

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.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

Appeal No. 2005-0901
Application No. 10/182,886

ON BRIEF

Before CAROFF, KIMLIN and PAWLIKOWSKI, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-3, 12, 15 and 21. Claims 1 and 21 are illustrative:

1. A soil manipulating tool for manipulating soil, including;
a soil penetrating portion comprising a helical or spiral member;

the helical or spiral member having an inner surface defining a substantially cylindrical cavity in which a plug of soil can locate, the cavity extending substantially the entire length of the soil penetrating portion; and

the helical or spiral configuration of the soil penetrating portion having a substantially constant amplitude along the soil

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penetrating portion and the soil penetrating portion having a tip which terminates on the constant amplitude without extending into the cavity,

said helical or spiral member being a free-standing, unsupported member.

21. A soil manipulating tool for manipulating soil, including:

a soil penetrating portion comprising a helical or spiral member;

the helical or spiral member having an inner surface defining a substantially cylindrical cavity in which plug of soil can locate, the cavity extending substantially the entire length of the soil penetrating portion, said helical or spiral member being a free-standing, unsupported member; and

wherein the helical or spiral member has a pitch or wavelength at a portion of the helical or spiral member which is greater than the remainder of the pitch or wavelength of the helical or spiral member so as to create a spring effect at the portion of greater pitch or wavelength.

The examiner relies upon the following references in the rejections of the appealed claims:

Bracewell	4,942,932	Jul. 24, 1990
Reinhardt	5,454,435	Oct. 3, 1995

Appellant's claimed invention is directed to a soil manipulating tool comprising a helical or spiral member having an inner surface that defines a substantially cylindrical cavity in which a plug of soil can locate. Claim 1 recites that the soil penetrating portion of the tool has a tip which terminates on the constant amplitude of the helical configuration without extending into the cavity, while claim 21 recites that the helical member

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has a pitch or wavelength at a portion of the member which is greater than the pitch or wavelength at the remainder of the member. The portions of the member having a different pitch or wavelength create a spring effect at the portion having the greater pitch or wavelength. According to appellant, the cylindrical cavity of the helical member "enables the tool to be wound into soil and pulled directly out of the soil so a plug of soil is located within the cavity" (page 2 of principal brief, second paragraph). Appellant also relates that "when used to aerate soil around a small seedling or the like, the tool can be wound into the soil so that it extends about the root structure of the seedling and does not damage the seedling as the tool is wound into the soil" (id.).

Appealed claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Reinhardt. Claims 2, 3, 12, 15 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reinhardt in view of Bracewell.

We have thoroughly reviewed the respective positions advanced by appellant and the examiner. In so doing, we find that the examiner's rejections are without the requisite factual support. Accordingly, we will not sustain the examiner's rejections.

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We consider first the examiner's rejection of claim 1 under § 102 over Reinhardt. Although Reinhardt, like appellant, discloses a soil manipulating tool comprising a helical or spiral member, we agree with appellant that the tool of Reinhardt fails to comprise two of the features recited in claim 1. In order to support a rejection under § 102, a reference must clearly describe all the features of the claimed invention. In the present case, we agree with appellant that Reinhardt does not clearly describe a helical member having an inner surface defining a substantially cylindrical cavity in which a plug of soil can locate. The narrative of Reinhardt fails to describe such a feature, and it is not clear from the figures of Reinhardt that the windings of the tool are not extremely tight and define no cavity at all. The examiner has not explained how the diameter D_2 of the tool's shaft necessarily requires a cylindrical cavity of the type claimed.

We also concur with appellant that Figure 3 of Reinhardt, relied upon by the examiner, fails to show the claimed tip of the helical member which terminates on the constant amplitude without extending into the cavity. As explained by appellant at page 2 of the Reply Brief, "when a straight line is drawn at the constant amplitude [on Figure 3], the tip 20 is short of reaching

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the line." Also, Reinhardt provides no teaching that the tip of the helical member terminates on the constant amplitude without extending into the cavity of the member.

Accordingly, it cannot be said that Reinhardt describes the element of claim 1 within the meaning of § 102.

As for the § 103 rejection, Bracewell does not cure the deficiencies of Reinhardt discussed above. In addition, we concur with appellant that Bracewell does not evidence the obviousness of modifying the tool of Reinhardt such that it has a means for increasing the size of the bore created by the soil penetrating portion of the tool (claim 12) or has portions having a greater pitch or wavelength to create a spring effect. While the auger drilling system of Bracewell has portions of different pitch or wavelength to stabilize the bore wall by compressing the tailings against the bore wall, we agree with appellant that the examiner has not provided any satisfactory explanation how such a compression would necessarily result in an increasing of the size of the bore. Furthermore, as urged by appellant, the flights 4 of Bracewell are welded to the stem 6, and the examiner has not set forth how such a modification would have been implemented in the tool of Reinhardt. Also, as submitted by appellant "it would appear that such springing or oscillating movement is totally

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contrary to the teaching in Bracewell and would result in Bracewell not operating in the manner described" (page 4 of Reply Brief, last paragraph). Since the flights 4 of Bracewell are welded to central stem 6, and the tool of Reinhardt has no central stem, the examiner's rejection is based more upon what one of ordinary skill in the art could have done rather than what the teachings of the cited art would have suggested to one of ordinary skill in the art.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

MARC L. CAROFF)	
Administrative Patent Judge)	
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EDWARD C. KIMLIN)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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BEVERLY PAWLIKOWSKI)	
Administrative Patent Judge)	

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Fish & Richardson PC
225 Franklin St.
Boston, MA 02110