

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BILLIE O. DOONAN

Appeal No. 1997-1869
Application 08/215,462¹

ON BRIEF

Before McKELVEY, Senior Administrative Patent Judge, and SCHAFER and LEE, Administrative Patent Judges.

SCHAFER, Administrative Patent Judge.

DECISION ON APPEAL

Applicant appeals the rejection of claims 11-30, all the pending claims. A supervisory primary examiner has rejected all claims on two grounds: (1) under 35 U.S.C. § 103 as unpatentable over U.S. patent 5,248,041 to Deiringer et al., or U.S. patent 5,120,768 to Sisson, or U.S. patent 3,652,466 to

¹ Application for patent filed March 21, 1994.

Hittel et al. and (2) under 35 U.S.C. § 103 as unpatentable over Lundquist.² We vacate the rejections and remand the application to the examiner.

The claimed subject matter relates to a process for cleaning and reclaiming the plastic used to make plastic containers so the plastic may be recycled. The process involves cutting the containers into pieces, placing the pieces into a washer with an aqueous solvent, agitating the solvent to loosen, suspend and remove residual material such as organic liquids (e.g., motor oil) or solid waste from the pieces, draining the solvent from the pieces, separating the solvent from the organic liquid and solid waste, regenerating the solvent for recycling it into the process, recovering the organic liquid, recovering the solid waste, and passing the cleaned plastic pieces to a recycling process.

We reproduce independent claims 11, 21 and 27 (broadest to narrowest) below:

27. A process for cleaning residual material such as a liquid organic phase and a solid waste phase from plastic containers for recycling said plastic comprising the steps of:

- a) dividing said plastic containers into relatively large pieces that are small enough to allow an aqueous solvent to reach each area of said plastic pieces,
- b) loading said plastic pieces into a vessel with an aqueous solvent adapted to loosen and suspend said residual material,
- c) agitating said aqueous solvent containing said plastic pieces to loosen, suspend and remove said residual material from said plastic pieces,
- d) separating said aqueous solvent containing said suspended residual material from said plastic pieces by draining said aqueous solvent from said plastic pieces,

² Apparently, other rejections were made. Since they were not presented in the Examiner's Answer, we consider them to have been withdrawn.

- e) separating said residual material from said aqueous solvent and recycling said aqueous solvent through said cleaning process, and
- f) recovering cleaned plastic pieces from said process suitable for recycling said plastic.

21. A process for reclaiming and preparing plastic containers for recycling said plastic which containers have associated therewith residual material such as an organic liquid phase and a solid waste phase comprising the steps of:

- a) dividing said containers into relatively large pieces of plastic that are small enough to allow aqueous solvent to reach each area of said plastic pieces,
- b) loading said cut plastic pieces into a vessel with an aqueous based solvent adapted to loosen and suspend said residual material,
- c) agitating said aqueous solvent by rotating or reciprocating a part of said vessel to loosen, suspend and remove said residual material from said plastic pieces,
- d) separating said aqueous solvent containing any residual material suspended therein from said plastic pieces,
- e) separating said aqueous solvent from any organic liquid residual material and from any solid waste residual material,
- f) regenerating said aqueous solvent and recycling said aqueous solvent in the process,
- g) recovering organic liquid residual material and solid waste residual material free of aqueous solvent, and
- h) recovering cleaned plastic pieces ready for recycling.

11. A process for reclaiming and preparing plastic containers for recycling said plastic which plastic containers have residual material such as an organic liquid phase and a solid waste associated therewith comprising the steps of:

- a) cutting said containers into relatively large plastic pieces that are small enough to allow aqueous solvent to reach each area of said pieces,
- b) placing said cut plastic pieces into a washer with an aqueous based solvent adapted to loosen and suspend said residual materials,
- c) agitating said aqueous solvent by rotating or reciprocating said washer or a part thereof to loosen, suspend and remove said residual material,
- d) separating said aqueous solvent containing suspended residual material from said plastic pieces by simply draining said aqueous solvent from said plastic pieces,
- e) separating said aqueous solvent from an organic liquid residual material and from a solid waste residual material,
- f) regenerating said aqueous solvent and recycling said aqueous solvent in the process,
- g) recovering a useable organic liquid residual material free of solid waste residual material and free of aqueous solvent,
- h) recovering a solid waste residual material free of organic liquid residual material and free of aqueous solvent, and
- i) passing cleaned plastic pieces to a plastic recycle process free of organic liquid residual material, solid waste residual material and aqueous solvent.

The examiner rejected the claims under § 103 over Deiringer, Sisson or Hittel in the alternative. The examiner also entered a rejection under § 103 over Lundquist. In stating the rejection, the examiner makes findings as to what each reference teaches. With respect to the rejection based on Deiringer, Sisson or Hittel, the examiner states the following conclusions of obviousness:

It would have been obvious to one of ordinary skill in the art to practice the process for recovering plastic material of the invention of Deiringer et al. or Sisson, or Hittel et al. for the applicant's purpose. Also, it would have been obvious to one of ordinary skill in the art to consider that plastic waste articles may contain any residual materials in liquid and solid phase. It is obvious to make such a conclusion because any liquid phase as impurities would be expected in the plastic waste as well as a solid phase such as PVC or glue and label on Evian water bottles. And, also it would have been obvious to one of ordinary skill in the art to add any surfactant or detergents, or organic solvent to facilitate removal and suspension of residual material during the agitation step; and also, a pH degree of an aqueous base solvent can be obtained in any desirable level.

Answer, p. 5. With respect to the rejection based on Lundquist the examiner concludes:

It would have been obvious to one of ordinary skill in the art to practice the process of separating a liquid organic waste and a solid waste from contaminated plastic material for the purpose of being the claimed recycled process. It is obvious to do so because the reference's process includes the following steps of: a size reduction into a chip having a size of 3/4 inch x 1/2 inch; a centrifugal separation liquid wastes, particularly automotive oils and the like which have their own value as a reclaimed product; continuous washing with a detergent; and a separation from the washing process soluble and suspended waste removed with the waste water and a separation of usable plastic material and heavy waste such as stones, metals, and the like (see column 3, lines 21-68). These steps are within the scope of the claimed process.

Answer, p. 8.

The examiner, however, has failed to make any findings relating to the differences between the claimed subject matter and each of the references. This fact finding is a necessary predicate to a determination of obviousness. See In re Rouffet, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1455

(Fed. Cir. 1998). Without enumeration of the differences, it is not possible to determine “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious” 35 U.S.C. § 103(a). Without this necessary fact finding, we are unable to evaluate the correctness of the examiner’s conclusions on obviousness. The examiner has simply not conducted sufficient fact finding to allow meaningful appellate review. The examiner has, in effect, invited us to compare the references with the claims and make the necessary fact findings as to the differences in the first instance. We decline this invitation. Instead, we vacate the examiner’s rejection and remand the application to the examiner to provide an opportunity to make the necessary fact findings. As a result of our vacatur, the claims currently stand unrejected. Nevertheless, if, after making the necessary fact findings, the examiner concludes that the claimed subject matter would have been obvious, then applicant must be informed of the reasons for that determination and given an opportunity to respond.

VACATED AND REMANDED

FRED E. McKELVEY, Senior)
Administrative Patent Judge)
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) BOARD OF PATENT
RICHARD E. SCHAFER)
Administrative Patent Judge) APPEALS AND
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Appeal No. 1997-1869
Application 08/215,462

JAMESON LEE
Administrative Patent Judge

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RES:yrt

cc: Robert S. Nisbett
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