

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

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

Ex parte DANA R. COLDREN, GREGORY W. HEFLER
and ALAN R. STOCKNER

Appeal No. 2002-2039
Application No. 09/258,712

ON BRIEF

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

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 4, 6 to 10, 21 to 24, 26 and 27. Claims 5, 25 and 28 to 30 have been withdrawn from consideration. Claims 11 to 20 have been canceled.

We AFFIRM.

BACKGROUND

The appellants' invention relates to fuel injectors having a multi-component nozzle assembly with a dual guided needle valve member (specification, p. 1). A substantially correct copy of the claims under appeal is set forth in the appendix to the appellants' brief.¹

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

Ganser	4,826,080	May 2, 1989
Sturman	5,485,957	Jan. 23, 1996
Anderson et al. (Anderson)	5,697,342	Dec. 16, 1997
Moncelle	5,752,659	May 19, 1998

Claims 1 to 4, 6, 8 to 10, 21 to 24, 26 and 27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sturman.

¹ Minor errors in the claims which we have noted are: (1) In claim 1, line 14, the word "blocked" is used whereas claim 1, as presented in the last amendment uses the word "locked" (since "blocked" is the correct terminology (see original claim 1) the appellants should amend claim 1 in any future prosecution); (2) In claim 21, line 8, the word "rotating" should be "rotated;" (3) In claim 21, line 10, the second occurrence of the word "bore" should be deleted; and (4) In claim 21, lines 10-11, the phrase "and having a lower guide portion positioned in said upper guide bore," should be deleted since it repeats the subject matter just claimed.

Claims 1 to 4, 6 to 10, 21 to 24, 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Moncelle in view of Ganser.

Claims 1, 6 to 10, 21, 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Anderson in view of Ganser.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 30, mailed April 17, 2002) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 29, filed April 5, 2002) and reply brief (Paper No. 31, filed June 19, 2002) 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 references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The anticipation rejection

We sustain the rejection of claims 1 to 4, 6, 8 and 10 under 35 U.S.C. § 102(b) as being anticipated by Sturman but not the rejection of claims 9, 21 to 24, 26 and 27.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

Claims 1, 9 and 21 read as follows:

1. A fuel injector nozzle assembly comprising:
a lower tip component having a solitary annular locating surface that is a first locating surface and defining a lower guide bore with a first centerline and a nozzle outlet;
said first locating surface being included on a first line rotated about said first centerline;

an upper tip component in contact with said lower tip component and having a solitary annular locating surface that is a second locating surface, and defining an upper guide bore with a second centerline;

said second locating surface being included on a second line rotated about said second centerline;

a needle valve member having an upper guide portion positioned in said upper guide bore, and having a lower guide portion positioned in said lower guide bore, and being movable between an open position in which said nozzle outlet is open, and a closed position in which said nozzle outlet is [b]locked; and said first centerline being concentrically coupled to said second centerline via an interaction of said first locating surface with said second locating surface.

9. The fuel injector nozzle assembly of claim 1 wherein said upper tip component, said lower tip component and said needle valve member define a nozzle chamber; and

said needle valve member includes an opening hydraulic surface exposed to fluid pressure in said nozzle chamber.

21. A fuel injector nozzle assembly comprising:

a lower tip component having a solitary annular locating surface that is a first locating surface and defining a lower guide bore with a first centerline and a nozzle outlet, and said first locating surface being included on a first line rotated about said first centerline;

an upper tip component in contact with said lower tip component and having a solitary annular locating surface that is a second locating surface, and defining an upper guide bore with a second centerline, and said second locating surface being included on a second line rotated about said second centerline;

a needle valve member having an upper guide portion positioned in said upper guide bore, and having a lower guide portion positioned in said upper guide bore, and being moveable between an open position in which said nozzle outlet is open, and a closed position in which said nozzle outlet is blocked;

said needle valve member including an opening hydraulic surface exposed to fluid pressure in a nozzle chamber, said nozzle chamber defined by said upper tip component, said lower tip component and said needle valve member; and

said first centerline being concentrically coupled to second centerline via an interaction of said first locating surface with said second locating surface.

Sturman's invention relates to a fuel injector for an internal combustion engine. As shown in Figure 2, the fuel injector 14 has a housing 100 that includes an end cap 102 that captures a nozzle member 104 and is attached to an upper housing 106. Within the end cap 102 are injection housing members 108 and 110. The housing 100 may further include seals (not shown) that seal the unit.

Sturman's upper housing 106 contains a fuel passage 112 that is in fluid communication with an intensifier chamber 114 and pressure chambers 54 and 56 of an intensifier 14. The intensifier chamber 114 is in fluid communication with a second fuel passage 116 that extends through the housing members 108 and 110, and the nozzle 104. The nozzle 104 contains a plurality of openings 118 that are coupled to the second fuel passage 116. The flow of fuel through the nozzle openings 118 is controlled by a needle valve 120. The needle valve 120 is biased into a closed position by nozzle springs 122 located within a nozzle spring chamber 124. The nozzle chamber 124 is coupled to the intensifier chamber 114 through passage 126 to prevent a hydrostatic build up of pressure in the chamber 124 that will counteract the movement of the needle valve 120. The second fuel passage 116 is connected to an injector chamber 128 that receives fuel from the intensifier 12. The second passage 116 has a check valve 130 which prevents fuel from flowing back into the intensifier chamber 114.

Located within the upper housing 106 is a second intensifier piston 132 that has an intensifier 134 which moves within the injector chamber 128. The intensifier 134 is captured by an insert 136 that is attached to the piston 132. Coupled to the piston 132 is a spring assembly 138. The area ratio of the piston 132 and the intensifier 134 is such that the fuel within injector chamber 128 is pressurized to a value higher than the fuel pressure within the intensifier chamber 116.

In operation, the intensifier 12 provides a pressurized fuel to the intensifier chamber 114. The pressurized fuel lifts the intensifier piston 132 and compresses the spring assembly 138. The fuel also flows from the intensifier 12 into the injector chamber 128 via passage 126. When the piston 132 reaches a top dead center position, a control valve 16 (see Figure 1) is opened to allow fuel to flow out of the intensifier chamber 116. The flow of fuel reduces the pressure in the chamber 114 and allows the spring assembly 138 to move the piston 132 back to the original position. Movement of the piston 132 also moves the intensifier 134, which reduces the volume of the injector chamber 128 and increases the pressure of the fuel therein. The highly pressurized fuel lifts the needle valve 120 and is ejected through the nozzle openings 118. When the piston 132 reaches the fully stroked position, the control valve 16 is closed and the pressure within the intensifier chamber 128 is increased by the intensifier 12, wherein the process is repeated.

In the anticipation rejection before us in this appeal, the examiner has set forth a detailed explanation (answer, pp. 3-4) as to how the subject matter of claims 1, 9 and 21 was readable on Sturman.

The appellants argue with respect to independent claims 1 and 21 (brief, pp. 3-6) that

Sturman does not show in its Figure 2 a needle valve member having an upper guide portion at all. There is no dispute that a guide in a fuel injector is interpreted by those skilled in the art to mean a relatively tight clearance between two parts that are capable of moving with respect to one another. The clearance is loose enough that one piece can move with respect to the other but the clearance is tight enough that it is substantially blocked to fluid flow. In practicality, the difference between a guide clearance and a non-guide clearance can be less than the thickness of a line on a typical patent drawing. Applicants respectfully assert that Sturman shows a loose fitting spacer sitting atop, but not attached to, a needle valve member. Furthermore, no one skilled in the art would interpret the spacer of Sturman as providing a guide clearance with the bore in which it is located. Thus, there is a dispute as to what Sturman shows, and Sturman includes no text that explicitly or implicitly supports or refutes either the examiner's or the Applicants' interpretation.

MPEP Section 2125 makes it clear that a drawing alone can support a § 102 rejection, but only if the illustration shows "all of the claimed structural features and how they are put together" (emphasis added) Jockmus vs. Leviton, 28 F.2d 812(2d Cir. 1928). In other words, the cited drawing must provide an enabling disclosure for what the Applicants have claimed in order to support a proper § 102(b) rejection. The examiner, however, ignores this applicable case law and dismisses the argument by stating that all patents are considered valid and therefore enabling. This statement by the examiner fails to address the issue at hand since Applicants have made no comment or argument with regard to whether Sturman provides an enabling disclosure for what Sturman claims. Applicants argument is that Sturman fails to enable what Applicants have claimed. There is absolutely no controlling authority to support the examiner's assertion that because Sturman may be considered a valid US patent, that it

also is presumed to be enabling of Applicants claimed invention. Such an argument would only be true if Applicants and Sturman were claiming the same subject matter, which they do not. Thus, in this case, how the identified features of Sturman are put together is at the heart of whether Sturman can properly support a § 102(b) rejection against Applicants' claims. The MPEP also requires that the drawing must be evaluated for what it reasonably discloses and suggests to one of ordinary skill in the art. In re Aslanian, 590 F.2d 911, 200 USPQ 500 (CCPA 1979). Since Sturman could reasonably be interpreted by one with ordinary skill in the art as showing something other than what the examiner has asserted, Sturman cannot be said to anticipate what Applicants have claimed.

With regard to how one with ordinary skill in the art would interpret Figure 2 of Sturman, one should start with ascertaining whether the Sturman spacer 124 has a guide clearance. There should be no dispute that in a drawing, such as Figure 2 of Sturman, the difference between an illustration of parts having a guide clearance and those not having a guide clearance can be less than the thickness of a line in the drawing. Thus, to look at a drawing in a fuel injector context and declare that it shows a guide clearance without any support for that assertion in the written description of that illustration, and without any support in the art of record or any support in the general context of the fuel injector art is improper and overreaching. When one closely examines Figure 2 of Sturman, it is clear that it includes side channels (vertical dashed lines) that facilitate fluid communication with the spring volume above spacer 124 and the volume below spacer 124. These channels are clearly included so that fluid can be displaced between the upper and lower volumes allowing the assembly to move as indicated. Applicants respectfully assert that no one skilled in the art would interpret Figure 2-of Sturman as showing spacer 125 as being a guide clearance while at the same time including channels to permit fluid communication, especially when the Sturman text is silent on this matter. Thus, Applicants respectfully assert that item 124 of Sturman would not be interpreted by one with ordinary skill in the art as having a guide clearance with its bore, as required by Applicants' claims.

A more reasonable interpretation of Sturmans' Figure 2 would indicate that spacer 124's thickness is far more important to the operation of the fuel injector shown than its diametrical clearance within its bore. In particular, one skilled in this relevant art would recognize that if the Sturman fuel injector was mass produced, one would need to assemble fuel injectors using a variety of spacers having slightly different thicknesses so that the valve opening pressure

of each injector could be made uniform despite inherent slight variations in spring washers 22 and inherent vertical differences between injectors as to where the needle 120 seats. In other words, one with ordinary skill in the art would recognize that, because fuel injector performance variability is very sensitive to geometrical and force differences (e.g. needle movement distance and/or needle biasing spring strength) that there needs to be some means of reducing injector performance variability in light of these inherent differences among fuel injectors. The spacer 124 of Sturman would be interpreted by one with ordinary skill in the art as a category part that is available in a plurality of discrete thicknesses that allow for performance variations to be reduced by choosing an appropriate thickness for each fuel injector that causes two different fuel injectors to have virtually identical valve opening pressures, despite the presence of slight geometrical and spring strength differences. Valve opening pressure refers to the pressure above which the needle valve will open to allow fuel to spray into the engine cylinder. Thus, the Sturman spacer is not attached to the needle valve member, is not guided in a guide bore, and is only present to minimize the performance differences from one injector to another. Since the spacer 124 of Sturman clearly shows fluid communication, and because it is properly interpreted as being a separate spacer not attached to its needle valve member, and because interpreting it to include a guide clearance is unsupported by anything in the Sturman text or elsewhere, all of the § 102(b) rejections should be reversed.

In addition, because the Sturman drawing is subject to differing interpretations because it does not show "how the parts are put together", it fails to provide an enabling disclosure that would support a proper § 102(b) rejection. In other words, without more evidence, Sturman's Figure 2 fails by itself to make a prima facie case that Applicants' claimed invention is anticipated.

In the reply brief (pp. 1-2), the appellants further argue

One undisputed fact renders this appeal appropriate for summary disposition. Namely, the difference between a guide clearance and a non-guide clearance in the fuel injector art can be less than the thickness of a line on a typical patent drawing. Thus, Applicants respectfully assert that some additional evidence, such as a text description and/or extrinsic evidence, must be included in order to appropriately assert that the cited patent drawing anticipates the claimed invention that includes limitations not capable of being clearly depicted

in a full section view of a fuel injector. In other words, the examiner has failed to satisfy his prima facie burden of proof by merely identifying a drawing and then superimposing the examiner's own speculations as to what the drawing shows without any evidence of record to support that interpretation. In the present case, Applicants have demonstrated that the Sturman drawing is reasonably subject to more than one interpretation. In fact, Applicant's interpretation is the only reasonable interpretation when one considers the practical problems associated with mass manufacturing and assembly of fuel injectors. Speculation is no substitute for evidence of facts. Since the examiner has not identified any evidence of record to support his speculative interpretation of what Figure 2 of the Sturman reference supposedly shows, the examiner's §102 rejections should be summarily reversed for failing to satisfy the burden to make out a prima facie case of anticipation.

Claim 1

In our view, the subject matter of claim 1 is readable on Sturman as set forth in the answer. We find the appellants argument unpersuasive for the following reasons.

First, it is our opinion that Sturman does not show a spacer atop, but not attached to the needle valve 120. The appellants' argument that Sturman shows a loose fitting spacer atop, but not attached to, a needle valve member is unsupported by any evidence² and is, in our view, contrary to the specific disclosure of Sturman (e.g., the needle valve 120 is biased into a closed position by nozzle springs 122 located within a nozzle spring chamber 124). It is our determination that the disclosure of Sturman would have taught an artisan that nozzle springs 122 engage the needle valve

² Attorney argument in a brief cannot take the place of evidence. In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

120 as shown in Figure 2. Thus, the disc-like portion, which the appellants consider to be a separate spacer, is part of the needle valve.

Second, it is our opinion that the claim language argued by the appellants (i.e., a needle valve member having an upper guide portion positioned in said upper guide bore) is readable on Sturman's needle valve 120 which has an upper portion (i.e., the disc-like portion which the appellants refer to as a spacer) positioned in the bore of housing member 108 as shown in Figure 2. In our view, the bore of Sturman's housing member 108 guides³ the upper portion of Sturman's needle valve 120 since it clearly directs the course of the upper portion of Sturman's needle valve 120. Moreover, it is our view that even if the term "guide" as used in the claims under appeal was given the more restrictive meaning⁴ as set forth by the appellants, the bore of Sturman's housing member 108 guides the upper portion of Sturman's needle valve 120 since there is no disclosure in Sturman that the bore of Sturman's housing member 108 provides a loose fit for the upper portion of Sturman's needle valve 120. In fact, it is our opinion that absent evidence to the contrary, an artisan would have viewed the bore of Sturman's

³ The American Heritage Dictionary, Second College Edition, (1982) defines the verb "guide" as "to direct the course of."

⁴ The United States Patent and Trademark Office (USPTO) applies to the verbiage of the claims before it the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the appellant's specification. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). See also In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983).

housing member 108 as providing a tight fit for the upper portion of Sturman's needle valve 120.

Third, the appellants argue that Sturman shows the disc-like portion/spacer shows fluid communication. This appears to be directed at the two vertical dashed lines in the disc-portion. However, the appellants' conclusion is speculative and unsupported by any evidence. Moreover, it is our opinion that even if the two vertical dashed lines in the disc-portion represent fuel flow channels, such would not be sufficient to define over Sturman since the claims under appeal do not exclude such flow channels. In that regard, we note that even if the disc-portion of the needle valve had flow channels the needle valve 120 would still have an upper guide portion positioned in the guide bore of the housing member 108 for the reasons set forth above.

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 102(b) is affirmed.

Claims 2 to 4, 6, 8 and 10

The appellants have grouped claims 1 to 4, 6, 8 and 10 as standing or falling together.⁵ Thereby, in accordance with 37 CFR § 1.192(c)(7), claims 2 to 4, 6, 8 and 10 fall with claim 1. Thus, it follows that the decision of the examiner to reject claims 2 to 4, 6, 8 and 10 under 35 U.S.C. § 102(b) is also affirmed.

Claims 9 and 21

The appellants argue (brief, pp. 6-7) that claims 9 and 21 recite that the nozzle chamber is at least partially defined by the upper tip component and that Sturman flatly does not show this feature. We agree. In our view, Sturman's passage 116 through housing member (i.e., the upper tip component) 108 is not part of a nozzle chamber. While Sturman's nozzle member (i.e., the lower tip component) 104 and the needle valve 120 define a nozzle chamber such nozzle chamber does not extend upwardly into the housing member 108. In fact, we agree with the appellants that the fuel supply passage 116 ends where the nozzle chamber begins in nozzle member 104. Thus, the subject matter of claims 9 and 21 is not readable on Sturman.

For the reasons set forth above, the decision of the examiner to reject claims 9 and 21 under 35 U.S.C. § 102(b) is reversed.

⁵ See page 3 of the appellants' brief.

Claims 22 to 24, 26 and 27

Claims 22 to 24, 26 and 27 depend from claim 21 and are not anticipated by Sturman for the reasons set forth above with respect to claim 21. Thus, it follows that the decision of the examiner to reject claims 22 to 24, 26 and 27 under 35 U.S.C. § 102(b) is also reversed.

The obviousness rejections

We sustain both the rejection of claims 1 to 4, 6 to 10, 21 to 24, 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Moncelle in view of Ganser and the rejection of claims 1, 6 to 10, 21, 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Anderson in view of Ganser.

In the obviousness rejections before us in this appeal, the examiner has set forth a detailed explanation (answer, pp. 5-11) as to how the subject matter of the claims under appeal would have been obvious at the time the invention was made to a person of ordinary skill in the art. In these rejections, the examiner (1) determined the scope and content of the prior art, (2) ascertained the differences between the prior art and the claims at issue, and (3) concluded that the determined difference(s) would have been obvious at the time the invention was made to a person of ordinary skill in the art.

Accordingly, we see no need in this decision to further discuss the teachings of the applied prior art or the differences between the prior art and the claims at issue.

The appellants argue with respect to the obviousness rejections (brief, pp. 8-12; reply brief, pp. 3-4) that there is no motivation in the applied prior art for one skilled in the art to add the second guide of Ganser into either Moncelle or Anderson. We do not agree.

To establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of

one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein).

In our view, Ganser's teaching (column 10, lines 20-21) that needle valve 212 has a second guide 216 (which is in addition to the needle valve piston 206 of the needle valve 212) provides sufficient motivation for one skilled in the art to have added a second guide on the needle valve of either Moncelle or Anderson for the self-evident advantages thereof (e.g., additional guiding of the needle valve in the bore of the lower tip component (i.e., Moncelle's bore 32 in tip 18; Anderson's bore in tip 154). In our view, Ganser's teaching of a second guide 216 on needle valve 212 provides an implicit suggestion to one with ordinary skill in the art that a needle valve with two guides provides more accurate movement of the needle valve than a single guide (i.e., the needle valve piston 206 of the needle valve 212). While the appellants are correct that there is no "support" (express statement) in the record that the needle valves of Moncelle and Anderson need to be guided in a more accurate manner, it is our determination that the combined teachings of the applied prior art (Moncelle combined with Ganser or Anderson combined with Ganser) would have made it obvious at the time the invention was made for one skilled in the art to have added a second guide on the needle valve of either Moncelle or Anderson.

With regard to the appellants' argument that the simple addition of a second guide region confounds the need for an accurately moving needle valve, rather than improving the movement accuracy of the needle valve, we note that such argument is unpersuasive since it is unsupported by any evidence.⁶

Likewise, the appellants' contention that virtually all of the hundreds of fuel injector patents show a single guide for the needle is unpersuasive since Ganser teaches a needle valve having two guide portions. While conventional wisdom in the art may be to include only one guide for the needle valve, Ganser goes against such conventional wisdom by teaching two guides for the needle valve and that teaching is sufficient as set forth above to render the claimed subject matter obvious to a person of ordinary skill in the art at the time the invention was made.

Since there is motivation in the applied prior art that would cause a person skilled in the art to apply the teachings of Ganser to modify the needle valves taught in either Moncelle or Anderson, the examiner's obviousness conclusion in this case does not rest upon the teachings of the present invention.⁷

⁶ See footnote 2.

⁷ The use of hindsight knowledge derived from the appellants' own disclosure to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert.

(continued...)

For the reasons set forth above, the decision of the examiner to reject claims 1 to 4, 6 to 10, 21 to 24, 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Moncelle in view of Ganser is affirmed and the decision of the examiner to reject claims 1, 6 to 10, 21, 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Anderson in view of Ganser is affirmed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 4, 6, 8 to 10, 21 to 24, 26 and 27 under 35 U.S.C. § 102(b) as being anticipated by Sturman is affirmed with respect to claims 1 to 4, 6, 8 and 10 and reversed with respect to claims 9, 21 to 24, 26 and 27; the decision of the examiner to reject claims 1 to 4, 6 to 10, 21 to 24, 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Moncelle in view of Ganser is affirmed; and the decision of the examiner to reject claims 1, 6 to 10, 21, 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Anderson in view of Ganser is affirmed.

Since at least one rejection of each of the appealed claims has been affirmed, the decision of the examiner is affirmed.

⁷(...continued)
denied, 469 U.S. 851 (1984).

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

AFFIRMED

IRWIN CHARLES COHEN
Administrative Patent Judge

LAWRENCE J. STAAB
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

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MCNEIL LIELL MCNEIL & HARPER
511 S MADISON ST
BLOOMINGTON, IN 47402

JVN/jg