

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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOSEPH F. BRUMBACH

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Appeal No. 2001-1472  
Application 08/772,878

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ON BRIEF

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Before FRANKFORT, McQUADE, and BAHR, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 22 through 29, all of the claims remaining in this application. Claims 1 through 21 have been canceled.

Appellant's invention relates to an ultrasonic probe used for crushing urethral calculi and, more specifically, to a power

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delivery tip associated with such a probe wherein the tip (e.g., as seen in Figure 2 of the application) has an enlargement (40) at an end thereof providing an enlarged annular flat surface transverse to the longitudinal axis of the tube for engaging the calculi. The tip also includes a restriction (42) at the distal end of the tip for preventing debris from the concretion or calculi from entering the internal passageway of the probe until it has been reduced to a sufficiently small size to allow it to be aspirated through the probe without plugging. Independent claim 22 is representative of the subject matter on appeal and a copy thereof may be found in the Appendix to appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Brumbach	4,660,573	Apr. 28, 1987
Manna et al. (Manna)	5,527,273	Jun. 18, 1996
Kühne	5,741,272	Apr. 21, 1998
Wuchinich et al. (Wuchinich) <sup>1</sup>	WO 87/01276	Mar. 12, 1987

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<sup>1</sup>While the examiner and appellant have referred to the Wuchinich reference by different numbers (e.g., final rejection, pages 2 and 3, and brief, page 1), it is clear from the record that the reference listed on page 3 of the answer (WO 87/01276) is the Wuchinich reference relied upon in both of the rejections before us on appeal.

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Claims 22 through 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumbach in view of Manna, Wuchinich, and Kühne.

Claims 22 through 29 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Manna in view of Wuchinich and Kühne.

Rather than reiterate the examiner's full statement of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the final rejection (Paper No. 18, mailed March 22, 2000) and the examiner's answer (Paper No. 21, mailed October 11, 2000) for the reasoning in support of the rejections and to appellant's brief (Paper No. 20, filed August 11, 2000) and reply brief (Paper No. 22, filed November 13, 2000) for the arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, this panel of the Board has given careful consideration to appellant's

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specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have reached the determinations which follow.

Before turning to the merits of the rejections before us on appeal, we make note of appellant's grouping of the claims set forth on page 3 of the brief. In accordance with the dictates of 37 CFR § 1.192(c)(7), we have selected claim 22 from appellant's grouping and we shall decide the issues before us on appeal on the basis of that claim alone. The remaining claims of the grouping (claims 23 through 29) will stand or fall with claim 22.

Looking first to the examiner's rejection of representative claim 22 under 35 U.S.C. § 103(a) based on the combined teachings of Brumbach, Manna, Wuchinich, and Kühne, we note that Brumbach (like appellant) discloses an ultrasonic lithotritor probe for performing fragmentation and removal of calculi deposits in the kidney and upper ureter wherein high frequency sound waves are utilized to disintegrate the calculi or stones based on placing the probe against the calculi and causing the calculi to disintegrate due to ultrasonic energy. Aspiration is used to

remove the particles of the calculi through a channel in the probe. In order to overcome a tendency of prior art ultrasonic probes to clog because the end of the probe would become embedded in a calculi/stone and prevent aspiration through the probe, Brumbach provides one or more slits (64) in the end portion of the probe or lithotritor needle (26) that engages the stone, which slits extend a distance of about 1/4 inch from the end face of the probe and permit irrigant fluid to pass through the slit(s) even if the end opening of the probe/needle is blocked. With regard to appellant's claim 22, Brumbach does not disclose a power delivery tip having a configuration like that defined in the last two clauses of the claim.

Manna is directed to an ultrasonic lipectomy probe used for ultrasonically assisted liposuction procedures wherein fatty deposits from areas of the human body are liquefied by ultrasonic energy and the resultant fatty emulsion is then removed from the body by way of a suction source via channel (26) of the probe. The examiner relies upon Manna as disclosing that it was known to provide an enlargement on the tip of an ultrasonic cutter. From this teaching, the examiner concludes that "it would have been an obvious design choice to enlarge the distal working area of the

needle tip [of Brumbach] to increase the probe's effectiveness at breaking up the deposits" (final rejection, page 3).

Kühne is relied upon by the examiner as disclosing that a tip for a lithotritor probe can be a metal insert, while Wuchinich is relied upon for a teaching that it was known to provide the tip of a lithotritor probe with a constriction relative to the proximal end of the lithotritor needle.<sup>2</sup> From these teachings the examiner concludes that it would have been an "obvious design choice" to provide a metal tip insert to Brumbach's lithotritor probe and to allow for the tip to be a harder material than the probe, and to have formed Brumbach's needle with a smaller bored tip to prevent matter from blocking or clogging the tube when suction is applied.

Appellant's arguments in the brief appear to be primarily directed to the examiner's attempted combination of Manna and

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<sup>2</sup>The examiner has however not pointed out where in the nearly 75 pages contained in these references the applied teachings might be found. Perhaps a review of MPEP §§ 706.02(j), 1208 and 2143+ would be beneficial, especially those portions which make note that the examiner is required to point out where each of the specific limitations recited in the rejected claims is found in the prior art relied upon in the rejection, e.g., by reference to a page and line where such disclosure may be found.

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Brumbach. More specifically, appellant urges (brief, page 7) that the lipectomy procedure disclosed in Manna is a fundamentally different process than lithotripsy, that there would be no incentive to combine Manna with Brumbach, and that Manna is neither analogous nor reasonably pertinent to the problem solved by appellant's claimed invention. In that regard, appellant further contends that the enlargement of the head in the lipectomy probe of Manna is explicitly provided to increase an ablation rate of fat and that the examiner has failed to provide any cogent reason why it should be viewed otherwise, or why one of ordinary skill in the art at the time of appellant's invention would have sought to provide the lithotritor probe of Brumbach with such a head.

Like appellant, we find no cogent reason or suggestion, other than hindsight gleaned from appellant's own disclosure, for combining the enlarged head of the liposuction probe of Manna with the lithotritor probe of Brumbach. In describing the enlarged cavitation head (14), Manna indicates that the head is enlarged and flattened "for facilitating the removal of fat" (col. 3, lines 52-61) by providing a greater active surface area in contact with the surrounding fat cells, thereby resulting in

more tissue ablation (liquefaction) in a given period of time. Manna notes (col. 10, lines 50-55) that cavitation bubbles produced at the head in response to vibration thereof by the standing ultrasonic wave will liquefy adipose (fat) tissue of the patient at a surgical site located distally of the head and allow the liquefied fat to be suctioned from the surgical site through a channel in the probe. Manna also makes note (col. 10, lines 56-60) that the enlarged head of the lipectomy probe therein produces a flatter and more esthetically pleasing result than obtainable using a purely cylindrical probe, which creates a waffled pattern when used pursuant to current liposuction procedures.

Given the disclosure in Manna regarding the enlarged head and emphasis therein on its advantages for removing adipose (fat) tissue by liquefaction of the fat tissue via cavitation bubbles, and the emphasis on a flatter more esthetically pleasing result in a liposuction procedure due to use of such an enlarged head, we see nothing in Manna that would have led one of ordinary skill in the art to attempt to provide the lithotritor probe of Brumbach for breaking up hard calculi or stones with such an enlarged head, or any basis supporting the examiner's assertion

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(final rejection, page 3) that doing so would "increase the [lithotritor] probe's effectiveness at breaking up the [calculi] deposits."

Accordingly, we conclude that the examiner's attempted combination of Brumbach and Manna is unsupported by the evidence of record and therefore improper.

As a further point, we also fail to see why one of ordinary skill in the art would have been led to combine a tip with a constriction at the distal end as in Wuchinich (Figs. 25-26) with the probe of Brumbach, wherein the desire is to increase the area at the distal end of the probe for permitting aspiration of fluids and debris away from the surgical site by providing an opening of enlarged size (slits) to avoid clogging of the tip when the tip penetrates into a calculi deposit.

Since we consider that the modification of Brumbach's lithotritor probe urged by the examiner is merely a hindsight reconstruction based on the impermissible use of appellant's own disclosure and teachings as a blueprint for piecing together unrelated elements of the relied upon prior art, we will not

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sustain the examiner's rejection of claim 22, or claims 23 through 29 which depend therefrom, under 35 U.S.C. § 103(a) as being unpatentable over Brumbach in view of Manna, Wuchinich, and Kühne.

We next consider the examiner's alternative rejection of claims 22 through 29 under 35 U.S.C. § 103(a) as being unpatentable over Manna in view of Wuchinich and Kühne. In this instance, the examiner has made a determination that the ultrasonic probe of Manna corresponds to that defined in appellant's claims on appeal, except that Manna does not teach an internal constriction in the channel of the probe or a tip formed using a metal insert. In the examiner's view (final rejection, page 4), these differences between Manna and the claimed subject matter on appeal are provided and rendered obvious by the teachings of Wuchinich and Kühne. More particularly, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention "to have provided the probe of Manna with a distal constriction [as suggested in Wuchinich] as this would prevent the tube [probe channel 26] from being clogged with large pieces of tissue," and

that it would have been further obvious to the artisan to provide a metal tip insert to Manna's probe, as taught by Kühne, to allow for the tip to be a harder material than the probe.

Appellant's arguments (brief, pages 7-12) again initially go to the fact that lipectomy as in Manna is a fundamentally different process than lithotripsy and that there would be no incentive to combine Manna with Wuchinich and Kühne. In this instance, we note that representative claim 22 is drawn to a power delivery tip "for . . . lithotripsy." Thus, the claims on appeal are directed to a power delivery tip having a particular configuration for use on an ultrasonic probe wherein the tip must have the capability of being used in lithotripsy. While Manna specifically discloses the probe therein as being used for a lipectomy procedure, we find no evidence of record to establish that the probe and power delivery tip of Manna would be incapable of being used for lithotripsy if subjected to an appropriate level of ultrasonic energy. Moreover, since Manna already discusses having a tip insert (e.g., col. 4, lines 10-15 and col. 4, lines 35-42) and discloses having a suction channel configuration in the probe where the distal diameter of the suction channel is smaller than a proximal diameter of the channel, we see no reason

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why one skilled in the art would not have found the teachings of Kühne and Wuchinich at least reasonably pertinent.

However, we share appellant's view expressed on pages 11 and 12 of the brief that the examiner has failed to meet his burden of establishing a *prima facie* case of obviousness, since even if the applied references were to be combined as urged by the examiner we do not see that a power delivery tip having the specific configuration set forth in claim 22 on appeal would be the result. More particularly, while the examiner has asserted that Manna discloses a probe having "an enlarged tip," the examiner has not directed us to any embodiment of Manna that shows or discloses a tip having "an enlarged annular flat surface transverse to the longitudinal axis of the tube for engaging the calculi on a power delivery end of the tip" wherein said enlarged annular flat surface has "an inner diameter of a smaller relative size than the inner diameter of the tube and an outer diameter of a larger relative size than the outer diameter of the tube" and "a side wall of the tip coupling the tube wall to the annular flat surface and having a diverging wall thickness from the tube to the annular flat surface" wherein said diverging wall thickness forms "a relatively smooth transition in cross-section

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between a thickness of the tube wall and a thickness of the annulate of the annular flat surface of the power delivery end of the tip" as required in claim 22, or any reasoning as to why or how a tip of this specific configuration would result from combining the teachings of Kühne and Wuchinich with Manna.

The examiner's reasoning set forth on page 9 of the answer (first full paragraph) is so cryptic as to defy understanding and, at best, would appear to be a piecemeal combination of diverse features from the various applied references and various embodiments of tip configurations seen in Manna. In the final analysis, it is our opinion that the examiner has failed to provide an adequate evidential basis to support the § 103 rejection before us on appeal, and that the examiner has relied upon impermissible hindsight knowledge derived from appellant's own teachings in attempting to reconstruct the claimed subject matter out of isolated teachings in the prior art. Accordingly, we will not sustain the examiner's rejection of claim 22, or of dependent claims 23 through 29, under 35 U.S.C. § 103(a) based on the combined teachings of Manna, Wuchinich and Kühne.

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To summarize, we have not sustained either of the examiner's rejections under 35 U.S.C. § 103(a) before us on appeal. Thus, the decision of the examiner is reversed.

REVERSED

CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JOHN P. McQUADE	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

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