

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BORRE BENGT ULRICHSEN, CLAS FREDRIK MENDER,
GEIR FOSS-PEDERSEN, JON HENRIK TSCHUDI,
and IB-RUNE JOHANSEN

Appeal 2006-3103
Application 09/541,718
Technology Center 3600

Decided: March 22, 2007

Before ANITA PELLMAN GROSS, STUART S. LEVY, and ROBERT E.
NAPPI, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Ulrichsen, Mender, Foss-Pedersen, Tschudi, and Johansen
(Appellants) appeal under 35 U.S.C. § 134 from the Examiner's final
rejection of claims 144, 145, 168 through 171, and 174.

Appellants' invention relates to a method and apparatus for separating waste items of different compositions, such as metal or different types of plastics. Claims 144 and 174 are illustrative of the claimed invention and read as follows:

144. A method of automatically inspecting matter for varying composition, comprising advancing a stream of said matter through a detection station, irradiating with electromagnetic radiation a section of said stream at said station, scanning said section and determining the intensity of electromagnetic radiation of selected wavelength(s) received from portions of said stream, and obtaining detection data from said detection station, wherein said scanning is performed in respect of a plurality of discrete detection zones distributed across said stream and said determining is performed for each detection zone in respect of a plurality of said wavelengths simultaneously.

174. Apparatus for automatically inspecting a stream of matter for varying composition, comprising a detection station through which said stream passes, emitting means serving to emit a detection medium to be active at a transverse section of said stream at said station, receiving means at said station arranged to extend physically across substantially the width of said stream serving to receive detection medium varied by variations in the composition of said matter at said section, detecting means arranged to be in communication with said receiving means and serving to generate detection data in dependence upon the variations in said medium, and data-obtaining means connected to said detecting means and serving to obtain said detection data therefrom, wherein said station is a metal-detection station, said emitting means serves to emit electromagnetic field, and said receiving means comprises a multiplicity of electromagnetic field sensing devices arranged to be distributed across said stream.

The prior art reference of record relied upon by the Examiner in rejecting the appealed claims is:

Sommer

EP 0484221 A2

May 06, 1992

Claims 144, 145, 168 through 171, and 174 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sommer.

We refer to the Examiner's Answer (mailed January 30, 2004) and to Appellants' Brief (filed January 6, 2003) and Reply Brief (filed March 30, 2004) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will reverse the anticipation rejection of claims 144, 145, 168 through 171, and 174. We also add a new rejection of claims 169 and 174 under 35 U.S.C. § 103 over Sommer.

OPINION

With regard to claims 144 and 145, Appellants contend (Br. 7) that Sommer fails to disclose scanning a transverse section of a stream of matter at a detection station and using a plurality of wavelengths simultaneously to determine the intensity of electromagnetic radiation of selected wavelengths received from portions of the stream. We agree. Nowhere does Sommer disclose scanning. The Examiner (Answer 3) relies upon radiation zone 22 containing detector array 20 as a disclosure of scanning. However, a beam of light and an array of detectors do not signify scanning. To scan, in electronics, is defined as "[t]o move a finely focused beam of light or electrons in a systematic pattern over (a surface) in order to reproduce or sense and subsequently transmit an image." See American Heritage Dictionary definition number 5. Sommer discloses (col. 7, ll. 50-55) a sheet-like beam of radiation, not a moving beam. Thus, Sommer's beam and array of detectors do not constitute scanning.

As to using plural wavelengths simultaneously, the Examiner asserts (Answer 3) that Sommer "does inherently perform such function because if the wavelengths are not simultaneously, there would be gaps in between the wavelengths which is not desired." The Examiner's reasoning is unclear, particularly in light of Sommer's disclosure (col. 7, ll. 14-16) that "[t]he preferred wavelength of radiation to be used depends upon the physical and chemical properties of the items 13 and 14 to be separated." In other words, Sommer appears to use a single wavelength, not a plurality of wavelengths, and we find no disclosure that would suggest otherwise. Since Sommer fails to disclose each and every limitation of claims 144 and 145, as required by 35 U.S.C. § 102(b), Sommer does not anticipate the claims. Accordingly, we cannot sustain the anticipation rejection of claims 144 and 145.

Regarding claims 168 through 171 and 174, Appellants contend (Br. 8) that Sommer fails to disclose that the emitting means emits an electromagnetic field, that the receiving means comprises multiple electromagnetic field sensing devices distributed across the stream, and that the detection station is a metal detection station. As to the field and the sensors, Sommer discloses (col. 3, ll. 14-19) that the plastic materials are to be fed "into a common region of penetrating electromagnetic radiation." Similar references are made to electromagnetic radiation in column 4, lines 10-26 and 34, column 5, lines 29-31, column 6, lines 45-46, and column 7, lines 7-14, among others, and in column 7, lines 49-51, Sommer refers to a "sheet-like beam of radiation." Further, Sommer includes (col. 7, ll. 41-54) a radiation detector array 20 of radiation detectors 15. Thus, Sommer discloses the claimed electromagnetic field and electromagnetic field sensing elements.

As to the detection station, the Examiner refers to Sommer (col. 1, ll. 36-46), which states "it is useful to separate . . . metals from nonmetals." Sommer also states (col. 1, ll. 47-54) that "the disclosed invention is very effective at distinguishing and separating items of differing chemical composition. Mixtures containing *metals*, plastics, textiles, paper, and/or other such waste materials can be separated" (emphasis ours). However, the Summary of the Invention reads, "It has been found that the disclosed invention . . . provides efficient high volume separations by allowing *plastic* materials to be fed multiply and in a continuous manner without regard to orientation into a common region of penetrating electromagnetic radiation" (emphasis ours). Further, the example given as a typical first material for the invention is a polyester plastic container (see col. 9, ll. 12-13). Thus, although Sommer clearly discloses a plastic detection station, for separating different types of plastics and plastic from other materials, Sommer is unclear as to whether the described apparatus includes a metal detection station. Therefore, we will not sustain the anticipation rejection of claims 168 through 171 and 174.

Under the provisions of 37 C.F.R. § 41.50(b), we enter the following new ground of rejection against Appellants' claims 169 and 174. Claims 169 and 174 are rejected under 35 U.S.C. § 103 as unpatentable over Sommer. Although Sommer does not clearly disclose a metal detection station, Sommer does suggest 1) that it is desirable to separate metals from nonmetals (see col. 1, ll. 39-41), 2) that the disclosed apparatus can separate metals from other materials (see col. 1, ll. 47-52), and 3) that metals can be separated from nonmetals by selecting the appropriate wavelength of electromagnetic radiation (see col. 1, ll. 50-54, and col. 7, ll. 14-18).

Therefore, it at least would have been obvious to the skilled artisan to make the detection station a metal detection station for separating metals from nonmetals. As to claim 169, conveyor 171 and acceleration slide 18 of Sommer advance the stream of matter through the detection station, which is at the lower end of slide 18. Therefore, claim 169 would have been obvious over Sommer.

ORDER

The decision of the Examiner rejecting claims 144, 145, 168 through 171, and 174 under 35 U.S.C. § 102(b) is reversed. Claims 169 and 174 are newly rejected under 35 U.S.C. § 103 over Sommer.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 CFR § 1.136(a)(1)(iv) (2006).

REVERSED
37 C.F.R. § 41.50(b)

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