

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARCEL BARTOCCI

Appeal No. 1998-2119
Application No. 08/343,965

HERAD : April 18, 2000

Before COHEN, FRANKFORT, and NASE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

According to appellant (Paper No. 14), this is an appeal from the examiner's final rejection of claims 1-11 and 13-20. However, we note that amendments (Paper Nos. 12 and 17) filed subsequent to the final rejection and approved for entry by the examiner have amended claims 1 and 13, and canceled claims

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10-12, 16 and 18-20. Accordingly, the appeal as to claims 10,
11, 16,

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and 18-20 is dismissed. This leaves for our consideration on appeal only claims 1-9, 13-15 and 17 as amended subsequent to the final rejection.¹

Appellant's invention relates to a method of fabricating a reinforced foil coating material with a low frictional coefficient including contacting an expanded metal sheet (2) and at least one polytetrafluoroethylene (PTFE) strip (1 or 3) to form a stack, calendering the stack to at least partially crush the expanded-metal sheet, and then heating the calendered stack to sinter the PTFE strip, thereby forming the foil-type material. During the calendering step, pressure greater than 200 kg/cm², and preferably approximately 500 kg/cm², is applied. A copy of representative independent

¹ While the amendments filed by appellant on December 30, 1996 (Paper No. 12) and on April 28, 1997 (Paper No. 17) have been approved for entry by the examiner (see Paper Nos. 13 and 18), they have not as of yet been properly clerically entered. During any further prosecution of this application before the examiner, this oversight should be corrected. In addition, in claims 14, 15 and 17 the spelling of calendering should be corrected.

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claim 1, reproduced from appellant's brief, is attached to
this decision.

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The prior art references of record relied upon by the examiner in rejecting claims 1-9, 13-15 and 17 are:

French Patent ² 25, 1980	2,445,210	Jul.
Japanese Kokai ³	4-101845	Apr. 3, 1992

Claims 1-9, 13-15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over French '210 in view of Japanese '845.

Rather than attempt to reiterate the examiner's full explanation with regard to the above noted rejection and the conflicting viewpoints advanced by the examiner and appellant regarding the rejection, we make reference to the final rejection (Paper No. 10, mailed August 29, 1996) and the examiner's answer (Paper No. 21, mailed September 15, 1997)

² A copy of an English translation of French Patent 2,445,210 obtained by the USPTO and relied upon by this panel of the Board in deciding this appeal is appended to the decision for appellant's convenience.

³ We have also relied upon a copy of an English translation of Japan 4-101,845 provided by appellant in deciding this appeal.

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for the reasoning in support of the rejection, and to appellant's brief (Paper No. 20, filed May 28, 1997) and reply brief (Paper No. 23, filed November 17, 1997) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions as set forth by appellant and the examiner.

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); In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992)), which is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art (see In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). The conclusion that the claimed subject matter is prima facie obvious must be

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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).

With this as our background, we turn to the examiner's rejection of claims 1-9, 13-15 and 17 under 35 U.S.C. § 103 as being unpatentable over French '210 in view of Japanese '845.

The primary reference, French '210, was discussed by appellant on page 1 of his specification and discloses a method for fabricating a foil-type material wherein expanded metal is coated on each face with a polytetrafluoroethylene (PTFE) strip. The assembly is formed in a mold by hot-pressing at a pressure of between 20 and 200 kg/cm².

Japanese '845 teaches a method for producing a laminated sheet wherein a precuring step involving heating without

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pressure is carried out on a laminated base material before heat-pressing the base material and a metal foil together in a molding machine. This precuring step eliminates wrinkles or waves, which results from the difference in the thermal expansion coefficient between the laminated base material and the metal foil. The preferred embodiment of Figure 1 discloses four layers of impregnated cloth sheets (1) laminated through a set of squeeze rollers (2), laying polyethylene terephthalate films (4) on the cloth sheets and laminating the films to the cloth layer via rollers (3). This product is then heated in a hot air heating furnace (5) without applying any pressure to carry out the precuring step. Then, the polyethylene terephthalate films (4) are removed by using wind-up rollers (6). To create the final laminate assembly, metal foils (8) are laid on the precured laminated cloth sheet by rollers (7) and the composite is then subjected to a double belt press (9) which provides heat and pressure to the assembly for bonding the metal foils and the impregnated cloth sheets together.

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The examiner takes the position that French '210 discloses all but the separate steps of calendering and heating which is rectified by Japanese '845. On page 3 of the examiner's answer, the examiner states that "'calendering and heating' is deemed to be the functional equivalent of 'heating under pressure', insofar as the final product is concerned." It is also the examiner's position that "when the expanded metal sheet of French '210 is subjected to a calendering operation, it will be at least partially crushed" (answer, pg. 4). The examiner also concludes (answer, pg. 7) that Japanese '845 "fairly suggests that when a composite product is to be made by an applicant [sic] of pressure and heat, the application of pressure and heat could be separate from one another" and that "a reasonable inference that the artisan would logically draw from Japan '845 is that the

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process thereof would work with all composite structures produced from [sic] strip-like material by applying heat and pressure thereto" (answer, pg. 7).

Appellant argues that neither French '210 nor Japanese '845 teaches nor suggests calendaring the stack to at least partially crush the expanded-metal sheet. As set forth in appellant's reply brief on page 4, the PTFE would be in a gelatinous state during the hot pressing step taught in French '210 and would not result in any crushing of the metal. Appellant finds support for this conclusion in Dupont Teflon Compression Molding, pages 13-15. Appellant also argues that Japanese '845 does not disclose the separate calendaring step as recited in the claims on appeal.

Referring to Japanese '845, it cannot be determined whether the examiner is suggesting that the calendaring step occurs during the precuring phase (at 1-6) or during the laminating step (at 7-9) in Figure 1 of the reference. We find no suggestion that calendaring to at least crush the

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metal sheet occurs anywhere during the entire process of Japanese '845 or French '210. Japanese '845 (page 2, last two paragraphs of the translation provided by the appellant) state that a cover film is merely "laid" on the impregnated laminated base material, with no suggestion of applying pressure. The process also describes "laying" the metal foils (8) onto the laminated base material with no reference of applying any amount of pressure before the composite structure is moved on to the continuous heat-pressure molding machine. We find the precuring step to be irrelevant to the issue at hand since the cover film (4) is intended to be removed instead of being permanently laminated thereon, as in appellant's invention. Regarding the process for bonding the metal foil (8) to the laminated base material, we agree with the appellant that this process also uses heating under pressure, similar to that of French '210, since there is no suggestion that the rollers (7) of Japanese '845 necessarily apply any significant pressure. The pressure during this phase is applied at the belt press (9), which also provides combined heating. We also agree with appellant's statement (reply brief, pg. 3) that "there is no indication in the cited

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prior art that 'calendering and heating' is the functional equivalent of 'heating under pressure'," since the examiner has not provided adequate explanation or evidence to support such an assertion. To the contrary, as pointed out in the rely brief on page 3 by the appellant, Japanese '845 uses pressing and then heating without pressure in some steps of the process (1-6) and heating under pressure in another step of the process (9), which suggests to us that these processes are not equivalent.

In this case, we find that neither the primary nor the secondary reference includes key features of the claimed invention, the key features being partial crushing of the expanded metal sheet during the calendering phase, and then heating the calendering stack to sinter the PTFE sheet, thereby forming the composite self-lubricating foil-type material.

It is our view that the examiner has engaged in speculation and conjecture, as well as impermissible hindsight, in attempting to combine the disparate teachings of

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French '210 and Japanese '845 to meet the limitations of appellant's claims on appeal. Even if French '210 and Japanese '845 are considered to be analogous prior art, the combined teachings of the applied references, in our opinion, would not have suggested calendaring the stack to at least partially crush the expanded metal and then heating the calendared stack to sinter the PTFE and thereby form the foil-type material. Therefore, the examiner's rejection of independent claim 1 will not be sustained. Since claims 2-9 depend from 1 and thus include all of the limitations thereof, we will also not sustain examiner's rejection of these claims under 35 U.S.C. § 103(a).

Independent claim 13 includes all of the limitations of independent claim 1 as well as requiring a calendaring pressure "greater than 200 kg/cm²". Since we have determined that a prima facie case of obviousness was not set forth by the examiner with regard to broader independent claim 1, it follows that the rejection of independent claim 13 on the same basis (i.e., French '210 in view of Japanese '845) will also not be sustained. Since claims 14, 15 and 17 depend from 13

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and thus includes all of the limitations thereof, we will also not sustain examiner's rejection of these claims under 35 U.S.C. § 103(a).

In light of the foregoing, we cannot sustain the examiner's rejection of claims 1-9, 13-15 and 17 under 35 U.S.C. § 103(a) as being unpatentable over French '210 in view of Japanese '845.

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Thus, the decision of the examiner to reject claims 1-9, 13-15 and 17 under 35 U.S.C. § 103(a) is reversed. In addition, this application is REMANDED back to the examiner since claim 4, which depends from independent claim 1 appears to be a duplicate of independent claim 13. Therefore, the examiner should consider this issue and take appropriate action pursuant to M.P.E.P. § 706.03(k) and 37 CFR § 1.75.

REVERSED and REMANDED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JEFFREY V. NASE)	
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REVERSED AND REMANDED

Prepared: December 22, 2000