

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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER C. GATES

Appeal No. 1997-1731
Application No. 08/377,924

ON BRIEF

Before COHEN, ABRAMS, and BAHR, Administrative Patent Judges.
COHEN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 7, 9 through 16, 18, 19, and 39 through 44. These claims constitute all of the claims remaining in the application.

Appellant's invention pertains to an extrusion die apparatus. A basic understanding of the invention can be derived from a reading of exemplary claim 39, a copy of which appears in "APPENDIX A" of the brief (Paper No. 13).

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As evidence of obviousness, the examiner has applied the documents listed below:

Siard	4,472,129	Sep. 18, 1984
Briggs et al (Briggs '775)	4,522,775	Jun. 11, 1985
Briggs et al (Briggs '526)	4,798,526	Jan. 17, 1989
Teutsch	5,069,612	Dec. 3, 1991

The following rejection is before us for review.

Claims 7, 9 through 16, 18, 19, and 39 through 44 stand rejected under 35 U.S.C. § 103 as being unpatentable over Siard or Briggs '526 in view of Teutsch and Briggs '775.

The full text of the examiner's rejection and response to the argument presented by appellant appears in the answer (Paper No. 14), while the complete statement of appellant's argument can be found in the brief (Paper No. 13).

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OPINION

In reaching our conclusion on the obviousness issue raised in this appeal, this panel of the board has carefully considered appellant's specification and claims, the applied teachings,¹ and the respective viewpoints of appellant and the examiner. As a consequence of our review, we make the determination which follows.

We do not sustain the rejection of appellant's claims.

As disclosed by appellant (specification, page 16), die elements can be constructed with different characteristics and properties for handling different thermoplastic resins and/or

¹ In our evaluation of the applied prior art, we have considered all of the disclosure of each document for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the inferences which one skilled in the art would reasonably have been expected to draw from the disclosure. See In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

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materials. The example is given of making the angle of inclination of an outer conical surface containing a helical groove or grooves less than that of the inner conical surface of an adjacent die element in order to vary the width of the conical passage therebetween.

Each of independent claims 39, 40, and 41 addresses an extrusion die apparatus with the features, inter alia, of die elements each having an outer conical surface inclined at an acute angle which is less than that of an inner conical surface (decreasing cross-sectional area of conical passage defined by the conical surfaces) and a helical groove in the outer conical surface, with the depth of the helical groove decreasing as the groove approaches annular thickness control passages.

This panel of the board understands the examiner's point of view as articulated in the answer (pages 8 through 10) and fully appreciates the assessment and application of the applied Siard, Briggs '526, Teutsch, and Briggs '775 teachings in the rejection before us. However, the difficulty that we

have is that the applied references, by themselves, would not have motivated one having ordinary skill in the art to modify the Siard or Briggs '526 patents, as proposed. As we see it, each of Teutsch and Briggs '775 would have simply been perceived by one of ordinary skill as distinct alternatives for effecting uniformity in an article being extruded. More specifically, as recognized by the examiner (answer, page 6), Teutsch instructs those versed in the art as to the benefit of helical grooves of decreasing depth in combination with conical surfaces that coact with one another to effect a conical passage that increases from its inlet to its outlet.² On the other hand, Briggs '775 informs those skilled in the art as to the practice of interfacing tapered passages alone to effect a lesser downstream diameter and achieve laminar flow and reduced turbulence (column 7, lines 19 through 26). Based upon the aforementioned disclosures, it is clear to us that the proposed combination of teachings can only be

² In appellant's specification (page 3), it is indicated that "[s]o far as presently known" die apparatus have not employed helical or spiral grooves on the conical surfaces of die elements. The applied patent to Teutsch teaches such a die apparatus.

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achieved by reliance upon impermissible hindsight. It is for this reason that we cannot support the rejection of appellant's claims based upon the applied prior art.

In summary, this panel of the board has not sustained the rejection of claims 7, 9 through 16, 18, 19, and 39 through 44 under 35 U.S.C. § 103.

The decision of the examiner is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
NEAL E. ABRAMS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	

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JENNIFER D. BAHR)
Administrative Patent Judge)

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