

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ELDON ROTH

Appeal 2008-1998
Application 10/951,076
Technology Center 1700

Decided: April 28, 2008

Before BRADLEY R. GARRIS, KAREN M. HASTINGS, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-4, 6-10, 12, and 14-22. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

The invention relates to a method of enhancing the pH of meat products by injecting pH modifying material into the interior of the meat product (Spec. 1:18 to 2:2). Claim 1 is illustrative:

1. A method including:
 - (a) forcing an oxygen enhancing material into the interior of a meat product through an injection conduit positioned within the meat product; and
 - (b) forcing an ammonia-based pH modifying material into the interior of the meat product through the injection conduit or through an additional injection conduit.

The Examiner relies upon the following prior art references in the rejection of the appealed claims:

Townsend	4,220,669	Sep. 2, 1980
Langen	5,012,728	May 7, 1991
Roth ¹	5,871,795	Feb. 16, 1999

The Examiner rejected claims 1-4, 6-10, 12, and 14-22 under 35 U.S.C. § 103(a) as being unpatentable over Roth in view of Townsend or Langen.

Appellant does not separately argue with any reasonable specificity any of the individual dependent claims (App. Br. 4-12; Reply Br. 2-6). Therefore, we select independent claim 1 to decide the issues on appeal.

¹ Roth is also the inventor of the instant application.

ISSUES ON APPEAL

The issues on appeal arising from the contentions of Appellant and the Examiner are whether the Appellant has shown that the Examiner reversibly erred in rejecting the claims because:

(a) there is no apparent reason in the prior art to combine the references as proposed by the Examiner; and

(b) the objective evidence indicates that the claimed invention would not have been obvious.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) secondary considerations, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S. Ct. at 1739. The question to be asked is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR*, 127 S. Ct. at 1740.

KSR states:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

KSR, 127 S. Ct. at 1740-41.

The Federal Circuit recently recognized that “[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not.” *Leapfrog Ent., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007).

OPINION

We agree with the Examiner’s findings of facts and legal conclusions of obviousness as set out in the Answer. We add the following primarily for emphasis.

Roth describes treating the surfaces of meat products with a treatment material of ammonia gas mixed with oxygen to increase the pH of the meat and to reduce bacterial activity (Abstract; col. 5, ll. 45-50). The increased pH also helps maintain the quality of the meat during storage (Roth, Abstract). This treatment has been shown to improve the color of the meat product substantially, both at the time of treatment and during storage (Roth, col. 3, ll. 54-65). The pH increasing gas need not be an actual gas, it may be a liquid (*see e.g.*, Roth, col. 3, ll. 33-35).

Each of Townsend and Langen describe use of injection needles to add treatment materials to the interior of a meat product (Townsend, Abstract; Langen, Abstract).

We agree with the Examiner that a person having ordinary skill in the art would have found it obvious to add the treatment materials of Roth via the use of injection needles into the meat, in addition to Roth's surface treatment, in order to reduce bacterial activity therein, and thus arrive at Appellant's claimed method (Ans. 3-4).

Appellant contends that there is no apparent reason in the prior art to combine Roth with Townsend or Langen as proposed by the Examiner (App. Br. 4; Reply Br. 2-5). In particular, Appellant contends that Roth does not disclose applying the pH increasing gas in any way other than to the surface of the meat product. Appellant contends that the problems addressed in Roth (to reduce microbe content and retard microbe growth) and the improvement in color of the meat product all relate to the surface of a meat product, and thus, there was no reason to apply the pH increasing gas to any part of a meat product other than the surface. Appellant further contends that Roth teaches limiting the contact time between the meat and treatment material, and therefore it would have been inappropriate to inject the pH increasing gas into the interior of a meat product. We do not find these arguments persuasive of error in the Examiner's rejection for the following reasons.

First, we note that Roth provides the following explicit definition of "surface":

As used in this disclosure and the following claims, the "surface" of the meat product means generally any surface that may be exposed to the pH increasing gas. For example, the surface of ground meat may include the entire surface of each

piece of ground meat *and not just the surface of the aggregate made up of individual ground pieces.*

(Roth, col. 2, ll. 16-22; emphasis provided).

In accordance with this explicit definition, we therefore find that “surfaces” of a ground meat product would be located in the interior of a ground meat product.

Second, Roth further describes that it is desirable for “the pH increasing gas to be *absorbed into* the meat product and affect the desired increase in pH.” (col. 2, ll. 54-57; emphasis provided). We determine that one of ordinary skill would have realized that one way to ensure the pH increasing material of Roth is *absorbed into* the meat product would be to deliver the same into the interior of the meat product.

We further find that Roth describes at least two alternative methods for exposing the meat to the pH increasing treatment material. One is a continuous processing method using a compressor, with injection ports 70, 72 introducing the pH increasing treatment material to ground meat as it travels through the inlet compressor valve; the other is a batch process using a pressurized vessel (see, e.g., Fig. 2, 3; col. 3, ll. 4-18; col. 7, ll. 15-30; col. 8, l. 60 to col. 9, l. 8). Roth describes that in the continuous processing method, the meat product may be held under the operating pressure for a “relatively long operating period” (col. 6, ll. 47-50).

The Supreme Court noted in *KSR* that although the teaching, suggestion, motivation test “captured a helpful insight,” an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences

and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 127 S. Ct. at 1741. The knowledge that injecting treatment fluids into meat products was a desirable way to expose interior surfaces of a meat product to the fluid would have been within the skill in the art, as evidenced by Townsend or Langen. Furthermore, one of ordinary skill in the art is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742.

Therefore, it would have been *prima facie* obvious at the time the invention was made to have used the prior art injection needles to reach the interior surfaces of the ground meat product of Roth. This would predictably increase the absorption of the pH increasing gas into the meat product, a result that Roth taught to be desirable. Further, this appears to be no more than the predictable use of one known prior art element (*i.e.*, injection needles) for another (*e.g.*, the injection ports 70, 72 of the compressor of Roth) in order to treat the “surfaces” of a ground meat product. *See KSR*, 127 S. Ct. at 1739-40 (The question to be asked is “whether the improvement is more than the predictable use of prior art elements according to their established functions.”).

We again note, in accordance with Roth’s explicit definition of “surface”, that many of those “surfaces” would be located within the interior of an aggregate of ground meat. We determine that use of injection needles as taught by Townsend or Langen (*e.g.*, in the batch pressurized system of Roth), versus Roth’s injection ports in the continuous compressor system, would have been a predictable known alternative device to one of ordinary skill in the art. The “improvement” herein appears to be no more than the predictable use of a known injection method (*e.g.*, the injection needles of Townsend or Langen) for that of a known injection with compression

method (Roth), for the predictable result of improved absorption of the treatment fluid into the meat product (e.g., when using the batch process using a pressure vessel as taught in Roth on a ground meat product). Indeed, Appellant's Specification describes that the injection needles may be used in a pressurized chamber with the meat products being massaged to help distribute the pH modifying materials (Spec. 10:7-15).

Thus, in view of the reference evidence, we determine that modifying the process of Roth to include injecting the pH modifying material (that is, the pH increasing gas or liquid mixed with oxygen) into the interior of a meat product through an injection conduit positioned within the meat product as claimed would have been within the ordinary level of skill in the art.

Appellant contends that objective evidence available in this case strongly supports the conclusion that it would not have been obvious to modify the surface treatments described in Roth. According to Appellant, this objective evidence is the coexistence for many years of the knowledge that meat surfaces treatments with ammonia, with the knowledge of meat injection treatments, for over forty years, yet there is no evidence of anyone combining these two processes until the present application and its parent application (App. Br. 11-12; Reply Br. 5-6). Assuming *arguendo* that what Appellant alleges is true, we do not agree that this establishes objective evidence of nonobviousness.

It is well established that the mere age of references is not persuasive of the unobviousness of the combination of their teachings, absent evidence that, notwithstanding knowledge of these teachings, the art tried and failed to solve the problem. *See, In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977).

Establishing such long-felt need requires objective evidence that an art recognized problem existed in the art for a long period of time without solution. Appellant has proffered no such objective evidence here.

Furthermore, the references Appellant discusses as the “objective evidence” of nonobviousness² are much older than those relied upon in the rejection of the claims. For example, Roth was published in 1999, and recognizes the problem of microbe growth in meat. As discussed previously, Roth solves that problem by using a pressurized surface treatment of the meat with ammonia such that the gas is absorbed into the meat product. Thus, there is no objective evidence that an art recognized problem existed in the art for a long period of time without a solution. For at least these reasons, the alleged objective evidence of nonobviousness is not persuasive.

We have considered Appellant’s other arguments in the Appeal Brief and Reply Brief filed October 29, 2007, but do not find any of them persuasive.

For the foregoing reasons and those stated in the Answer, we agree with the Examiner’s findings and conclusions in support of obviousness for claim 1 based on the combined teachings of Roth with Townsend or Langen.

CONCLUSION

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 the applied references, with Appellant’s countervailing evidence and arguments for nonobviousness and conclude that the claimed

² Appellant discusses Albrecht, US 1,192,596 (patented in 1916), and Hines, US 3,023,109 (patented in 1962) (*see* App. Br. 11-12).

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invention encompassed by appealed claims 1-4, 6-10, 12, and 14-22 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The Primary Examiner's decision is affirmed.

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

AFFIRMED

tc

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