

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHAN M. GUNTHER

Appeal No. 1998-1783
Application No. 08/566,681¹

ON BRIEF

Before MEISTER, STAAB, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 5 and 6, which are all of the claims pending in this application.

We REVERSE.

¹ Application for patent filed December 4, 1995.

BACKGROUND

The appellant's invention relates to a process of forming an in-situ piling. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the appellant's brief.

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

Reed et al. (Reed)	4,659,259	Apr. 21,
1987		

Claims 1, 5 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Reed.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejection, we make reference to the examiner's answer (Paper No. 11, mailed December 22, 1997) for the examiner's complete reasoning in support of the rejection, and to the appellant's brief (Paper No. 10, filed November 11, 1997) for the appellant's arguments thereagainst.

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OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1, 5 and 6 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references

before him to make the proposed combination or other modification. See In re Lintner, 9 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

With this as background, we analyze the prior art applied by the examiner in the rejection of the claims on appeal.

Reed discloses a method and device for properly mixing stabilizing chemicals into earthen formations. As shown in Figure 4, a helical blade of one or more convolutions is attached to a hollow torque tube and rotated down into the soil. As the device is rotated through the soil to be stabilized, chemicals are pumped down the torque tube, out the device, and then mixed into a soil column by the rotating

action of the device. Specifically, Reed's invention is particularly applicable as a method which creates a disturbed column in a quick clay formation and then infuses and properly mixes a stabilizing chemical, such as hydroxy-aluminum, into the disturbed column in order to stabilize the quick clay.

Reed teaches (column 4, lines 44-52) that

[w]hen stabilizing some clay formations with lime, the chemical reaction is almost immediate. The lime must be infused on the upward travel since once the lime is mixed, the clay quickly hardens.

Optionally a pressure of 15-20 psi of water or preferably air may be applied to the torque tube 12 (and the exit ports 18, 20, & 22) to prevent intrusion of soil while drilling.

Reed also teaches (column 4, lines 57-61) that

[t]he mixing device of the present invention may accommodate dry chemicals by pumping those chemicals in an air stream down the torque tube 12 out the exit ports 18, 20, & 22 and into the formation 30.

After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Based on our analysis and review of Reed and claim 1, it is our opinion that one difference is the limitation in step c of claim 1 that

while rotating said augur, removing said augur from the soil, while injecting dry lime and dry cement into said soil in amounts to form said stoichiometric mixture.

With respect to the rejection of claim 1, the examiner determined (answer, p. 4) that

Reed et al further teach that it is old and well known in the art to inject a dry lime and cement into soil as an augur is being reversed rotated to remove it from the soil. See Col. 4, lines 55-64. While Reed et al does not indicate the amount of chemicals or water which is being added to the soil for forming an in-situ piling, it is obvious that only the amount necessary for forming the piling would be injected or else a stable or load supporting piling would not be obtained. Therefore, it is the examiner [sic] position that one skilled in the art would know the proper amount of chemicals to inject into the soil to obtain a stoichiometric mixture, i.e., a stoichiometric mixture is defined as mixing a [sic] the proper amount of chemicals to achieve a desired reaction.

The appellant's argue (brief, p. 6) that Reed does not show or suggest the provision of water in amounts which will react stoichiometrically with injected lime and cement as set forth in claim 1. We agree. Specifically, we fail to find any teaching or suggestion in Reed of injecting dry lime and dry **cement** into the soil as recited in step c of claim 1. Thus, it is our determination that the examiner's conclusion that the claimed subject matter was obvious is not supported by evidence that would have led an artisan to arrive at the claimed invention. Accordingly, the decision of the examiner

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to reject claim 1, and claims 5 and 6 dependent thereon, under
35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 5 and 6 under 35 U.S.C. § 103 is reversed.

REVERSED

JAMES M. MEISTER)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
LAWRENCE J. STAAB)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
JEFFREY V. NASE)	
Administrative Patent Judge)	

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APPEAL NO. 1998-1783 - JUDGE NASE
APPLICATION NO. 08/566,681

APJ NASE

APJ STAAB

APJ MEISTER

DECISION: **REVERSED**

Prepared By: Gloria Henderson

DRAFT TYPED: 10 Feb 99

FINAL TYPED: