

Appeal No. 2006-2116
Application No. 08/879,517

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Reissue of U.S. Patent 5,425,294¹

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Appeal No. 2006-2116
Reissue Application No. 08/879,517

Oral Hearing: September 12, 2006

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Before McQUADE, GRON, and MEDLEY, Administrative Patent Judges.
GRON, Administrative Patent Judge.

DECISION ON APPEAL

¹ U.S. Patent 5,425,294 issued June 20, 1995, to Shigeharu Ushiwata and Ryuichi Imamura, from U.S. Application 08/070,799, filed June 3, 1993.

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Background

This is an appeal under 35 U.S.C. § 134 from an examiner's rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 of Reissue Application 08/879,517, filed June 20, 1997. We are asked to review:²

(1) a rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 103(a) as being unpatentable for obviousness in view of "Prior Art" Figure 6, "Prior Art" Figure 7, and the "Description of the Prior Art" at column 1, lines 11-33, in Appellant's own U.S. Patent 5,425,294; and the prior art disclosures of George W. Johnson (Johnson), U.S. Patent 4,574,670, issued March 11, 1986; Gotthold Haffner (Haffner), DE 3,640,784, published March 31, 1988; M. Langworthy (Langworthy), U.S. 1,417,669, issued May 30, 1922; and T. G. Ambrosio, et al. (Ambrosio), U.S. Patent 3,013,592, issued December 19, 1961;

² We are not asked to review the examiner's standing rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 251. The examiner has stated that an appropriate supplemental reissue oath/declaration under 37 CFR § 1.175(b)(1) must be received before this reissue application is allowed (Examiner's Answer, page 3 (EA 3)) and presumes that any and all defects in the existing reissue oath/declaration filed under 37 CFR § 1.175(b)(1) will be corrected.

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(2) a rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 103(a) as being unpatentable for obviousness in view of the combined teachings of Otto Bergler (Bergler), U.S. Patent 4,531,441, issued July 30, 1985; Katsuyasu Ito et al. (Ito), U.S. Patent 5,357,834, which issued October 25, 1994, from U.S. Application 08/063,289, filed May 18, 1993; Johnson; Haffner; Langworthy; and Ambrosio; and

(3) a rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 103(a) as being unpatentable for obviousness in
10 view of the combined teachings of Ito; Johnson; Haffner;
Langworthy; and Ambrosio.³

The patentability of Claims 2, 3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 103(a) stands or falls with the patentability of Claim 1. Appellant states (AB 3):

For the convenience of the Board, Appellant will argue the patentability of independent claim 1. The other claims stand or fall together with claim 1.

³ The examiner refers to a rejection of Claim 37 under 35 U.S.C. § 103(a) for obviousness in view of the prior art applied to Claim 1 and "Brickner et al. '902" as a "Non-Issue" (EA 10). Since the examiner does not completely identify "Brickner et al. '902" in his answer and appellant acknowledges that Claim 37 stands or falls with the patentability of Claim 1, we shall not consider the patentability of Claim 37 separately.

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While appellant criticizes the examiner for his "piece meal" citation and application of the pertinent prior art and his restatements and modifications of existing rejections under 35 U.S.C. § 103 without reopening prosecution, apparently appellant does not intend to petition its procedural grievances or otherwise delay our review of the merits of the examiner's latest restatement of the rejections of its claims (Reply Brief (RB), pp. 2-6). Accordingly, we proceed to review the examiner's rejections of the invention appellant claims, as represented by Claim 1, under 35 U.S.C. § 103 in view of "applicant's admitted prior art" (hereafter AAPA) or Ito, and the combined teachings of Johnson; Haffner; Langworthy; and Ambrosio.

The information disclosed, and issues relating to rejections on appeal based on information disclosed, by certain prior art refernces have not been fully analyzed, discussed and/or developed as a result of the haphazard prosecution and briefing in this case. For example, it is not clear from this record the extent to which the examiner continues to rely on the prior art teachings of Langworthy and Ambrosio. Nor has the examiner expressly denied appellant's argument that Haffner is nonanalogous art. The examiner's belated citation and application of Haffner has limited

his, and hinders our, analysis of the teachings and pertinence thereof. Moreover, Bergler's teachings appear to be cumulative at best of all that the AAPA and Ito disclose. In short, the term "desk-top cutting machine" has not been interpreted, the full scope and content of the claimed subject matter has not been determined, the knowledge and skill in the art has not been discussed adequately, and the differences between all the prior art cutting machines and the cutting machines appellant claims have not been clearly identified. Nevertheless, at appellant's urging, we shall consider whether the applied prior art is analogous, compare the claimed subject matter to the prior art teachings, look at the pertinent prior art as a whole, and review the rejections before us to the extent we are able to do so based on the record before us.

We find that persons having ordinary skill in the art would have considered both Langworthy and Ambrosio to be pertinent to the subject matter claimed and thus analogous prior art. Both patents teach motor-driven saws with parallel motor and blade shafts which enable straight, mitre, bevel and compound cutting. We are not convinced by appellant's arguments that the motor/saw designs these patents describe are nonanalogous to the desk-top

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cutting machines appellant claims simply because their sizes and specific applications differ. Aside from the want or kind of respective supports, the motor/saw designs utilized by the cutting machine appellant claims and those described by the cited prior art all have a basic parallel motor shaft/blade shaft configuration for straight, mitre, bevel and compound cutting.

Langworthy explicitly states:

10 I have utilized a well known or standard type of electric motor 1 with its driving shaft 2 protruding therefrom, and the saw 3 is of the disk type, of which various sizes may be used to adapt it to different conditions.

(Langworthy, p. 1, l. 71-76);

The saw may be of various sizes, and the guard is also made in various sizes complementary to the saw, and these elements may be changed at will, to adapt them for different uses.

(Langworthy, p. 2, l. 49-53); and

20 The arm may readily be manipulated to attain cuts at various angles and depths for cranial and other cuts, and the laterally disposed saw affords an instrument which may be manipulated with facility and accuracy in the operations.

(Langworthy, p. 2, l. 69-74).

Representative Claim 1 on appeal reads (AB 38, Claims Appendix):

Claim 1

1. A desk-top cutting machine, comprising:

a base on which a workpiece to be cut is supported,
said base including a top surface:

a turntable rotatably disposed in said base and
including a top surface;

10 a holder supported by said turntable for tilting
transversely in opposite directions about a zero-tilt angle
position;

a circular saw blade;

a saw shaft located above said holder for supporting
said saw so that said saw is swung up and down relative to
said base, about a pivot shaft;

20 a circular saw assembly having a motor covered by a
housing;

a motor shaft of said motor being disposed in parallel
with and above said saw shaft;

30 transmission means through which said motor shaft is
connected to said saw shaft so that an axis of said motor
shaft is shifted from an axis of said saw shaft by a
distance which is greater than or equal to the radius of
said circular saw blade, wherein when said holder is tilted
in either of said opposite directions by an angle greater
than or equal to 45 degrees with respect to the zero-tilt
angle position, said housing does not contact said top
surface of said base.

In re Zletz, 893 F.2d 319, 13 USPQ2d 1320 (Fed Cir. 1989),
teaches at 321, 13 USPQ2d at 1322:

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During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art.

We find no explicit definition of the term "desk-top cutting machine" in appellant's supporting specification. Nevertheless, it is sufficient for purposes of this appeal that we are able to relate the "desk-top cutting machine[s]" appellant claims to the cutting machines described by the prior art. Based on our consideration of appellant's specification and all the other evidence of record, we conclude that persons having ordinary skill in the art at the pertinent time reasonably would have understood that the cutting machines described by Ito and depicted in acknowledged prior art Figures 6 and 7 of appellant's patent are "desk-top" cutting machines of the same basic type, size and utility as the "deck-top cutting machine[s]" appellant claims.

Moreover, we find that cutting machines encompassed by appellant's Claim 1 and those described by Ito, Johnson, Ambrosio and Japanese Laid-Open Utility Model Publication No. 63-49901/ Japanese Utility Model Application (OPI) No. 49901/88 (commonly cited as prior art pertaining to the particular problem with which

both appellant's patent and Ito are concerned (Ushiwata et al., U.S. Patent 5,425,294, col. 1, l. 35-36; Ito et al., U.S. Patent 5,357,834, col. 1, l. 18-19)), all pertain to the particular problem with which the inventor of the patented claims before us was concerned. The scope of the particular problem with which the inventor of the patented claims before us was concerned is broadly defined in the specification of appellant's U.S. Patent 5,425,294 at col. 1, l. 22-33, as follows (emphasis added):

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When a workpiece is normally cut by the tilted saw assembly . . . the angle of the desired tilt is usually 45 degrees. However, the end . . . of a motor housing . . . comes into contact with the top of [the] base . . . when the saw assembly . . . is tilted rightward by an angle of 20 to 30 degrees, as shown in FIG. 7. For that reason, the workpiece cannot be cut at 45 degrees. Therefore, to cut the workpiece, the saw assembly . . . is tilted leftward, the workpiece is cut at the left-hand end and then the workpiece is flipped around and cut at the right-hand end. This means that the efficiency of the cutting work is very low.

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To solve this problem

Appellant, Ito, Johnson, Ambrosio and Japanese Laid-Open Utility Model Publication No. 63-49901/Japanese Utility Model Application (OPI) No. 49901/88 cited in appellant's patent specification, all sought solutions to substantially the same problem, i.e., how to make compound angular cuts, including left and right 45 degree angular cuts, on a workpiece without flipping

the workpiece. To solve the problem, each of Johnson, Ambrosio and Langworthy describes a compound angle disk cutting apparatus comprising "a circular saw assembly having a motor covered by a housing" wherein the "motor shaft of said motor [is] disposed in parallel with and above the circular saw shaft" as required for the cutting machine of appellant's Claim 1. See Johnson's Figure 1, the composite of cutting member 19, motor 41, and drive train 43 with "+45⁰ capability of the cutting member positioning mechanism **17**" (Johnson, col. 5, l. 14-15; col. 7, l. 11-12);

10 Ambrosio's Figure 1, the composite of blade 10, blade shaft 31, motor means 11, motor shaft 32, and pulleys 29 and 30 relating to saws "for varying the angular position of the saw blade relative to the work" (Ambrosio, col. 1, l. 8-11); and Langworthy's Figure 1, the composite of disk-type saw 3, motor 1, and driving shaft 2 for "many different styles of incisions or cuts, with the instrument at various angles" (Langworthy, p. 1, l. 26-28).

We find that each of Ito, Johnson, Ambrosio and Langworthy is analogous prior art to appellant's claimed invention because each: (1) comes from the same field of endeavor, and/or (2) reasonably

20 pertains to the particular problem with which the inventor is involved. In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060

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(Fed. Cir. 1992); In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986).

Appellant would have us limit the field of endeavor to smaller "desk-top" cutting machines and limit the problem with which the applicants are concerned to difficulties encountered making compound angular cuts using smaller "desk-top" cutting machines. We find appellant's view of the full scope of prior art analogous to the claimed invention unreasonably restricted with regard to the sizes and shapes of composites comprising a saw, a saw motor, a transition means, a base for the workpiece, the situs of the workpiece, the workpiece itself, and problems related to their utility for compound angular cutting of a workpiece. In our view, persons skilled in the art would have considered the problem to which the claimed invention is directed with less regard for the sizes and shapes of the particular saw, saw motor, transition means, base for the workpiece, the location of the workpiece and the workpiece itself. Rather, we find prior art to be analogous to the full scope of the invention claimed when it reasonably pertains to the problem more broadly defined by appellant's own specification, i.e., how to make compound angular cuts, including left and right 45 degree angular cuts, on a workpiece without

flipping it. We find that Ito, Johnson, Ambrosio, and Langworthy all describe prior art cutting machines analogous to this broader problem.

We need not consider whether the cutting machines described by Bergler and Haffner are analogous to the invention appellant claims. We find their teachings less pertinent to the claimed invention than the teachings of Ito, Johnson, Ambrosio and Langworthy. Moreover, we find the disclosure of acknowledged prior art Figures 6 and 7 and Ito, combined with the teachings of
10 Johnson, Ambrosio and Langworthy, sufficient to support the examiner's rejection of the subject matter appellant claims for obviousness under 35 U.S.C. § 103 without application of, or reference to, the cumulative teachings of Bergler and/or Haffner.

Discussion

The examiner urges, and Appellant does not deny, that Figures 6 and 7 in appellant's patent specification (acknowledged Prior Art), and Figure 2 and the discussion thereof in Ito, describe every aspect of the "desk-top cutting machine" defined by appellant's Claim 1 but for limitations (a) and/or (b) below:

20 (a) a motor shaft of said motor being disposed in parallel with and above said saw shaft; and

(b) transmission means through which said motor shaft is connected to said saw shaft so that an axis of said motor shaft is shifted from an axis of said saw shaft by a distance which is greater than or equal to the radius of said circular saw blade, wherein when said holder is tilted in either of said opposite directions by an angle greater than or equal to 45 degrees with respect to the zero-tilt angle position, said housing does not contact said top surface of said base.

10 The motor shaft and saw shaft of the desk-top cutting machine labeled prior art and depicted in appellant's Figures 6 and 7 are extensions of the same shaft. Thus, the motor and saw blade shafts lie in a single plane. It would have been apparent to a person having ordinary skill in the art therefrom that the housing for the motor driving the motor shaft, depending on the sizes of the motor and its housing, likely would deny saw blade cuts 45 degrees to either side of zero-tilt unless the workpiece was turned around. The housing for the motor driving the motor shaft would abut the top surface of the workpiece base when the saw
20 blade attempts one of the two 45 degree cuts to either side of zero-tilt.

The motor shafts and the distinct saw blade shafts of the desk-top cutting machines encompassed by appellant's Claim 1 and described by Ito both were positioned to prevent the housing for the motor driving the motor shaft from ever abutting the top

surface of the workpiece base and denying saw blade cuts 45
degrees to either side of zero-tilt without turning the workpiece
around. The separate and distinct motor and saw blade shafts of
the desk-top cutting machines defined by appellant's Claim 1 and
described by Ito lie in separate planes. However, the separate
and distinct motor and saw blade shafts of the desk-top cutting
machines defined by appellant's Claim 1 lie in parallel planes and
are connected by linear "transmission means" (see Figures 1 and 4
of appellant's patent). The separate and distinct motor and saw
10 blade shafts of Ito's desk-top cutting machines do not lie in
parallel planes. Ito solved the problem of the motor housing
abutting the top surface of the workpiece base by positioning the
distinct motor and saw blade shafts at angles acutely oblique to
each other, i.e., in intersecting planes. At the points of
intersection, there Ito's separate and distinct shafts are
connected by an angular "transmission means" (see Figures 1 and 4
of appellant's patent).

What would a person having ordinary skill in the art have
learned from the combined teachings of Figures 6 and 7, Johnson,
20 Ambrosio and Langworthy? What would a person having ordinary
skill in the art have learned from the combined teachings of Ito,

Johnson, Ambrosio and Langworthy? First, we find that persons having ordinary skill in the art would have recognized from either the acknowledged prior art Figures 6 and 7 or Ito that the housing for the motor driving the motor shaft of a conventional miter saw with one common, linear motor-driving saw blade shaft likely would deny saw blade cuts 45 degrees to either side of zero-tilt unless the workpiece was turned around because the housing for the motor would abut the top surface of the workpiece base. Second, persons having ordinary skill in the art would have recognized that Ito's
10 solution to the recognized problem requires a special "bevel gear 39 having a chip angle of 45° and acting as a reduction gear is fixedly mounted on the spindle 33 at a position within the gear case 32" (Ito, col. 4, 31-33) and a "spur gear 42a . . . integrally formed with the motor shaft 42 and . . . positioned above the bevel gear 39 so as to engage the same" (Ito, col. 4, 1. 40-42). The inventors of appellant's claimed invention and Ito both appear to have recognized that, while positioning a motor shaft of a motor in parallel with a saw blade (perpendicular to the saw blade shaft) precluded obstruction caused by a motor
20 housing when a mitre saw unit is pivoted (Ito, col. 1, 17-31, citing Japanese Laid-Open Utility Model Publication No. 63-49901;

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and Ushiwata et al., U.S. Patent 5,425,294, col. 1, l. 34-49, citing the same Japanese Utility Model Application (OPI) No. 49901/88), that the solution to the problem at hand was expensive. The inventor of the invention presently claimed acknowledged that beveled gears are an "expensive means for motive power transmission" (Ushiwata et al., U.S. Patent 5,425,294, col. 1, l. 44-46). Ito disclosed that, when the motor shaft is positioned parallel to the saw blade, "the gear train must involve a number of parts and consequently becomes costly" (Ito, col. 1, l. 29-30).

10 Persons having ordinary skill in the art would have learned from Johnson that a cutting machine with the driving motor shaft positioned parallel to the saw blade shaft was capable of, and could be used for, multiple angle cutting at angles at least 45 degrees to either side of zero-tilt (1) without the driving motor housing abutting the workpiece base, and (2) without turning the workpiece around. See Johnson's composite driving motor 41, drive train 43, and cutting member 19 (Johnson, col. 5, l. 52-55). Johnson describes the "+45^o capability of the cutting member positioning mechanism 17" (Johnson, col. 5, l. 13-15; col. 7, 20 l. 9-12) associated with Johnson's composite. Whether or not persons having ordinary skill in the art would have understood

that the $\pm 45^\circ$ angle cutting capability of Johnson's saw blade 19 was enabled by the parallel positioning of the driving motor shaft of driving motor 41 to the shaft of cutting member 19 or by the relative size and/or configuration of the driving motor and its housing, the drive train and its housing, the cutting member and the workpiece base is immaterial. What is material is that persons having ordinary skill in the art would have understood from Johnson's teaching that the sizes and configuration of his composite driving motor 41, drive train 43, and cutting member 19 impart $\pm 45^\circ$ capability to the cutting member.

In that light we turn to Langworthy's disclosure. While Langworthy appears not to identify a workpiece base for the workpiece the surgical saw he describes was designed to cut, the workpiece Langworthy is concerned with is a living body and the workpiece base for the workpiece the surgical saw he describes was designed to cut is an operating table. We conclude that persons having ordinary skill in the art would have understood that a surgeon utilizing Langworthy's surgical saw would not have wanted to turn the living workpiece to make angular cuts to both sides of zero-tilt. Langworthy instructs (Langworthy, p. 1, 1. 26-35):

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By utilization of my invention many different styles of incisions or cuts, with the instrument at various angles, may be made, and the saw manipulated to penetrate to unusual depths.

The invention consists in certain novel combinations and arrangements of parts, involving the driving motor . . . and certain features of construction

10 And what were those novel combinations and arrangements of parts involving the driving motor and certain features of construction? Langworthy preferably "utilized a well known standard type of electric motor 1 with its driving shaft 2 protruding therefrom, and the saw 3 is of the disk type, of which various sizes may be used to adapt it to different conditions" (Langworthy, p. 1, l. 71-76). "The saw is operated from the motor and carried at the side of a tubular arm or casing 4" (Langworthy, p. 1, l. 76-78). As shown in
20 Langworthy's Figures 2 and 3, the motor shaft is disposed in parallel with and above said saw shaft; and the transmission means through which the motor shaft is connected to the saw shaft so that the axis of the motor shaft is shifted from an axis of said saw shaft by a distance which is greater than the radius of said circular saw blade. It appears that during

surgery, when the motor of Langworthy's surgical saw is tilted in either direction by an angle greater than or equal to 45 degrees with respect to the zero-tilt angle position, the housing would not contact the top surface of the workpiece base.

Langworthy teaches that the tubular arm of his surgical saw has a size and shape convenient for holding in the manner a pen or a pencil is held in the hand (Langworthy, p. 1, l. 83-86).

However, Langworthy expressly states (Langworthy, p. 2, l. 49-53),

"The saw may be of various sizes, complementary to the saw. . . .

10 and these elements may be changed at will, to adapt them for different uses." Langworthy adds (Langworthy, p. 2, l. 69-74),

"The arm may readily be manipulated to attain cuts at various angles and depths for cranial and other cuts, and the laterally disposed saw affords an instrument which may be manipulated with facility and accuracy in the operations."

Ambrosio would have taught persons having ordinary skill in the art that a tilting table saw capable of cutting a workpiece +45° from zero tilt without turning the workpiece can be made and used if (1) the motor shaft is disposed in parallel with the saw shaft, and (2) the transmission means through which the motor
20 shaft is connected to the saw shaft so that an axis of the motor

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shaft is shifted from the axis of the saw shaft by a distance which is greater than the radius of the circular saw blade. Persons having ordinary skill in the art would have learned from Ambrosio that when its motor casing is tilted in either of opposite directions by an angle greater than or equal to 45 degrees with respect to the zero-tilt angle position, the motor housing does not contact the workpiece base.

10 In light of the combined prior art teachings, we find that persons having ordinary skill in the art would have had the instruction and the motivation to make and use a desk-top cutting machine having the design and/or construction claimed. The problem would have been apparent to any person having ordinary skill in the art from the acknowledge prior art devices depicted in Figure 7 of appellant's supporting specification or Ito's discussion of the state of the art and problems associated therewith. Ito's solution, and the recognized prior art designs proffered by Japanese Laid-Open Utility Model Publication No. 63-49901/Japanese Utility Model Application (OPI) No. 49901/88 commonly cited in Ito and appellant's patent specification, rely
20 on the use of expensive beveled gears. A less expensive, yet equally remedial solution to the recognized problem would have

been apparent from the designs and constructions of the cutting machines described by Johnson, Langworthy and Ambrosio. Each of Johnson, Langworthy and Ambrosio reasonably appear to describe a cutting machine comprising a base including a top surface on which a workpiece to be cut is supported, a circular saw blade, a circular saw assembly having a motor covered by a housing, the motor shaft of the motor disposed in parallel with and above the saw shaft, and a transmission means through which the motor shaft is connected to the saw shaft so that an axis of the motor shaft is shifted from an axis of the saw shaft by a distance which is greater than or equal to the radius of the circular saw blade, wherein when the circular saw assembly is tilted in either of opposite directions by an angle greater than or equal to 45 degrees with respect to the zero-tilt angle position, the housing does not contact the top surface of the base. Persons having ordinary skill in the art reasonably would have expected to be able to inexpensively eliminate the prior art-recognized requirement to turn the workpiece in order to cut angles +45 degrees with respect to the zero-tilt angle position using a desk-top cutting machine by applying the design, materials and construction taught by Johnson, Langworthy and Ambrosio and

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altering the conventional desk-top cutting machines depicted in Figures 6 and 7 of appellant's specification and described by Ito in accordance therewith.

We have considered all of appellant's evidence and arguments to the contrary. We have exercised extreme caution in our studies of the drawings in Johnson, Langworthy and Ambrosio. Because we cannot presume that the prior art figures are drawn to scale, we focus and rely more on the written descriptions of the subject matter the prior art describes. Therefore, we grant substantial weight to Johnson's teaching that the cutting machines therein described have a ±45 degree cutting capability (Johnson, col. 5, l. 13-15; col. 7, l. 9-12). We grant substantial weight to Langworthy's utilization of well known or standard type electric motors and disk type saws and instruction that various sizes of each may be used to adapt the composite to different conditions (Langworthy, p. 1, l. 71-76). We find little or no objective evidence in Johnson, Langworthy or Ambrosio which would lead us to understand that persons having ordinary skill in the art would not have understood the materials necessary and/or the modifications required to make and use inexpensive desk-top cutting machines of the kind appellant claims with reasonable expectation of

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successfully eliminating a problem well recognized in the art of desk-top cutting machines.

Accordingly, we affirm the examiner's rejections of:

Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C.

§ 103(a) as being unpatentable for obviousness in view of "Prior Art" Figure 6, "Prior Art" Figure 7, and the "Description of the Prior Art" at column 1, lines 11-33, in Appellant's own U.S.

Patent 5,425,294; and the prior art disclosures of Johnson, U.S.

Patent 4,574,670, issued March 11, 1986; Langworthy, U.S.

10 1,417,669, issued May 30, 1922; and Ambrosio, U.S. Patent

3,013,592, issued December 19, 1961; and

Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C.

§ 103(a) as being unpatentable for obviousness in view of the combined teachings of Ito, U.S. Patent 5,357,834, which issued October 25, 1994, from U.S. Application 08/063,289, filed May 18, 1993, Johnson, Langworthy, and Ambrosio.

We dismiss the rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 under 35 U.S.C. § 103(a) as being unpatentable for

obviousness in view of the combined teachings of Bergler, U.S.

20 Patent 4,531,441, issued July 30, 1985, Ito, Johnson, Haffner,

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Langworthy, and Ambrosio as cumulative of the affirmed rejections,
at best.

Conclusion

Having considered the merits of the examiner's rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 for unpatentability under 35 U.S.C. § 103 in view of the prior art acknowledged in appellant's own U.S. Patent 5,425,294, Johnson, Langworthy, and Ambrosio; and all the evidence of record for and against the rejection, we affirm.

10 Having considered the merits of the examiner's rejection of Claims 1-3, 26, 27, 37, 48-56 and 58-62 for unpatentability under 35 U.S.C. § 103 in view of the combined prior art teachings of Ito, Johnson, Langworthy, and Ambrosio; and all the evidence of record for and against the rejection, we affirm.

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Order

On consideration of all the evidence and arguments of record,
and for the reasons stated hereinabove, it is ORDERED THAT:

the rejection under 35 U.S.C. § 103 of Claims 1-3, 26, 27,
37, 48-56 and 58-62 of Application No. 08/879,517 for Reissue of
U.S. Patent 5,425,294 is affirmed.

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

10

AFFIRMED

JOHN P. McQUADE)
Administrative Patent Judge)

20

TEDDY S. GRON)
Administrative Patent Judge)

) BOARD OF PATENT
) APPEALS
) AND
) INTERFERENCES
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SALLY C. MEDLEY)
Administrative Patent Judge)

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