

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. 45

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GABOR DEVENYI and KEVIN WAGNER

Appeal No. 2002-0588
Application No. 08/566,206

ON BRIEF

Before HAIRSTON, DIXON, and GROSS, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-6, 9, 19-21, 23, 24, 27 and 29. Claims 7, 11-16, 18, and 25 are withdrawn as non-elected claims. Claims 8, 10, 17, 22, 26 and 28 are cancelled.

We REVERSE.

Appellants' invention relates to an electrically driven bistable mechanical actuator. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. An actuator, comprising:
an annular electromagnet having a bore therethrough with a bore axis;

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a ferromagnetic plunger disposed within the bore and slidable therein parallel to the bore axis, the plunger having a first end face and a second end face;

a first permanent magnet positioned outside of the bore and in facing relation to the first end face of the plunger along the bore axis, the first permanent magnet attracting the plunger thereto;

a second permanent magnet positioned outside of the bore and in facing relation to the second end face of the plunger along the bore axis, the second permanent magnet attracting the plunger thereto,

the plunger being slidable in the bore between a first position with the first end face adjacent to the first permanent magnet and a second position with the second end face adjacent to the second permanent magnet; and

a bipolar electrical DC power supply operatively connected to the electromagnet through a sense switch, whereby a polarity of the electromagnet may be reversed by operation of the sense switch,

the plunger being retained adjacent to one of the permanent magnets when the electromagnet is not energized.

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

Knutson	4,127,835	Nov. 28, 1978
Ueda et al. (Ueda)	4,288,771	Sep. 8, 1981
Matsumoto et al. (Matsumoto)	4,422,060	Dec. 20, 1983
Yamamoto	4,755,782	Jul. 5, 1988
Philips, N. V. (Italian patent)	633786	Feb. 10, 1962

Claims 1, 2, 4 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Knutson in view of Philips. Claims 3 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Knutson and Philips further in view of Matsumoto. Claim 9

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stands rejected under 35 U.S.C. § 103 as being unpatentable over Knutson and Philips further in view of Ueda. Claims 19-21, 24, and 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Yamamoto in view of Philips further in view of Knutson. Claim 23 stands rejected under 35 U.S.C. § 103 as being unpatentable over Yamamoto in view of Philips further in view of Knutson and Matsumoto. Claim 27 stands rejected under 35 U.S.C. § 103 as being unpatentable over Yamamoto in view of Philips further in view of Knutson in view of Ueda.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 42, mailed Jul. 13, 2001) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 39, filed Mar. 8, 2001) and reply brief (Paper No. 43, filed Sep. 19, 2001) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Appellants argue that Knutson teaches "directly away" from the invention (brief at page 4) and Philips "teaches away" from a bipolar supply (brief at page 6). We disagree

with appellants that any of the prior art references specifically teaches away from the claimed invention, but do agree that the references teach various other means and methodologies different than that recited in appellants' independent claims 1 and 19.

Appellants argue that the prior art references must teach every limitation recited in independent claim 1. Appellants argue that Knutson does not teach “a first permanent magnet positioned outside of the bore and in facing relation to the first end face of the plunger along the bore axis, the first permanent magnet attracting the plunger thereto” and “a second permanent magnet positioned outside of the bore and in facing relation to the second end face of the plunger along the bore axis, the second permanent magnet attracting the plunger thereto” wherein the magnets of Knutson are annular and do not face the end faces of the sliding armature. (See brief at page 5.) We agree with appellants, but find that Philips teaches the magnets facing the plunger.

Appellants argue that claim 1 recites “a bipolar electrical DC power supply operatively connected to the electromagnet through a sense switch, whereby a polarity of the electromagnet may be reversed by operation of the sense switch, the plunger being retained adjacent to one of the permanent magnets when the electromagnet is not energized” and Knutson teaches that the armature is centered when the power is turned off. (See brief at page 5.) We agree with appellants. From our review, we find that Philips teaches that the body/plunger is maintained in position by magnetic adhesion, but that Philips teaches the use of pulses of identical polarity to move the

body from one position to another position. (See brief at page 6 and Philips Figure 2 and translation at page 5.)

Appellants argue that they traverse the examiner's attempt to modify the teachings of Knutson without any basis in the reference or anywhere else for such a modification. Appellants maintain that the asserted modification is an attempt by the examiner to perform hindsight reconstruction of the claimed invention. (See brief at page 6.) Appellants argue that the examiner has set forth no objective evidence/basis for combining the teachings of the references in the manner used in the rejection where the helpful portions were selected and the unhelpful portions were ignored. (See brief at page 9.) We agree with appellants that the examiner has found various parts to the claimed invention in the two prior art references and has attempted to pick and choose the needed portions of the references. (See brief at pages 6-9.) Appellants argue that the examiner stated that the motivation for combining the teachings of the prior art references is that the references are in the "same field of endeavor." Appellants further argue that the examiner does not address the argument concerning the propriety of combining analogous art references. Appellants argue that the examiner has provided no objective basis for selecting from each reference those features which aid in the forming of a facsimile of the invention. (See brief at page 9.) We agree with appellants that the examiner's rejection is riddled with bald assertions that structures are an "equivalent structure known in the art" and "the armature inherently results in an

increased attraction force,” yet the examiner provides no analysis of why it would have been obvious to one of ordinary skill in the art to desire increased attraction in view of the teaching or the use of springs to center the plunger in Knutson. In response to appellants’ arguments, the examiner merely states “that by removal of the springs, an obvious modification when deemed necessary given a particular application, Knutson would also function as a bistable actuator. The placement of the permanent magnets for impact by the armature, as shown by Philips, is a concept readily transferable to Knutson and Yamamoto.” (See answer at page 9.) While we MAY agree with the examiner if a “particular application” was taught as desirable in the prior art, we find no such teaching disclosed or suggested and the examiner has provided no convincing line of reasoning as to why it would have been obvious to one of ordinary skill in the art at the time of the invention. Therefore, we are left with the examiner’s bald assertions with no evidence to support the conclusion of obviousness. Therefore, we cannot sustain the rejection of independent claim 1 and its dependent claims 2, 4, 6 and 9.

With respect to claims 3 and 5, the examiner adds the teachings of Matsumoto for limited purposes and does not provide any further motivation to combine the base teachings of Knutson and Philips. Therefore, Matsumoto does not remedy the noted deficiencies, and we cannot sustain the rejection of claims 3 and 5.

With respect to claim 9, the examiner adds the teachings of Ueda for limited purposes and does not provide any further motivation to combine the base teachings of

Knutson and Philips. Additionally, the examiner merely addresses the use of a capacitor as shown in Figure 1 of Ueda, but does not address the remainder of the claim limitations as a whole. Therefore, Ueda does not remedy the noted deficiencies, and we cannot sustain the rejection of claim 9.

With respect to independent claim 19, the examiner adds the teachings of Yamamoto as the primary reference to the combination of Knutson and Philips. Again, the examiner sets forth the same basic argument for the combination of the teachings of these three references. (See answer at pages 6 and 7.) Again, we do not find that the examiner has established a motivation to combine the various teachings of the three references to achieve the claimed invention. Therefore, we cannot sustain the rejection of independent claim 19 and its dependent claims 20, 21, 24 and 29.

Similarly, the teachings of Matsumoto and Ueda do not remedy the deficiencies in the base combination. Therefore, we cannot sustain the rejection of claims 23 and 27.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-6, 9, 19-21, 23, 24, 27, and 29 under 35 U.S.C. § 103(a) is reversed.

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REVERSED

KENNETH W. HAIRSTON
Administrative Patent Judge

JOSEPH L. DIXON
Administrative Patent Judge

ANITA PELLMAN GROSS
Administrative Patent Judge

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