PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Andrew Miller CAMERON, et al.	Docket No.	M02B129
Serial No.	10/517,906	Examiner:	Jie YANG
Filed:	November 7, 2005	Group Art Unit:	1793
Title:	REFINING FERROALLOYS	Conf. No.:	6895

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APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Dear Sir:

This a Reply Brief submitted in response to the Examiner's Answer mailed March 29, 2010, which was in response to Appellants' Brief under 37 C.F.R. § 41.37 appealing to the Board of Patent Appeals and Interferences (the "Board") from the final rejection set forth in the Office Action mailed October 2, 2009. The Notice of Appeal was submitted electronically via EFS-Web by Appellants on November 25, 2009. The present appeal is of claims 1-21 of the present application.

Status of Claims

The present application was given a 35 U.S.C. § 371 date of November 7, 2005 after being initially submitted to the Office on December 10, 2004 with original claims 1-21. A Final Office Action for this application was mailed by the Office on September 5, 2008. A Request for Continued Examination for this application was filed with the Office on January 9, 2009. A Final Office Action for this application, subsequent to Appellants' Request for Continued Examination, was mailed by the Office on October 2, 2009.

Claims 1-21 are currently under final rejection and constitute the claims on appeal.

Grounds of Rejection to be Reviewed on Appeal

A. The 35 U.S.C. § 103(a) rejection of claims 17, 9-14 and 19-21 as unpatentable over U.S. Patent No. 5,366,537 to Schlichting in view of U.S. Patent No. 6,409,793 B1 to Edlinger. Claim 8 has been removed from this ground of rejection, based on the new ground of rejection presented in the Examiner's Answer.

B. The 35 U.S.C. § 103(a) rejection of claims 15-18 as unpatentable over U.S. Patent No. 5,366,537 to Schlichting in view of U.S. Patent No. 6,409,793 B1 to Edlinger, further in view of U.S. Patent No. 6,558,614 B1 to Fritz.

C. NEW GROUND OF REJECTION: Claim 8 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,366,537 to Schlichting ("Schlichting") in view of U.S. Patent No. 6,409,793 B1 to Edlinger ("Edlinger"), further in view of U.S. Patent No. 6,241,510 B1 to Anderson, et al ("Anderson").

Argument

A. Claims 1-14 and 19-21

Preliminarily, the Office again alleges, at page 12, last paragraph, of the Examiner's Answer, that "the appellant's arguments are against the references individually, [and] one cannot show nonobviousness by attacking references individually where the rejections are based on a combination of references." Appellants have addressed this issue at page 9, second paragraph of Appellants' Brief, but Appellants' wish to reiterate the argument: Since it is necessary to argue the appropriateness of the combination of references with regard to arguing that the Office has not established a prima facie case of obviousness, Appellants respectfully submit that it is necessary to discuss the references individually in order to show their differences as well as their incompatibility for the combination alleged by the Office.

The Office Has Not Established a Prima Facie Case of Obviousness

At page 11 of the Examiner's Answer, the Office addresses Appellants' arguments regarding the Office's failure to state a prima facie case of obviousness. Appellants' arguments at pages 9-11 of Appellants' Brief are extensive, and do not need repeating. However, Appellants' wish to note that the Office has merely restated its arguments from the previous Office Actions, and has not addressed arguments in Appellants' Brief with any specifics. Appellants therefore maintain that the Office has failed to state a prima facie case of obviousness.

The Office's Burden of Proving Inherency Has Not Been Met

At pages 11-12 of the Examiner's Answer, the Office addresses Appellants' arguments regarding the Office's failure to meet its burden of proving inherency. Appellants arguments at pages 12-13 of Appellants Brief are extensive, citing specific language from the MPEP which discusses the requirements for proving inherency. The Office's response to these arguments does not address the specific requirements of proving inherency discussed in Appellants' Brief.

namely: The Office must establish that the alleged inherency must necessarily be present and it must be recognized as necessarily present by a person of ordinary skill in the art. Therefore, Appellants maintain that the Office has failed to meet its burden of proving inherency.

Dependent Claims 9 and 10

At page 12 of the Examiner's Answer, the Office addresses Appellants' arguments regarding the rejection of dependent claims 9 and 10. At page 14 of Appellants' Brief, Appellants expressed confusion regarding the rejection of claim 9, stating that the citations provided by the Office in the rejection of claim 9 do not teach or suggest the features of claim 9, namely that the "particulate material is introduced into the melt in fine particulate form." In the Examiner's Answer, the Office newly alleges that "particulate coal" (Schlichting at col. 6, lns. 63-64) reads on the particulate material in fine particulate form as recited in claims 9 and 10 (claim 10 depending from claim 9).

Appellants' respectfully submit that this new allegation by the Office is technically incorrect. The metallurgically acceptable particulate material of claim 9 is "capable of providing a cooling effect", as recited in claim 1. As recognized by the presently applied prior art, particulate coal is used to increase the heat of combustion, not to provide a cooling effect. Therefore, a disclosure of introducing particulate coal does not read on introducing the particulate material in fine particulate form capable of providing a cooling effect, as recited in claim 9 as depending from claim 1. Appellants respectfully maintain that the Office has failed to state a prima facie case of obviousness with regard to claims 9 and 10.

Dependent Claim 14

At page 12 of the Examiner's Answer, the Office addresses Appellants' arguments regarding the rejection of dependent claim 14. At page 15 of Appellants' Brief, Appellants once again expressed confusion, this time regarding the rejection of claim 14, stating that the citations provided by the Office in the rejection of claim 14 do not teach or suggest the features of claim 14, namely that "the second supersonic gas jet is formed of burning gases." In the Examiner's

Answer, the Office newly cites the Abstract of Schlichting as teaching "a process for melting iron ore and /or [sic] refining molten oxygen and a carbonaceous fuel . . ., which allege the 'burning gases' of the instant claim."

However, the Abstract of Schlichting states that "[t]he interposition of the inert gas stream between the coal and oxygen streams prevents the volatile matter in the coal from combusting before it reaches the slag layer." Therefore, the Abstract of Schlichting teaches against a gas jet formed of burning gases, the opposite of that which is recited in claim 14. Appellants respectfully maintain that the Office has failed to state a prima facie case of obviousness with regard to claim 14.

B. Claims 15-18

Appellants respectfully submit that the Office has failed to respond in substance to Appellants' arguments regarding the rejection of dependent claims 15-18. Specifically, responses to Appellants' argument found in the Examiner's Answer do not discuss Fritz at all. Appellants therefore respectfully submit that the Office has failed to establish a prima facie case of obviousness with regard to claims 15-18.

C. Claim 8

Claim 8 has been newly rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlichting, in view of Edlinger, and further in view of Anderson. Specifically, the Office has alleged, at pages 7-8 of the Examiner's Answer, that Anderson "teaches the technique is applied to ferromanganese refine [sic] furnace."

Claim 8, which depends from claim 1, recites that "the ferroalloy is ferromanganese and the metallurgically acceptable particulate material is an oxide of manganese." The Office has merely alleged that Anderson teaches a ferromanganese refining furnace, and has failed to allege that Anderson, or any other of the applied references, teach or suggest utilizing an oxide of manganese as the particulate material, as recited by claim 8. Appellants' therefore respectfully submit that the Office has failed to state a prima facie case of obviousness with regard to claim 8.

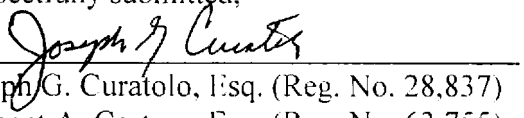
Further, Anderson does not disclose injecting a particulate material: it is merely concerned with injecting gases into an "injection volume" (Abstract). Thus, Anderson does not contemplate injecting a particulate material into the injection volume at all. Therefore, Schlichting, Edlinger and Anderson in combination do not teach or suggest all of the features of claim 8, namely injecting an oxide of manganese into a ferromanganese alloy. *See* MPEP § 2143.03 (" 'All words in a claim must be considered in judging the patentability of that claim against the prior art.' *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).").

The deficiencies with regard to the combination of Schlichting and Edlinger have been discussed in detail in Appellants' Brief. The addition of Anderson does nothing to cure these deficiencies. Therefore, Appellants respectfully request that the 35 U.S.C. § 103(a) rejection of claim 8 be reversed.

Conclusion

Appellants submit that the remarks presented in Appellants' Brief under 37 C.F.R. § 41.37, as well as the remarks presented hereinabove, address and rebut all existing allegations concerning the 35 U.S.C. § 103 rejections of claims 1-21. Appellants respectfully request that the Board reverse the 35 U.S.C. § 103 rejection of these claims. Appellants further respectfully request that the Board reverse the Final Office Action in this case and require the Office to indicate the allowability of the claims 1-21 over the art of record.

Respectfully submitted,



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