

Appellant's Brief

BRIEF FOR APPELLANT DONALDSON COMPANY, INC.

**United States Court of Appeals
for the Federal Circuit**

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

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FRANCIS X. GINDHART
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No. 91-1386

IN RE DONALDSON COMPANY, INC.

**APPEAL FROM A DECISION OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

R. Carl Moy, Esq.
MERCHANT, GOULD, SMITH, EDELL,
WELTER & SCHMIDT, P.A.
3100 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402
(612) 332-5300

*Attorney for Appellant
Donaldson Company, Inc.*

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CERTIFICATE OF INTEREST

Appellant's Certificate of Interest, which has been filed with the Court previously, is reprinted below:

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

IN RE DONALDSON CO., INC.

No. 91-1386

CERTIFICATE OF INTEREST

Counsel for the Appellant, Donaldson Company, Inc., certifies the following:

1. The full name of every party or amicus represented by me is: Donaldson Company, Inc.
2. The name of the real party in interest represented by is: Donaldson Company, Inc.
3. The parent companies, subsidiaries, and affiliates that have issued shares to the public, of the party or amicus curiae represented by me are: none.
4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Merchant, Gould, Smith, Edell, Welter & Schmidt, P.A.,
Alan G. Carlson, R. Carl Moy, and Thomas Jurgenson.

Dated: _____

/s/

R. Carl Moy
Counsel for Appellant
MERCHANT, GOULD, SMITH,
EDELL, WELTER & SCHMIDT, P.A.
3100 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402
(612) 336-4635 (direct number)
(612) 332-5300 (firm number)

STATEMENT OF RELATED CASES

This is the only appeal that has ever been filed in or from a decision of the Board of Patent Appeals and Interferences in connection with the patent at issue.

The patent owner filed an action to enforce the patent at issue against an accused infringer. That action, *Donaldson Co. v. PTS Industries, Inc.*, No. SA CV 90-194 (C.D. Calif.), has terminated with entry of a consent judgment that the patent is valid and infringed. No appeal from that judgment was filed.

STATEMENT OF JURISDICTION

The Patent and Trademark Office's jurisdiction over the reexamination proceeding from which this appeal has been filed was granted by Sections 301-306, Title 35, U.S.C.

This Court's jurisdiction is based on Sections 141 and 306, Title 35, U.S.C.

Appellant timely filed its notice of appeal in the Patent and Trademark Office within sixty days of the date of the Decision of the Board of Patent Appeals and Interferences, on reconsideration, of April 17, 1991.

STATEMENT OF THE ISSUES PRESENTED

1. Does the applied reference disclose a device whose structure meets the literal language of the claim?
2. Are the Board's decisions incorrect in light of the Board's failure to interpret the means expression of the claim in the manner required by the sixth paragraph of Section 112, Title 35, U.S.C.?

This is an appeal from a decision by the United States Patent and Trademark Office to reject claim 1 of U.S. Patent No. 4,395,269 (the "Schuler patent") during a reexamination proceeding.

I. BACKGROUND

A. Procedural History

The appellant, the Donaldson Company, Inc., requested on May 18, 1989 that the Schuler patent be reexamined. A16. It did so as part of the process of asserting the Schuler patent against a former distributor. The former distributor was contending at that time that the Schuler patent was invalid over certain items of prior art.¹

During the reexamination proceeding, the examiner confirmed the patentability of all the claims except Nos. 1-3 and 5. A1. On appeal, the Board of Patent Appeals and Interferences reversed the examiner in part, finding claims 2-3 and 5 patentable. It affirmed the examiner's rejection of claim 1. A5-6. Thus, the only issue before this Court is whether claim 1 of the Schuler patent is patentable over the prior art.

The Board adhered to its decision with regard to claim 1 on reconsideration. A9-11.

B. The Invention.

The Schuler patent is directed to industrial air-filtering devices, which are often called "dust collectors." Figure 2 of the Schuler patent, which shows the Schuler collector in cross-section, is attached hereto at TAB A.

In general operation, the Schuler dust collector functions to remove particulate matter, or "dust," from an air stream. Dust-laden air enters the dirty-air chamber 22 of the collector through the air inlet 20. The air then passes through filter media 32, and exits the collector through the clean-air outlet 64. The dust is filtered out and trapped as the air stream passes through the porous filter media 32 and into the hollowed interior of the filter element 32, then out the clean-air outlet 64. The dust is collected on the outsides of the filter media. *e.g.*, Schuler patent, A73, col. 6 at lines 45-46; A74, col. 7 at lines 12-19.

¹ The action against the former distributor, *Donaldson Co. v. PTS Industries, Inc.*, No. SA CV 90-194 (C.D. Calif.), has now terminated. The former distributor consented to entry of a judgment that the Schuler Patent is valid and infringed.

The industry has learned that the service life of each filter element can be extended greatly if the accumulated dust is cleaned from the filter elements periodically. The Schuler collector includes a mechanism for doing this automatically. Specifically, there is a valve and nozzle assembly 65 associated with each filter element. The nozzles are designed to "direct a jet of compressed air into the hollow interior" of the filter elements. Schuler patent, A73, col. 5 at lines 67-68. This jet of air momentarily reverses the normal direction of the air flow through the particular filter element. In so doing, the jet dislodges a substantial portion of the accumulated dust from the outside surface of the filter element. The dislodged dust then falls downward through the dirty-air chamber, where it accumulates at the bottom of the chamber in the hopper 25. Schuler patent, A73, col. 6 at lines 7-10. The accumulated dust in the hopper is removed from the collector by means of an auger screw 68. *Id.* at lines 32-42.

There is a recognized problem in the operation of such automatic cleaning systems. In operation, the accumulated dust in the hopper can tend to harden or cake. This, in turn, interferes with the free movement of the accumulated dust downward to the auger screw, Schuler patent, A73, col. 6 at lines 15-17, and causes an undesirable build-up of dust within the collector.

The collector of the Schuler patent incorporates a special mechanism for dealing with this problem. Every pulse jet of air incidentally causes the pressure within the dirty-air chamber to increase momentarily. To take advantage of this fact, one wall of the hopper in the Schuler collector is made from a flexible material, thus forming a diaphragm. The diaphragm expands outward in response to the temporary increase in pressure during each cleaning pulse. Schuler patent, A73, col. 6 at lines 21-31. This movement breaks up any dust cake that may have formed in the hopper and keeps the accumulated dust flowing toward the auger.

The Schuler patent describes the diaphragm as providing additional benefits. For example, the diaphragm deadens the sounds of the cleaning pulses. A74, col. 7 at lines 55-56; col. 8 at lines 10-15. Further, the outward expansion of the diaphragm expands the volume of the dirty-air chamber, allowing the cleaning pulses to act on the filter cartridges with greater vigor. This causes the dust to be removed from the cartridges more reliably. See A74, col. 7 at lines 49-62.

C. The Claim Language.

Claim 1 of the Schuler patent is an apparatus claim. A12, 74. It recites the valve and nozzle assemblies of the collector as "cleaning means." The hopper is recited as "a lowermost portion in said filtering chamber," while the diaphragm is recited as a "means" in the hopper that is

responsive to the pressure increases in said [dirty-air] chamber caused by said cleaning means, for moving particulate matter in a downward direction to a bottommost point in said portion.

D. The Board's Decisions.

The Board affirmed the rejection of claim 1 in light of a single reference, U.S. Patent No. 3,421,295 (the "Swift patent"). Decision, at A5-6. The Swift patent discloses a dust collector in which the hopper walls are rigid — there is no disclosure or suggestion of a flexible diaphragm. Swift patent, A137-138. See Figure 1 of the Swift patent, attached hereto at TAB C.

The Board explained that, in its view, claim 1 does not "recite" the diaphragm of Schuler's preferred embodiment. Decision, at A5. As a consequence, it asserted, Donaldson's references to the specifics of that structure are "of no moment." *Id.*

Further, the Board was convinced that the Swift collector met all the literal requirements of claim 1:

[W]e are convinced that hopper 16 of the gas filtering apparatus of Swift is "responsive" to pressure increases in the apparatus caused by the jet-cleaning means whereby filtered particulate matter is caused to move in a downward direction. Thus, we agree with the examiner that there is no apparent distinction between the "lowermost portion" of the apparatus recited in claim 1 and the corresponding portion of the apparatus of Swift.

Decision, at A5. The Board did not explain how it found the hopper of the Swift collector to be "responsive" to the jet-cleaning means of that patent.

The Board adhered to its position on reconsideration. It reiterated its conviction that the hopper of Swift met the requirement of being "responsive." It again offered no explanation of the basis for that conviction. Decision on Reconsideration, at A10.

II. SUMMARY OF THE ARGUMENT

The Swift patent does not satisfy the literal language of the Schuler patent's claim 1. The hopper of the Swift collector is a rigid structure. It cannot respond to the increase in pressure from a cleaning pulse, as the claim requires. Moreover, the art teaches that the rigid hopper of Swift can be ineffective in overcoming the tendency of dust to cake and block the outlet of the hopper.

The Board's decisions are also in error because the Board failed to interpret the means expression at issue in claim 1 in the manner required by the sixth paragraph of Section 112, Title 35, U.S.C. This Court has required the statutory method to be used in patentability determinations. *In re Iwahashi*, 888 F.2d 1370, 1375 (Fed. Cir. 1989); *In re Bond*, 910 F.2d 831, 833-34 (Fed. Cir. 1990). Because the Board failed to use the correct method, it did not make the required factual findings. Furthermore, the record cannot support the findings that would be required to properly reject the claim.

III. ARGUMENT

A. The Art Does Not Respond to the Literal Language of the Claim.

Read literally, claim 1 requires a means for moving dust downward that is both (i) responsive to pressure increases, and (ii) part of the lowermost portion of the collector. A12, 74. The Board did not explain how the hopper in Swift satisfies these requirements. See Decision, at A5-6, and Decision on Reconsideration, at A10. Because the hopper of Swift does not satisfy the claim language, the Board's decision to reject is unsupported and must be reversed.

The Swift patent does not describe the hopper 16 of that collector in any detail. In fact, the specification refers to the hopper in only two places. Swift patent, A142, col. 3 at 38-41, and A143, col. 5 at 45-47. The only reference to the structural specifics of the hopper simply states that the hopper is "combined with the bottom of the casing." *Id.* at A142, col. 3 at 40-41.

Thus, there is no basis for attributing any special qualities or abilities to the hopper of the Swift patent. The main focus of the Swift patent, in fact, is a refinement to the shape of the filter elements and how they interact with the airflow from the cleaning nozzles. See Swift patent, A141, cols. 1 and 2. There is no

indication that Swift's hopper is anything other than a rigid structure, on which the individual dust particles are supposed to simply slide downward under the influence of gravity.

This structure is wholly unlike the collector that claim 1 defines. The collector of claim 1 must have a hopper that is "responsive to pressure increases in [the dirty-air] chamber caused by [the] cleaning means." A12, 74. The rigid hopper of Swift is not responsive to such pressure increases. In fact, it is arguably not responsive to anything at all.

Other prior-art references illustrate that the responsive hopper of claim 1 is significantly different from rigid hoppers such as that of the Swift collector. For example, U.S. Patent No. 4,409,009 to Lissy, A90-96, discloses a dust collector that is cleaned by pulse jets of air. A94, col. 4 at lines 38-58 (Figure 2 of the Lissy patent in attached hereto at TAB C.). In that respect, the Lissy collector is like both the Swift and Schuler collectors.

The Lissy patent teaches that a hopper with rigid, inclined walls can be ineffective to "mov[e] particulate matter in a downward direction to a bottommost point" in the hopper, as claim 1 requires. Lissy describes the "difficulty of moving the powder from the collection hopper into the powder pump."² A93, col. 1 at line 67 to col. 2 at line 1.

Often times, . . . the powder collects and builds on the walls of the hoppers rather than falling by gravity or being drawn into the powder pump.

A93, col. 2 at lines 1-4. See also *id.* at A95, col. 6 at lines 13-22. Lissy even goes so far as to provide vibrator attached to the wall of each hopper to rectify this problem. E.g., A93, col. 2 at lines 4-8, 48-55, and A95, col. 6 at lines 16-22.

The U.S. Patent to Davis, No. 2,732,099, A98-104, is to the same general effect. In it, air bladders are provided in a hopper to prevent "jamming" of the particulate. A101, col. 4 at lines 13-74 (Figure 1 of Davis is attached hereto at TAB D). The jamming is said to occur "frequently" in some applications. *Id.*

² The "powder pump" 52 of Lissy is disclosed as a "venturi pump or other suitable means to receive the powder from the hopper." A94, col. 4 at 14-19. It is analogous to the auger 68 of the Schuler patent.

Thus, it is apparent that the rigid hopper of Swift is *not* "responsive to pressure increases," as claim 1 requires. Further, and because of this shortcoming, it also does *not* function to reliably "mov[e] particulate matter in a downward direction to a bottommost point" in the hopper. The Swift collector therefore does not satisfy the literal language of claim 1, and the Board's decision to the contrary should be reversed.

B. The Board Interpreted the "Means Expression" Incorrectly.

Claim 1 describes the diaphragm 24 of the Schuler collector via a means expression. A12, 74. The Board's opinions indicate that the Board interpreted this expression literally in comparing claim 1 to the prior art. For example, in its original Decision the Board asserted that the diaphragm is not "a recited feature of the apparatus" of claim 1. A5. On this basis, it considered Donaldson's arguments concerning the diaphragm to be "of no moment." *Id.* The Board repeated its position in its Decision on Reconsideration, adding "[i]t is axiomatic that particular features or limitations appearing in the specification are *not* to be read into the claims of an application." A10 (emphasis in original). The Board's decision thus appears to embody the rationale concerning means expressions expressed recently by the Commissioner in his Directive to the Examining Corps (Dec. 3, 1990), reprinted at 41 P.T.C.J. 411-12 (Mar. 14, 1990).

This position regarding the scope and effect of a means expression is legally incorrect. The sixth paragraph of Section 112, Title 35, U.S.C., directs that such expressions

shall be construed to include the corresponding structure, material, or acts described in the specification and equivalents thereof.

The benefits of consistency and symmetry provide compelling reasons for using this statutory method of construction at all times. It is "axiomatic" that claims must be interpreted the same way during validity and infringement. *W.L. Gove & Associates, Inc. v. Garlock, Inc.*, 842 F.2d 1275, 1279 (Fed. Cir. 1988). Means expressions are to be interpreted according to the statutory method when resolving infringement issues. *E.g.*, *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed. Cir. 1989); *in re Bond*, 910 F.2d 831, 833-34 (Fed. Cir. 1990). Logic demands that the PTO use the statutory method as well. *See generally*, Moy, THE

INTERPRETATION OF MEANS EXPRESSIONS DURING PROSECUTION, 68 J.P.O.S. 246 (June 1986).

This Court, moreover, has recently directed that the statutory method be used when determining patentability. *In re Iwahashi*, 888 F.2d 1370, 1375 (Fed. Cir. 1989); *Bond*, 910 F.2d at 833-34.

The Board made no attempt to analyze the claims under the statutory method. See A5, A10. The record therefore completely lacks the factual determinations that would be required for this Court to affirm. See *Bond*, 910 F.2d at 833-34.

Moreover, it appears manifest that the Board's decision on claim 1 cannot be supported by any findings that would survive appellate review. For example, the diaphragm 24 of the Schuler collector corresponds to the means recitation at issue in claim 1. This structure is unquestionably different from the collector disclosed by the Swift patent. As for the possibility that the structures are nevertheless equivalent, see *Bond*, 910 F.2d at 833-34, the record does not provide any basis for such a finding. The negative teachings from the Lissy and Davis patents, see the discussion, *infra* at 5-6, would positively refute the finding if it were to be made.

IV. CONCLUSION

For the foregoing reasons, Donaldson respectfully submits that the Board's decision to reject Claim 1 is in error and should be reversed.

MERCHANT, GOULD, SMITH,
EDELL, WELTER & SCHMIDT, P.A.
3100 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402
(612) 336-4635 (direct number)
(612) 332-5300 (firm number)

By: 
R. Carl Moy