Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte SYOICHI MARUYAMA, SINICHI YAMASHIRO and KENJI MISHIMA

Appeal No. 1997-1181
Application No. 08/000,735

HEARD: AUGUST 16, 2001

Before STAAB, NASE and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1 and 2. In Paper No. 30, the examiner withdrew the prior art rejection of claims 3-5,[1] the only other claims pending in this application.

[1] Claims 3 and 4 were amended subsequent to the final rejection in Paper No. 11.

BACKGROUND

The appellants' invention relates to a method of manufacturing electrical windings used for rotating electric machinery for rail and road vehicles, etc., and, more particularly, to an electrical winding manufacturing method which can be effectively applied to the manufacture of various types of electrical windings including wires differing in shape, size and function while enabling the respective windings to perform the required functions (specification, page 1). Claim 1, the only independent claim involved in this appeal, reads as follows:

> 1. A method of manufacturing electrical windings differing in function comprising the step of forming windings by winding conductors, the step of applying insulation on each of said windings, the step of embedding each of the windings covered with the insulating layers in a core, the insulating layers suitable for each of the respective types of windings being formed in said step of applying insulation, the step of impregnating a same resin in all of the respective windings and a single step of hardening the impregnated same resin in all of the insulated windings to set the windings embedded in a core.

The examiner relied upon the following prior art reference of record in rejecting the appealed claims:

Shooichi et al. 3285540 Dec. 16, 1991[2]
(Japanese patent document)

The following rejection is before us for review.[3]

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Japanese document.[4]

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer and supplemental answer (Paper Nos. 19 and 23) for the examiner's complete reasoning in support of the rejection and to the brief, reply brief, supplemental reply brief and supplemental brief (Paper Nos. 15, 21, 24 and 29) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art reference, and to the

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[2] An English language translation of this reference, prepared by the Patent and Trademark Office, is appended hereto.

[3] The rejection of claims 3 and 4 under the second paragraph of 35 U.S.C. § 112 was overcome by the amendment of Paper No. 11 (see Paper No. 12).

[4] The rejection of claim 2 under 35 U.S.C. § 102(b) was a new ground of rejection entered in the answer. The examiner has withdrawn all rejections of claims 3-5.

respective positions articulated by the appellants and the examiner. For the reasons which follow, we cannot sustain the examiner's rejection.

The Japanese document discloses a method of manufacturing electrical windings wherein a single resin is used in multiple "processes" (steps). In particular, a winding is wound around several times to form a conductor and an additive is added to a resin A to produce a high viscosity resin which is applied to the inside diameter corners of the conductor and heat hardened to smooth the conductor surface. Next, a glazed backing mica tape is semi-layered and wound around the conductor several times. The insulating resin A is then heated to a temperature of approximately 90° C, thereby rendering it a low viscosity resin, impregnated into the mica tape covered conductor and then heat hardened to form a field winding 5. A metal core 4 is then inserted into the field winding 5 and a high viscosity resin 8 formed by adding an additive of pulverized glass and hardening accelerator to resin A is poured between the core and field winding and hardened to form a field device 6 (translation, page 7).

While we discern no such express teaching in the translation of the Japanese document, appellants have conceded

in Paper No. 22 that the method of the Japanese document includes a step of embedding a plurality of conductor windings in a core subsequent to separate steps of impregnating and hardening insulating resin into the insulation-covered conductor windings. According to the attachment included in Paper No. 22, the step of embedding the plurality of windings in a core appears to be a single hardening step. We perceive this embedding step to include pouring the high viscosity resin 8 between the windings and the core and hardening the resin 8 to form a field device, as discussed above.

Even taking into account the above-noted concessions of appellants, we find no teaching in the Japanese document to perform a single step of hardening the impregnated resin in all of the insulated windings (a plurality of windings differing in function[5]) to set the windings embedded in a core, as required in claim 1. Rather, in accordance with the method of the Japanese document, each of the windings is subjected to a separate impregnation and hardening step to form a plurality of field windings 5 which are then embedded

[5] Consistent with appellants' underlying disclosure, we understand "windings differing in function" to be windings having different properties, such as size or shape so as to have different current-carrying and/or magnetic properties.

in a core in a separate embedding step comprising pouring a high viscosity resin between the core and windings and hardening the resin.

In light of the above, we shall not sustain the examiner's rejection of claim 1, or claim 2 which depends from claim 1, as being anticipated[6] by the Japanese document.

CONCLUSION

To summarize, the decision of the examiner to reject

[6] Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

claims 1 and 2 under 35 U.S.C. § 102(b) is reversed.

REVERSED

LAWRENCE J. STAAB Administrative Patent Judge	)
JEFFREY V. NASE Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)

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