] should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. [Citations omitted] Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure."); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881-82 (CCPA 1981)("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."); *Harza, supra.* .

Furthermore, we agree with the examiner that the use of more than one layer of fiber glass reinforced plastic to provide the strong rigid, fire resistant shell walls of Fortune was within the ordinary skill in this art. We further take notice that metal would also provide a strong rigid, fire resistant shell wall. Indeed, this fact is generally notorious in the building arts area, which is not one of esoteric technology. *See In re Ahlert*, 424 F.2d 1088, 1091-92, 165 USPQ 418, 420-21 (CCPA 1970). Thus, we determine that one of ordinary skill in this art routinely following the teaching of Fortune would have used metal layers either along with or in place of the fiber glass layers in the reasonable expectation of obtaining strong rigid, fire resistant walls. Therefore, with respect to appealed claims 8 and 9, one of ordinary skill in this art routinely following the teachings of Fortune would have reasonably arrived at the claimed invention encompassed by these claims, including all of the elements thereof arranged as required, without recourse to the disclosure in appellant's specification. *See B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) ("When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. [Citation omitted.] This suggestion or motivation need not be expressly stated. [Citation omitted.]"); *In re Siebentritt*, 372 F.2d 566, 567-68, 152 USPQ 618, 619 (CCPA 1967) (express suggestion to interchange methods which achieve the same or similar results is not necessary to establish obviousness); *Harza, supra.*

1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Fortune and Mallow and of Fortune alone with appellant's countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 3, 6, 8, 11, 12 and 14 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

Turning now to the rejection of appealed claims 5 and 15 over the combined teachings of Fortune and Ellis, we find that the claim language of claim 15 in issue here is "wherein at least an exterior surface of said walls is covered with a means for sealing said means for allowing ingress and egress to said self contained room," which "means" is modified in claim 5 as "a paint which expands when heated." We find that the "means for" language in claim 15 does not recited structure to carry out the means, thus falling within § 112, sixth paragraph, and that the examiner has not interpreted this language in either Paper No. 10 or in the answer. Accordingly, the examiner has not established a *prima facie* case of obviousness with respect to claim 15 because he has not considered all the limitations of that claim, and therefore, on this basis, we reverse the rejection of appealed claim 15 under § 103(a). *Cf. Donaldson*, 16 F.3d at 1195-97, 29 USPQ2d at 1850-52; *Geerdes, supra*.

Appealed claim 5 provides "paint" structure for the "means," and thus any paint that is capable of covering the exterior surface of a wall or door such that it will "seal" the means for allowing ingress and egress to the self contained room upon exposure to fire is encompassed. The examiner contends that Ellis provides "a fire barrier coating or intumescent paint for a means for protecting (column 5, lines 9-12)" which one of ordinary skill in this art would have applied to the door of the unit of Fortune for "protecting the door . . . in the event of a fire" (Paper No. 10, pages 3-4).

Appellant argues that "Ellis does not disclose any substance which will perform" the function specified in appealed claim 5 because "Ellis teaches a paint that, when applied to wood or plastic substrates, will form a fire barrier on these substrates," and not a sealing means for a door (brief, pages 10-11). The examiner responds that Ellis "teaches that intumescent fire retardant coatings are well known in the prior art (column 5, lines 7-12)," and "[a]n intumescent

the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

material inherently . . . expands and swells when exposed to heat, thus sealing the joint when painted onto the means for allowing ingress and egress” (answer, page 4).

Based on the disclosure in Ellis relied on by the examiner, we agree with appellant’s position. At col. 5, lines 7-18, Ellis discloses in relevant part that

[f]ire retardant coatings are used to reduce the surface flammability of wood and laminated wood products. Prior art [sic] disclosed four major types of fire preventive paints: . . . (2) intumescent Intumescent coatings are generally soft and easily abraded, and have limited duration of protection – 10 to 15 minutes – when exposed to fire before the delicate char cracks and is eroded away, leaving the substrate unprotected.

It is readily apparent that the evidence in Ellis relied on by the examiner does not support his position because there is no teachings therein from which one of ordinary skill in this art would have reasonably inferred that the intumescent paint acknowledged by Ellis would provide a seal in any respect. Accordingly, we reverse the ground of rejection of appealed claim 5 under § 103(a).

The examiner’s decision is affirmed-in-part.

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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

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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