

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte J. BRUCE KOLOWICH

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Appeal No. 2002-1533  
Application 09/055,377

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HEARD: January 21, 2003

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Before STAAB, McQUADE, and NASE, Administrative Patent Judges.  
STAAB, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 10-12, 17, 18, 26-31 and 35-39. Claims 9, 14-16, 19-21, 23 and 32-34, the only other claims pending in the application, have been withdrawn from consideration pursuant to 37 CFR § 1.142(b) as not being readable on the elected species.

THE INVENTION

Appellant's invention "relates generally to liquid receptacles or containers and more specifically to a receptacle

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that rapidly cools a hot liquid to a warm range and then maintains the fluid in the warm range for an extended period" (specification, page 1). A further understanding of the invention can be derived from a reading of exemplary claims 1 and 17 which appear in the appendix to appellant's main brief.

THE PRIOR ART

The references relied upon by the examiner in the final rejection are:

Myers	1,679,621	Aug. 7, 1928
Zimmerman et al. (Zimmerman)	2,876,634	Mar. 10, 1959
Staggs	5,271,244	Dec. 21, 1993

THE REJECTIONS

The following rejections under 35 U.S.C. § 103(a) are before us for review:

(1) claims 1, 10-12 and 39, rejected as being unpatentable over Zimmerman in view of Staggs;

(2) claims 17, 18, 26-28 and 35-38, rejected as being unpatentable over Zimmerman in view of Myers; and

(3) claims 29-31, rejected as being unpatentable over Zimmerman in view of Myers and further in view of Staggs.

DISCUSSION

Rejection (1)

Zimmerman, the examiner's primary reference, discloses in Figure 1 a container comprising an innermost container 10 formed of a material having good heat transfer properties, an outermost container 14 formed of a material having good heat insulation properties, and thermodynamic material 18 disposed between containers 10 and 14 and selected to have a phase change temperature within the range of the desired temperature for use of a heated material to be disposed in and dispensed from the container. Zimmerman envisions that the container may be used, for example, as a coffee cup. As explained at column 1, line 70, through column 2, line 9:

It is of course well known that coffee quite frequently is served at a temperature at which it is too hot for immediate drinking. In fact the coffee may be so hot as to require a number of minutes for it to cool to the desired drinking temperature range of approximately 145-155° F. The container of Figure 1 is adapted to cool the coffee down from even the boiling temperature to said desired range in less than one minute's time and to thereafter maintain the temperature within the desired range, for a period of many minutes. For this purpose, the preferred material 18 is bee's wax, having a melting point of approximately 147° F.

As conceded by the examiner (see page 3 of the answer), Zimmerman does not respond to the limitation of independent

claim 1 that the outer shell of the receptacle has a foam insulating layer defining at least a portion of the inner surface of the outer shell. The examiner's reliance on Staggs to overcome this deficiency is not well founded.

Staggs pertains to a container designed to rapidly transform its contents into a congealed or very low temperature liquid condition. The device comprises an inner container enclosed within a larger outer cup and a water based refrigerant in the space therebetween. For use, "the device in [sic, is] placed in a refrigerator freezer until the refrigerant is solidified. The contents are then poured into the container and cooled as heat is absorbed by the refrigerant through the walls of the inner container" (abstract). Staggs states that the concepts of the invention may also be applied in the design of containers to heat, rather than cool their contents (column 29, lines 26-33).

Looking at the construction of the Staggs device in detail, Figures 1-3, 10 and 11 show that the container includes an exterior cup 14 (which forms the large outer cup) and a cold cell assembly 12 (which forms the inner container), with the exterior cup 14 and cold cell assembly 12 being joined at their upper ends by a mouthpiece 10 and sealing arrangement 24. The cold cell assembly 12 is a double walled structure defined by an outer wall

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member 40 and an wall inner member 16 spaced apart to define therebetween a refrigerant compartment 58 that is filled with a suitable refrigerant 42. When assembled, the exterior cup 14 and the outer wall member 40 of the cold cell assembly are spaced apart to form a dead air space 38 therebetween. Staggs explains at column 22, lines 53-59, that the dead air space is made up of room air that is trapped inside the device when the parts are assembled. Staggs prefers to use dead air space rather than rubber or plastic foam insulation because dead air has no cost, yet possesses excellent thermal insulating properties (column 27, lines 45-59).

In proposing to combine Zimmerman and Staggs to reject claims 1, 10-12 and 39, the examiner submits (answer, page 4) that

[i]t would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Zimmerman et al. the outer shell being comprised of . . . a double, insulation plastic wall with insulation (i.e., evacuated air, rubber, plastic foam) therebetween . . . as disclosed in Staggs. The claimed materials, shape and dimension are considered to be obvious design expedients in view of the materials and dimensions disclosed in Zimmerman et al. and Staggs which do not solve any stated problem or produce any new and/or unexpected result. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the claimed insulation . . . since it has been held to be within the general skill of a worker in the art to

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select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, [277 F.2d 197,]125 USPQ 416 [CCPA 1960].

We cannot accept the examiner's position. First, the examiner's determination that Staggs employs *evacuated* air as an insulating medium is simply incorrect. As clearly stated by Staggs (see, for example, column 22, lines 53-59, and column 27, lines 45-59), the space 38 between the exterior cup 14 and the outer wall member 40 is dead air space (i.e., made up of room air). Second, there is no factual support for the examiner's assertion to the effect that one of ordinary skill in the art would consider appellant's use of foam insulation in the manner particularly called for in claim 1 to be an "obvious expedient" or "matter of obvious design choice."<sup>1</sup> Third, Staggs expressly teaches away from the use of foam insulation. See column 27, lines 52-57. Fourth, even if Zimmerman were modified in the manner proposed by the examiner, the subject matter of claim 1 would not necessarily result because the modified Zimmerman

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<sup>1</sup>In this regard, the examiner's reliance on a *per se* rule such as that derived from *In re Leshin*, 277 F.2d 197, 198-99, 125 USPQ 416, 417-18 (CCPA 1960) (that selection of a known material based on suitability for the intended use is not normally considered to be patentable) does not suffice to make up for the substantial deficiencies in the factual basis for the rejection.

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device may or may not comprise an outer shell comprising a foam insulating layer wherein said layer defines at least a portion of the inner surface of the outer shell. In short, since neither one of the applied references teaches, suggests or implies an outer shell comprising a foam insulating layer wherein the foam layer defines at least a portion of the inner surface of the outer shell, it cannot be said that their combined teachings would have rendered obvious such a construction.

Accordingly, we will not sustain the rejection of claim 1, or claims 10-12 and 39 that depend therefrom, as being unpatentable over the combination of Zimmerman and Staggs.

Rejection (2)

Considering next the examiner's rejection of independent claim 17, the examiner acknowledges that Zimmerman does not respond to the limitation of claim 17 pertaining to the recess in the inner surface of the outer shell spaced from the lip of the shell for engaging the rim of the inner vessel and for preventing contact between the inner vessel and the mouth of a consumer of liquid from the receptacle. The examiner's reliance on Myers to overcome this deficiency also is not well taken.

Myers pertains to a reusable container or jacket 1 for milk and the like made of iron, steel, aluminum, brass, bakelite, or

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other substantial material, the reusable container being provided with a disposable sanitary cup 9 of treated or waxed paper that functions as a single use inner liner for the container. The liner is held in the container by means of a shoulder 11 and flange 12 provided at the upper edge of the paper cup engaging in a groove or recess 5 of the container. As explained by Myers:

The shoulder 11 is adapted to spring into the groove or recess 5 with the flange 12 when the container 9 is pressed into the jacket 1 from the top. No extraneous parts are required to support the inner container. This springing action of the shoulder 11 and flange 12 into the recess 5 also makes necessary the destruction of the inside container before it can be removed, as no grip can be obtained on the paper member 9 without gouging into its interior surface, thereby puncturing it. [Page 1, lines 68-79.]

In establishing a *prima facie* case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, e.g., *Uniroyal, Inc. v.*

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*Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439  
(Fed. Cir. 1988).

In the present instance, the examiner contends (answer, page 5) that it would have been obvious to one of ordinary skill in the art to provide the outer container 14 of Zimmerman with a lip having a inner recess and the inner container 10 with a rim in sealing engagement with the inner recess "for the purpose of securing the inner vessel to the outer vessel with no extraneous parts as disclosed in Myers." For the reasons that follow, we cannot accept the examiner's position.

In our opinion, the threaded connection 16 used by Zimmerman to connect the upper portions of the containers 10 and 14 constitutes a relatively simple connection that comprises "no extraneous parts." This being the case, the examiner's reason for providing Zimmerman with the recess and extended rim connection of Myers (i.e., for securing the vessels together "with no extraneous parts") is insufficient to justify the proposed modification. Moreover, in that there is no disclosure in Myers that the connection between the container 1 and the cup 9 can function as a seal, the proposed modification of Zimmerman in view of Myers might very well compromise the operation of Zimmerman by allowing thermoplastic material 18 to escape when it

changes phase to a liquid. This would act as a disincentive for modifying Zimmerman in the manner proposed because a modification that renders the modified prior art unsatisfactory for its intended purpose would not have been obvious. See *Tec Air Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 1360, 52 USPQ2d, 1294, 1298 (Fed. Cir. 1999); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Finally, because neither one of the applied references recognizes the problem solved by appellant<sup>2</sup> in locating the upper end of the inner vessel in a recess spaced from the lip of the outer shell, it is problematic that the proposed modification would result in the subject matter of claim 17 (i.e., a recess spaced from the lip of the outer shell and a rim of the inner vessel spaced from said lip for preventing contact between the inner vessel and the mouth of a consumer of liquid from the receptacle).

For these reasons, we will not sustain the rejection of claim 17, or claims 18, 26-28 and 35-38 that depend therefrom, as being unpatentable over the combination of Zimmerman and Myers.

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<sup>2</sup>See page 10, lines 15-22, of appellant's specification, wherein it is stated that locating the upper end of the inner vessel below the lip of the outer shell prevents the lips of a consumer from contacting the highly thermally conductive inner vessel when the consumer drinks from the receptacle.

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Rejection (3)

Claims 29-31 depend either directly or indirectly from claim 17. In rejecting these claims as being unpatentable over Zimmerman in view of Myers and further in view of Staggs, the examiner relies on Myers for its showing of an inner recess and lip connection and Staggs for its showing of a double-walled insulated container. The examiner's rationale in combining these reference teachings with Zimmerman to arrive at the subject matter of claims 29-31 is no more convincing here than it was in rejecting claim 1 as being unpatentable over Zimmerman and Staggs and claim 17 as being unpatentable over Zimmerman and Myers. It follows that we also will not sustain the rejection of claims 29-31 based on the combined teachings of Zimmerman, Myers and Staggs.

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SUMMARY

The decision of the examiner finally rejecting claims 1, 10-12, 17, 18, 26-31 and 35-39 is reversed.

REVERSED

LAWRENCE J. STAAB	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
JOHN P. McQUADE	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
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	)	
JEFFREY V. NASE	)	
Administrative Patent Judge	)	

LJS:svt

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Douglas L. Wathen  
280 North Old Woodward Avenue  
Suite 400  
Birmingham, MI 48009