

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT A. MEGER

Appeal No. 96-3037
Application No. 08/252,474¹

ON BRIEF

Before ABRAMS, STAAB and CRAWFORD, *Administrative Patent Judges*.
ABRAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 1-3, 5-8 and 10-12. At this point, claim 4 had been allowed and claim 9 indicated as containing allowable subject matter. Subsequent to the final rejection, an amendment was entered which resulted in claim 9 being allowed (Paper No. 13).

¹Application for patent filed June 1, 1994.

Appeal No. 96-3037
Application No. 08/252,474

The appellant's invention is directed to a railgun using a composite insulator. The subject matter before us on appeal is illustrated by reference to claim 1, which reads as follows:

1. A railgun comprised of:

a plurality of rails;

a laminated insulator comprised of laterally positioned layers of insulation material separated by a conducting layer;

said insulator being located between the rails so as to form a bore;

an armature located within the bore; and

means for generating a current to be applied to the armature through the rails thereby causing a magnetic field to be generated capable of accelerating the armature along the bore.

THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Creedon	4,681,015	Jul. 21, 1987
Bauer	5,375,504	Dec. 27, 1994

Thio et al. (Thio), "On Some Techniques To Achieve Ablation Free Operation Of Electromagnetic Rail Launchers," Conf. Proc., 6th Symp. on Electromag. Launch Tech., Austin, TX (April 28-30, 1992).

THE REJECTIONS

Claims 1, 5, 7, 8 and 10-12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Thio.

Appeal No. 96-3037
Application No. 08/252,474

Claims 1, 2, 6-8 and 10-12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bauer.

Claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over Bauer in view of Creedon.

The rejections are explained in the Examiner's Answer.

The opposing viewpoints of the appellant are set forth in the Supplemental Brief.

OPINION

Two of the rejections are under 35 U.S.C. § 102, which means that a single prior art reference must disclose, expressly or under the principles of inherency, each and every element of the claimed invention. See *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.), cert. dismissed sub nom., *Hazeltine Corp. v. RCA Corp.*, 468 U.S. 1228 (1984).

The Section 102 Rejection on the Basis of Thio

Claim 1 first stands rejected as being anticipated by Thio, which also is directed to a railgun. As disclosed (see Figure 3), the appellant's railgun incorporates a pair of laminated composite insulators 32, each consisting of a plurality of flat, rectangular alternating insulating and conducting layers. The

Appeal No. 96-3037
Application No. 08/252,474

alternating layers are disposed parallel to the bottom and top surfaces, respectively, of a pair of spaced rails 35a and 35b, and are coextensive therewith. The spaced inner edges of the insulators, together with the bottom and top surfaces of the rails, define the bore of the railgun. However, the elements of the device are not defined so precisely in claim 1, which merely requires that the laminated insulator be "comprised of laterally positioned layers of insulation material separated by a conducting layer." While no reference point is recited in the claim from which the layers of insulation material are "laterally positioned," the appellant and the examiner appear to agree that the claim should be interpreted such that this reference point is the longitudinal axis of the bore, a conclusion with which we agree.

Thio discloses a railgun in which the components are arranged in a circular array. As shown in Figure 4.1(a) the centrally located bore of the gun is defined by a pair of spaced upper and lower arcuate rails and a pair of spaced arcuate laminated insulators (Figure 4.1(b)) interposed at the sides, as shown. It is the examiner's position that Thio's insulators are "laterally positioned" within the common definition of this phrase, and thus meet the terms of the claims, since the

Appeal No. 96-3037
Application No. 08/252,474

appellant's specification has not limited the interpretation to be given thereto. The examiner points out by reference to the dictionary that "lateral" means located at or on the side, which is the case with the Thio railgun. The only argument advanced by the appellant regarding this rejection is to this issue, and is that the Thio insulators are not "laterally positioned" within the meaning that should be given to this terminology. The appellant points to the representation of the invention provided in the specification and a definition of "lateral" which, it is asserted, commonly is used by engineers, as well as the concept that an appellant is entitled to be his own lexicographer, in urging that the phrase must be interpreted in such a manner as to include the orientation of the layers of the insulators shown in the drawings (Supplemental Brief, pages 12 through 16).

We are not persuaded by the appellant's arguments. We begin by pointing out that during examination, the pending claims in an application must be interpreted as broadly as their terms reasonably allow, without reading any limitations from the specification into the claims. See *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). If the limitations in the specification were required to be read into the claims there would be no need for claims and no basis for the

Appeal No. 96-3037
Application No. 08/252,474

requirement of 35 U.S.C. § 112 that the specification conclude with claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. See *Sjolund v. Musland*, 847 F.2d 1573, 1580, 6 USPQ2d 2020, 2027 (Fed. Cir. 1988). In the present case, nothing in the specification establishes that an interpretation narrower than the common one should be given to the phrase "laterally positioned." This being the case, although we admit that the insulators disclosed by Thio are oriented to a different plane than that of those disclosed by the appellant, they nevertheless are "laterally positioned," that is, located to the side, of the axis of the bore of the gun.

For this reason, the rejection of independent claim 1 as being anticipated by Thio is sustained. Since the appellant has chosen to have all of the claims stand or fall together (Supplemental Brief, page 5), the rejection of claims 5, 7, 8 and 10-12 on this same basis also is sustained.

The Section 102 Rejection on the Basis of Bauer

Bauer also is directed to a railgun. However, the structure in Bauer differs substantially from that which is set forth in independent claims 1 and 12. In the Bauer device (as pictured in Figure 6), it is each of the rails 604 and 606 which comprise a

Appeal No. 96-3037
Application No. 08/252,474

plurality of alternating conducting elements and insulating elements, and not the insulator, as is required by the appellant's claims. As described in columns 6 and 7, the bore is defined on its sides by rails 604 and 606, and on its top by "insulation layer 636," the details of which are not further disclosed. Therefore, we do not agree with the examiner that claims 1 and 12 read on the Bauer construction.

The rejection of independent claims 1 and 12, and dependent claims 2, 6-8 and 10-12, as being anticipated by Bauer, is not sustained.

The Rejection Under Section 103

Claim 3 stands rejected as being obvious in view of the teachings of Bauer and Creedon. The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Claim 3 depends from claim 1, adding the limitation that the conducting layer of the insulator is a copper alloy. Creedon is cited for this teaching, but it does not alleviate the deficiency in Bauer insofar as the subject matter of claim 1 is concerned, which we have explained, *supra*, with regard to the anticipation rejection. This being the case, this rejection will not be sustained.

Appeal No. 96-3037
Application No. 08/252,474

SUMMARY

The rejection of claims 1, 5, 7, 8 and 10-12 as being anticipated by Thio is sustained.

The rejection of claims 1, 2, 6-8 and 10-12 as being anticipated by Bauer is not sustained.

The rejection of claim 3 as being unpatentable over Bauer in view of Creedon is not sustained.

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

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

NEAL E. ABRAMS)	
Administrative Patent Judge))	
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LAWRENCE J. STAAB)	BOARD OF PATENT
Administrative Patent Judge))	APPEALS AND
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Appeal No. 96-3037
Application No. 08/252,474

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