

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HOMER W. FOGLE, Jr.

Appeal No. 98-2398
Application No. 08/815,251¹

ON BRIEF

Before MEISTER, FRANKFORT, and STAAB, 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 3, 11 through 13 and 16, which

¹ Application for patent filed March 12, 1997.

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are all of the claims remaining in the application. Claims 4 through 10, 14, 15 and 17 have been canceled.

Appellant's invention relates to an electrically actuatable igniter (claim 11), an apparatus including an inflator employing such an igniter (claim 1), and a method of installing pyrotechnic material in an igniter (claim 16). As disclosed, the inflator and igniter are used in an inflatable vehicle occupant protection device such as an air bag system. Independent claims 1, 11 and 16 are representative of the subject matter on appeal and a copy of those claims appears in the Appendix to appellant's brief.

The sole prior art reference of record listed by the examiner (answer, page 3) as relied upon in rejecting the appealed claims is:

Duguet	5,544,585	Aug. 13,
1996		

In addition, the examiner has relied upon what has been characterized as an admission by appellant found on page 11 of

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the specification. That portion of the specification indicates that:

[t]he resin binder and the pyrotechnic material in the ignition droplet 46, as well as the pyrotechnic material of the main pyrotechnic charge 48, may comprise any suitable materials known in the art. In the preferred embodiment of the invention, the pyrotechnic material in the ignition droplet 46 is KDNBF (potassium dinitrobenzofuroxan) at about 80% by volume. The resin binder in the preferred embodiment is a single component (i.e., free of a catalyst added for curing) epoxy based UV-curable thermoset resin at about 20% by volume. More specifically, the resin binder in the preferred embodiment is EMCAST CHIPSHIELD No. 1462, a blend of epoxy resin (CAS No. 2386-87-0), a hydroxy oligomer compound, mixed sulfonium compounds (CAS No. 109037-75-4 and No. 108-32-7) and mineral fillers (to include CAS No. 67762-90-7) which is available from Electronics Materials, Inc. of Breckinridge, Colorado. The supplier-recommended curing process for this resin binder comprises ultraviolet irradiation at 350 ± 30 nm at ambient temperature for 2.0 seconds, followed by a 20 minute dwell at ambient temperature. The UV curing process can be performed with any suitable apparatus known in the art.

Claims 1 through 3, 11 through 13 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Duguet in view of "applicant's admission."

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Rather than reiterate the examiner's full statement of the above-noted rejection and the conflicting viewpoints advanced by the examiner and appellant regarding the rejection, we make reference to the examiner's answer (Paper No. 12, mailed June 17, 1998) for the examiner's reasoning in support of the rejection, and to appellant's brief (Paper No. 11, filed June 5, 1998) and reply brief (Paper No. 18, filed July 2, 1998) for appellant's 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 determination that the examiner's position is not well founded and will therefore not be sustained. Our reasons follow.

Like appellant, we note that independent claims 1 and 11 on appeal each recite "an ignition droplet adhering to said ohmic heating element" of the igniter, while method claim 16 sets forth the steps of "depositing an ignition droplet on said ohmic heating element in a fluid condition" and then curing the resin binder of the droplet to cause the droplet to adhere to the ohmic heating element. As explained in the specification (page 10) and as can be clearly seen in appellant's drawing Figures 2 and 3, the "ignition droplet"

(46)

has the shape of a somewhat spherical segment with a generally circular periphery centered on

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an axis 111, and with an arcuate radial profile generally symmetrical about the axis 111.

With this understanding of what constitutes an ignition "droplet," we look to Duguet and note that this patent refers to a thermosensitive substance (104) that is applied "in the form of a fine layer of an explosive varnish" (col. 3, lines 57-61) that covers ohmic heating element or resistive heating strip (110). In addition, Duguet indicates (col. 3, lines 66+) that the explosive varnish is made by mixing a "film-generating binder" (after it is put into solution in an appropriate solvent) with the explosive substance, with the mixture then being deposited on the resistive flat strip (110). Thereafter, the varnish solvent is evaporated so as to form an explosive "thin layer" (col. 4, line 6) that is hard and that adheres well. In contrast to the examiner's position (answer, page 5) that "the element 104 disclosed in the Duguet reference is shown in Figure 1 in the form of a 'droplet'," we conclude, as appellant has (reply brief, page 2), that the thin or fine layer of thermosensitive substance (104) in Duguet is not shown, described, or suggested as taking the form of the claimed "ignition droplet"

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set forth in appellant's claims on appeal. Like appellant, we view the small mounds of material at the top of each of the pins (102, 103) in Figure 1 of Duguet as being merely metal connections formed by soldering, welding or brazing of the pins to the conductive pads (121, 122) as set forth in column 3, lines 28-40 of Duguet, with the thin layer of thermosensitive substance (104) being represented by the bold line extending entirely across the top of the printed circuit therein, although it is only the resistive strip (110) that is heated up by the Joule effect to ignite the explosive varnish layer (col. 3, lines 39-40). Thus, since Duguet has no "ignition droplet," for this reason alone, we would refuse to sustain the examiner's rejection of claims 1 through 3, 11 through 13 and 16 on appeal.

However, we also find ourselves in agreement with appellant's position that the examiner's use of the information set forth on page 11 of appellant's specification and the use of the references to Muller et al. and VanName et al. (answer,

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page 4)² is based on the hindsight benefit of having first read appellant's disclosure and not on any fair teaching or suggestion found in the applied prior art and patents themselves. Absent the disclosure of the present application, it is our opinion that one of ordinary skill in the art would not have been motivated by the teachings of the applied prior art to modify the initiator of Duguet in the manner urged by the examiner so as to arrive at the subject matter set forth in appellant's independent claims 1, 11 and 16 on appeal.

For the above reasons, the examiner's rejection of appellant's claims 1 through 3, 11 through 13 and 16 under 35 U.S.C. § 103 as being unpatentable over Duguet in view of "applicant's admission" will not be sustained, and the decision of the examiner rejecting the above-noted pending claims of the present application is reversed.

² As pointed out by the Court in In re Hoch, 428 F.2d 1341, 1342, 166 USPQ 406, 407 (CCPA 1970), where a reference is relied upon to support a rejection, whether or not in a minor capacity, there would appear to be no excuse for not positively including the reference in the statement of the rejection.

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REVERSED

JAMES M. MEISTER)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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LAWRENCE J. STAAB)	
Administrative Patent Judge)	

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REVERSED

Prepared: September 24, 1999