

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte BRUCE G. VAN STRATUM

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Appeal No. 2005-1329  
Application No. 10/187,038

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ON BRIEF

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Before FRANKFORT, MCQUADE, and NASE, 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 12, all of the claims pending in the application. Subsequent to the final rejection, the examiner has withdrawn the rejections of claims 5 through 12, thus leaving only the rejections of claims 1 through 4 for review on appeal.

Appellant's invention relates to a gas propellant delivery cartridge with a burst cap that allows controlled discharge of a propellant gas generated within the cartridge.

Independent claim 1 is representative of the subject matter on appeal, and a copy of that claim can be found in the Appendix to appellant's brief.

The prior art references of record relied upon by the examiner as evidence of obviousness under 35 U.S.C. § 103 are:

Hotchkiss	99,899	Feb. 15, 1870
Bullard	278,394	May 29, 1883
Tucker	3,983,817	Oct. 5, 1976
Brown (British Patent)	3065	Jan. 1872

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bullard in view of Hotchkiss.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bullard in view of Hotchkiss as combined above, and further in view of Tucker.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bullard in view of Hotchkiss and Tucker as applied to claim 3 above, and further in view of Brown.

Rather than reiterate the examiner's statement of the above-noted rejections and the conflicting viewpoints advanced by appellant and the examiner regarding those rejections, we refer to the examiner's answer (mailed September 21, 2004) for the reasoning in support of the rejections and to the brief (filed July 12, 2004) for appellant's arguments to the contrary.

#### OPINION

Before turning to the merits of the examiner's position, we note that on page 5 of the brief, appellant has indicated that claims 1 through 4 are grouped to stand or fall together. Thus, we select claim 1 as being representative of this grouping and will decide the appeal as to that claim alone, with claims 2 through 4 standing or falling with our determination concerning claim 1.

Our evaluation of the obviousness issues raised in this appeal has included a careful assessment of appellant's specification and claims, the applied prior art references, and the respective positions advanced by appellant and the examiner. As a consequence of our review, we have made the determination that the evidence relied upon by the examiner is sufficient to support a conclusion of obviousness under 35 U.S.C. § 103 with respect to appellant's claim 1. Our reasoning in support of that determination follows.

In rejecting claim 1 under 35 U.S.C. § 103(a), the examiner has determined (answer, pages 4-5) that Bullard discloses a cartridge for controlled delivery of a propellant fluid comprising: a case (1) having a closed lower end (6), an open upper end (Fig. III), and a continuous vertical side wall thereby defining a hollow interior; a propellant (fulminate) contained within the hollow interior of the case; a hemispherical burst cup (2-4) having an open lower end (Fig. IV) and a closed upper end (at 4) thereby defining a hollow interior, and being placed within the open upper end of the case (1) as seen in Figure II; and ignition means to ignite the propellant, thereby creating pressurized propellant gases within the case and bursting the burst cup to release the gases without ejecting the burst cup from the case. What the examiner finds lacking in Bullard is any teaching or suggestion of a roll crimp formed in the side wall of the case (1) proximate the upper end so as to lap over the burst cup and capture and retain the burst cup in the case. To account for this difference the examiner looks to Hotchkiss, pointing to the roll crimp (D<sup>2</sup>) of the primer cartridge seen in Figure 11, which roll crimp laps over the inner member (B) and secures that member in the case (D). From the combined teachings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to add a roll crimp similar to that in Hotchkiss to the primer cartridge of Bullard so as to securely hold the burst cup (2-4) in place within the case (1).

In the brief (pages 7-8), appellant indicates that a first and dispositive point in this appeal is that the element in Bullard pointed to by the examiner as being a “burst cup” is not a burst cup at all, since it does not burst. Appellant goes on to note that throughout the specification, the burst cup is described as a thin-walled device designed to rupture shortly after the ignition of the propellant within the cartridge, and urges that the structure in Bullard characterized by the examiner as a burst cup is not designed to rupture. On page 8 of the brief, appellant contends that this issue alone “is, by itself, determinative of this entire appeal.”

Thus, we look specifically to the structure (2-4) seen in Figures II and VI of Bullard and pointed to by the examiner as being a burst cup. On page 1, at lines 28-56, Bullard describes the structure in question and its operation. What is immediately clear from a reading of this portion of the patent and viewing the drawings is that the structure (2-4) relied upon by the examiner as being responsive to the broadly recited “burst cup” of claim 1 on appeal is a hemispherical cup that includes a tin-foil waterproofing layer (4) covering the domed end and hole (3) therein and that upon firing of the fulminate propellant within the case (1) and anvil (2) the fire from the explosion of the fulminate will readily pass through the hole (3) to ignite the charge in the main cartridge, with the force of the explosion breaking through the water-proof covering (4) on the outer side of the anvil (2). Thus, contrary to appellant’s assertions, the structure (2-4) pointed to by

the examiner in Bullard is a thin-walled device designed to rupture shortly after the ignition of the propellant within the case (1) and therefore does, at least broadly, constitute a "burst cup."

Based on the foregoing, we will sustain the examiner's rejection of claim 1 under 35 U.S.C. § 103(a). In accordance with appellant's grouping of claims set forth on page 5 of the brief, dependent claims 2 through 4 will fall with parent claim 1.

Thus, the decision of the examiner rejecting claims 1 through 4 of the present application under 35 U.S.C. § 103(a) is affirmed.

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

AFFIRMED

CHARLES E. FRANKFORT  
Administrative Patent Judge

JOHN P. MCQUADE  
Administrative Patent Judge

JEFFREY V. NASE  
Administrative Patent Judge

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