

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(2) is not binding precedent of the Board.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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEROLD MUELLER, PETER WOLF, and HEINZ VEITINGER

Appeal No. 2000-0105
Application 08/573,247

ON BRIEF

Before CALVERT, COHEN, and FRANKFORT, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 23 to 25, all the claims remaining in the application.

The appealed claims are drawn to a method of tightening a screw connection, using an impact screwdriver; they differ in

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their definition of the "at least one characteristic variable," which is defined in claim 23 as "a drop of speed of said variable-speed electric drive motor per time during or after an impulse emission," in claim 24 as

a profile of an induced armature voltage of the variable speed electric drive motor when no current is flowing through the variable speed electric drive motor," and in claim 25 as "a profile of a current of said variable-speed electric drive motor.

A copy of these claims is included in an appendix to appellants' brief,¹ except that this copy does not include the changes made by the amendment filed on October 1, 1998, entry of which was approved by the examiner per paragraph 2 of Paper No. 24 (November 5, 1998).²

The references applied in the final rejection are:

Maruyama et al. (Maruyama)	5,181,575	Jan. 26,
1993		
Anders et al. (Anders)	5,439,063	Aug.
8, 1995		

¹ Any references herein to appellants' brief are to the brief filed on December 29, 1998 (Paper No. 27).

² In reviewing the claims, we note that "a tightening process" (two occurrences) and "a desired value" in, for example, lines 16 and 17 of claim 23, are not related back to these terms as previously recited. In any subsequent prosecution, "a" should be changed to "the" or "said".

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Claims 23 to 25 stand finally rejected on the following grounds:

(1) Unpatentable for failure to comply with 35 U.S.C. § 112, second paragraph;

(2) Unpatentable over Anders in view of Maruyama, under 35 U.S.C.

§ 103(a).

35 U.S.C. § 112 Rejection

The bases for this rejection are stated on pages 4 and 5 of the examiner's answer as follows:

In general, the claims are replete with instances of unclear and indefinite claim language. For instance, in claim 23, applicants claim determining at least one characteristic variable from a group consisting of two different variables, yet at the end of the claim, applicants claim a specific type of variable. This results in indefinite claim language wherein it is not clear what applicant intends to be the scope of patent protection desired. This same problem is seen in claims 24 and 25, all instances of which must be corrected. Further, on lines 3 and 4, it is not clear what is meant by "a moment producing impulses". Problems similar to those cited above also occur in claims 24 and 25, all instances of which must be corrected.

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Applicant should take note that the above are just examples of 35 U.S.C. § 112 problems in the claims, the number of which is too great to list individually and all of which must be corrected.

Also, in claim 23, it is not clear what is meant by "a drop of speed of said. . . motor per time during or after an impulse emission".

In claim 24, it is not clear what is meant by "a profile of an induced armature voltage" nor is it clear how a profile of a voltage can be a variable.

In claim 25, it is not clear what is meant by "a profile of a current" nor is it clear how a profile of a current can be a variable.

First, with regard to the underlined portion of the above-quoted excerpt from the examiner's answer, we do not consider that such portion complies with 37 CFR 1.113(b), which requires that in the final rejection the examiner shall "clearly stat[e] the reasons in support" of the applicable grounds of rejection. See also MPEP § 706.07, "Statement of Grounds." Stating that all "§ 112 problems" in the claims "must be corrected," without specifying what they are, is not a clear statement of the reasons in support of the rejection, but rather requires the applicants to speculate as to what problems the examiner has in mind, and then to respond

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appropriately, running the risk that they may fail to correct all of these problems. Likewise, it would be unfair to appellants for this Board to affirm a rejection under 35 U.S.C. § 112, second paragraph, based on a reason which the examiner did not specify in a prior Office action. We will therefore only consider the specific reasons set forth in the examiner's answer.

In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975), defines the question of compliance with the second paragraph of 35 U.S.C. § 112 as:

whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bounds of the claimed subject matter are distinct.

See also In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994) ("The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope"). Applying these criterion to the first reason specified by the examiner, i.e., claiming a characteristic variable selected from a group and then claiming a specific

characteristic variable, we do not consider that one of ordinary skill would be unable to determine the bounds of scope of the claims. While the language is cumbersome in form, we believe it is clear that each claim is limited to the specific characteristic variable recited at the end of the claim, or, as appellants argue on page 8 of their brief, "[each] claim provides for a possibility of selection of at least one [characteristic] variable from two different variables and at the end specifies which one is selected."

The expression "a moment producing impulses" in lines 3 and 4 of each claim is an obvious grammatical error and does not render the claims indefinite.

In the last three paragraphs of the above quotation from the examiner's answer, the examiner indicates that all three of the definitions of the characteristic variable at the end of each claim are unclear. We do not agree with the examiner as to claims 23 and 24. Reading the language of claim 23 in light of the specification, it is evident from page 5 and Figs. 2a and 2d that "a drop of speed . . . an impulse emission" refers to the rate of drop in motor speed, a_n/a_t , at the impulses (1, 2, 3 and 4 in Fig. 2d). Likewise, in claim

24, "a profile of an induced armature voltage . . . electric drive motor" refers to the voltage profile (as at " t_{ind} " in Fig. 2c) when no current is flowing through the motor, as shown in Fig. 2b; this voltage "profile" varies as shown for the three different " t_{ind} " time periods of Fig. 2c.

However, we do not consider claim 25's expression "a profile of a current of said variable-speed electric drive motor" to be definite. In the first place, this expression does not define which current of the motor is being claimed, nor does it define when the profile of the current is to be measured (unlike the profile recited in claim 24). Secondly, this expression becomes even more indefinite if one attempts to read it in light of the specification, because as shown in Fig. 2b, the motor current I_{mot} is zero during the impulses, and thus has no "profile" at those times. On page 6 of the specification, lines 6 to 13, appellants state that emitted moment M_{ab} can be calculated from I_{mot} , but it is not clear how this can be done when the motor current is zero during the time that there is an emitted moment (compare Figs. 2b and 2d).

The rejection of claims 23 to 25 under 35 U.S.C. § 112,

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second paragraph, will therefore be sustained as to claim 25,
but not as to claims 23 and 24.

35 U.S.C. § 103 Rejection

We begin our discussion of this rejection by noting, as do appellants, that although claims 23 to 25 all call for "an impact screwdriver having a variable speed electric drive motor," the tools disclosed by Anders and Maruyama both have motors driven by compressed air. The examiner, however, takes the position that:

The examiner agrees with appellant's [sic] remarks that the [motors disclosed by the] references are not electric-drive motors. However, Maruyama et al. clearly teach forming the spindle of the motor from a material having a magnetic strictive effect. This magnetic spindle has the effect of an [sic] dynamo-electric machine when driven in the presence of the coils opposed to the spindle. The spindle/coil combination of Maruyama et al. therefore exhibits the characteristics of an electric motor when in operation. Since the motor of Maruyama et al. clearly operates in a similar manner as appellant's [sic] and since the variables used by [sic] appellant are the same variables used by Maruyama et al. (e.g. motor speed, motor generate[d] current and motor generated voltage), then whether the motor is electric powered or pressure-air operated is clearly a matter of design choice, wherein no stated problem is solved by using an electric motor versus the air-powered motor that exhibits electrical characteristics as taught by Maruyama. There is ample motivation to combine references in that Maruyama seeks to control torque in a more efficient manner.

We do not consider the examiner's arguments to be well

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taken. Even if the spindle/coil 16, 17 combination of Maruyama might be considered to be an electric motor, which we doubt, it is not the drive motor which drives the impact mechanism of the tool, as recited in the claims. The examiner's further position, that it would have been obvious to substitute an electric motor for the air-powered motor of the reference(s), is not supported by any evidence in the record, but appears to be based upon improper hindsight gleaned from appellants' disclosure.

Cf. In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Moreover, even if an electric drive motor were substituted for the references' air-powered motor, the claimed subject matter would still not be taught or suggested because the references disclose controlling the power to the drive motor in response to the torque detected by separate torque sensors (Anders col. 2, line 67, to col. 3, line 2; Maruyama col. 4, line 59, to col. 5, line 35), rather than in response to any characteristic variables of the drive motor per se, as recited in claims 23 to 25.

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The rejection of claims 23 to 25 under 35 U.S.C. § 103(a) accordingly, will not be sustained.

Conclusion

The examiner's decision (1) to reject claims 23 to 25 under 35 U.S.C. § 112, second paragraph, is reversed as to claims 23 and 24, and sustained as to claim 25, and (2) to reject claims 23 to 25 under 35 U.S.C. § 103(a) is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

PATENT

IAN A. CALVERT)	
Administrative Patent Judge)	
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