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The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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 JOHN RHODES and BRIAN K. EVANS

Appeal No. 95-4824
Application 07/966,163¹

ON BRIEF

Before WARREN, ELLIS and OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1-3, 29-39, 41-44 and 46-48, which are all of the claims remaining in the application.

¹ Application for patent filed January 21, 1993. This application is a national stage application under 35 U.S.C. § 371 of PCT/GB91/01209 filed July 19, 1991.

THE INVENTION

Appellants claim a bismuth-containing complex which, appellants state, is useful for treating conditions of the alimentary canal (specification, page 1, lines 6-9). A method for making the complex also is claimed. Claims 1 and 41 are illustrative and read as follows:

1. A water soluble complex of bismuth with a polyacrylate.

41. A process for the preparation of a water-soluble complex of bismuth and a polyacrylate comprising reacting a bismuth-containing compound with a polyacrylate in a liquid phase.

THE REFERENCES

Coveney et al. (Coveney)	4,940,695	Jul. 10, 1990
Borody	5,196,205	Mar. 23, 1993
	(PCT filing date	Sept. 29, 1988)
Lloyd-Jones et al. (Lloyd-Jones)	2,220,855	Jan. 24, 1990
(United Kingdom patent application)		

THE REJECTIONS

Claims 1-3, 29-39 and 41 stand rejected under 35 U.S.C. § 103 as being unpatentable over Coveney in view of Lloyd-Jones. Claims 42-44 and 46-48 stand rejected under 35 U.S.C. § 103 as being unpatentable over Borody in view of Lloyd-Jones.

OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejections are not well founded. Accordingly, these rejections will be reversed.

Coveney discloses bismuth-containing pharmaceutical compositions which are suitable for oral administration and which coat the gastrointestinal tract (col. 1, lines 59-63). The compositions include from about 0.1% to about 50% of a pharmaceutically-acceptable bismuth-containing agent, from about 0.1% to about 25% of a pharmaceutically acceptable non-ionic cellulose ether polymer, and from about 0.1% to about 25% of magnesium aluminum silicate, wherein the ratio of bismuth to non-ionic cellulose ether polymer is greater than about 1.5:1 (col. 1, line 63 - col. 2, line 3). The compositions are useful for treating or preventing disturbances of the gastrointestinal tract, such as diarrhea, nausea, heartburn, indigestion, upset stomach, gastritis and ulcers (col. 2, lines 6-8; col. 6, lines 10-30).

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Lloyd-Jones teaches that it was known in the art to use polyacrylates to treat peptic ulcers (page 1, line 8 - page 2, line 19), and discloses use of polyacrylates to treat inflammatory bowel disease (page 5, lines 24-26; page 6, lines 6-9).

Borody discloses a pharmaceutical composition for treating gastrointestinal disorders associated with *C. pylori* infections, which comprises a pharmaceutically acceptable bismuth compound, a first antibiotic or antimicrobial agent, and a second antibiotic or antimicrobial agent (col. 1, line 65 - col. 2, line 2; col. 2, lines 27-33). In a preferred embodiment, a capsule is provided which contains an effective amount of a pharmaceutically acceptable bismuth compound, enteric-coated microspherules of an antibiotic of the tetracycline class or penicillin class, and a second antibiotic of the metronidazole class, which optionally is provided in enteric-coated microspherule form (col. 3, lines 38-46).

The examiner argues that it would have been obvious to one of ordinary skill in the art to combine a bismuth-containing compound of either Coveney or Borody with a polyacrylate of Lloyd-Jones in order to obtain an additive effect (answer, pages 4-5). Regarding the recitation in appellants' claims that the

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material is a complex, the examiner states that "a complex is considered to be a mixture of interconnected parts or ingredients. The Examiner sees the complex as a mixture of bismuth or bismuth-containing ingredients combined with polyacrylates to treat inflammatory bowel diseases" (answer, page 6).

Appellants provide (brief, page 7) a definition of "complex" from Collins Dictionary (2d ed. 1986), which is:

... a chemical compound in which molecules, groups or ions are attached to a central metal atom, esp. a transition metal atom, by coordinate bonds. 9. any chemical compound in which one molecule is linked to another by a coordinate bond.

This definition is consistent with that in two other dictionaries.² Accordingly, we interpret appellants' claims as requiring that the polyacrylate be attached to the bismuth by coordinate bonds.

The examiner has not carried his burden of establishing a *prima facie* case of obviousness of appellants' claimed invention

² Gessner G. Hawley, *The Condensed Chemical Dictionary* (10th ed., Van Nostrand Reinhold 1981); *McGraw-Hill Dictionary of Scientific and Technical Terms* (2d ed., McGraw-Hill 1978).

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because he has not provided evidence which shows either of the following:

1) That merely mixing a bismuth-containing compound and a polyacrylate results in the formation of a complex between the polyacrylate and bismuth. Appellants state in their specification that stirring a mixture of a bismuth-containing compound and a polyacrylate at 40EC usually will produce a complex within 24 hours (page 3, lines 20-22). Appellants' claims do not require any minimum degree of complex formation, but the examiner has provided no evidence that any formation of coordinate bonds between a polyacrylate and bismuth would take place during the mere mixing of a bismuth-containing compound and a polyacrylate.

2) That the prior art would have fairly suggested, to one of ordinary skill in the art, mixing a bismuth-containing compound with a polyacrylate under conditions which cause the formation of coordinate bonds between the polyacrylate and bismuth.

DECISION

The rejections under 35 U.S.C. § 103 of claims 1-3, 29-39

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and 41 over Coveney in view of Lloyd-Jones, and claims 42-44 and
46-48 over Borody in view of Lloyd-Jones, are reversed.

REVERSED

JOAN ELLIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
TERRY J. OWENS)	
Administrative Patent Judge)	

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