

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM B. KORB and BRIAN K. DOUGLAS

Appeal 2008-006186
Application 10/792,415
Technology Center 3700

Decided:¹ June 30, 2009

Before WILLIAM F. PATE III, STEVEN D.A. McCARTHY, and
STEFAN STAICOVICI, *Administrative Patent Judges*.

WILLIAM F. PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing Anderson appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF CASE

This is an appeal from the final rejection of claims 17, 20, 21, 26-28, 30-32, 38-42, 46, 49, 50, 55-57, 59, 62, 63, 65-69 and 71-89. These are the only claims remaining in the application. We have jurisdiction over the appeal pursuant to 35 U.S.C. §§ 134 and 6. Oral argument was heard on April 21, 2009.

The claimed invention is directed to a method for making a composite utility knife blade. The blade is characterized by a cutting edge formed of wear-resistant steel and an elongated backing strip formed of a steel of a different composition. The blade is formed by welding the wire of wear-resistant steel in a continuous manner to the backing strip.

Claim 32, reproduced below, is further illustrative of the claimed subject matter.

32. A method of making composite utility knife blades, the method comprising:

providing an elongated wire formed of wear-resistant steel, and an elongated backing strip formed of steel and defining a first side, a second side, and opposing lateral edges extending between the first and second sides;

placing the wire in contact with a lateral edge of the backing strip;

applying thermal energy to an interface between the wire and the backing strip to weld the wire to the backing strip, and forming a composite strip defining a first metal portion formed by the steel backing strip, a second metal portion formed by the wear-resistant steel wire, and a weld region joining the first and second metal portions and extending from approximately one end of the second metal portion to approximately the other end of the second metal portion;

heat treating the composite strip;

forming at least one facet into the second metal portion, and forming an approximately straight wear-resistant steel cutting edge on the composite strip; and

die cutting at least one of the first and second metal portions along shear lines axially spaced relative to each other to thereby form a plurality of utility knife blades from the composite strip.

REFERENCES

The references of record relied upon by the examiner as evidence of obviousness are:

Behrman	US 1,734,554	Nov. 5, 1929
Young	US 2,286,047	Jun. 9, 1942
Anderson et al.	US 3,315,548	Apr. 25, 1967
Anderson	US 4,109,380	Aug. 29, 1978
Cox	US 5,575,185	Nov. 19, 1996
Wilson	US 5,701,788	Dec. 30, 1997
Huang	US 5,875,551	Mar. 2, 1999

REJECTIONS

Claims 31, 38-41, 50, 56, 57, 59, 63, 65, 71, 72, 82 and 86-89 stand rejected under 35 U.S.C. § 103 as unpatentable over Huang in view of Young and Anderson et al.

Claims 42, 55, 83 and 84 stand rejected under 35 U.S.C. § 103 as unpatentable over Huang, Young and Anderson et al. as applied to claim 31 and 82 and further in view of Behrman.

Claims 32, 46, 62, and 73-81 stand rejected under 35 U.S.C. § 103 as unpatentable over in view of Huang, Young, Anderson et al. and Behrman and further in view of Wilson.

Claims 49 and 85 stand rejected under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., and further in view of Wilson.

Claims 66-69 stand rejected under 35 U.S.C. § 103 as unpatentable over Huang, Young, and Anderson et al. as applied to claim 31 and further in view of Behrman.

Claims 17, 20, 21, 26, 27, and 30 stand rejected under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., Wilson, and further in view of Behrman and Cox.

Claim 28 stands rejected under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., Wilson, Behrman, Cox and further in view of Anderson.

ISSUES

An obviousness rejection based on the combined teachings of Huang, Young and Anderson et al., forms the underlying basis for all of the rejections on appeal. Appellants argue that Anderson et al. is not analogous art and that Huang and Young do not teach or suggest all of the features of the claimed invention other than applying thermal energy to an interface, and straightening, annealing and hardening the blade to a desired hardness. Further, Appellants argue that it would not have been obvious to combine Huang, Young and Anderson et al. Accordingly, the issues for our consideration are whether Appellant has established that the Examiner erred in determining: a) that Anderson et al. can be considered analogous art, b) that Young and Huang when combined, disclose all of the features except for applying thermal energy, straightening and annealing, and, c) that the

combination of the teachings of Huang, Young and Anderson et al. would have rendered the claimed subject matter prima facie obvious to one of ordinary skill. Appellant has also furnished evidence to rebut a prima facie case of obviousness.

FINDINGS OF FACT

1. Huang discloses a replaceable blade 16 for a utility knife. See col. 2, ll. 37-39. The blade is generally trapezoidal in shape with a cutting edge on the longer of the parallel sides and with two locating notches 17 formed in the shorter parallel side. See Fig. 1. Huang is not of bimetal construction.
2. Young discloses a cutting implement in the form of a replaceable blade of either the single or double edge type where substantial savings is garnered in the manufacture of the blade by making the blade as a mere skeleton of the prior art blade. See col. 1, ll. 4-12. Young discloses a double edge configuration in which the cutting portion 15 with cutting edges 16 are manufactured from relatively expensive Swedish or stainless steel wire. See p. 2, col. 1, ll. 23-30. The balance of the blade is composed of cross members--links or struts 17. See p. 2, col. 1, ll. 30-35. Young teaches that his structure is a replacement for blades of the previous type wherein the entire blade was formed of a strip of costly steel which had to be stamped or otherwise cut to separate the individual blade from the strip. See p. 2, col. 1, ll. 1-6. In this respect Young teaches away from the claimed subject matter, since the claimed subject matter is cut into individual blades from a strip.
3. Anderson et al. discloses a method of making a band saw blade. The blade is composed of tips or teeth formed of high-speed cutting tool steel where the balance or the backing portion of the blade is formed of a steel

alloy which properties are characteristic of spring steel so as to be capable of withstanding shock and having a high resistance to fatigue failure. See col. 1, ll. 11-23. As shown in Fig. 2. Anderson et al. teaches the manufacture of the blade by electron beam welding a high speed steel wire 16 to a spring steel backing 15. See col. 3, ll. 29-60.

4. The patents to Behrman, Wilson, Anderson and Cox have been cited by the Examiner to show other features of the claimed process.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). See also *KSR*, 550 U.S. at 406-407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”).

“‘A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.’ *In re Clay*, 966 F.2d 656,

659 (Fed.Cir.1992). In other words, “familiar items may have obvious uses beyond their primary purposes.” *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 398, 420 (2007).” *In re ICON Health and Fitness, Inc*, 496 F.3d 1375, 1380-1.

ANALYSIS

Appellants’ first argument is that Anderson et al. is not analogous art with respect to Appellants’ invention. However, in our view, Anderson et al. is directed to forming a composite blade of two steels with different properties. Therefore, it is our view that Anderson et al. is directed to subject matter which logically would have commended itself to the inventors’ attention when considering their problem. Accordingly, it is our finding that Anderson et al. is analogous prior art.

Appellants’ other principal argument is that the subject matter of the claims would not have been obvious from the combined teachings of Huang, Young and Anderson et al. Huang teaches a conventional prior art trapezoidally-shaped utility knife blade. Huang is not of bimetal construction. Young teaches a blade that has neither a backing strip nor a blade substrate. Young teaches a skeleton blade structure with a Swedish or stainless steel cutting edge and a relatively soft steel for the reinforcing struts. While we agree with the Examiner that Huang and Young when combined would teach a composite cutting structure, we must emphasize that Young teaches that such a structure should take the form of a skeleton blade arrangement for the purpose of substantially reducing the stock material cost of the blade. Therefore, Huang, when combined with Young does not teach the structure of a blade with the backing strip or a blade substrate extending

from approximately one end of the second metal portion to approximately the other end of the second metal portion as recited in claims 31 and 50, for example. We agree with the Appellants, that as taught by Young, most of the blade structure would not have any backing blade substrate at all when combined with the teachings of Huang. The Examiner remarks that Young is only used to teach making a blade out of two different materials. We agree that Young teaches this, but as part and parcel of this teaching, Young teaches two materials in a skeleton structure.

As noted above, we also recognize that Young expressly teaches away from making blades in strip form and then cutting the strip in to individual blades. See Young at p. 2, col. ll. 4-6. This is another factor of incompatibility of Young as opposed to Huang.

Turning to Anderson et al., while we do believe that this blade is analogous prior art, the Examiner fails to convince us that the teachings in this reference would have ameliorated the above-noted difficulties with Huang and Young. First of all, it is not clear that the band saw blade has the correct properties for use in a utility knife blade. A band saw blade demands a certain suppleness so that it may be bent around an axis which is parallel to the depth of the blade in the direction of the cut. While Young does not have any structure in the middle of the blade and seemingly might be bendable around an axis normal to the long sides, we believe that the Huang blade is relatively stiff and suppleness is an undesirable feature in a utility knife blade.

Secondly, while Young may teach forming a blade as a composite structure, the reference does not teach forming the claimed backing and weld regions. Therefore, to choose the composite feature but ignore the skeleton

structure of Young is to pick and choose through hindsight only those features of Young that may support the obviousness rejection. In this respect, we agree with Appellant that the Examiner is ignoring other portions of Young that lead away from the claimed subject matter. Furthermore, since a band saw blade is utilized in one endless loop, Anderson et al. is essentially irrelevant to the issue raised by Huang and Young as to whether or not blades should be individually manufactured or cut from a strip. Brief 9:10-12; Reply 6:5-12.

In short, while we agree with the Examiner that Anderson et al. is analogous prior art, we do not find in the Examiner's rejection any rational basis for the combination of the teachings of Huang, Young and Anderson et al. This being the case, we must conclude that the Examiner's rejection is based on impermissible hindsight reconstruction of the claimed subject matter. Therefore, the obviousness rejections of the claims on appeal cannot be sustained.

While we have considered the prior art teachings of Behrman, Wilson, Anderson and Cox, we find therein no teaching or suggestion that would mitigate the difficulties that we have found with the prima facie case of obviousness based on the three patents to Huang, Young and Anderson et al. Accordingly, the rejection of all of the claims on appeal is reversed. We acknowledge Appellants' evidence furnished for rebutting the prima facie case of obviousness. Inasmuch as we have not found the independent claims on appeal to be prima facie obvious, a lengthy consideration of this evidence is considered moot.

ORDER

The rejection of claims 31, 38-41, 50, 56, 57, 59, 63, 65, 71, 72, 82 and 86-89 as unpatentable over Huang in view of Young and Anderson et al. is reversed.

The rejection of claims 42, 55, 83 and 84 under 35 U.S.C. § 103 as unpatentable over Huang, Young and Anderson et al. and further in view of Behrman is reversed.

The rejection of claims 32, 46, 62, and 73-81 as unpatentable over Huang, Young, Anderson and Behrman and further in view of Wilson is reversed.

The rejection of claims 49 and 85 under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., and further in view of Wilson is reversed.

The rejection of claims 66-69 under 35 U.S.C. § 103 as unpatentable over Huang, Young, and Anderson et al. and further in view of Behrman is reversed.

The rejection of claims 17, 20, 21, 26, 27, and 30 under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., Wilson, and further in view of Behrman and Cox is reversed.

The rejection of claim 28 under 35 U.S.C. § 103 as unpatentable over Huang, Young, Anderson et al., Wilson, Behrman, Cox and further in view of Anderson is reversed.

REVERSED

Appeal 2008-006186
Application 10/792,415

Vsh

MCCARTER & ENGLISH, LLP HARTFORD
CITYPLACE I
185 ASYLUM STREET
HARTFORD CT 06103