

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID P. BAUER and DUANE C. NEWMAN

Appeal No. 2001-0882
Application No. 08/950,965

ON BRIEF

Before KRATZ, PAWLIKOWSKI and POTEATE, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2 and 8-17. Claims 18-30, which are all of the other claims that remain pending in this application, stand withdrawn from further consideration by the examiner as drawn to a non-elected invention.

BACKGROUND

Appellants' invention relates to a system for consolidating powders. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A particulate materials consolidation system comprising:
a particulate material die for receiving a particulate material to be consolidated;
a first punch and a second punch which cooperate with said particulate material die to compress the particulate material;
a power source coupled to said first and second punches to energize said particulate material to a predetermined energy level for a duration of at least .1 second at a current of less than about 10KA/cm² when said particulate material is being consolidated; and
feedback control coupled to said punches and said power source for monitoring a characteristic of said particulate material when it is being consolidated and generating a feedback signal in response thereto;
said power source adjusting said predetermined energy level in response to said feedback signal while said particulate material is being consolidated such that said particulate material achieves at least 95 percent of its maximum theoretical density.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Inoue (Inoue '029)	3,508,029	Apr. 21, 1970
Inoue (Inoue '805)	3,873,805	Mar. 25, 1975
Knoss et al. (Knoss)	5,529,746	Jun. 25, 1996

Claims 1, 2 and 15-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Inoue '029 in view of Inoue '805.
Claims 8-14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Inoue '029 in view of Inoue '805 and Knoss.

We refer to appellants' briefs and to the examiner's answer for an exposition of the respective viewpoints expressed by appellants and the examiner concerning the rejections.

OPINION

Upon careful review of the respective positions advanced by appellants and the examiner with respect to the rejections that are before us for review, we find ourselves in agreement with appellants' viewpoint in that the examiner has failed to carry the burden of establishing a prima facie case of obviousness. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1471-1472, 223 USPQ 785, 787-788 (Fed. Cir. 1984). Accordingly, we will not sustain the examiner's rejections.

The examiner has determined that Inoue '029 discloses a particulate material sintering and consolidation system including, inter alia, a die with associated punches, a power source and a feedback control (servo control 312(e) as shown in figure 5¹), which control is coupled to the punches (answer,

¹ The examiner also refers to element 362 of figure 2 of Inoue '029 at page 3 of the answer albeit figure 2 of that reference does not have such a legend associated therewith.

page 3). The examiner acknowledges that Inoue fails "to disclose the feedback control is coupled to the punches and also to the power source, wherein the power source is capable of adjusting a predetermined energy level in response to the feedback signal" as here claimed (answer, page 4).

In an attempt at making up for those noted deficiencies of the teachings of Inoue '029, the examiner additionally relies on Inoue '805. In this regard, the examiner asserts that Inoue '805 (figure 12 thereof and corresponding text) discloses a die with first and second punches and a feedback control coupled to a power source and the punches.² According to the examiner (answer, page 4):

[I]t would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have modified the particulate material consolidation system in Inoue ('029) by coupling the feedback control to the punches and the power source, which is capable of adjusting a predetermined energy level in response to the feedback signal in order to control the density of the material being consolidated, as taught by Inoue ('805). In fact, Inoue ('805) states that "it is preferable in many instances to control the density" by adjusting a predetermined energy level in response to the feedback signal.

² While the examiner refers to "Fig. 2, 362, or Fig. 5, #312(e)" (answer, page 4) of Inoue '805 for a feedback control of Inoue '805, we observe that those figures of Inoue '805 do not show such a feedback control.

Here, the examiner has not fairly explained why one of ordinary skill in this art would have been led to modify the system of Inoue '029 by coupling the feedback control of Inoue '029 (identified by the examiner as the servo control (312(e), fig. 5) to the power source and punches of Inoue '029 based on the disclosure of Inoue '805. Concerning this matter, the servo control feedback device of Inoue '029 (column 10, lines 4-30) is disclosed as a device useful for operating a pair of servo valves supplied with hydraulic fluid. The examiner has not shown how the figure 12 embodiment of Inoue '805 would suggest connection of that servo control feedback device of Inoue '029 to the power source (317, figure 12) of Inoue '029 that was identified by the examiner. The examiner has not specifically identified a reasonable suggestion or teaching of the desirability of modifying the system of Inoue '029 including the servo control connections based on the figure 12 embodiment of Inoue '805 so as to arrive at the appellants' claimed invention.³

³ Appellants (brief, pages 11 and 12 and reply brief, pages 2 and 3), in essence, invoke the sixth paragraph of 35 U.S.C. 112 in arguing that the claimed functional attributes of the here claimed system components are not found in the applied Inoue references. We note, for example, that appellants' specification, at pages 7 and 8 describes a programmed logic controller as part of the feedback control to the power source that provides the function of controlling the power supply during

With regard to the examiner's separate § 103 rejection of claims 8-14, the examiner has not shown how the additional teachings of Knoss remedy the deficiencies in the teachings of the applied Inoue patents.

Accordingly, on this record, the rejections fail for lack of a sufficient factual basis and analysis by the examiner upon which to reach a conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073-74, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

CONCLUSION

The decision of the examiner to reject claim 1, 2 and 15-17 under 35 U.S.C. § 103 as being unpatentable over Inoue '029 in view of Inoue '805 and to reject claims 8-14 under 35 U.S.C. § 103 as being unpatentable over Inoue '029 in view of Inoue '805 and Knoss is reversed.

REVERSED

PETER F. KRATZ

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consolidation to achieve the claimed material density. The examiner has not explained how the applied Inoue references teach all of the claimed functions let alone suggest such a structure or a functional equivalent thereof.

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