

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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ERIC T. HENGSTENBERG

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Appeal No. 2004-1006  
Application 10/142,485

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ON BRIEF

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Before WARREN, WALTZ and KRATZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 2 and 8,<sup>1</sup> which, as they stand of record,<sup>2</sup> read as follows:

8. A choke tube for attachment to an externally threaded discharge end of a barrel of a firearm for obtaining dense shot patterns, comprising:

a cylindrical body having a center bore and opposite open first and second ends;

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<sup>1</sup> Claims 3 through 7 are also of record and have been withdrawn from consideration by the examiner under 37 CFR § 1.142(b).

<sup>2</sup> According to the examiner, pursuant to 37 CFR § 1.126 (2002), “claim 12” presented in the amendment of December 2, 2002 (Paper No. 6), has been renumbered as “claim 8,” and, without citation of rule, the dependency of claim 2, amended in the same amendment to depend on “claim 12,” has been changed to “claim 8” on the basis of said renumbering. *See* the final action mailed February 21, 2003 (Paper No. 7); *see also* answer (page 3).

internal threads located in the bore adjacent the first end for threadably engaging an outside diameter of the discharge end of the firearm barrel; and

the bore being tapered and narrowing only from a diameter adjacent the internal threads to a smaller diameter at the second end.

2. The apparatus of claim 8 wherein the outer surface of the cylindrical body is knurled.

The appealed claims are drawn to a choke tube for a “shot” firearm comprising at least a cylindrical body having a center bore, the internal threads in one end of the center bore are engaged with the external threads on the barrel of the firearm, the other end of the center bore is tapered and narrowed only from a diameter adjacent the internal threads to the end thereof, and in claim 2, at least a part of the outer surface of the cylindrical body is knurled.

The references relied on by the examiner are:

Linde et al. (Linde)	4,058,925	Nov. 22, 1977
Coburn	5,425,298	Jun. 20, 1995
Buss	5,814,757	Sep. 29, 1998
Schrader (German Patent)	88198	Feb. 28, 1896
Ferhat (Canadian Patent)	490,721	Feb. 24, 1953

The examiner has advanced the following grounds of rejection on appeal:

Claims 8 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Ferhat;

Claim 8 stands rejected under 35 U.S.C. § 102(b) as anticipated by Schrader;

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schrader in view of Buss or Coburn;

Claim 8 stands rejected under 35 U.S.C. § 102(b) as anticipated by Linde; and

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Linde in view of Buss or Coburn.

Appellant states that dependent claim 2 “includes all the limitations of independent claim 8 . . . [and] the claims stand and fall together” (brief, page 3). Thus, we decide this appeal based on appealed claims 8 and 2 as representative of the respective grounds of rejection.

37 CFR § 1.192(c)(7) (2003).

We affirm the grounds of rejection based on Ferhat and Schrader and reverse the grounds of rejection based on Linde, and thus, affirm the decision of the examiner.

Rather than reiterate the respective positions advanced by the examiner and appellant, we refer to the examiner's answer and to appellant's brief and reply brief for a complete exposition thereof.

*Opinion*

In order to review the examiner's application of prior art to appealed claims 1 and 8, we must first interpret the language thereof by giving the claim terms their broadest reasonable interpretation in light of the written description in the specification as it would be interpreted by one of ordinary skill in this art, *see, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), without reading into these claims any limitation or particular embodiment which is disclosed in the specification. *See Zletz, supra; In re Priest*, 582 F.2d 33, 37, 199 USPQ 11, 15 (CCPA 1978). Thus, the terms in the appealed claims must be given their ordinary meaning unless another meaning is intended by appellant as established in the written description of their specification. *See, e.g., Morris, supra; Zletz, supra*. When the specification does not contain an express definition, a reasonable, supported interpretation of the appealed claims that differs from that urged by appellant can be used to determine the patentability of the claims. *Morris*, 127 F.3d at 1055-56, 44 USPQ2d at 1028-30 ("Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO's definition unreasonable when the PTO can point to other sources that support its interpretation."). Thus, "[i]t is the applicants' burden to precisely define the invention, not the PTO's. See 35 U.S.C. § 112 ¶ 2 [statute omitted]." *Morris*, 127 F.3d at 1055-56, 44 USPQ2d at 1029. We will consider below the interpretation to be made of the claim language where it is an issue in the application of a reference.

Considering first the ground of rejection of appealed claim 8 under § 102(b) as anticipated by Ferhat, the examiner finds that, as shown in Ferhat **Fig. 2** (see cols. 1-3), tubular connector or coupling member **11** and choke member **19** as combined, comprise "a cylindrical body having a center bore and opposite open first and second ends" as specified in the first clause of appealed claim 8; internal threads **14** in the bore of tubular connector **11** engage external threads **13** of firearm barrel **10**, comprise "internal threads located in the bore adjacent the first

end for threadably engaging an outside diameter of the discharge end of the firearm barrel” as specified in the second clause of claim 8; and the bore of choke member **19** tapering and narrowing only from a diameter adjacent internal threads **14** in tubular connector **11** to a smaller diameter at the end of the choke member, comprises “the bore being tapered and narrowing only from a diameter adjacent the internal threads to a smaller diameter at the second end” as specified in the third clause of claim 8 (answer, pages 3-4 and 5-6). Thus, *prima facie*, Ferhat discloses an embodiment that expressly satisfies each and every element of the claimed choke tube arranged as required by claim 8. *See generally, In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); *Lindemann Maschinenfabrik v. American Hoist and Derrick*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

We find that the examiner has established a *prima facie* case of anticipation of appealed claim 8 as a matter of fact over the disclosure of Ferhat, and accordingly, we again evaluate all of the evidence of anticipation and non-anticipation based on the record as a whole, giving due consideration to the weight of appellant’s arguments and evidence in the brief and reply brief. *See generally, In re Spada*, 911 F.2d 705, 707 n.3, 15 USPQ2d 1655, 1657 n.3 (Fed. Cir. 1990).

Appellant submits that choke **19** of Ferhat has external threads **27** and thus, does not fall within appealed claim 8, and argues that the examiner has erroneously combined tubular connector **11** with choke **19** to provide such threads (brief, pages 5-8). Appellant further contends that even if the combination of tubular connector **11** with choke **19** is proper, “the bore in . . . [Ferhat] does not taper and narrow from a diameter adjacent the internal threads, but rather begins to taper and narrow from a diameter adjacent a rib 18 which is substantially equal to the inner diameter of the outer end of the gun bore” (*id.*, pages 6-7). In response, the examiner argues that the combined tubular connector **11** with choke **19** can reasonably “be considered to be two pieces of a functional cylindrical body of a choke tube,” noting that as such, the limitations with respect to internal threads is met (answer, page 5). The examiner further finds that the tapering of the bore of choke **19** “appears to begin at a location approximate lead line 24 in fig. 2” and considered this “to be close enough to internal threads 14 to meet the claim limitation ‘narrowing only from a diameter adjacent the internal threads’” (*id.*, pages 5-6).

Appellant replies that the “two-piece cylindrical body” of Ferhat “does not correspond with the claimed language requiring ‘a cylindrical body having a center bore and opposite open first and second ends’” because “the two-piece cylindrical body disclosed by Ferhat consists of a choke member 19 with a center bore that is threadably attached to a coupling member 11, which also has a center bore,” wherein “tubular member 11 does not perform a choking function but rather provides a means for attaching the choke member 19 to the end of the barrel 10” (reply brief, pages 2-3). Appellant further argues that “[t]he claims . . . do not require tapering and narrowing from a diameter ‘close enough’ to the internal threads, but rather require a diameter ‘adjacent to’ the internal threads,” and contends that “[a]s read in light of the specification, and as shown in Fig. 3 of the Application . . . the tapering of bore 36 begins at the end of internal threads 26 . . . and narrows continuously to end 32,” while in Ferhat, “there is a separation between the internal threads and the point where the narrowing begins” (*id.*, pages 3-5).

The claim limitations at issue here are the first and third clauses of appealed claim 8. Considering the claim term “a cylindrical body” in the first clause of claim 8, “a cylindrical body having a center bore and opposite open first and second ends,” we find no definition for this term in the written description in the specification. In giving the claim term the broadest reasonable interpretation, we find that, indeed, a “body” can be an entity comprising more than one part, as determined from the common dictionary definition of this term,<sup>3</sup> and thus we cannot agree with appellant that the term is in this instance limited to an entity of unitary construction. Therefore, we agree with the examiner that, as a matter of fact, in Ferhat **Fig. 2**, the combination of tubular connector **11** and choke **19** comprises “a cylindrical body,” with “a center bore” comprising the center bore of each of these parts, with each part thus providing an “opposite open . . . end,” as specified for the claimed choke tube by the first clause of claim 8, and, as recognized by appellant, tubular connector **11** provides internal threads located in the bore adjacent the first end for threadably engaging the outside diameter of firearm barrel, as specified for the claimed choke tube by the second clause of this claim.

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<sup>3</sup> See generally, *The American Heritage Dictionary, Second College Edition* 193 (Boston, Houghton Mifflin Company, 1982); *Webster’s II New Riverside University Dictionary* 186-87 (Boston, The Riverside Publishing Company, 1984).

The dispute with respect to the third clause of appealed claim 8, “the bore being tapered and narrowing only from a diameter *adjacent the internal threads* to a smaller diameter at the second end” (emphasis supplied), involves the italicized language used by appellant to define the locus of a diameter in the center bore relative to the internal threads, from which the center bore is “tapered and narrowing only” to the second end of the choke tube. Appellant does not define the term “adjacent to” in the context of this claim clause in the written description in the specification *per se*, and in now canceled original claim 1 states the clause as “the bore being tapered and narrowing only from a diameter *at the first end* to a smaller diameter at the second end” (emphasis supplied). We find that appellant does disclose in the written description in the specification that “[t]he choke has an internal diameter that tapers inwardly as it progresses *from the end of the barrel* to the end of the choke” (page 2, lines 3-5, emphasis supplied; *see also* page 2, lines 10-12, and page 3, lines 4-6, 11-14 and 17-19). Upon considering the language of appealed claim 8 as a whole in these respects, we find no requirement that the entire length of the “internal threads” of the claimed choke tube must be “threadably engaged” with all of the external threads on “an outside diameter of the discharge end of the firearm barrel,” that is, there can be a shorter length of threads on the barrel than inside the choke tube in which instance, the “tapering and narrowing” would begin at a point in the center bore of the choke tube *after* the end of the barrel.

In amending the subject clause by replacing the words “at the first end,” in canceled claim 1, with the words “adjacent the internal threads” in “claim 12” in the amendment filed December 2, 2002 (Paper No. 6), now claim 8 (*see above* note 2), appellant states that “Applicant’s device is . . . manufactured by cutting the internal threads in a bore of constant diameter, and thence tapering the bore to a narrower diameter downstream of the threads” (page 3). In the reply brief (pages 4-5; emphasis supplied), appellant points to specification **Fig. 3** as establishing that “the tapering of bore 36 begins *at the end of* internal threads 36” in contrast to the separated loci of the end of internal threads **36** and lead line **24** of Ferhat **Fig. 2**, which the examiner considers to be “close enough” to be “adjacent to” (answer, pages 5-6).

We find that the common dictionary meaning of the term “adjacent” includes “close to; lying near” and “nearby,” and is not limited to “next to” or “touching.”<sup>4</sup>

We determine that, on this record, a broad, reasonable interpretation of the claim language “the bore being tapered and narrowing only from a diameter *adjacent the internal threads* to a smaller diameter at the second end” (emphasis supplied), is that the “diameter” which is the starting point, can be at *any locus close to* the end of the internal threads, even though it may be determined that the interpretation of this language urged by appellant is a reasonable one. *See Morris*, 127 F.3d at 1055-56, 44 USPQ2d at 1029. In this latter respect, we point out that appellant’s interpretation is based on the “preferred embodiment,” that is, the specification **Figs.** are based on this embodiment, and we will not read limitations from this embodiment into appealed claim 8. *See Zletz, supra; Priest, supra.*

Therefore, we agree with the examiner that, as a matter of fact, in Ferhat **Fig. 2**, the center bore of choke **19** beings tapering and narrowing at a point close enough to the end of the threads **14** on tubular connector **11** to satisfy the limitation “the bore being tapered and narrowing only from a diameter *adjacent the internal threads* to a smaller diameter at the second end” of appealed claim 8.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of anticipation found in Ferhat with appellant’s countervailing evidence of and argument for no anticipation in fact and find that the claimed invention encompassed by appealed claims 2 and 8 is anticipated as a matter of fact under 35 U.S.C. § 102(b).

Turning now to the ground of rejection of appealed claim 8 under § 102(b) as anticipated by Schrader, the examiner finds in Schrader **Fig. 2** (pages 2-3), “a cylindrical body having a center bore and opposite open first and second ends,” as specified in the first clause of appealed claim 8; internal threads **d**<sup>1</sup> which comprise “internal threads located in the bore adjacent the first end for threadably engaging an outside diameter of the discharge end of the firearm barrel,” as specified in the second clause of claim 8; and a tapering and narrowing of the center bore as shown in **d** comprises “the bore being tapered and narrowing only from a diameter adjacent the

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<sup>4</sup> Cf. the common dictionary definitions of “nearby,” “adjoining,” “close” and “contiguous.” *See generally, The American Heritage Dictionary, Second College Edition* 79, 282, 316, 787;

internal threads to a smaller diameter at the second end” as specified in the third clause of claim 8 (answer, pages 4 and 6). Thus, *prima facie*, Schrader discloses an embodiment that expressly satisfies each and every element of the claimed choke tube arranged as required by claim 8. *See generally, King, supra; Lindemann Maschinenfabrik, supra.*

We find that the examiner has established a *prima facie* case of anticipation of appealed claim 8 as a matter of fact over the disclosure of Schrader, and accordingly, we again evaluate all of the evidence of anticipation and non-anticipation based on the record as a whole, giving due consideration to the weight of appellant’s arguments and evidence in the brief and reply brief. *See generally, Spada, supra.*

Appellant argues that a review of Schrader Fig. 2 shows that “bore (d) tapers and narrows at a point within the portion of internal threads and not, as is required by claim 8, from a diameter adjacent to the threads” (brief, page 10). The examiner contends that “[I]nternal threads d<sup>1</sup> matchingly engage external threads b on barrel a (see page 3, lines 4-6, of English translation),” and from Schrader Figs. 2 and 4, “it is clear that the tapering begins where threads d<sup>1</sup> begins [sic, ends]” as the “other portion d<sup>1</sup> . . . is clearly cylindrical (see figs. 2 and 4)” (answer, page 6). Appellant alleges that the examiner provides no support for this position and ignores the evidence in the brief in these respects (page 6).

We find that each of Schrader **Figs. 2 and 4** show that the center bore of the choke tube begins to taper and narrow at a point close to the end of internal threads d<sup>1</sup>, although as the examiner points out, the disclosure of Schrader in this respect is that “internal thread **d<sup>1</sup>** . . . fits threads **b** on the barrel” (page 3, lines 4-6) and barrel **a** appears to be cylindrical in this area. In any event, in view of our interpretation of the language “the bore being tapered and narrowing only from a diameter adjacent the internal threads to a smaller diameter at the second end” of the third clause of claim 8 to mean that the “diameter” which is the starting point can be at *any* locus *close to* the end of the internal threads, we find that even if one of ordinary skill in this art would

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*Webster’s II New Riverside University Dictionary* 78, 272.

have inferred from Schrader<sup>5</sup> that the center bore of the choke tube begins to taper and narrow at a point prior to the end of the internal threads thereof, such point is close enough to the end of the internal threads to satisfy the limitation “the bore being tapered and narrowing only from a diameter *adjacent the internal threads* to a smaller diameter at the second end” (emphasis supplied) of appealed claim 8 as we interpreted this claim language above.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of anticipation found in Schrader with appellant’s countervailing evidence of and argument for no anticipation in fact and find that the claimed invention encompassed by appealed claim 8 is anticipated as a matter of fact under 35 U.S.C. § 102(b).

In the ground of rejection of appealed dependent claim 2 stands under § 103(a) over the combined teachings of Schrader, Buss and Coburn, the examiner relies on Buss and Coburn for the position that the combination of references would have suggested to one of ordinary skill in this art to modify the choke tube of Schrader by knurling the outer surface thereof for grasping purposes as taught by Buss and Coburn (answer, page 4). Appellant does not dispute the examiner’s position in this respect, but contends that the combination of references does not teach “a bore that tapers and narrows only from a diameter adjacent the internal threads” (brief, page 11; *see also* reply brief, pages 8-11), thus raising an issue that we addressed above in finding that Schrader did in fact anticipate appealed independent claim 8. Appellant has presented no new argument here in this latter respect.

Accordingly, in again considering the totality of the record before us in view of the case of *prima facie* obviousness established by the examiner over the combined teachings of Schrader, Buss and Coburn, we have weighed the evidence of obviousness found in the applied combination of references with appellant’s countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claim 2 would have been obvious as a matter of law under 35 U.S.C. § 103(a). *See generally, In re*

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<sup>5</sup> It is well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom, *see In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir. 1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

*Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

Turning now to the ground of rejection of appealed claim 8 under § 102(b) as anticipated by Linde, we have carefully considered the examiner's position with respect to the evidence (answer, pages 4-5 and 6-7), but find that we agree with appellant's argument that the word "only" in the claim language "the bore being tapered and narrowing only from a diameter adjacent the internal threads to a smaller diameter at the second end" limits the shape of the center bore to being tapered and narrowed from the point at a diameter adjacent the internal threads to the end of the choke tube. Indeed, a definition for this term in this context does not appear in the written description in the specification, and thus the broadest reasonable interpretation is its customary dictionary meaning in context of "exclusively."<sup>6</sup> We find that the portion of the multiple choke tubes in each of the Linde Figs. on which the examiner relies have "portions that are parallel to the central axis" as appellant argues (brief, pages 8-9; reply brief, pages 7-8), and the examiner does not dispute (answer, pages 6-7). While it can be said that the "tapering and narrowing" begins "adjacent" to the treads in each of the figures, as we have interpreted this claim language above, we find that in each figure, the "tapering and narrowing" does not extend from such a point to the "end" of the choke tube as required by the claim language. Accordingly, because the choke tubes shown in Linde **Figs. 3, 5 and 6** do not as a matter of fact meet each and every limitation arranged as required by appealed claim 8, we reverse this ground of rejection. *See generally, King, supra; Lindemann Maschinenfabrik, supra.*

The ground of rejection of appealed claim 2 under § 103(a) over the combined teachings of Linde, Buss and Coburn, of course, has the same deficiency in its factual underpinnings, as appellant points out (brief, page 11; *see also* reply brief, pages 8-11), and the examiner does not dispute appellant's position in this respect (answer, page 7). Accordingly, we reverse this ground of rejection as well.

In summary, we have affirmed the ground of rejection based on Ferhat and the grounds of rejection based on Schrader, and we have reversed the grounds of rejection based on Linde.

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<sup>6</sup> *See generally, The American Heritage Dictionary, Second College Edition* 869; *Webster's II New Riverside University Dictionary* 821.



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Application 10/142,485

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