

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS A. RYSGAARD

Appeal No. 97-3007
Application No. 08/161,650¹

ON BRIEF

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

CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 16, 19 through 21, which are all of the claims pending in this application. Claims 1 through 15, 17, 18 and 22-27 have been canceled.

The appellant's invention relates to a method of manufacturing a structural support member. An understanding

¹ Application for patent filed December 2, 1993.

of the invention can be derived from a reading of exemplary claim 16, which appears in the appendix to the appellant's brief.

The prior art

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Randolph 1962	Re. 25,241	Sep. 11,
Burton 1969	3,475,768	Nov. 4,
Medler 1971	3,574,104	Apr. 6,
Allen 1971 ('563)	3,610,563	Oct. 5,
Burkholz et al. 1973 (Burkholz)	3,766,573	Oct. 23,
Porter 1981	4,275,534	Jun. 30,
Walter 1987	4,642,962	Feb. 17,
Fondiller 1987	4,678,157	Jul. 7,
Hale 1988	4,746,471	May 24,
Allen 1989 ('292)	4,838,292	Jun. 13,
Plantier 1989	4,885,879	Dec. 12,
Santosuosso 1990	4,901,484	Feb. 20,

Kittaka et al. 1993 (Kittaka) 1990)	5,221,391	Jun. 22, (filed Feb. 9,
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The rejections

Claim 16 stands rejected under 35 U.S.C. § 103 as being unpatentable over Medler in view of any of Randolph or Allen'563 or Kittaka or Hale or Fondiller.

Claims 19 through 22 stand rejected under 35 U.S.C. § 103 as being unpatentable over Medler in view of Randolph or Allen'563 or Kittaka or Hale or Fondiller as applied to claims 16 above, and further in view of Burkholz.

Claims 19 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Medler in view of any of Randolph or Allen'563 or Kittaka or Hale or Fondiller as applied to claim 16 above, and further in view of any of Burton or Allen'292 or Walter or Porter.²

Claims 19 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Medler in view of any of Randolph or Allen'563 or Kittaka or Hale or Fondiller as applied to claim

² The examiner's answer has included claim 17 in several of the rejections, however, claim 17 has been canceled. As such, we will not address the examiner's rejections of claim 17.

16 above, and further in view of either of Plantier or Santosuosso.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 18, mailed March 17, 1997) for the examiner's complete reasoning in support of the rejections, and to the appellant's brief (Paper No. 16, filed July 24, 1996) for the appellant's arguments thereagainst.

OPINION

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

We turn first the examiner's rejections of claim 16 under 35 U.S.C. § 103 as being unpatentable over Medler in view of Randolph or Allen'563 or Kittaka or Hale or Fondiller. We initially note that in rejecting claims under 35 U.S.C. § 103,

the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 9 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction

to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., Grain Processing Corp. v. American Maize-Products Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

In the instant case, the examiner found that Medler teaches forming a structural tube by layering FRP (fiber-reinforced plastic) around a mandrel or support. The examiner relies on Randolph, Allen'563, Kittaka, Hale or Fondiller for teaching utilizing an inflatable bladder as a mandrel.

The examiner concludes:

To have utilized an inflatable bladder as a mandrel to form the initial support for the Medler structural tube, with the inflatable mandrel subsequently being removed upon hardening of the tube, thus allowing for easy removal of the support or mandrel, as is desired by Medler, would have been an obvious expedient to one of ordinary skill in the art as taught by any of Randolph, at 30, or Allen'563, at 32, or Kittaka et al., at 10, or Hale, at 18, 60, or Fondiller, at

202, 208, for example. [examiner's answer
at page 4]

Randolph discloses a method of impregnating glass fiber articles in which a loose mat of fiber 10 is wound on a core 11 and inserted into a mold casing 12 (Col. 2, lines 52-56). After insertion, the core is removed and a flexible envelope or bladder is inserted and inflated (Col. 3, lines 73-Col. 4 line 4). After inflation of the bladder, the resin is introduced and the bladder is inflated further to exert further pressure (Col 4, lines 39-42). The mold is then heated to cure the resin (Col. 4, line 72-Col. 5, line 1). The bladder is then deflated and removed (Col. 5, line 6).

Similarly, Allen '563 discloses a method of forming fiber-reinforced plastic articles in which a fiber matting is laid in a casing and a fiber preform is inserted (Col. 2, lines 56-66). An inflation tube or bladder is inserted and inflated (Col. 2, line 72-Col. 3, line 11). The inflation of the bladder is enough to compact the fiber (Col. 3, lines 9-11). Resin is then introduced and cured by heat, catalyst or the like. The bag is then deflated and removed (Col. 3, lines 32-34).

Kittaka discloses a process for forming a pipe in which a preform is heated and placed in a mold, and a bladder is placed into the preform and inflated. After inflation, resin is injected and cured. The bag is then deflated and removed.

As detailed above, Randolph, Allen'563, and Kittaka each disclose the use of an inflatable bladder in a method that includes the steps of placing material to be compressed or compacted within an outer mold, placing an uninflated bladder within the mold and inflating the bladder so that the material to be compacted is pressed against the inside of the mold. These references do not disclose teach or suggest this use of inflatable bladders as mandrels around which material is wrapped. As such, we find no suggestion in Randolph, Allen'563 or Kittaka to modify the method disclosed in Medler in the manner proposed by the examiner. As such we will not sustain the examiner's rejections of claim 16 as unpatentable over Medler in view of Randolph, or Allen'563 or Kittaka.

In regard to the rejection of claim 16 under 35 U.S.C. § 103 as being unpatentable over Medler in view of Hale, we note that Hale discloses the use of an inflatable bladder to

form a concrete structure. Cement is sprayed on the inflatable bladder, which has a wire mesh disposed thereon, and allowed to cure (Col. 5, lines 53-60). Hale does not disclose, suggest or teach that the inflatable bladder can be used as a mandrel to form glass fiber tubes as disclosed in Medler. As such, we find no suggestion to combine the teachings of Hale and Medler and therefore, we will not sustain the examiner's rejection of claim 16 under 35 U.S.C. § 103 as unpatentable over Medler in view of Hale.

We turn next to the examiner's rejection of claim 16 under 35 U.S.C. § 103 as being unpatentable over Medler in view of Fondiller. Fondiller discloses a method in which building material is sprayed on an inflatable form to construct a building structure (Col. 7, lines 59-68). Fondiller does not disclose, teach or suggest that the method disclosed therein can be used to form glass fiber rods as are formed in Medler. As such, we find no suggestion to combine the teachings of Medler and Fondiller. Therefore, we will not sustain this rejection.

We have reviewed the disclosures of Burkholz, Burton, Allen'292, Walter, Porter, Plantier and Santosuosso and have

determined that the disclosures of these references do not cure the deficiencies noted above for the combination of Medler and

one of Randolph, Allen'563, Kittaka, Hale or Fondiller. As such, we will not sustain the remaining rejections of the examiner. The decision of the examiner is reversed.

REVERSED

IAN A. CALVERT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
IRWIN CHARLES COHEN)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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MURRIEL E. CRAWFORD)
Administrative Patent Judge)

MEC/kis

Janet P. Schafer
651 Driftwood Court
New Brighton, MN 55112

CRAWFORD

APPEAL NO. 97-3007 - JUDGE

APPLICATION NO. 08/161650

APJ CRAWFORD

APJ CALVERT

APJ COHEN

DECISION: **REVERSED**

Prepared By:

DRAFT TYPED: 27 Jul 00

FINAL TYPED: