

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SATOSHI KUME, MITSUHIKO SHINOHARA, TAKESHI ISEKI, and
MICHIRO UEDA

Appeal No. 2006-1795
Application No. 10/269,057
Technology Center 3700

ON BRIEF

Before OWENS, NAPPI and HORNER, *Administrative Patent Judges*.
HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the examiner's final rejection of claims 1-16, all of the claims pending in the application.

We reverse.

BACKGROUND

The appellants' invention relates to an ultrasonic sealing apparatus for use in a filling/packing machine for producing liquid beverages or the like. The ultrasonic sealing apparatus has a horn (12) with two elongated, flat sealing faces (11) and an opposing jaw (18) with an elongated action face (16). (See Specification, Figure 5 and page 20, lines 3-5). During sealing, the sealing faces (11) and the action face (16) abut to form sealed zones. The ultrasonic sealing apparatus also includes a cutting device (17). (Specification, page 20, line 7). The action face (16) includes grooves (20) that form molten thermoplastic resin bulges (19) in the vicinity of the side of the sealed zones in contact with a fluid and grooves (22) that form molten thermoplastic resin bulges (21) in the vicinity of the sealed zones near the cutting side. (Specification, page 20, lines 7-12). In another embodiment, inclines (23) in the action face (16) allow molten thermoplastic resin to flow out of the sealed zones to the cutting side. (Specification, page 20, lines 16-18). Independent claims 1 and 8 are representative of the subject matter on appeal, and a copy of these claims can be found in the appendix to the appellants' brief.

The examiner relies upon the following as evidence of unpatentability:

Voller	4,135,957	Jan. 23, 1979
Kreager <i>et al.</i> (Kreager)	4,534,818	Aug. 13, 1985

The examiner has rejected claims 1-16 under 35 U.S.C. § 103(a) as being unpatentable over Kreager in view of Voller.

Rather than reiterate in detail the conflicting viewpoints advanced by the examiner and the appellants regarding this appeal, we make reference to the examiner's answer (mailed April 6, 2004) for the examiner's complete reasoning in support of the rejection and to the appellants' brief (filed February 27, 2004) for the appellants' arguments.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations that follow. It is our view that, after consideration of the record before us, the evidence relied upon fails to support the obviousness rejection made by the examiner.

We focus our review on independent claims 1 and 8. In the rejection of independent claims 1 and 8, the examiner has determined that Kreager discloses all of the elements of the claimed apparatus and method except for an "elongated" action face including a "single flat pressing portion." (Examiner's Answer, pages 4-5).

To address this deficiency, the examiner relied on Voller, noting, "Voller discloses a method and apparatus that comprising [*sic*, comprises] an opposing jaw 38 with at least one elongated action face 42 including a single flat pressing portion...." (Examiner's Answer, page 5). The examiner contends that the flat pressing portion of Voller, "would provide a longer bonding surface between the two thermoplastic layers and thus a stronger seal." (Examiner's Answer, page 5). With regard to claims 1 and 8, the examiner has determined that it 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 in view of what is taught by Voller to replace Kreager's action face and groove with Voller's action face having a flat pressing portion for a better sealing surface and thus a better seal. (Examiner's Answer, page 5).

The appellants contend that there is no suggestion or teaching in the references themselves to replace the land areas 38, 40 of Kreager with the grooves 44 and the flat surface 42 of Voller. (Appellants' Brief, page 8). The appellants further argue,

The lands and valley construction of Kreager creates an unsealed space between two narrow adjacent seals. Breaking the two separate narrow seals is obviously and intentionally easier than breaking a continuous seal over the same area. According to Voller, the continuous seal created by the single flat pressing area is "as strong or stronger than the material itself." See Voller at column 1, lines 31-33. In Kreager, allowing easy access to the package contents (potato chips, corn chips, cookies, etc.) for end users is an advantage. By contrast, the strong seal of Voller would be a distinct disadvantage in the Kreager packaging.

(Appellants' Brief, page 8).

With regard to the appellants' argument regarding lack of motivation to combine Kreager and Voller, we considered the requirement, as recently re-stated in *In re Kahn*, 441 F.3d 977, 78 USPQ2d 1329 (Fed. Cir. 2006), for a showing of a "teaching, suggestion, or motivation" to modify or combine the prior art teaching. As to this test, the court explained,

The 'motivation-suggestion-teaching' test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims.... From this it may be determined whether the overall disclosures, teachings, and suggestions of the prior art, and the level of skill in the art – *i.e.*, the understandings and knowledge of persons having ordinary skill in the art at the time of the invention – support the legal conclusion of obviousness.

441 F.3d at 988, 78 USPQ2d at 1336 (internal citations omitted). It is not just the explicit teachings of the art itself, but also the understandings and knowledge of persons having ordinary skill in the art, that play a role in applying the motivation-suggestion-teaching test.

“In considering motivation in the obviousness analysis, the problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made. *In re Kahn*, 441 F.3d at 988, 78 USPQ2d at 1336 (citations omitted). In this case, the general problem confronting the inventors was to make an ultrasonic sealing apparatus and method for use in a filling/packing machine for producing containers containing liquid beverages and the like where the sealing apparatus and method produce excellent sealability. (See specification, page 2, lines 12-14 and page 8, lines 9-10).

In view of this general problem confronting the inventor, and the teachings of the prior art, we find that there would have been no motivation for one skilled in the art at the time of the invention to combine Kreager, which relates to an ultrasonic apparatus for sealing bags of chips and the like, with the teachings of Voller, which relates to a radio frequency sealing method to produce a stronger seal between two plastic sheets.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” 916 F.2d at 682, 16 USPQ2d at 1432. See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992).

Here, although we agree that Kreager is capable of being modified to use the flat sealing area 42 and grooves 44 of Voller, we find no motivation for person skilled in the art to have made this combination absent the teaching of the present invention. Kreager is directed to solving the problem of sealing bags by a method other than conventional heat sealing methods to overcome the disadvantages of conventional methods, *viz*, expense of materials, slower rate of sealing due to heat transfer issues, and high rate of failure of seals produced using conventional heat sealing methods. Kreager solves these problems by using an ultrasonic sealing apparatus and method. Voller, on the other hand, is directed to a method of sealing two sheets of flexible plastic material using radio frequency energy that avoids the problem of extrusion of material between the sheets adjacent the sealed area that causes the seal or the areas adjacent the seal to become thinner than the gauge of a single sheet of plastic. We see no motivation to combine Kreager, which is specifically directed to an ultrasonic sealing apparatus and which teaches away from using conventional heat sealing methods, with Voller, which is directed to a conventional heat sealing method, to solve the problem that confronted the inventor. Moreover, we agree with the appellants that there would have been no motivation to replace the land areas 38, 40 of the ultrasonic sealing apparatus of Kreager with the grooves 44 and the flat surface 42 of Voller, because there would have been no advantage to making the seals in Kreager larger and thus stronger. Rather, the narrow seals formed by the land areas 38, 40 in Kreager were suited for the purpose of sealing flexible bags of chips, etc.

As such, we find that the examiner has failed to set forth a *prima facie* case of obviousness. From our perspective, the Examiner's rejections appear to be premised on impermissible hindsight reasoning. On the record of this appeal, it is our view that the

Examiner has not carried the burden of establishing a *prima facie* case of obviousness with respect to the subject matter defined by the appealed claims.

Accordingly, we find that the subject matter of claims 1 and 8 would not 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 in view of the combination of Kreager and Voller. Thus, we reverse the Examiner's rejection of independent claims 1 and 8 under 35 U.S.C. § 103(a).

With regard to remaining dependent claims 2-7 and 9-16, because these claim rejections rely upon the underlying rejection of independent claims 1 and 8 based on the combination of Kreager and Voller, we must also reverse the examiner's rejection of these claims. See *In re Fine*, 837 F.2d 1071, 5 USQP2d 1596 (Fed. Cir. 1988) (If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim dependent therefrom is nonobvious).

CONCLUSION

To summarize, for the reasons set forth above, we reverse the rejection of claims 1-16.

REVERSED

TERRY J. OWENS)
Administrative Patent Judge)
ROBERT E. NAPPI) BOARD OF PATENT
Administrative Patent Judge) APPEALS
LINDA E. HORNER) AND
Administrative Patent Judge) INTERFERENCES

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