

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES M. SHIN

Appeal 2007-0002
Application 10/188,485
Technology Center 1700

Decided: May 18, 2007

Before EDWARD C. KIMLIN, RICHARD TORCZON and LINDA E. HORNER,
Administrative Patent Judges.

HORNER, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant, Charles M. Shin, appeals under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 and 3-10. Claim 2 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We REVERSE and ENTER A NEW GROUND OF REJECTION UNDER 37 C.F.R. § 41.50(B).

THE INVENTION

Appellant's claimed invention is to a method for rapidly and efficiently preparing a sandwich (Specification 1:[0001]). The claimed method includes toasting two layers of bread by impinging heated air against the bread and concurrently and simultaneously grilling the sandwich contents on a griddle. Claim 1, reproduced below, is the sole independent claim and is representative of the subject matter on appeal.

1. A method of making a sandwich, comprising the steps of:

(a) initiating toasting two layers of baked bread by impinging heated air surroundingly against said bread;

(b) initiating grilling sandwich contents, including meat and vegetables, on a griddle and grilling the contents concurrently with said toasting; and,

(c) disposing said sandwich contents on a surface of at least one of said layers of bread

wherein the toasting and grilling events are occurring simultaneously for a substantial majority of the time required for either event.

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THE REJECTION

The Examiner relies upon the following as evidence of unpatentability:

Russell	US 5,735,191	Apr. 7, 1998
Epicurean Online, "Philadelphia Cheesesteak Sandwich Recipe," December 16, 2000 ("the Recipe").		

Appellant seeks our review of the Examiner's rejection of claims 1 and 3-10 under 35 U.S.C. § 103(a) as unpatentable over the Recipe in view of Russell.

ISSUE

The Examiner found the Recipe teaches a method of making a cheesesteak sandwich including all of the steps of claim 1, except toasting and grilling simultaneously for a substantial majority of the time (Answer 3) and using impinging heated air to toast the bread (Answer 4). The Examiner found that Russell teaches simultaneous heating of meat and bread and that it would have been obvious to perform the toasting and grilling steps of the Recipe substantially at the same time, as taught by Russell, so that one component does not cool down while the other component is cooking (Answer 4 (citing Russell, col. 1, l. 65 through col. 2, l. 2)). The Examiner further found it would have been obvious to use any type of equipment to toast the rolls, and that the equipment selected depends on the site at which the sandwich is made, its availability, and economic factors (Answer 4).

Appellant contends that the prior art fails to teach or suggest using impinging heated air to toast the bread (Br. 11). The issue before us is whether

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Appellant has shown that the Examiner erred in finding that the Recipe and Russell render claims 1 and 3-10 obvious.

FINDINGS OF FACT (FF)

The following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427, 7 USPQ2d 1152, 1156 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Claim 1 includes the step of “initiating toasting two layers of baked bread by impinging heated air surroundingly against said bread.”

2. The Specification describes this step as follows,

Although a toaster oven can be used, it is preferred that toasting 14 is performed using an impinging oven. Generally, the impinging oven has multiple heating elements oriented in several directions toward the layers of bread and an air impeller for forcing air over the heating elements and directing the heated air against the bread.

...

Toasting 14 is performed until the bread becomes surroundingly toasted, meaning that each layer has a toasted crust enveloping a center comprised of soft bread. During toasting 14, the heated air is impinged against the entire surface of each layer of bread, which absorbs the heat and becomes warmed thereby. The temperature of the surface increases before the heat moves inwardly and increases the temperature of the center region of the bread. Thus, the surface of the bread is heated more than the bread in the interior below the surface. The surrounding contact of heated air currents against the

surface of each layer evenly draws much of the moisture outwardly from the bread underneath the surface. As a result, the toasted crust is formed extending from the surface to a substantially uniform depth beneath the surface. Moisture retained by the bread underneath the surface is drawn outwardly toward the surface and buffers the heat, thereby enabling the surface to withstand the heated air currents without becoming burnt or brittle. Initially, the bread underneath the surface softens, as it gets warmer. (Specification 8:[0020] – 10:[0021].)

3. The Recipe discloses cooking the vegetables and beef and keeping these sandwich contents warm while toasting the bread on the griddle.
4. The Recipe does not disclose toasting the bread by impinging heated air surroundingly against the bread.
5. Russell teaches using radiant heat both to heat food in food heating chamber 30 and to heat bread in bread heating chambers 32 and 34 (Russell, col. 4, ll. 41-43 and 51-52).
6. Russell does not disclose toasting the bread by impinging heated air surroundingly against the bread.

PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103(a), the examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). It is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness.

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See id. at 1073, 5 USPQ2d at 1598. In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), *viz.*, (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art.¹ In addition to these factual determinations, the examiner must also provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir 2006) (*cited with approval in KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007)).

Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the appellant. *See Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. *Id.* at 1445, 24 USPQ2d at 1444. *See also Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444; *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788.

ANALYSIS

Claim 1 recites “initiating toasting two layers of baked bread by impinging heated air surroundingly against said bread” (FF 1). Appellants are claiming more

¹ Although *Graham* also suggests analysis of secondary considerations such as commercial success, long felt but unsolved needs, failure of others, etc., Appellants presented no such evidence of secondary considerations for the Board’s consideration.

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than merely toasting the bread, such as is done for example in a conventional toaster. Appellants have invoked a term of art in its method claim by the use of the word “impinging.” This step would be understood by one of ordinary skill in the art in view of the Specification (FF 2) to describe a particular process of toasting bread using an impingement oven or equivalent device to deliver forced, heated air against the bread.

The combined teachings of the Recipe and Russell fail to disclose or render obvious the step of toasting the bread by impinging heated air surroundingly against the bread (FF 4, 6). The Recipe teaches to toast the bread on a griddle (FF 3), and Russell teaches to heat the bread using radiant heat (FF 5). In response to this deficiency in the art, the Examiner stated, “It would have been obvious to one skilled in the art to use any type of equipment to toast the rolls. The equipment selected depends on the site at which the sandwich is made, its availability and economic factor” (Answer 4). The Examiner further explained,

It would have been recognized by one skilled in the art that different cooking methods give different flavor, texture and taste.... Thus, one would also choose to toast the bread instead of grilling when it is desired to obtain bread with no additional fat at all. Thus, choosing a different method for heating the bread is not unobvious because both grilling and toasting are known alternative heating methods for bread. The decision to select either one depends on the taste, flavor, texture and fat content desired. Thus, it would have been obvious to choose different combinations of cook method depending on the taste and flavor desired” (Answer 6).

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We have no disagreement with the Examiner's findings that toasting is a known alternative to grilling for heating bread and that each imparts different taste, flavor, texture and fat content to the bread. What is lacking in the Examiner's reasoning is an explanation of the reason as to why one having ordinary skill in the art would have been led to employ the specific toasting technique of "impinging heated air" against the bread. Assuming it would have been obvious to toast the bread in lieu of grilling, the Examiner still has not provided a clearly articulated reason why one having ordinary skill in the art would have been led to substitute the particular method of impinging heated air to toast the bread, in lieu of toasting the bread on a griddle or by radiant heat, as disclosed in the prior art. As such, we find that the Examiner has failed to set forth a prima facie case of obviousness of claims 1 and 3-10.

NEW GROUND OF REJECTION

We make the following evidence of record:

Smith	US 4,338,911	Jul. 13, 1982
Glaros	US 4,986,992	Jan. 22, 1991
Naramura	US 5,493,958	Feb. 27, 1996

We enter a new ground of rejection of claims 1 and 4-7 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Naramura, Russell, and Smith.

We enter a new ground of rejection of claims 3 and 8-10 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Naramura, Russell, and Smith, as applied to claim 1, and further in view of Glaros.

ADDITIONAL FINDINGS OF FACT (FF)

We make the following additional enumerated findings of fact, which are supported by at least a preponderance of the evidence.

7. Naramura discloses a sandwich preparation apparatus including an automatic crown preparation section for automatically toasting crowns of buns, an automatic heel preparation section for automatically toasting heels of buns, and an automatic patty preparation section which automatically grills patties (Naramura, col. 2, ll. 7-14).

8. Naramura discloses that the crown and heel preparation sections toast the buns using a pair of heating plates (Naramura, col. 6, ll. 6-9 and col. 7, ll. 1-13).

9. Naramura discloses that the patty preparation section discharges patties from a stocker 5 one by one and in sequence and a patty grilling device 6 heats or grills the patties (Naramura, col. 7, ll. 29-32).

10. Naramura discloses a conveying device which transfers the prepared crowns, heels, and patties from their respective preparation sections to a manual preparation section, at which point an operator assembles the sandwich (Naramura, col. 2, ll. 17-20 and 41-47).

11. Naramura discloses that once an operator has completed manual assembly of a sandwich, the operator presses LEDs corresponding to the completed sandwich, the operation is inputted into a CPU 100, the CPU 100 sends an output to turn off corresponding LEDs and activate a conveyor unit 9, and “[a]t the same time, each preparation section works as stated above to replace the

crowns C, heels H and patties P which have been removed from the storage sections 8C, 8H, and 8P and used in the completed sandwiches” (Naramura, col. 9, ll. 15-25). As such, Naramura discloses concurrently initiating toasting of a crown and heel and grilling of sandwich contents, i.e., a patty, using different cooking methods.

12. Naramura acknowledges that “[a] demand for heightened productivity has arisen as a result of an increase in the number of consumers and increasingly diversified tastes” (Naramura, col. 1, ll. 19-21).

13. Naramura discloses that its sandwich preparation apparatus can be used for production of “a wide variety of hamburgers and sandwiches” (Naramura, col. 4, ll. 9-11) and that one advantage of the sandwich preparation apparatus is to heighten productivity by eliminating idling time from waiting for completion of toasting or grilling (Naramura, col. 4, ll. 19 and 36-38 and col. 9, ll. 26-30).

14. Naramura does not disclose grilling vegetables as part of the sandwich contents.

15. Naramura also does not explicitly state the relative amount of time it takes to toast the bun halves and grill the patty.

16. Naramura also does not disclose toasting the crowns and heels by impinging heated air.

17. Russell teaches an electric appliance for cooking meat and buns simultaneously (Russell, Abstract).

18. Russell recognizes that meat requires more heat to become cooked than does a bun to become warmed or toasted. Russell teaches that “[i]n order to

provide for the simultaneous heating of the bun and the meat, and in order that the heating of the bun and the meat are completed simultaneously, a number of techniques may be utilized” (Russell, col. 5, ll. 35-37 and 44-47).

19. Russell teaches, for example, altering the distance between the radiant heat element and the bun to slow the cooking time of the bun so that the cooking of the bun is completed simultaneously with the meat (Russell, col. 5, ll. 48-61).

20. Russell further discloses that heating/cooking times of food will vary “depending on the heat capacity of the elements, the thickness of the foods, the water and fat content of the foods, among other factors” (Russell, col. 10, ll. 50-54).

21. Russell teaches that a single timer version in which the bun and meat are cooked for the same amount of time is preferable because the bun and meat portions have the same heating times and the apparatus is easier to make and operate (Russell, col. 6, ll. 27-29).

22. Smith teaches an impingement oven that uses jets of heated air to cook food products at a much higher rate and lower temperature than can be accomplished with still air or forced air convection ovens (Smith, col. 10, ll. 18-23).

23. Smith discloses an embodiment of an impingement oven having a “continuous loop wire mesh conveyor 358” for supporting the food product (Smith, col. 12, ll. 36-37 and Figure XI). Smith discloses that the “food product P may be deposited on the upper portion of conveyor 358 adjacent end wall 306 and is passed through the oven and is discharged through outlet opening 362 and

deposited on shelf 361 secured to end wall 304 of cabinet 301.” (Smith, col. 12, ll. 43-47).

24. Smith describes that “the sweeping jets, impinging against the surface, provide crisping, browning or searing on the surface without causing undesirable drying of the interior portions of the product” (Smith, col. 4, ll. 1-4).

25. Glaros discloses partially baking a dough product by heating the dough product in an impingement oven and then immediately freezing the partially-baked dough product (Glaros, Abstract).

26. Glaros teaches that “food products that are made from dough are most appetizing immediately after the product has been baked in an oven” because “[s]uch products give off aromas and have a texture and moistness that generally lasts only a relative short time after taking [sic, baking] even when the product has been stored in an optimum manner after baking” (Glaros, col. 1, ll. 12-17).

27. Glaros teaches that it is known in the art to partially-bake dough products, such as a loaf of bread and then to freeze the product prior to shipment. Glaros teaches that when desired, the food product is placed in an oven and baked sufficiently long to obtain the color and temperature desired. Glaros explains that since the product is partially baked by the manufacturer, the baking time needed by the end user is significantly reduced (Glaros, col. 2, ll. 15-29).

ANALYSIS

Naramura discloses a method of making a sandwich by initiating toasting of bun crowns and heels using heating plates, and concurrently initiating grilling of sandwich contents, including meat, on a griddle (FF 7-9, 11). Naramura further

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discloses disposing the sandwich contents on a surface of at least one of the layers of bread (FF 10). Naramura acknowledges a market demand for heightened productivity in the fast food market as a result of an increase in the number of consumers and increasingly diversified tastes (FF 12). Naramura discloses that a benefit of its sandwich preparation method is to heighten productivity by eliminating idling time from waiting for completion of toasting or grilling (FF 13). As such, Naramura discloses the known technique, useful in the fast food industry, for separately grilling meat and toasting a bun using different cooking methods and performing the cooking and toasting concurrently for the sake of efficiency and productivity.

Naramura does not disclose that the sandwich contents include vegetables (FF 14). Naramura does, however, teach that its apparatus can be used to make a wide variety of sandwiches (FF 13). The increasingly diversified tastes of consumers in the fast food industry, as acknowledged by Naramura (FF 12), would have provided an incentive for one skilled in the art to have used Naramura's apparatus for making other types of sandwiches that include grilled vegetables, such as the Philadelphia Cheesesteak Sandwich disclosed in the Recipe. In doing so, it would have been obvious to grill the vegetables along with the meat to prepare the sandwich contents to meet the market demand for variety and heightened productivity. *KSR*, 127 S. Ct. at 1741, 82 USPQ2d at 1396 (“In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends.”).

Naramura also does not disclose toasting the bread by impinging heated air surroundingly against the bread (FF 16). Smith teaches that impingement ovens, which use jets of heated air to cook food products at a much higher rate and lower temperature than can be accomplished with still air or forced air convection ovens, were known in the art at the time of the invention (FF 22). Smith also teaches an advantage of impingement ovens is that they brown food products on the surface without drying out the interior portions of the product (FF 24). It would have been obvious to one having ordinary skill in the art to have used impinging heated air in Naramura's apparatus to automatically toast the buns because the impingement cooking method would toast the bread more quickly and provide an improved texture, thereby further improving on Naramura's stated goal of heightened productivity. *KSR*, 127 S. Ct. at 1739, 82 USPQ2d at 1395 ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.")

Finally, although the grilling and toasting steps in Naramura occur concurrently, Naramura does not explicitly describe the relative amount of time it takes to toast the bun halves and grill the meat, such that it is abundantly clear that the two steps occur simultaneously for a substantial majority of the time (FF 15). As found by the Examiner, Russell teaches simultaneous heating of a bun and meat (FF 17). Russell further teaches several techniques for achieving simultaneous cooking times (FF 18). For example, Russell teaches adjusting cooking times based on, for example, altering the distance between the heat element and the bun (FF 19), or altering the thickness of the food (FF 20). Russell further teaches that a

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single timer version in which the bun and meat are cooked for the same amount of time is preferable, because the bun and meat portions have the same heating times and the apparatus is thus easier to make and operate (FF 21).

It would have been obvious to modify Naramura's apparatus to achieve simultaneous cooking times of the bread and sandwich contents, in view of Russell's teaching that it is desirable to achieve simultaneous cooking for ease of operation of the apparatus. Further, common sense tells us that it is easier to cook different parts of the sandwich using different devices if everything takes the same amount of time to cook. This allows an operator to start all of the sandwich components cooking at the same time and then retrieve and assemble the components for serving at the same time. In a fast food environment, such as is described in Naramura, those cooking are often inexperienced and required to multitask in a busy environment. By automating the cooking/toasting process, as in Naramura, the worker is not required to be an experienced cook. Further, in an automated apparatus, such as Naramura, simultaneous cooking requires only one timer for both components which is, according to Russell, an easier apparatus to make.

In this case, the market demand for heightened productivity in the production of hot sandwiches created a strong incentive to efficiently prepare the components of a sandwich, and the prior art taught a number of known cooking methods and devices for achieving this goal. A fast food restaurant owner of ordinary skill, possessed with knowledge of the prior art and facing the market demand for fast and hot sandwiches, would have seen a benefit to improving upon

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the known cooking methods of Naramura by using Naramura's apparatus to grill vegetables to expand the variety of sandwich offerings, by cooking the bread with impinging heated air for increased speed and improved taste and texture, as taught by Smith, and by cooking the bread and sandwich contents concurrently and simultaneously for improved efficiency of preparation and productivity, as taught by Russell. As such, the method of claim 1 would have been obvious in view of Naramura, Smith, and Russell.

Claims 3 and 8 further recite that the bread is slightly under baked prior to toasting. Glaros discloses that partially-baked bread products were known in the art at the time of the invention. In particular, Glaros discloses a partially-baked bread product that is made by heating the dough in an impingement oven until partially-baked and then immediately freezing the bread (FF 25). Glaros teaches that this partially-baked bread product provides the benefit of allowing the retail store to complete the baking in a short amount of time while still achieving the aroma, texture and moistness of a freshly-baked bread product (FF 26, 27). It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a partially-baked bread product, such as that described in Glaros, in the assembly of Naramura to manufacture sandwiches, to achieve the stated benefits of aroma, texture, and moistness, because this would make the sandwich more appealing to customers. As such, we find that claims 3 and 8 would have been obvious in view of the combined teachings of Naramura, Smith, Russell, and Glaros.

Claims 4 and 9 recite that the layers of bread are two half-portions of a submarine roll. Although Naramura describes its bread halves as “crowns” and “heels,” which connote hamburger buns or the like, it would have been obvious to one skilled in the art to use a submarine roll instead of a hamburger roll depending on the variety of sandwich that one were making, as submarine rolls were known in the art and commonly used on a wide variety of sandwiches, as mentioned, for example in the Recipe, which discloses using a hoagie, po’boy, or Italian-style sandwich roll.

Claims 5 and 7 further recite that the toasting step is performed by conveying the bread through an impinging oven. Smith discloses an impingement oven having a conveyor for supporting the food product as it travels through the oven (FF 23). It would have been obvious to use the impingement oven of Smith to toast the bread for the same reasons provided above for claim 1.

Claims 6 and 10 further recite the step of removing a moist byproduct from the sandwich contents prior to disposing the sandwich contents on the bread. It would have been obvious to remove moisture from the sandwich contents before placing them on the bread to keep the bread from becoming soggy since the whole purpose of separately toasting the bread is to keep the bread crisp.

CONCLUSIONS OF LAW

We conclude that the Examiner failed to make a prima facie show of obviousness of claims 1 and 3-10 over the Recipe and Russell. We conclude, however, that claims 1 and 4-7 would have been obvious to one having ordinary

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skill in the art at the time of the invention in view of Naramura, Smith, and Russell, and claims 3 and 8-10 would have been obvious to one having ordinary skill in the art at the time of the invention in view of Naramura, Smith, Russell, and Glaros.

DECISION

The decision of the Examiner to reject claims 1 and 3-10 is not sustained. Pursuant to 37 C.F.R. § 41.50(b), we enter new grounds of rejection under 35 U.S.C. § 103 of claims 1 and 4-7 as obvious in view of Naramura, Smith, and Russell and claims 3 and 8-10 as obvious in view of Naramura, Smith, Russell, and Glaros.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2006). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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

REVERSED; 37 C.F.R. § 41.50(B)

vsh

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