

United States Court of Appeals for the Federal Circuit

03-1445

VERSA CORPORATION,

Plaintiff-Appellant,

v.

AG-BAG INTERNATIONAL LIMITED,

Defendant-Appellee.

Peter E. Heuser, Kolisch Hartwell P.C., of Portland, Oregon, argued for plaintiff-appellant.

David W. Axelrod, Schwabe, Williamson & Wyatt, P.C., of Portland, Oregon, for defendant-appellee. With him on the brief was Christopher J. Lewis.

Appealed from: United States District Court for the District of Oregon

Magistrate Judge Dennis James Hubel

United States Court of Appeals for the Federal Circuit

03-1445

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Plaintiff-Appellant,

v.

AG-BAG INTERNATIONAL LIMITED,

Defendant-Appellee.

DECIDED: December 14, 2004

Before NEWMAN, RADER, and DYK, Circuit Judges.

Opinion for the court filed by Circuit Judge DYK. Dissenting opinion filed by Circuit Judge NEWMAN.

DYK, Circuit Judge.

Versa Corporation (“Versa”) sued Ag-Bag International Ltd. (“Ag-Bag”) in the United States District Court for the District of Oregon for infringement of United States Patent Nos. 5,345,744 (the “744 patent”), 5,426,910 (the “910 patent”), and 5,452,562 (the “562 patent”). The district court construed the claims, and Versa admitted that it could not prove infringement under the district court’s claim construction. The district court entered a judgment of non-infringement pursuant to Fed. R. Civ. P. 54(b). Versa Corp. v. Ag-Bag Int’l, Ltd., No. 01-544-HU (D. Or. May 22, 2003). We conclude that the district court erred

in its claim construction of the “means . . . for creating air channels” element and, accordingly, we reverse.

BACKGROUND

Versa and Ag-Bag are competitors in the agricultural bagging machine market. They manufacture and sell similar machines. Versa is the assignee of the '744, '910, and '562 patents, which pertain to compost bagging machines. The patented machines fill large bags with compost material in such a way that air required for decomposition may enter the bag. The patents are directed to various features of the bagging machines, including the structures that introduce air. Two such structures are disclosed in the three patents: (1) one or more perforated pipes that extend through the compost material and (2) a multiplicity of V-shaped flutes on the walls of the tunnel against which the compost is compacted.

Versa filed suit against Ag-Bag alleging that Ag-Bag infringed claims 1 and 3 of the '910 patent, and the sole claims of the '744 and '562 patents. Ag-Bag counterclaimed for infringement of its United States Patent No. 5,461,843 (the “843 patent”) and raised a number of defenses and counterclaims including invalidity and non-infringement.

The three patents asserted by Versa share very similar specifications. Claim 1 of the '910 patent, the only patent with multiple claims, is representative of the claims at issue. This claim is identical in pertinent part to claim 3 of the '910 patent, and the claims of the '744 and '562 patents. Claim 1 provides:

1. A compost bagging machine for bagging compost material into an elongated flexible bag having a fixed end and an open mouth,
a wheeled frame means having rearward and forward ends,
a tunnel means on said wheeled frame means and having an intake end for receiving compost material and an output end adapted to receive the mouth of the bag,

a hopper means on said wheeled frame means for receiving compost material,

means at the intake end of said tunnel means for forcing the compost material into said tunnel means, into said bag, and to move said wheeled frame means away from said fixed end of said bag,

means associated with the bagging machine for creating air channels in the compost material in said bag to enhance the composting of the compost material,

said means for creating air channels comprising positioning means which positions at least one elongated, perforated pipe extending substantially the entire length of the compost material in the bag as said bagging machine bags the compost material in said bag, said perforated pipe having openings formed therein for substantially the entire length thereof,

and a pipe support on said wheeled frame means for supporting said perforated pipe thereon prior to said perforated pipe being positioned in said compost material by said positioning means as said bagging machine bags the compost material in said bag.

'910 patent (emphasis on pertinent part).

Among other things, the district court held, and the parties agree, that the clause referring to a “means associated with the bagging machine for creating air channels” is a means-plus-function limitation governed by 35 U.S.C. § 112, ¶ 6.1 Based upon its analysis of the claim language, specification, and prosecution history, the district court ruled that the means for creating air channels requires the presence of both perforated pipe and flutes. After the district court construed the claims, Versa moved for judgment of non-infringement on the '744, '910, and '562 patents. Versa agreed that it was unable to prove infringement under the district court's claim construction, apparently because the accused Ag-Bag machine does not contain flutes, and it therefore requested that judgment be entered so that it could appeal to this court. The district court entered judgment of non-infringement of the '744, '910, and '562 patents in favor of Ag-Bag pursuant to Rule 54(b) of the Federal

¹ We need not decide whether, absent such agreement by the parties, the claims were properly analyzed under § 112, ¶ 6.

Rules of Civil Procedure. We have jurisdiction over this appeal pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

After the filing of appeals the parties entered into a settlement agreement which resolved all issues on appeal other than the proper construction of the “means . . . for creating air channels” limitation.² The parties have also agreed that, if we conclude the flutes are required, Ag-Bag will pay Versa an agreed royalty.³ Thus, the sole question before us is whether under a proper claim construction the claimed bagging machines must include flutes.

I

This court reviews the claim construction of the district court without deference. Mars, Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1373 (Fed. Cir. 2004). We have previously held that “[c]laim construction of a § 112, ¶ 6 limitation includes identifying the claimed function and determining the corresponding structure or act disclosed in the specification.” IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1430 (Fed. Cir. 2000). In this case, the claim makes clear that the function is “creating air channels in the compost

² The settlement agreement grants Ag-Bag a nonexclusive license on the '744, '910, and '562 patents and grants Versa a nonexclusive license on the '843 patent. Ag-Bag agreed to withdraw its appeal of the district court's decision regarding invalidity and prior invention. That appeal was in fact withdrawn.

³ That section of the settlement agreement states in part:

In the 1445 Appeal, if the CAFC rules that flutes are not a required part of the “means for creating air channels” or correctly not a required part of any of the claims asserted against Ag-Bag, contrary to the District Court's claim construction requirement, then from the date of the CAFC decision, Ag-Bag will pay Versa a 7% royalty on all compost bags sold for the life of the '744 Patent, whether or not those bags are sold in association with the sale of new equipment or to be used with equipment that has been previously sold by Ag-Bag or others.

material in said bag to enhance the composting of the compost material.” ’910 patent, col. 4, ll. 9-12. The dispute is over what corresponding structure is disclosed in the specification. In particular, the issue is whether flutes must be included in the structures that perform this function.

In most places the specification describes the invention as including both flutes and perforated pipe, and the drawings show both flutes and perforated pipe. Specifically, the abstract states that “[t]he presence of air in the channels created by the flutes and the air present in the perforated pipe ensures that sufficient air will be present in the mass to achieve complete decomposition of the material.” Id. The specification further states that “[t]he air present in the grooves in the material [i.e., the flutes] and the air present in the perforated pipe causes the material to properly decompose.” Id. at col. 2, ll. 23-25. However, the specification also points out that both structures are not required, stating: “[I]t is believed that sufficient air will be present to achieve decomposition with either the channels 48 or the perforated pipe 50 although it is preferred that both the flutes 46 and the pipe 50 be utilized.” Id. at col. 3, ll. 29-34. We conclude that, in light of this disclosure, flutes are not essential.

In Micro Chemical Inc. v. Great Plains Chemical Co., we held that “[w]hen multiple embodiments in the specification correspond to the claimed function, proper application of § 112, ¶ 6 generally reads the claim element to embrace each of those embodiments.” 194 F.3d 1250, 1258 (Fed. Cir. 1999). In Serrano v. Telular Corp., we addressed a question similar to that presented here. 111 F.3d 1578 (Fed. Cir. 1997). Serrano involved a patent on an apparatus for interfacing standard telephone devices with a cellular radio transceiver. Id. at 1580. The claim required “determination means” to determine when the

last digit of a telephone number was dialed. Id. at 1580, 1582. Serrano argued that the “determination means” corresponded only to a logic circuit and did not disclose systems wherein software made the logical decisions. Id. at 1583. To support his contention, he noted that the embodiment shown in the specification and drawings disclosed only logic circuitry. Id. We rejected this argument because the written description also included a passage which stated that “a microprocessor-based system could also be used wherein the logical decisions are configured in software.” Id. We held that “[d]isclosed structure includes that which is described in the patent specification, including any alternative structures identified,” even when the most frequently described structure and embodiment are different. Id. The same is true here.⁴

Moreover, here the language of the claim itself also suggests that the means for creating air channels does not have to include flutes. After setting forth the “means . . . for creating air channels” limitation, that limitation is further defined by the next clause of the claim, which reads: “said means for creating air channels comprising positioning means which positions at least one elongated, perforated pipe” ’910 patent, col. 4, ll. 13-15. Although “comprising” language is not limiting and may include features not recited in the claim, such language cannot be read to require other structure. Thus the claim language itself shows that flutes are not required structure for the “means . . . for creating air channels.”

⁴ The district court relied on Unique Concepts, Inc. v. Brown, 939 F.2d 1558 (Fed. Cir. 1991), to reach a contrary result. However, Unique Concepts was not a case involving a means-plus-function claim, and did not involve the question of what structure was disclosed in the specification. Rather, it involved construction of claim language that explicitly described a particular structure. The specification’s reference to an alternate structure was simply held insufficient to overcome clear claim language. Id. at 1562.

Furthermore, the doctrine of claim differentiation supports the conclusion that flutes are not necessary structure. The doctrine of claim differentiation “create[s] a presumption that each claim in a patent has a different scope.” Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998). The difference in meaning and scope between claims is presumed to be significant “[t]o the extent that the absence of such difference in meaning and scope would make a claim superfluous.” Tandon Corp. v. United States Int’l Trade Comm’n, 831 F.2d 1017, 1023 (Fed. Cir. 1987).

Here, claim 2 of the '910 patent depends from claim 1 and adds that flutes are "also" present:

2. The machine of claim 1 wherein said tunnel means has inner and outer surfaces and wherein said means for creating air channels also comprises spaced-apart inwardly projecting flutes positioned on the inner surface of said tunnel means.

'910 patent, col. 4, ll. 27-31 (emphasis added). Thus, because an interpretation of claim 1 requiring flutes would render claim 2 superfluous, the doctrine of claim differentiation supports an interpretation that claim 1 does not require the flutes of claim 2.

II

We do not find convincing Ag-Bag’s arguments to the contrary. First, Ag-Bag argues, and the district court agreed, that the specification’s multiple references to the preferred embodiment somehow overpower the single reference to an embodiment not requiring the flutes. It is telling that Ag-Bag cites no case law supporting this position, and it was rejected in Serrano.

Second, in supporting the district court’s opinion, Ag-Bag also argues that the claim limitation’s use of “channels” in the plural suggests that both perforated pipe and flutes are required structure since a perforated pipe does not create multiple channels. However, the

use of “channels” in the plural does not imply that multiple channels are required by the claim. In Dayco Products, Inc. v. Total Containment, Inc., we recognized that, in context, the plural can describe a universe ranging from one to some higher number, rather than requiring more than one item. 258 F.3d 1317, 1328 (Fed. Cir. 2001). The context in which the patentee used the plural here supports a similar interpretation and, therefore, the recitation of “channels” does not mean a plurality of channel forming structures is required.

Third, Ag-Bag argues that the prosecution histories of the Versa patents demonstrate that flutes are required. This argument was not adopted by the district court and, like the district court, we reject it. Ag-Bag points out that during the prosecution of the '744 patent, every dependent claim drawn to flutes alone or perforated pipe alone was rejected. Ag-Bag argues that the claims accordingly should be interpreted to require both structures. But there is no evidence that the claims were rejected because both perforated pipe and flutes were required to overcome prior art or an obviousness rejection. Indeed, the examiner also rejected claims that required both perforated pipe and flutes, finding that both flutes and perforated pipe were disclosed in the prior art.

The examiner only allowed the claims once reel means and guide means were added. The patent states that the reel means is a structure supporting a coil of perforated pipe while the guide means guides the perforated pipe after leaving the reel. '744 patent, col. 3, ll. 28-40. This prosecution history does not suggest that flutes are required structure; it suggests only that reel means and guide means are required structure in the '744 patent. The prosecution histories of the patents do not support a claim construction requiring flutes.

We have considered Ag-Bag's other arguments and found them to be without merit.

CONCLUSION

We hold that the proper claim construction of claim 1 of the '910 patent and the claims of which it is representative does not require the patented device to include flutes. The parties' settlement agreement specifies that a ruling by this court that flutes are not a required structure of the claims asserted against Ag-Bag shall result in Ag-Bag paying Versa a royalty as set out in the agreement. Accordingly, since we hold that flutes are not required structure, the judgment of non-infringement based on the district court's incorrect claim construction is

REVERSED.

COSTS

No costs.

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NEWMAN, Circuit Judge, dissenting.

This case does not present a new question, and it should not have a new answer. The question is, can a patent claim clause written in means-plus-function form be construed, as a matter of law, literally to cover a device that is not the invention described in the specification, that is not shown in any of the drawings, that was not examined for patentability, that was excluded by prosecution arguments, and that is not an asserted equivalent. Statute and precedent require that the question be answered in the negative. Until today.

My colleagues on this panel now hold that the description of the invention, the prosecution history, and the prior art, must give way to a claim construction that covers an invention that the applicant foresaw but chose not to describe and prosecute. Reversing the district court, my colleagues hold that the patents cover a machine that uses only a

perforated pipe to provide air to the compost material. However, the specification, the prosecution, and the claim require the use of flutes to create air channels along with the use of perforated pipe. The district court correctly and rationally construed the claim, and should be affirmed.

The Claim

The parties designated claim 1 of the '910 patent as dispositive of the only remaining issue, viz., does the means-plus-function clause for "creating air channels" require a structure that includes flutes (or their equivalent). The pertinent claim limitation is shown in bold:

1. A compost bagging machine for bagging compost material into an elongated flexible bag having a fixed end and an open mouth,
 - a wheeled frame means having rearward and forward ends,
 - a tunnel means on said wheeled frame means and having an intake end for receiving compost material and an output end adapted to receive the mouth of the bag,
 - a hopper means on said wheeled frame means for receiving compost material,
 - means at the intake end of said tunnel means for forcing the compost material into said tunnel means, into said bag, and to move said wheeled frame means away from said fixed end of said bag,
 - means associated with the bagging machine for creating air channels in the compost material in said bag to enhance the composting of the compost material,**
 - said means for creating air channels comprising positioning means which positions at least one elongated, perforated pipe extending substantially the entire length of the compost material in the bag as said bagging machine bags the compost material in said bag, said perforated pipe having openings formed therein for substantially the entire length thereof,
 - and a pipe support on said wheeled frame means for supporting said perforated pipe thereon prior to said perforated pipe being positioned in said compost material by said positioning means as said bagging machine bags the compost material in said bag.

The district court ruled that the "means . . . for creating air channels" requires the presence of the flutes and air channels set forth in the specification and drawings, pointing out that the inventor, throughout the specification and the prosecution history, required the air channels created by the flutes, as does the claim.

The Specification and Drawings

The invention is a composting machine for use with very large bags of compost material. The specification describes the machine's structure wherein a plurality of flutes creates air channels around the edge of the compost material as it enters the bag. These air channels, along with the air introduced through one or more perforated pipes, enhance decomposition of the compost material. This description of the device appears in all three patents in suit, starting with the Abstract of the Invention:

. . . . The inside surface of the tunnel is provided with a **plurality of spaced apart flutes which create air channels in the material within the bag. An elongated perforated pipe is also positioned within the material** in the bag and the bagging machine moves relative to the bag during the bagging operation. **The presence of air in the channels created by the flutes and the air present in the perforated pipe ensures that sufficient air will be present** in the mass to achieve complete decomposition of the material.

'910 patent, page 1; '744 patent, page 1; '562 patent, page 1 (all emphases added).

The specifications explain that the device uses both the flute-created channels and the perforated pipe to deliver air to the bagged compost. Every embodiment in the patents shows flutes as the means for creating air channels in the composting material. The objects of the invention, for example as in the '910 specification, stress this aspect:

It is therefore **a principal object of the invention to provide a method and means for creating air channels** in bagged compost material so that the compost material will properly decompose.

* * *

A further object of the invention is to provide a compost bagging machine including a means for creating a plurality of spaced-apart air channels in the exterior surface of the bagged material.

'910 patent, col. 1, lines 39-52.

The Summary of the Invention reiterates that both elements, the channels created by the flutes and the perforated pipe, introduce air into the compost material:

. . . The interior surface of the tunnel is provided with a plurality of spaced-apart flutes which create grooves or channels in the exterior surface of the material as the material is being placed into the bag. The bagging machine also includes means for positioning an elongated perforated pipe in the material. The air present in the grooves in the material and the air present in the perforated pipe causes the material to properly decompose.

'910 patent, col. 2, lines 16-24.

All of the relevant drawings show both flutes (46) and perforated pipe (50). Figures 2, 3, and 5 show details of the flutes and the air channels they create. No other embodiments are shown.

Figure 2:

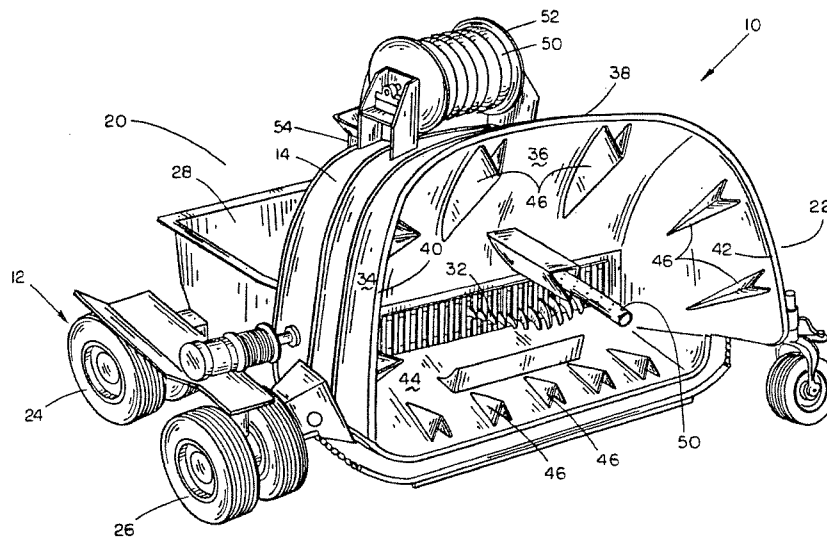


Figure 3:

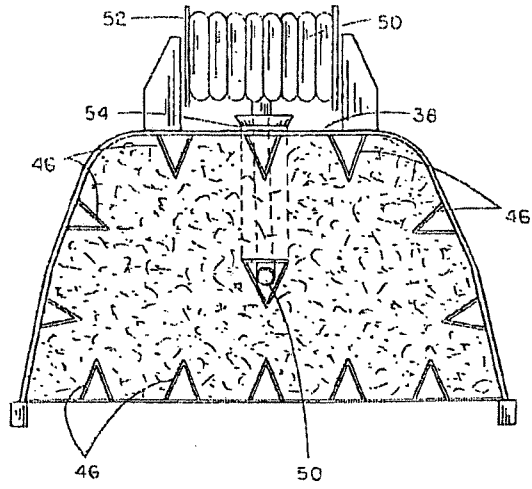
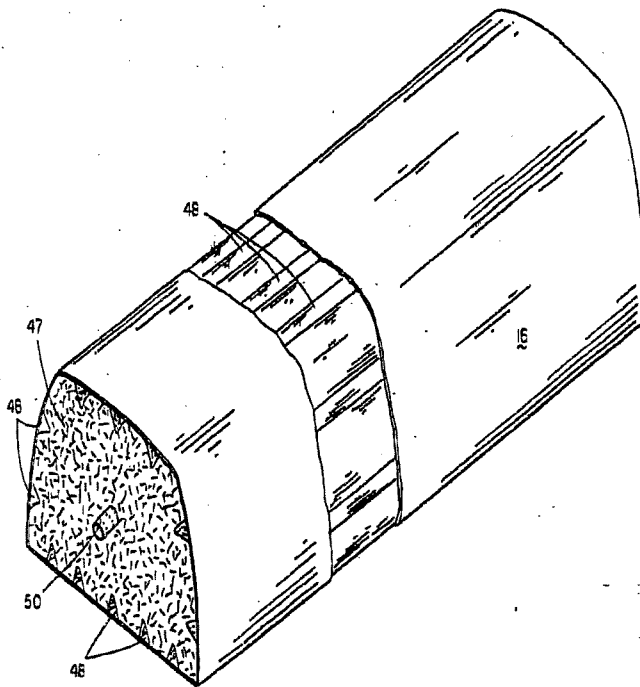


Figure 5:



The specification describes the flutes as follows:

A **plurality of spaced-apart flutes or channels 46** are secured to the inner surfaces of top wall 38, side walls 40 and 42 and bottom wall 44 as seen in the drawings. Preferably, the flutes 46 are elongated It can also be seen that the flutes 46 are tapered The flutes 46 are preferably welded As the material to be composted is forced through the tunnel 14 into the bag 16, **the flutes or channels 46 create indentations, channels or grooves 48 in the exterior surface** of the material 47 positioned in the bag 16 to ensure that air will be present within the bag to enable the material to properly decompose.

'910 patent, col. 3, lines 5-19.

At the end of the specification, just before the claims, the inventor summarizes the invention as follows:

The **V-shaped flutes 46 and the perforated pipe 50 ensure that sufficient air will be present** in the material to achieve complete decomposition. Thus, it can be seen that the invention accomplishes at least all of its stated objectives.

'910 patent, col. 3, lines 55-59.

The debate arises because the specification also contains the following sentence:

However, it is believed that sufficient air will be present to achieve decomposition with either the channels 48 or the perforated pipe 50 although it is preferred that both the flutes 46 and the pipe 50 be utilized.

'910 patent, col. 3, lines 30-33. This "belief" appears to be the basis of the ruling of the panel majority that claim 1 does not require the air channels. The flaw, as the district court discerned, is that this "belief" is not the invention that was patented. A device without flute-created air channels was not described, is not presented as the applicant's invention, is not illustrated in any drawing. A device without the air channels was not presented for examination, was generally disclaimed during prosecution, and is in the prior art. Whatever

the ultimate accuracy of the applicant's "belief," it is not the invention that he submitted for patenting.

During prosecution, the examiner cited the Eggenmuller reference as showing both the perforated pipe and the use of flutes to create air channels, whereupon Versa argued that the combination of the flute-created channels and the reel and guide for the perforated pipe distinguished this device. The examiner's rejection and the applicant's arguments preclude a claim construction that eliminates the combination of elements on which patentability was based. See Warner-Jenkinson Co. V. Hilton Davis Chemical Co., 520 U.S. 17, 29 (1997) (every claimed element or its equivalent must be present in an infringing device). See also, e.g., J&M Corp. V. Harley-Davidson, Inc., 269 F.3d 1360, 1368 (Fed. Cir. 2001) (the patentee "is statutorily entitled only to claims that encompass embodiments of the 'gripping means' disclosed in the specification and their equivalent").

The District Court's Decision

The district court ruled that the flutes are integral to the "means for creating air channels" of claim 1, citing the specification, the drawings, and the prosecution history. The function stated in the means-plus-function clause, the creation of channels in the compost material, requires the corresponding structure shown in the specification or an equivalent thereof. See 35 U.S.C. §112 ¶6. The patent does not show a composting machine using only perforated pipe to provide air, omitting the flute-created air channels. Indeed, whatever credence is given to the "belief" that either the flutes or the pipe could be eliminated, that is not the invention that was patented. See Unique Concepts v. Brown, 939 F.2d 1558, 1562 (Fed. Cir. 1991) (when a patentee throughout the specification and

prosecution history describes the invention as having a certain structural or functional limitation, the patentee cannot point to an isolated suggestion in the specification to eliminate that limitation).

In Markman v. Westview Instruments, Inc., 517 U.S. 370, 389-90 (1996) the Court stressed that claims must be construed in a way that "comports with the instrument as a whole" and "preserve[s] the patent's internal coherence." The specification, drawings, and prosecution history all teach that a material aspect of the device is the air channels or grooves created by the plurality of flutes. The patentee may have "believed" that some other structure could achieve decomposition, but that is not what was presented for examination.

The district court correctly construed the claim, in fidelity to the policy and principles of claim construction. From my colleagues' departure from well-established rules of claim construction I must, respectfully, dissent.