Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LUCIANO GARRO
and ENZO FALZOLGHER

Appeal No. 1997-4457
Application 08/250,617

HEARD: October 24, 2001

Before WARREN, LIEBERMAN and PAWLIKOWSKI, *Administrative Patent Judges.*

WARREN, *Administrative Patent Judge.*

Decision on Appeal and Opinion

We have carefully considered the record in this appeal under 35 U.S.C. § 134, including the opposing views of the examiner set forth in the answer and supplemental answer, and of appellants, set forth in the brief and reply brief, and based on our review, find that we cannot sustain either of the rejections of appealed claims 12 through 16,[1] all of the claims in the application, under 35 U.S.C. § 103 as being unpatentable over Muraoka et al. (Muraoka) combined with Nakamura et al. (Nakamura), Saitoh and Davis et al. (Davis '770), and over

[1] See specification, page 14.

Muraoka, Nakamura, Saitoh and Davis et al. (Davis '838).[2]

It is well settled that in order to establish a *prima facie* case of obviousness, "[b]oth the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991), citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). Thus, a *prima facie* case of obviousness is established by showing that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in the art would have led that person to the claimed invention as a whole, including each and every limitation of the claims, without recourse to the teachings in appellants' disclosure. *See generally, Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Oetiker*, 977 F.2d 1443, 1447-48, 24 USPQ2d 1443, 1446-47 (Fed. Cir. 1992) (Nies, J., concurring); *Vaeck*, *supra*; *Dow Chem.*, *supra*; *In re Warner*, 379 F.2d 1011, 1014-17, 154 USPQ 173, 175-78 (CCPA 1967). We agree with appellants that the examiner has failed to carry his burden of making out a *prima facie* case of obviousness with respect to the claimed invention.

The appealed claims are drawn to a method of vulcanizing a rubber composition which must comprise the specified amounts of trimercaptotriazine and a cobalt containing material, such as a cobalt salt of an organic acid, and includes at least one galvanized steel wire. We find that Muraoka discloses a method which differs from the claimed method in that the rubber composition contains a cobalt salt of an organic acid and either or both of two sulfenamides but no trimercaptotriazine, and the wire material must be plated with a ternary alloy of copper, zinc and nickel which is exemplified as containing 60-75 wt. % copper (e.g., col. 3). The method of Nakamura uses a rubber composition which contains trimercaptotriazine and a sulfur containing compound which can be one of the sulfenamides of Muraoka (page 6) but which differs in that no cobalt containing material is present, and the metal substrate is disclosed to "include iron, zinc, aluminum, copper, other metals, or alloys thereof" (sentence bridging

[2] Answer, pages 2-6. A copy of the translation of Nakamura prepared for the USPTO by Diplomatic Language Services, Inc. (1996) is attached to this decision. Any reference to Nakamura in our opinion is with respect to this translation.

pages 6-7). The rubber composition disclosed by Saitoh also contains trimercaptotriazine along with silica, a resorcin donor, a methylene donor and an organic sulfur-donating compound but no cobalt containing material, and the metal substrate is brass plated wire. Davis '770 employs rubber stock which can contain an inorganic salt of cobalt and a rosin-derived resin, and the metal substrate can be brass plated or zinc plated steel. The rubber stock of Davis '838 contains an organic complex of cobalt and at least one halogenated polymer, and the metal substrate is brass plated or zinc plated steel.

We find that the combination of Muraoka, Nakamura and Saitoh would have reasonably suggested to one of ordinary skill in this art that a rubber compositions containing a cobalt salt can be modified by adding thereto trimercaptotriazine which is used in view of the similarity of rubber compositions of Muraoka and Nakamura which contain the same sulfenamide, with the reasonable expectation that the resulting rubber composition can be combined with brass plated wire to prepare a vulcanized composite material in which the rubber bonds to the plated wire because Muraoka specifies a brass alloy plated wire, Nakamura teaches alloys of copper and zinc and Saitoh shows the use of trimercaptotriazine in a rubber composition containing a sulfur-donating compound which bonds to brass plated wire. The examiner recognizes that this combination of references does not teach a galvanized wire as seen from the reliance on the Davis references for the first time in the answer for the disclosure of zinc coated steel, and takes the position that the coating on a wire is "believed not to be critical to method for improving cohesion" because Nakamura and Saitoh, which disclose the trimercaptotriazine additive demonstrate that "improved adhesion is obtained even though zinc coating was not used" (answer, pages 3 and 6; emphasis in original omitted). In response to appellants' arguments in the reply brief, the examiner points out in the supplemental answer that the wire plating alloy of Muraoka "may contain at least 36% weight of Zn" (page 1) and seem to suggest the combination of the Davis references, Nakamura and Saitoh on the basis that the latter shows the use of trimercaptotriazine "to improve adhesion (cohesion) between rubber and metal surfaces" (page 2).

We are of the view that whether viewing the evidence in the applied references from the perspective of modifying the methods employing cobalt containing material with zinc or brass plated wires of the Davis references by using trimercaptotriazine or of modifying the method employing cobalt containing material with a brass alloy plated metal of Muraoka by using trimercaptotriazine and

substituting the alloy plated metal required by this reference with galvanized wire, where the only disclosure of trimercaptotriazine is shown by Nakamura and Saitoh, the examiner's position is that the applied prior art discloses that trimercaptotriazine and cobalt containing materials provide increased adhesion to metals which includes zinc coated steel and thus one of ordinary skill in this art would have combined these ingredients to arrive at the claimed method. We cannot agree with the examiner that the mere citations of references which collectively disclose each of the specified ingredients in a rubber composition used with some type of metal substrate, with one of the ingredients shown to be used with zinc plated steel, thus providing each of the limitations of the claimed method, is all that is required to establish a *prima facie* case of obviousness. Indeed, there must be some objective teaching, suggestion or motivation to combine the teachings of the references other than knowledge of appellants' invention. *See Warner*, 379 F.2d at 1016, 154 USPQ at 177 ("Thus, where the invention sought to be patented resides in a combination of old elements, the proper inquiry is whether *bringing them together was obvious* and not, whether one of ordinary skill having the invention before him, would find it obvious through hindsight to construct the invention from elements of the prior art.").

The difficulty we have with the examiner's position(s) is that there is no explanation on this record why one of ordinary skill in this art would have combined the rubber compositions of these references, each of which uses either cobalt containing material, that can be an inorganic or organic cobalt salt, or trimercaptotriazine with specific additional ingredients in order to treat specific metal substrates. We are of the opinion that the only related rubber compositions of the applied prior art are those of Muraoka and Nakamura which contain sulfur containing compounds, and one of ordinary skill in the art would have combined these compositions in view of the rubber compositions of Saitoh which contain sulfur-donating compounds, as common metal substrates are involved as we explained above, which, of course, does not result in the claimed method. Indeed, the only similarity between the rubber composition of Muraoka and Davis '838 is the cobalt salt of an organic acid, which relationship does not exist with Davis '770 wherein the rubber composition contains an inorganic salt of cobalt, and there is no similarity between the rubber compositions of the Davis references and those of either Muraoka, Nakamura or Saitoh with respect to the ingredients specified to be used with the cobalt containing material and with trimercaptotriazine in connection with the respective specified metal substrates.

Accordingly, on this record, we determine that the only direction to appellants' claimed invention as a whole is supplied by appellants' own specification.

The examiner's decision is reversed.

Reversed

CHARLES F. WARREN Administrative Patent Judge	)	
PAUL LIEBERMAN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
BEVERLY A. PAWLIKOWSKI Administrative Patent Judge	)	

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