

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANNO REIMANN,
GÖTZ REIMANN,
and
SIEGFRIED MEININGER

Appeal No. 1999-0772
Application No. 08/600,165

ON BRIEF

Before KIMLIN, WALTZ, 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 from the examiner's refusal to allow claims 12 through 17 in the above-identified application.¹ Claims 7 through 11, which are

¹ In response to the final Office action of December 16, 1997 (paper 12), the appellants submitted an amendment under 37 CFR § 1.116 (1981), proposing changes to claims 12 and 14-16. The examiner indicated in the advisory action of March 23, 1998

the only other remaining claims, stand withdrawn from further consideration pursuant to 37 CFR § 1.142(b)(1959). We reverse.

The subject matter on appeal relates to a method for combined production of cement and sulfuric acid by the so-called Müller-Kühne process. Further details of this appealed subject matter are recited in illustrative claim 12, the sole independent claim, reproduced below:

12. A method for combined production of cement and sulfuric acid by Muller-Kuhne [sic] process comprising:
storing powder components used in the process separately, the components including waste material, unprocessed powder components, fuel components, and residual components;
conditioning the components by comminuting;
taking a sample of the components and evaluating the sample for determining its composition;
formulating a required composition of the feed mix;
combining the components for forming the formulated feed mix;
feeding the mix to a rotary drum kiln;
transporting a fuel mix comprising liquid and solid residual materials, separately to the rotary drum kiln;
burning the fuel mix in a flame, for forming active carbon;
burning the feed in the flame at a temperature of over 700°C, for forming CaO and flue gases;
calcining the CaO at a temperature of over 1,200°C in the presence of SiO₂ [sic], Al₂O₃ [sic], and Fe₂O₃ [sic] for forming cement;

(paper 14) that the amendment will be entered for purposes of this appeal.

feeding cooling gas and flash-cooling flue gases in a kiln hood and a fuel gas discharge chamber; and exhausting SO₂-containing [sic] flue gases, removing dust, washing the SO₂ [sic], mixing with air and converting to SO₃ [sic] or H₂SO₄ [sic].

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

Herzog et al.	1,112,180	May 1, 1968
(Herzog)(published GB patent application)		

Claims 12 through 17 on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Herzog. (Examiner's answer, pages 4-5.)²

We cannot uphold this rejection.

Herzog describes a process for the production of raw stock for the manufacture of sulfuric acid and cement from calcium

² The examiner indicates that all other rejections, as set out in the final Office action, are withdrawn. (Examiner's answer, p. 3.) Further, the examiner refers to U.S. Patent 5,049,198 to Ribas issued on September 17, 1991 and U.S. Patent 3,865,602 to Stich et al. (Stich) issued on February 11, 1975. (Id.) According to the examiner, Ribas "is nearly identical [in] in scope" to Herzog, while Stich "provides a clear teaching of the known and conventional Muller-Kuhne process for further clarification purposes on this process should it be necessary." (Id.) However, we will not consider Ribas and Stich as part of the evidence relied upon in the examiner's rejection, because these references were not positively included in the examiner's statement of the rejection. In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970)("Where a reference is relied on to support a rejection, whether or not in a 'minor capacity,' there would appear to be no excuse for not positively including the reference in the statement of rejection.").

sulfate residues (waste), e.g. phosphorus gypsum, obtained from "other processes." (Page 1, lines 11-15; page 1, line 75 to page 2, line 2.) According to Herzog, phosphorus gypsum waste having a particle mesh size (German Industrial Standard sieve) of less than 0.090 mm, which is obtained directly after a calcination stage, is mixed with equally finely ground additional materials to produce a raw stock for calcination to produce cement clinker. (Page 2, lines 86-100.) Herzog also teaches that the calcined phosphorus gypsum may be comminuted to counter "slight formation of smallish granulates and particle aggregation." (Page 2, lines 101-117.) Herzog, however, does not specifically describe the method by which the sulfuric acid and cement are manufactured.

In an attempt to account for the differences between the applied prior art and the appellants' claimed invention, the examiner argues:

The appellants' step of taking a sample and evaluating and determining its composition is routinely done in cement industry as well as a multitude of other industrial processes to measure and monitor the product being produced.

(Examiner's answer, page 4.) The examiner further alleges:

Herzog would appear to differ from appellants' invention because he does not teach the specific processing temperatures in their process. However, the appellants' transporting, and burning, and

calcining steps as well as removal of SO₂ exhaust gas for the manufacture of sulfuric acid are all known steps and temperature ranges for the Muller-Kuhne process...[T]he improvement claimed by appellants over the prior art would appear to be the use of a **waste** raw material as a starting material for environmental as well as economic cost saving considerations. It would appear that the rest of appellants' process is merely application of the known Muller-Kuhne process...

(Id. at pages 4-5; underscoring added.) Additionally, the examiner holds: "[I]t is the examiner's position that the choice of a specific fuel be it a liquid or solid or mixture thereof is conventionally done in the art for rotary kilns which are routinely used in the Muller-Kuhne process." (Id. at page 6; underscoring added.)

On the other hand, the appellants urge:

[N]othing in Herzog describes, suggests or infers burning a specifically formulated mix of raw and residual powder components in a mutually supportive flame generated from a fuel mix comprising liquid and solid residual materials. There is nothing in Herzog that describes, suggests, or remotely infers the invention as claimed by Applicant.

(Appeal brief, page 17.) The appellants further point out that "the Examiner holds, without any relevant art, that those features absent in Herzog 'would appear' to be obvious." (Reply brief, page 2.)

Aside from the failure to supply evidence to support the position that one of ordinary skill in the art would have been led by the teachings of the applied prior art to modify the process of Herzog to include all of the recited steps in appealed claims 12, the examiner's allegations, even if accepted as fact, are insufficient to establish a prima facie of obviousness. Specifically, the mere fact that the recited steps may be old is insufficient to establish that one of ordinary skill in the art would have been led by the teachings of the applied prior art to arrive at the here claimed invention. In re Warner, 397 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967) ("[W]here the invention sought to be patented resides in a combination of old elements, the proper inquiry is whether bringing them together was obvious and not, whether one of ordinary skill, having the invention before him, would find it obvious through hindsight to construct the invention from elements of the prior art."); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("[T]he best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.").

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Hence, we must agree with the appellants that the examiner has not established a prima facie case of obviousness within the meaning of 35 U.S.C. § 103. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984).

The examiner's rejection under 35 U.S.C. § 103 of all the appealed claims as unpatentable over Herzog is reversed.

REVERSED

EDWARD C. KIMLIN)
Administrative Patent Judge)
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) BOARD OF PATENT
THOMAS A. WALTZ)
Administrative Patent Judge) APPEALS AND
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) INTERFERENCES
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