Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WALTER W. YOUNG

Appeal No. 1998-2590
Application No. 08/255,083

ON BRIEF

Before FRANKFORT, McQUADE, and LAZARUS, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 11, which are all of the claims pending in this application.

Appellant’s invention is directed to an insulated, vibration resistant, overhead electrical cable suitable for

use as a high voltage transmission line with a low electromagnetic field (EMF). More specifically, appellant solves the problem of aeolian and galloping vibrations of a low EMF overhead electrical cable transmission line by shaping an outer insulation layer of the cable to have an axially continuously rotating oval or elliptical outer periphery which is resistant to aeolian and galloping vibrations caused by aerodynamic forces acting on the cable. Independent claim 1 is representative of the subject matter on appeal and a copy of that claim may be found in the Appendix to appellant's brief.

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

Shealy	3,659,038	Apr. 25, 1972
Bahder et al. (Bahder)	3,725,230	Apr. 3, 1973
Yamamoto et al. (Yamamoto)	4,029,830	Jun. 14, 1977
Powers	5,171,942	Dec. 15, 1992

Claims 1 through 4 and 8 through 11 stand rejected under

35 U.S.C. § 103(a) as being unpatentable over Yamamoto in view of Powers and Shealy.

Claims 5 through 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto in view of Powers and Shealy as applied above, and further in view of Bahder.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the examiner's answer (Paper No. 20, mailed September 15, 1997) for the reasoning in support of the rejections, and to appellant’s brief (Paper No. 19, filed August 18, 1997) and reply brief (Paper No. 21, filed November 28, 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 articulated by appellant and the examiner. As a consequence of our review, we have made the determinations

which follow.

Looking first at the examiner's rejection of claims 1 through 4 and 8 through 11 under 35 U.S.C. § 103(a) based on the collective teachings of Yamamoto, Powers and Shealy, we note that Yamamoto discloses a method of manufacturing an insulated electric power cable that includes a cured insulation material (3) applied over a conductor (1, 2) and a layer of plastic compound (5) comprising a thermoplastic resin and 5-70 parts by weight of calcium oxide as a moisture-absorbing agent overlying the insulating material. In column 2, lines 30-41, it is indicated that

> [t]he presence of calcium oxide in the layer of plastic compound provided on electric conductors in accordance with this invention serves to give an insulation layer of polyethylene which is free of microvoids. The formation of micro-voids within the insulation layer is usually attributable to the invasion of steam during the curing process, using saturated steam as the heating medium. But when the calcium oxide-containing layer is provided over the insulation layer or between the conductor and the insulation layer, any invading steam can be caught or absorbed by the calcium oxide, serving in this case as the moisture-absorbing agent.

As is argued by appellant (brief, page 7), Yamamoto has absolutely nothing to do with aeolian and galloping vibrations

or vibration resistant electric power cables. Moreover, the outer plastic compound layer (5) of Yamamoto apparently does not have

insulation qualities, but instead is formed of a "semiconductive" plastic/resin compound extruded over the insulation layer (3). See, for example, column 4, lines 62+ of Yamamoto.

Powers and Shealy disclose uninsulated or air-insulated high voltage vibration resistant overhead electrical conductors having a generally oval or elliptically shaped outer configuration twisted along its length so as to provide a continuously varying profile to the wind which acts to dampen aeolian and galloping vibrations of the conductor. The oval or elliptical shape of these uninsulated conductors is achieved using specific sizing and arrangements of wires and twisting or spiraling of such wires along the length of the conductor. Neither Powers nor Shealy discloses or suggests any insulation on their conductor. Thus, these patents clearly provide no teaching or suggestion of a cable comprising a conductor having <u>insulation</u> thereon that has "an axially continuously rotating oval or elliptical outer periphery which provides an outer periphery of the cable such that the aerodynamic forces acting on the outer periphery of

the cable act in a continuously changing direction . . . , ” as required in appellant’s independent claim 1 on appeal and the claims which depend therefrom.

Like appellant, we observe that none of the three references applied by the examiner teaches or suggests a specifically shaped insulation for a conductor as in appellant’s application which provides an outer periphery of the cable that acts in the manner required in the claims on appeal to reduce the tendency of the cable to undergo aeolian and galloping vibrations. Indeed, a review of the applied references reveals that none of these patents even teaches or suggests an insulation layer forming the outer periphery of an overhead electrical cable. In our view, the examiner has used impermissible hindsight derived from appellant’s own teachings in attempting to combine the circular electric power cable of Yamamoto with the uninsulated conductors of Powers and Shealy in an effort to arrive at appellant’s claimed vibration resistant electrical cable. In this regard, we note that, as our court of review indicated in In re Fritch, 972 F.2d 1260, 1266 n.15, 23 USPQ2d 1780, 1783-84 n.15 (Fed. Cir. 1992), it

is impermissible to use the claimed invention as an instruction manual or "template" to piece together isolated disclosures and teachings of the prior art so that the claimed invention is rendered obvious. Notwithstanding that the examiner might deem the proposed modification to be "within the level of ordinary skill in the art." The mere fact that some prior art references may be modified in the manner suggested by the examiner does not make such modification obvious unless the prior art suggested the desirability of the modification. See In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Here, the prior art relied upon by the examiner contains no such suggestion.

Since we have determined that the teachings and suggestions found in Yamamoto, Powers and Shealy would not have made the subject matter as a whole of claims 1 through 4 and 8 through 11 on appeal obvious to one of ordinary skill in the art at the time of appellant's invention, we must refuse to sustain the examiner's rejection of those claims under 35 U.S.C. § 103(a).

As for the examiner's rejection of dependent claims 5 through 7 under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto, Powers, Shealy and Bahder, we have reviewed the Bahder patent, but find nothing therein which provides for or overcomes that which we have found lacking in the examiner's basic combination of Yamamoto, Powers and Shealy. Accordingly, the examiner's rejection of dependent claims 5 through 7 under 35 U.S.C. § 103(a) also will not be sustained.

In light of the foregoing, the decision of the examiner to reject claims 1 through 11 under 35 U.S.C. § 103(a) is reversed.

REVERSED

CHARLES E. FRANKFORT Administrative Patent Judge	)	
JOHN P. McQUADE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND

) INTERFERENCES
)
RICHARD B. LAZARUS)
Administrative Patent Judge)

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