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ON BRIEF

UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Gerhard Dingler

Application for Patent filed May 21, 1990, Serial No.
07/526,515. Construction Element.

M. Robert Kestenbaum for appellant.

Primary Examiner - James L. Ridgill, Jr.

Before McCandlish, Cohen and Stoner, Administrative Patent
Judges.

Stoner, Administrative Patent Judge.

This is a decision on the appeal from the final rejection of claims 51 through 101, claims 51, 61, 64, 70, 72, 73, 74, 77, 78, 95, 99 and 101 having been amended subsequent to the final rejection by the amendment filed March 2, 1992. Entry of that amendment was communicated to the appellant in the advisory action mailed March 12, 1992. The proposed amendments included in the reply brief filed January 11, 1993, have been refused entry by the examiner, as communicated in the Examiner's Answer to the Reply Brief mailed May 25, 1993. We affirm-in-part

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and enter a new ground of rejection pursuant to the provisions of 37 CFR 1.196(b).

The claimed invention relates to a composite construction element having a thickness substantially less than at least one of its other dimensions, for example, an element taking the form of a sheet or board. By way of example drawn from the appellant's originally filed specification, a plastic sheet (identified by reference numeral 11 in the specification and drawings) which is 9 cm thick, 2.60 m long and 1.35 m wide contains:

10% aluminum chips, 10% steel chips and 5% chopped glass fiber, the latter to increase the shear strength. The plastic is recycled thermoplastic which was granulated beforehand and substantially consists of polyolphins [sic, polyolefins?]. The evenly distributed mixture was introduced into a mold to produce the sheet 11. The evenly distributed mixture was introduced into a mold to produce the sheet 11. The mold has a temperature between 150° and 200°C with a best temperature value around 180°C. The mixture remained in the mold for about 6 minutes. The compression mold was cooled. The specific pressure used in compression was between 250 N/mm² and 550 N/mm² with a pressure at the optimum in the range from 300 to 330 N/mm².

Useable chips can be taken from the book "Fertigungsverfahren", (Production Processes), Volume 1 by Konig, VDI-Verlags GmbH, pages 142 to 148, in particular Figure

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6-24 ^[1][original specification, filed May 21, 1990, page 8].

Independent claims 51, 95, 99 and 101 define the invention as follows:

51. A construction element having a thickness substantially less than at least one of its other dimensions, wherein:

a) in terms of weight, said construction element is comprised of more than 50% plastic and less than 50% reinforcing material, wherein said reinforcing material is composed substantially of pieces of metal strip,

¹ Although certain of the appellant's correspondence with the examiner indicates that a copy of this document has been supplied to the examiner, we are unable to locate a copy thereof in the record before us. To the degree that the question of incorporation by reference of essential material remains open (a matter which is not before us), the attention of both the appellant and the examiner is directed to Manual of Patent Examining Procedure, Fifth Edition, §608.01(p) (Rev. 14, Nov. 1992), which indicates that:

The filing date of any application wherein essential material is improperly incorporated by reference to a foreign application or patent or to a publication will not be affected because of the presence of such reference. In such a case, the applicant will be required to amend the disclosure to include the material incorporated by reference.

* * *

The amendment must be accompanied by an affidavit or declaration executed by the applicant, or his or her attorney or agent, stating that the amendatory material consists of the same material incorporated by reference in the referencing application.

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b) each of said pieces of metal strip is a single piece substantially flat in cross-section and bent into a three-dimensional configuration,

c) said pieces of metal strip are randomly oriented and embedded in said plastic, and

d) said pieces of metal strip are shorter than said construction element is thick.

95. A process for the production of a construction element comprising:

selecting single pieces of metal strip that are substantially flat and bent into a three-dimensional configuration and have lengths that are shorter than the thickness of the construction element,

combining said pieces of metal strip with plastic in a ratio of more than 50% plastic and less than 50% pieces of metal strip by weight,

randomly orienting and embedding said pieces of metal strip in said plastic, and

forming said construction element with a thickness substantially less than its height or depth.

99. Use of construction elements for formwork^[2] sheets of wood, timber boards for the production of girders and the like, in which

a) in terms of weight, said construction element is comprised of more than 50% plastic and less than 50% reinforcing material, wherein said reinforcing material is composed substantially of pieces of metal strip,

² The appellant has not defined this term. The term "formwork" is defined in Webster's Third New International Dictionary, copyright 1971, G. & C. Merriam Co., Springfield, Mass., as "a set of forms in place for the reception of concrete."

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b) each of said pieces of metal strip is a single piece substantially flat in cross-section and bent into a three-dimensional configuration,

c) said pieces of metal strip are randomly oriented and embedded in said plastic, and

d) said pieces of metal strip are shorter than said construction element is thick.

101. A process for heating a construction element comprising

a) combining in terms of weight, more than 50% plastic and less than 50% reinforcing material, wherein said reinforcing material is composed substantially of pieces of metal strip,

each of said pieces of metal strip are single pieces substantially flat in cross-section and bent into a three-dimensional configuration,

said pieces of metal strip are randomly oriented and embedded in said plastic, and

said pieces of metal strip are shorter than said construction element is thick, and

b) radiating said construction element with electromagnetic waves without contact.

The references relied upon by the examiner are:

O'Shea	766,280	Aug. 2, 1904
Slaughter	2,388,297	Nov. 6, 1945
Morris	2,836,529	May 27, 1958
Brigham	3,303,626	Feb. 14, 1967
Moens	3,936,278	Feb. 3, 1976
Burk	4,370,390	Jan. 25, 1983

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Prot (France ³) (French '329)	980,329	May 10, 1951
Bayerische Mass-Industrie, Arno Keller (France ⁴) (French '521)	1,278,521	Apr. 11, 1962
Alberts (Sweden ⁵) (Swedish '641)	43,461	July 15, 1961

Renfrew, A. and P.Morgan, Polythene, Iliffe and Sons, London, 1957, pp. 307, 705 (Scientific Library Call No. TP 986 P56 R4) (Renfrew).

THE REJECTIONS UNDER 35 USC 112, FIRST AND SECOND PARAGRAPHS

Claims 51 through 101 stand rejected under 35 USC 112, first paragraph, as based upon a specification which is objected to under the same statutory basis for failing to provide support, that is, written description, for the invention now claimed. Specifically, the examiner is of the view that the original disclosure, including the specification, claims and drawings as originally filed, fails to provide written description for the

³ Our understanding of this French language document is based upon a translation prepared by the Patent and Trademark Office. A copy of that translation accompanies this decision.

⁴ Our understanding of this French language document is based upon a translation prepared by the Patent and Trademark Office. A copy of that translation accompanies this decision.

⁵ Our understanding of this document is based upon a translation provided by the appellant in the communication filed September 10, 1992.

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recitations that: (1) the reinforcing material is "composed substantially of pieces of metal strip", (2) "each of said pieces of metal strip is a single piece substantially flat in cross-section", and (3) "each of said pieces of metal strip is a single piece ... bent into a three-dimensional configuration." In stating the rejection at page 8 of the answer, the examiner adds: "The disclosure is only enabling for claims limited to the pages of the specification including the claims and drawings as originally filed, see Sec. 706.03(n) and 706.03(z) MPEP."

Claims 51 through 101 additionally stand rejected under 35 USC 112, first and second paragraphs, on the basis that the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner states:

In addition to the objection and rejections set forth above under the first paragraph of 35 USC 112, under the second paragraph of 35 USC 112, it is the position of Examiner that the terms and phrases of the claims must appear in the original disclosure as required by 35 USC 112, and 37 CFR 1,75(d). Thus these claims are vague and indefinite [answer, pages 8-9].

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To the degree that the rejection under 35 USC 112, first paragraph, is bottomed on a lack of written description in the original disclosure for the requirement contained in claims 51, 99 and 101 that the reinforcing material is "composed substantially of pieces of metal strip," the rejection is sustained.⁶ Thus, we sustain the rejection of claims 51 through 94 and 96 through 101 under 35 USC 112, first paragraph, for lack of written description, that is, as containing new matter not supported in the original disclosure. All other bases of rejection under §112 included in the examiner's statement are reversed.

We will consider, first, the written description requirement. As stated in In re Bowen, 492 F.2d 859, 181 USPQ 48 (CCPA 1974), the description requirement of 35 USC 112, first

⁶ Throughout this decision we will refer to the original disclosure, that is, to the specification, including claims and drawings filed on May 21, 1990. Although the claims have been amended several times, there has been no amendment to the descriptive part of the specification. The examiner has indicated that a substitute specification filed on May 6, 1991, will be entered at some future time dependent upon being "placed in the format prescribed by 37 CFR 1.77" (Examiner's Answer to the Reply Brief, page 2). The examiner has formally "held in abeyance" approval of entry of proposed drawing figure 4 (final Office action mailed September 27, 1991, page 8). That specification not having been entered, there is no question relating to the entry or non-entry of that specification (or the proposed drawing correction) before us nor do we express any opinion as to whether the same contains new matter.

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paragraph, "is that the invention claimed be described in the specification as filed." It is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey to those skilled in the art that the applicant had invented the subject matter later claimed. See In re Wilder, 736 F.2d 1516, 222 USPQ 369 (Fed. Cir. 1984).

In the present instance, we think that the disclosure contained in the language of original claims 11, 12 and 13 to the effect that the "pieces of strip" may be "flat helical chips" generated in the course of "metal-cutting machining" is more than ample to demonstrate that the appellant had invented a construction element in which "each of said pieces of metal strip is a single piece substantially flat in cross-section and bent into a three-dimensional configuration" as required by the claims on appeal. Any chip so-produced which is both "flat" and "helical" necessarily possesses a flat cross-section and a three-dimensional configuration which was achieved by the action of being bent into the helical configuration. Thus, the examiner's second and third criticisms under the written description requirement are not well-founded.

On the other hand, the examiner's first criticism under the written description requirement is considered correct. The

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material by which the thermoplastic of the element is reinforced, according to the original specification, is made up of 10% aluminum chips, 10% steel chips and 5% chopped glass fiber. Fully twenty percent (5/25) of the reinforcing material disclosed is chopped glass fiber. The reinforcing material, as originally disclosed, is thus not "composed substantially of pieces of metal strip," but includes a large portion which is not metal strip. There is nothing in the original disclosure that conveys that the appellant had invented the subject matter now claimed.

We turn now to the rejections founded upon the enablement requirement of 35 USC 112, first paragraph. It is by now well-established law that the test for compliance with the enablement requirement in the first paragraph of 35 USC 112 is whether the disclosure, as filed, is sufficiently complete to enable one of ordinary skill in the art to make and use the claimed invention without undue experimentation. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988); In re Moore, 439 F.2d 1232; 169 USPQ 236 (CCPA 1971). See also In re Scarborough, 500 F.2d 560, 182 USPQ 298 (CCPA 1974). That some experimentation may be required is not fatal; the issue is whether the amount of experimentation required is "undue." Wands, 858 F.2d at 736-37, 8 USPQ2d at 1404.

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In rejecting a claim for lack of enablement, it also is well settled that the examiner has the initial burden of producing reasons that substantiate the rejection. See In re Strahilevitz, 668 F.2d 1229, 212 USPQ 561 (CCPA 1982); In re Marzocchi, 439 F.2d 220, 169 USPQ 367 (CCPA 1971). Only when this is done does the burden shift to the appellant to rebut this conclusion by presenting evidence to prove that the disclosure in the specification is enabling. See In re Doyle, 482 F.2d 1385, 179 USPQ 227; In re Eynde, 480 F.2d 1364, 178 USPQ 640. In the present instance the examiner has set forth no reasons whatsoever to substantiate a rejection for lack of enablement. It necessarily follows that his rejection cannot be sustained.

As to the §112, second paragraph, rejection we note that the purpose of the requirement stated in the second paragraph of 35 USC 112 is to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance. In re Hammack, 427 F.2d 1378, 166 USPQ 204 (CCPA 1970). While we think that there are several claims which do, in fact, fail to provide the required degree of notice, the examiner has set forth no basis on

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which we could sustain his rejection. His bald assertions regarding indefiniteness are simply insufficient. His rejection on this basis is, therefore, reversed.

Pursuant to the provisions of 37 CFR 1.196(b), we make the following new rejection.

Claims 81, 99 and 100 are rejected under 35 USC 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which the appellant regards as his invention. (1) The recitation in claim 81 that the plastic of the element comprises "other plastic apart from olefins to a maximum of about 50% plus 2%, minus 60%" (emphasis added) is meaningless. Can the appellant actually mean to refer to a content of -8%, as the language implies? We recognize that similar language appears in the originally filed application in original claim 31. It is no more understandable in that context than in its present form. (2) The recitations in the preambles of claims 99 and 100 identify the claimed subject matter as a "Use of construction elements ... for the production of girders and the like" (claim 99) and "Use of a construction element ... wherein said girders are H girders and the like" (claim 100). Each of these recitations is indefinite on two bases. First, it is impossible to tell whether the appellant is claiming a

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construction element or a method of using a construction element, making it impossible to ascertain what activity would infringe these claims. Claim 99 repeats identically the wording of claim 51 in specifying that which is the object of use, suggesting that claims 99 and 100 are not directed to the element per se. On the other hand, claims 99 and 100 lack the use of verbal nouns denoting steps, a feature which is the hallmark of a method claim. We note that a "use" is not within the statutory categories of invention enumerated in 35 USC 101. Second, the recitation of "and the like" in the preamble of claim 99 and the body of claim 100 introduces an uncertainty into those claims precluding one skilled in the art from determining the metes and bounds of the claimed subject matter. See Ex parte Kristensen, 10 USPQ2d 1701 (BPAI 1989). It is not clear from the originally filed specification what the appellant intended to cover by the recitation of "girders and the like." What is like a girder yet not a girder? What is like an H girder yet not an H girder?

THE REJECTIONS BASED ON PRIOR ART

Claims 51 through 94 and 96 through 100 stand rejected under 35 USC 103 as unpatentable over (1) French '521 in view of Swedish '641, Morris, O'Shea, and French '329; (2) Moens in view of Morris and French '329; and (3) Burk in view of Morris,

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Brigham and Slaughter. Claims 95 and 101 stand rejected under 35 USC 103 as unpatentable over each of the three combinations of references stated above in further view of Renfrew. Rather than attempt to reiterate the examiner's statements of these rejections, we direct attention to pages 9 through 16 of his answer.

We are unable to sustain any of these rejections. While the examiner has marshalled a series of references containing various bits and pieces of the appellant's claimed invention and has postulated a variety of concatenations of those teachings, the fact remains that there is nothing in the combined teachings of the references which would have suggested the appellant's claimed subject matter, necessitating reversal of each of these rejections. Whether the "use" claims 99 and 100 are considered to be directed to an article of manufacture or to a process, the claimed subject matter is not met.

Our court of review has repeatedly cautioned against employing hindsight by using the applicant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in 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). That court has also cautioned against

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focussing on the obviousness of the differences between the claimed invention and the prior art rather than on the obviousness of the claimed invention as a whole as §103 requires. See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1383, 231 USPQ 81, 93 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

The rejections predicated on French '521 as the primary reference are plainly untenable. That reference discloses, as the appellant argues and the translation makes clear, a tape measure. That reference is concerned simply with providing a net or screen-like filling of metal wires within a coating made of a synthetic material in order to limit the stretchability of the tape measure while at the same time producing a tape measure that remains lightweight and flexible (translation, pages 1 and 2). By contrast, the Swedish '641 reference relates to reinforced concrete, with a particular concern for improved heat distribution via the reinforcements to avoid cracking of the concrete. Morris, while relating to reinforced plastic, is concerned with embedding metal wires and glass fibers in plastic in order to increase the stiffness of the product (column 1, lines 10-13). O'Shea simply discloses the use of strips of metal formed into spirals for reinforcing concrete, while the French '329 reference uses ceramic pieces as reinforcements in concrete

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or asphalt. Like the appellant, we do not consider French '521 anticipatory of the appellant's claimed subject matter; neither do we consider any of the secondary references anticipatory of the appellant's claimed subject matter. We discern no reasonable basis for attempting to modify the measuring tape of the French '521 reference by any of the secondary references upon which the examiner has relied, apart from a desire on the examiner's part to demonstrate obviousness. That being the case, the rejections founded on French '521 are reversed.

The rejections predicated on Moens as the primary reference fare no better. Moens is concerned with producing a reinforcement in the form of a twisted metal ribbon, one edge of which is intermittently deformed out of its helical configuration in order to obviate a screw effect tending to loosen engagement between the reinforcement and the surrounding material when the reinforced material is in tension (column 1, lines 32-48). Moens provides no guidance regarding the relative percentages of plastic and reinforcing material, in terms of weight, which are to exist in any resulting construction element, nor does Moens provide any indication that the reinforcement elements are to be shorter in length than the construction element is thick. While it is true that Moens indicates that the reinforcement elements may be randomly disposed in a resulting construction element,

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there is no indication that this random disposition is one necessitating that the reinforcement elements have a length shorter than the thickness of the construction element. Nor do any of the other references relied upon teach or suggest these properties, much less suggest modification of Moens to include such properties. The disclosure of Morris relating to relative volumetric proportions of metal reinforcing materials within a composition of which the balance is glass fibers and resin does not, of course, address weight percentages. The claimed weight percentages are not necessarily inherent in Morris, contrary to the examiner's position.

Finally, the rejections predicated upon Burk as the primary reference must also fail for reasons similar to those applicable to the rejection predicated upon Moens. Burk does not disclose or suggest anything regarding the relative percentages of plastic and reinforcing material, in terms of weight, which are to exist in any resulting construction element. Nothing in Morris, discussed above, nor in Slaughter and Brigham, each of which relate simply to joining elements at their edges, overcomes this basic deficiency in Burk.

We have considered the teachings of Renfrew, relied upon in connection with each of the foregoing combinations of

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references to reject claims 95 and 101 but find nothing therein which makes up for the basic deficiencies identified above in connection with the underlying rejections.

SUMMARY

The examiner's rejection of claims 51 through 94 and 96 through 101 under 35 USC 112, first paragraph, for lack of written description, that is, as containing new matter not supported in the original disclosure, is affirmed.

The examiner's rejection of claim 95 under 35 USC 112, first paragraph, for lack of written description, that is, as containing new matter not supported in the original disclosure, is reversed.

The examiner's rejection of claims 51 through 101 under 35 USC 112, first paragraph, for lack of enablement is reversed.

The examiner's rejection of claims 51 through 101 under 35 USC 112, second paragraph, is reversed.

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The examiner's several rejections of claims 51 through 101 under 35 USC 103 as unpatentable over the prior art are reversed.

Pursuant to the provisions of 37 CFR 1.196(b), we have rejected claims 81, 99 and 100 under 35 USC 112, second paragraph.

The decision of the examiner is affirmed-in-part.

Any request for reconsideration or modification of this decision by the Board of Patent Appeals and Interferences based upon the same record must be filed within one month from the date hereof (37 CFR 1.197).

With respect to the new rejection under 37 CFR 1.196(b), should appellant elect the alternate option under that rule to prosecute further before the Primary Examiner by way of amendment or showing of facts, or both, not previously of record, a shortened statutory period for making such response is hereby set to expire two months from the date of this decision. In the event appellant elects this alternate option, in order to preserve the right to seek review under 35 U.S.C. 141 or 145 with respect to the affirmed rejection, the effective date of the

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affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to us for final action on the affirmed rejection, including any timely request for reconsideration thereof.

37 CFR 1.196(b) provides that a new rejection shall not be considered final for the purpose of judicial review.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR

