

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte MATTHEW ROBSON and ALAN WOLF

Appeal 2007-3723
Application 10/926,723
Technology Center 3700

Decided: November 15, 2007

Before, TONI R. SCHEINER, NANCY J. LINCK, and RICHARD M.
LEBOVITZ, *Administrative Patent Judges*.

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DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 2-17. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Claims 2-17 are pending and stand rejected (Appeal Br. 4). The following rejections are on appeal:

1) Claims 2, 12, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by Glowacki (U.S. Pat. No. 3,626,602, Dec. 14, 1971) (Answer 3);

2) Claims 2, 12, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by Ashworth (U.S. Pat. No. 2,769,248, Nov. 6, 1956) (Answer 3);

3) Claims 2, 12, 14, 16, and 17 stand rejected under 35 U.S.C. § 102(b) as anticipated by Roper (U.S. Pat. No. 6,047,482, Apr. 11, 2000) (Answer 4);

4) Claims 13 and 17 stand rejected under § 103(a) as obvious over Glowacki or Ashworth or Roper in view of Freistadter (DE 37 06 539 A1, Sep. 8, 1988) (Answer 4);

5) Claims 15 and 17 stand rejected under § 103(a) as obvious over Glowacki or Ashworth or Roper in view of Lam (U.S. Pat. No. 5,085,358, Feb. 4, 1992) (Answer 4);

6) Claims 3, 5, 7, 9, and 11 stand rejected under § 103(a) as obvious over Glowacki or Ashworth or Roper in view of Berlin (U.S. Pat. No. 3,043,440, Jul. 10, 1962) or Thiot (U.S. Pat. No. 4,094,414, Jun. 13, 1978) (Answer 5);

7) Claims 3, 5, 7, 9, 11, and 17 stand rejected under § 103(a) as obvious over Roper in view of Berlin or Thiot (Answer 6);

8) Claims 4, 6, 10, and 17 stand rejected under § 103(a) as obvious over Glowacki or Ashworth or Roper in view of Berlin or Thiot, further in view of Freistadter (Answer 6); and

9) Claims 8 and 17 stand rejected under § 103(a) as obvious over Glowacki or Ashworth or Roper in view of Berlin or Thiot, further in view Lam (Answer 7).

The claims stand or fall together within each rejection because separate reasons for the patentability of any individual claim were not provided. We select claim 2 as representative of the claims rejected under § 102(b). For the rejections under § 103(a), all the claims are dependent on claim 2. Appellants do not separately argue the patentability of these dependent claims based on their additional limitations, but rather repeat the arguments made with respect to claim 2. Thus, our analysis of claim 2 addresses Appellants' arguments with respect to the § 103(a) rejections. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Claim 2 reads as follows:

A travel clothes dryer comprising:

- (a) a collapsible frame adapted to support clothing;
- (b) an integral heating element for heating said frame;
- (c) wherein said frame conductively heats the clothing.

CLAIM INTERPRETATION

Claim 2 is directed to a “travel clothes dryer.” The dryer comprises: “(a) a collapsible frame adapted to support clothing” and “(b) an integral heating element for heating said frame.”

We interpret the term “integral”¹ to have its ordinary and customary meaning as defined in a general purpose dictionary to mean that the “heating element” is part of the dryer structure. The claim does not specify the location of the heating element in the dryer, but the claim requires its function to be “for heating” the collapsible frame such that the “frame

¹ Integral: “of, pertaining to, or belonging as an essential part of the whole; constituent or component.” *The Random House College Dictionary* 692 (Revised Edition 1982).

conductively heats the clothing.” Thus, the heating element must be located in the dryer in a position which enables the heating element to heat the collapsible frame, resulting in the frame being capable of “conductively” heating clothing which is draped over it.

ISSUES ON APPEAL

Anticipation

There are three anticipation rejections under 35 U.S.C. § 102 on appeal (*see supra* at pp. 1-2), each involving a different reference. In each case, the Examiner contends that the cited prior art reference teaches all elements of the travel clothes dryer of claim 2, including the (a) collapsible frame and (b) heating element (Answer 3-4). The limitation that the dryer frame “conductively heats the clothing” is not described in the prior art, but the Examiner finds that the structure of the prior art dryer would cause the collapsible frame to heat and therefore be capable of conductively heating clothing (*id.*). Thus, although this characteristic is not expressly recited in the reference, the Examiner contends that it is an inherent characteristic of the prior art structure.

“A reference includes an inherent characteristic if that characteristic is the ‘natural result’ flowing from the reference’s explicitly explicated limitations.” *Eli Lilly & Co. v. Barr Labs.*, 251 F.3d 955, 970 (Fed. Cir. 2001). A “prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference.” *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005) (citing *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)). Thus, the issue in the anticipation rejections is whether the Examiner has provided sufficient

evidence or reasoning to establish that the prior art dryers “necessarily” would contain a “frame [which] conductively heats the clothing” as required by the limitations of claim 2.

Obviousness

There are six appealed obviousness rejections under 35 U.S.C § 103 in this proceeding (*see supra* at p. 2). Appellants contend that the obviousness rejections are improper for the same reasons that they challenge the rejections under § 102 (Appeal Br. 20-23). Thus, the rejections under § 103 turn on the same issue as the anticipation rejections.

REJECTION OVER GLOWACKI

Claims 2, 12, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by Glowacki.

Findings of Fact

G1. Glowacki describes a collapsible clothes dryer (Glowacki, col. 1, ll. 10-13).

G2. The dryer has a central duct (10) with a “plurality of tubular arms or ducts 24 project[ing] laterally outward from the duct 10” (Glowacki, at col. 2, ll. 55-56; Fig. 1; Answer 3).

G3. “Each duct 24 is pivotally connected to duct 10 by a hinge 26 or similar attachment means at end edge 28” to permit the duct to be swung from an open to a collapsible position (Glowacki, at col. 2, ll. 56-62; Fig. 2; Answer 3).

G4. The dryer comprises a combined heating element and blower unit 46 which are utilized to blow heated air through the ducts 10 and 24, causing the clothes to dry (Glowacki, at col. 1, ll. 49-52; at col. 3, ll. 23-53;

Answer 3).

G5. The “heating elements can be of an electrical type which are arranged within duct 10” (Glowacki, at col. 3, ll. 68-69).

G6. The clothes dryer described by Glowacki has a plurality of collapsible tubular arms (Glowacki, at col. 2, ll. 55-62; Figs. 1-2; Findings of Fact (“FF”) G1-G3, which meets the limitation of claim 2 of “(a) a collapsible frame adapted to support clothing.”

G7. The clothes dryer comprises a heating element that is part of the dryer (FF G4-G5), satisfying the requirement of claim 2 of “(b) an integral heating element.”

G8. The electrical heater with blower (FF G4-G5) arranged to blow hot air through the tubular ducts of Glowacki’s clothes dryer will result in heat being *conducted* through it, meeting the limitation of claim 2 that the frame is capable of “conductively” heating clothing (see Answer 3).

G9. All the limitations of claim 2 can be found in Glowacki’s collapsible clothes dryer, and thus Glowacki anticipates claim 2.

Analysis

The Examiner finds that Glowacki’s clothes dryer frame is capable of conductively heating clothing, as required by claim 2, because its heating element is arranged in the same manner as claimed (see FF G4, G7), and therefore would be expected to conduct heat (Answer 3). The Examiner finds that Glowacki’s clothes dryer contains all the limitations recited in claim 2 (FF G1-G4), thus anticipating it (*see* FF G6-G9; Answer 3).

Appellants contend that there is no certainty that the hot air flowing through the tubular frame would heat the frame, and that “even if some

frame components do, by happenstance, become hot *and* are in contact with clothing, conductive heating of the clothing is still not certain to occur” (Appeal Br. 15). They explain that “the clothing and the frame elements may have been heated to the same temperature by the hot air flow over both, in which case no transfer of heat will occur” (Appeal Br. 15) and thus would not meet the limitation of claim 2 that the frame “conductively” heat the clothing. They also argue that the Examiner has not met the burden to “provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” (Appeal Br. 18).

In this case, we find there is sufficient evidence to establish that Glowacki describes all limitations of the clothes dryer of claim 2, anticipating it.

Glowacki describes a clothes dryer that comprises a collapsible frame and an integral heating element, the only structural requirements of claim 2. The heating element – which is part of the blower unit 46 in Fig. 4 or is within the duct 10 (FF G4-G5) – is used to produce hot air which is passed through the central and supporting ducts (FF G4). The ducts form the frame of the clothes dryer. Therefore, the frame would be heated when the dryer is in operation, either by the hot air which is forced through them or more directly by a heating element situated in duct 10 (FF G5). While Glowacki does not state that this configuration would permit the clothes dryer to conductively heat clothing, the Examiner reasoned – based on these facts – that clothes hung over the heated ducts would be in contact with the heat and therefore would be dried by heat conduction (Answer 10). Thus, the Examiner has provided sound reasoning to support the determination that the

Glowacki's dryer frame necessarily possesses the inherent capability to conductively heat clothing. *See SmithKline Beecham Corp.*, 403 F.3d at 1343.

Appellants argue that the clothing "may" be heated to the same temperature of the frame in which case no conductive heat transfer would occur (Appeal Br. 15). We do not find this argument persuasive. Claim 2 is an apparatus claim; thus, the question is whether Glowacki's dryer would be capable of conductively heating clothing in any manner that it can be used. We find that the answer to this question is yes. At least when an article of wet clothing is initially applied to the heated frame of Glowacki's dryer, the heat would immediately transfer from the frame to the article of clothing – conductively heating it and meeting the corresponding limitation of claim 2. Logically, the clothing when applied to the frame would begin to dry, and wick moisture from the remaining wet portions just as the Specification describes for the operation of the claimed clothes dryer (Specification 6: 28-30 ("local drying of garments which causes moisture to wick from the remaining wet portions of the garment. The combination of wicking and local heating causes garments to dry faster")). Thus, we disagree with Appellants that the ducts might "happenstance" become hot (Appeal Br. 15); having hot air blowing through the ducts, as well as the electrical heating element optionally mounted in the frame, would most certainly result in the frame component becoming hot.

Appellants also argue that Glowacki's frame comprises hooks 48, while arguably a part of the frame, have no precisely specified location, and thus they may or may not fall within the heated airflow. Even if the various frame components in these references do become heated, they may not be in direct contact

with clothing and therefore cannot meet the ‘frame conductively heats the clothing’ limitation that was added in an amendment to claim 2.

(Appeal Br. 15.)

As noted by the Examiner (Answer 9-10), Glowacki also states that the clothes may be directly draped over the ducts (Glowacki, at col. 3, ll. 39-42). In this arrangement, the clothes would be in contact with the heated ducts, the same configuration described in the Specification to enable the clothes to be dried conductively. Consequently, we do not agree that Glowacki’s discussion of hooks 48 distinguishes its clothes dryer from claim 2.

In sum, we find that the Examiner correctly determined that Glowacki’s dryer anticipates claim 2. Thus, we affirm the rejection of claim 2. Claims 12, 14, and 16 fall with claim 2 because separate reasons for their patentability were not provided.

REJECTION OVER ASHWORTH

Findings of Fact

A1. Ashworth describes a portable clothes dryer having collapsible arms (91) for hanging clothes and collapsible legs (Ashworth, at col. 1, ll. 65-70; col. 3, l. 72 to col. 4, l. 18; Fig. 1; Answer 3).

A2. Electric heating elements (27, 29, 31, and 33) are located on the lower end of the frame (1) to effect heating of articles for drying by convection and radiation (Ashworth, at col. 4, ll. 1-5; Answer 3).

A3. There is no evidence that the convection heat produced by the heating elements of Ashworth would contact the collapsible arms and heat them.

Analysis

The Examiner finds that Ashworth describes a clothes dryer with collapsible arms and a heating element (FF A1-A2; Answer 3), meeting limitations (a) and (b) of claim 2. The Examiner concludes that “[s]ince the heating means 27-33 includes electric heater, . . . there will be some heat conducted through the metal frame 1, 3, 91 in addition to the convection heat” (Answer 3).

In this case, we do not find that the Examiner has met the burden of establishing that the heating elements described in Ashworth’s clothes dryer would be capable of conductively heating clothes draped on its collapsible arms. The Examiner does not explain how heating elements at the bottom of the drying frame would produce a frame which is capable of conductively heating clothing.

The Examiner contends that “the amount of heat conduction is not recited in the broad claim”; therefore, “[r]egardless how little amount of heat conduction is generated in Ashworth, the broad claims are still anticipated” (Answer 10-11).

The problem with the Examiner’s argument is that no evidence or reasoning has been presented that the convection heat produced by the heating elements of Ashworth would contact the collapsible arms and heat them (FF A3). Thus, we do not agree with the Examiner that Ashworth’s portable dryer would necessarily fulfill the conductive heat function recited in claim 2. Therefore, we reverse the rejection of claims 2, 12, 14, and 16.

REJECTION OVER ROPER

Findings of Fact

R1. Roper describes a portable clothes dryer having foldable elongate arms (42) (Roper, at col. 3, 58-67; Answer 4).

R2. The arms outwardly extend from a hub from which has a heater (44) and fan (46) (Roper, at col. 3, l. 65 to col. 4, l. 4; Figs. 1, 3; Answer 4).

R3. The fan is designed for blowing hot air over items, such as clothes, hanging on the arms (42) (Roper, at col. 4, ll. 59-67).

R4. There is no evidence that hot air blowing from the fan would necessarily heat an outwardly extending arm, enabling it to conductively heat the clothing.

Analysis

The Examiner finds that Roper describes a portable dryer that meets limitations (a) and (b) of claim 2 (FF R1-R3; Answer 4). The Examiner concludes that “[s]ince the heating means 44 includes electric heater, . . . there will be some heat conducted through the metal frame . . . 42 in addition to the convection heat” (Answer 4).

We do not find that the Examiner has presented sufficient or reasoning to establish that the heater described in Roper’s clothes dryer would be capable of conductively heating clothes draped on its elongate arms. The Examiner contends that conductive heat would transfer between the elongate arms and clothing hung on the arms (Answer 11), but does not explain how the arms would be heated by the heater (44). Roper describes a fan with a heater for blowing hot air over clothes (FF R1, R2). The Examiner does not provide evidence or explain how heater that radiates heat would necessarily heat an outwardly extending arm, enabling it to

conductively heat the clothing (FF R4). Thus, we reverse the rejection of claims 2, 12, 14, 16, and 17.

OBVIOUSNESS REJECTIONS

Obviousness based on Glowacki, Ashworth, or Roper

The Examiner bases rejections under § 103 on three primary references in the alternative – Glowacki, Ashworth, or Roper – in view of additional prior art. Since we have affirmed the rejection of the claims over Glowacki, we only consider the rejections as they relate to Glowacki. The rejections are listed *supra* at p. 2 as rejections 4), 5), 6), 8), and 9).

Appellants argue that the rejections are not proper because “conductive heating of clothing does not occur to a certainty, or alternatively, any such heating occurring by happenstance is *de minimis*” (Appeal Br. 21-23). Since we have determined (*supra* at pp. 6-8) that Glowacki’s dryer would have conductively heated the clothing, we do not find Appellants arguments to be persuasive. Accordingly, we affirm the obviousness rejections of claims 3-11, 13, 15, and 17.

Obviousness based on Roper

Claims 3, 5, 7, 9, 11, and 17 stand rejected under § 103(a) as obvious over Roper in view of Berlin or Thiot (*see supra* at p. 2, rejection 7)).

Appellants contend that the cited prior art does not teach “conductive heating of clothing” as required by independent claim 2 upon which the rejected claims ultimately depend (Appeal Br. 22). As discussed above see *supra* at p. 11), we agree with Appellants and reverse the rejection of claims 3, 5, 7, 9, 11, and 17.

CONCLUSION

The anticipation rejection of claims 2, 12, 14, and 16 over Glowacki is affirmed. The obviousness rejections of claims 3-11, 13, 15, and 17 over Glowacki in view of Freistadter; Glowacki in view of Lam; Glowacki in view of Berlin or Thiot; Glowacki in view of Berlin or Thiot, and Freistadter; and Glowacki in view of Berlin or Thiot, and Lam (*supra* at pp. 11-12) are affirmed. Thus, we affirm the final rejection of claims 2-17, which are all the pending claims in the application at issue in this proceeding.

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED.

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