The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN T. WOLFE, JOO H. SONG, CHRISTAFOR E. SUNDSTROM, DAVID W. RECORD, DONALD J. TOWNSEND, KEVIN B. BRODERICK, and PHILIP G. SCHNELL

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Appeal No. 1998-1417
Application No. 08/526,891

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ON BRIEF

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Before WARREN, TIMM, and DELMENDO, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 (2003) from the examiner's final rejection of claims 1 through 4, 6 through 12, 14, 15, 17, and 19, which are all the claims pending in the above-identified application.

The subject matter on appeal relates to a method for manufacturing chewing gum (claims 1-4 and 6), a method for modifying a blade and pin extruder having a barrel (claims 7-

12), a method of continuously manufacturing chewing gum in a blade and pin extruder that includes at least a first pin that is hollow and a second pin (claims 14 and 15), and a method of continuously manufacturing chewing gum without requiring separate manufacture of a chewing gum base (claims 17 and 19). According to the appellants (specification, page 3, lines 15-19), "[i]t has been found that by shortening, or backing out, one or more hollow feed pins that are typically used in a blade and pin type extruder, greater feed of ingredients can be achieved" and "clogging of feed orifices can be avoided." Further details of this appealed subject matter are recited in representative claims 1, 7 through 10, 14, 17, and 19, all the independent claims on appeal, reproduced below:

> 1. A method for manufacturing chewing gum comprising the steps of adding chewing gum ingredients to an extruder that includes pins projecting inward from a barrel that circumscribes a shaft having blades, the extruder including at least one hollow pin that is located at a distance from the shaft that is equal to at least 2.7% of the barrel diameter.
>
> 7. A method for modifying a blade and pin extruder having a barrel so as to allow it to manufacture chewing gum comprising the steps of increasing the distance between at least one hollow pin and a shaft of the extruder to a distance that is equal to at least approximately 2.7% of the barrel diameter.
>
> 8. A method for modifying a blade and pin extruder having a barrel so as to allow it to manufacture chewing gum comprising the steps of

increasing the distance between at least one hollow pin and a shaft of the extruder to a distance that is equal to at least approximately 2.7% of the barrel diameter wherein the distance is increased by grinding the hollow pin.

9. A method for modifying a blade and pin extruder having a barrel so as to allow it to manufacture chewing gum comprising the steps of increasing the distance between at least one hollow pin and a shaft of the extruder to a distance that is equal to at least approximately 2.7% of the barrel diameter wherein the distance is increased by cutting the hollow pin.

10. A method for modifying a blade and pin extruder having a barrel so as to allow it to manufacture chewing gum comprising the steps of increasing the distance between at least one hollow pin and a shaft of the extruder to a distance that is equal to at least approximately 2.7% of the barrel diameter wherein the distance is increased by adding a washer onto the hollow pin.

14. A method of continuously manufacturing chewing gum in a blade and pin extruder that includes at least a first pin that is hollow and a second pin, comprising the steps of:

a) adding a gum base into a high efficiency continuous mixer;

b) adding at least one sweetener and at least one flavor into the continuous mixer, and mixing said sweetener and flavor with the remaining ingredients to form a chewing gum product; and

c) wherein at least one ingredient is added through the first pin that is located at a greater distance from a shaft of the extruder then [sic] the second pin.

17. A method of continuously manufacturing chewing gum without requiring separate manufacture of a chewing gum base, comprising the steps of:

a) adding at least an elastomer and filler into a blade and pin continuous mixer;

b) subjecting at least the elastomer and filler

to mixing in the continuous mixer;

c) adding at least one sweetener and at least one flavoring agent into the elastomer and filler in the continuous mixer;

d) subjecting at least the sweetener, flavoring agent, elastomer and filler to distributive mixing in the continuous mixer, to form a chewing gum product;

e) continuously discharging the chewing gum product from the mixer; and

f) wherein at least one ingredient is added to the continuous mixer through a hollow pin located at a distance from a shaft of the extruder that is at least 2.7% of the diameter of a barrel of the extruder.

19. A method of continuously manufacturing chewing gum without requiring separate manufacture of a chewing gum base, comprising the steps of:

a) adding at least an elastomer and filler into a blade-and-pin mixer that includes pins that are located at different distances from a shaft of the extruder including at least one hollow pin that is located at a greater distance from the shaft then [sic] at least one other pin, and mixing the elastomer and filler together using blades and pins;

b) adding at least one ingredient selected from the group consisting of fats, oils, waxes and elastomer plasticizers into the blade-and-pin mixer, and mixing said at least one ingredient with the elastomer and filler using blades and pins; and

c) adding at least one sweetener and at least one flavor into the blade-and-pin mixer, and mixing said sweetener and flavor with the remaining ingredients to form a chewing gum product.

The examiner relies on the following prior art reference as evidence of unpatentability:

Andreas Treiber, Extrusion Processing of Shear-Sensitive Food Products, in International ZDS Conference SIA-27 "Extrusion Cooking '87" (1987).

Claims 14, 15 and 19 on appeal stand rejected under 35 U.S.C. § 102(b) as anticipated by Treiber. (Examiner's answer

mailed Dec. 29, 1997, paper 18, pages 4-5.) Additionally, claims 1 through 4, 6 through 12, and 17 on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Treiber. (Id. at pages 5-6.)[1]

We reverse these rejections for the reasons stated in the appeal brief filed Nov. 28, 1997 (paper 17) and the reply brief filed Feb. 4, 1998 (paper 19) but add the following comments for emphasis.

The appealed claims recite that: (i) at least one hollow pin is located at a distance from the shaft equal to "at least 2.7% of the barrel diameter" or "at least approximately 2.7% of the barrel diameter" (claims 1, 7-10, and 17); or (ii) a first or hollow pin is located at a greater distance from a shaft of the extruder than another or second pin (claims 14 and 19). The examiner, however, does not identify any portion of Treiber's disclosure that actually addresses these limitations by way of a teaching or suggestion.

In response to the appellants' main argument regarding these limitations, the examiner takes the following position (answer, pages 7-8):

[1] We rely on the copy of the reference submitted by the appellants in response to our 37 CFR § 1.196(d) (2003) (effective Dec. 1, 1997) order mailed Jan. 29, 2003 (paper 28). ("RESPONSE TO BOARD OF APPEALS" filed Mar. 4, 2004, paper 29.)

> [N]otice that Treiber defines the shear gap "s" as the gap between the kneading flights turning with the screw and the stationary pins. Figure 3 illustrates the different types of kneading pins that creates [sic] a particular profile or shear gap. Appellants are reminded that different shear gaps form a profile, this simply means that the distance between the shaft of kneading flight and pins will change throughout the extruder [sic]. One pin will have a greater distance from the shaft than the other. Second, Treiber teaches that any of the kneading pins installed in the extruder represents a potential injection point. In other words, a hollow injection pin can be substituted for a standard kneading pin at the desired location. Therefore, if any of the kneading pins in the extruder represents a potential injection point and a hollow injection pin can be substituted for the kneading pin, the pins (kneading and hollow) being capable of forming a profile due to its shear gap "s", then for a hollow pin at some point in the extruder the shear gap at that point must inherently be greater than another adjacent hollow pin if a profile is to follow [sic]. The language of the claims (14 and 19) contrary to Appellants [sic] allegation finds no distinction [sic] to that of the teaching of Treiber. Therefore, the claims are anticipated. [Emphasis added.]

The examiner's position lacks merit. As appreciated by the examiner, the shear gap "s" discussed in Treiber (page 8) refers to the gap "between the kneading flights turning with the screw and the stationary kneading tools in the barrel," not the distance between the shaft and the stationary kneading tool. Although Treiber teaches that the shear gap "s" may be varied by selecting different pins, this teaching has nothing to do with the distance between the shaft and the stationary kneading tool (i.e., pin). On this point, we note that the examiner offers no

reasonable rebuttal to the appellants' argument that all of the various pins shown in Figure 3 of Treiber have identical lengths.

Because neither of the examiner's rejections accounts for a crucial claim limitation, we cannot affirm.

The decision of the examiner is reversed.

REVERSED

Charles F. Warren	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
Catherine Timm	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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	)	
Romulo H. Delmendo	)	
Administrative Patent Judge	)	

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