

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID B. CHANEY, BARRY W. SMITH and THOMAS H. MILLS

Appeal No. 1998-0863
Application 08/502,831

ON BRIEF

Before CALVERT, ABRAMS, and LAZARUS, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 to 20, all the claims in the application. In the supplemental examiner's answer (Paper No. 16) the examiner states that claims 1 to 10 are allowed, leaving claims 11 to 20 before us

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for consideration.

Claims 11 to 20 are drawn to an upright radiant heating appliance, and are reproduced in part X of appellants' brief.

The references applied in the final rejection in rejecting claims 11 to 20 are:

Krichton	3,051,820	Aug. 28, 1962
Schindler et al. (Schindler)	Des. 325,251	Apr. 7, 1992
Chaney et al. (Chaney)	Des. 329,692	Sep. 22, 1992
Kuwabara (Japanese Kokai)	61-122454	Jun. 10, 1986 ¹
Patton WH-80 space heater, Heartland America Catalog (Nov. 1994) (Patton WH-80) ²		

The claims now on appeal stand finally rejected as follows:

(1) Claims 11 to 15, unpatentable over Krichton in view of

¹A translation of this reference, prepared for the PTO, is forwarded to appellant herewith.

² We note that the date of this reference is subsequent to the filing date of appellants' parent application 07/994,416. However, since appellants have not raised the issue of whether it qualifies as prior art against them, we will proceed on the assumption that the subject matter disclosed in the reference constitutes prior art against appellants under one or more provisions of 35 U.S.C. § 102.

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Patton WH-80, under 35 U.S.C. § 103.

(2) Claims 16 to 20, unpatentable over Krichton in view of Kuwabara, either of Chaney or Schindler, and further in view of Patton WH-80, under 35 U.S.C. § 103.

Rejection (1)

Claim 11 reads:

11. In an upright radiant electric heating appliance comprising a reflector assembly having rear surfaces, a radiant heating element assembly extending vertically adjacent to said reflector assembly, a housing extending around the rear surfaces of said reflector assembly, and a top cap mounted on the upper end of said housing above said reflector assembly, the improvement wherein said top cap is formed from a molded thermoplastic material.

Krichton discloses an electric heater having a reflector assembly 174, a vertically extending radiant heating assembly 186 adjacent to the reflector assembly, a housing 22 extending around the rear surfaces of the reflector assembly, and a top cap 26. The housing is disclosed as being made of sheet metal (col. 2, line 14), and as appellants state at page 21 of the brief, "the invention of claim 11 differs from [Krichton] only in the use of molded thermoplastic material to form the top cap."

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Patton WH-80 discloses an electric heater in which, as stated at page 9 of appellants' brief, the portion of the housing above the heater elements is formed from a thermoplastic material. The examiner takes the position that in view of Patton WH-80, "it would have been obvious to one of ordinary skill in

the art to provide a thermoplastic top cap in lieu of the cap of Krichton so that it remains cool to the touch, thereby increasing user safety" (final rejection, page 3).

After fully considering the record in light of the arguments presented in appellants' brief and reply brief, and in the examiner's answer and supplemental answer, we conclude that claim 11 is unpatentable over the applied prior art.

Appellants argue that claim 11 recites a radiant electric heater, in which the reflector assembly becomes extremely hot, whereas the Patton WH-80 is a convective heater which does not have such a metal reflector. They assert that (brief, page 22):

because radiant electric heaters generate such extreme heat levels, one skilled in the art would recognize that the plastic housing parts of convection heaters are not readily adaptable for use with radiant heaters unless some mechanism is provided to maintain the plastic housing parts relatively cool.

art Nothing in the Krichton patent or any other prior of record suggests any mechanism for keeping the plastic housing parts of a radiant heater cool in spite of the extreme heat developed by a radiant heater. . . . Thus, one of ordinary skill in the art would not be motivated to utilize the plastic top cap of a convection heater such as the Patton heater with a radiant heater as disclosed in the Krichton patent.

We are not persuaded by this argument. The Krichton heater, like that disclosed by appellants, is a radiant heater which also includes a fan (convective)(col. 1, lines 24 to 27). In Krichton, the fan 82 circulates air upward between the back of the reflector assembly 174 and the rear 24 of the housing, and then outward through slots 184 between the reflector elements. Krichton states at col. 1, lines 49 to 52, that "the moving air maintains the heater at a low temperature, thereby promoting efficiency and eliminating the dangers and discomforts to the user of high heater temperatures," and further discloses at col. 5, lines 59 to 62, that this moving air flow cools the reflector elements.

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In view of this disclosure, we consider that one of ordinary skill in the art would have appreciated that the housing 22 of Krichton's heater (including the top portion 26) would remain relatively cool, thereby allowing the housing to be formed of materials, such as thermoplastic, which are less heat-resistant than sheet metal. This is particularly brought out by Krichton's disclosure concerning handle 90, which is located on the top 26 of the heater. As described in col. 3, lines 8 to 18, the handle is preferably molded of plastic and is normally held down against the top surface of top panel 26 by springs 94. This disclosure of a molded plastic part maintained in direct contact with the top 26 of Krichton's heater would have suggested to one of ordinary skill that top 26 would not be so hot as to adversely affect molded plastic.

Accordingly, we agree with the examiner that it would have been obvious to modify the Krichton heater by making the top (cap) out of a molded thermoplastic material, as claimed. Taking Krichton's disclosure, as discussed above, in light of (a) the well-known advantages of plastic over sheet metal, e.g., plastic is moldable, does not rust, and need not be

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painted, and (b) the known use of plastic for the housing of a heater, as exemplified by Patton WH-80, there would have been ample suggestion and motivation for one of ordinary skill to make such a modification.

The rejection of claim 11, and of claims 12 to 15 grouped therewith (brief, page 6) will therefore be sustained.

Rejection (2)

Appellants argue that claim 16 distinguishes over the applied prior art in that, inter alia, it recites (at lines 44 to 47) that the top wall of the radiant heating assembly has ducts formed therein through which fan-forced air exits the heater (brief, page 26). The examiner has not responded to this argument, and we do not find any such ducts disclosed or suggested in Krichton or in any of the four secondary references.

Accordingly, we will not sustain the rejection of claim 16, nor of dependent claims 17 to 20.

Conclusion

The examiner's decision to reject claims 11 to 20 is affirmed as to claims 11 to 15, and reversed as to claims 16

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to 20.

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

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Administrative Patent Judge)
)
) BOARD OF PATENT
NEAL E. ABRAMS)
Administrative Patent Judge) APPEALS AND
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