

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DYSON TECHNOLOGY LIMITED AND DYSON, INC.,
Petitioners,

v.

OMACHRON INTELLECTUAL PROPERTY INC.,
Patent Owner.

Case No. IPR2024-00766
U.S. Patent No. 10,568,477

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF ABBREVIATIONS

Abbreviation	Term
'477 Patent	U.S. Patent No. 10,568,477 (Ex1001)
Dimbylow	U.S. Patent Publication No. 2017/0079489 to Dimbylow
Howes	U.S. Patent No. 8,021,453 to Howes
Brown	U.S. Patent No. 2,477,685 to Brown
Vuijk	International Publication No. WO 02/067753 to Vuijk
Challenged Claims	Claims 1–20 of U.S. Patent No. 10,568,477
Fig.	Figure
IPR	<i>inter partes</i> review
Patent Owner	Omachron Intellectual Property Inc.
Petitioners	Dyson Technology Limited and Dyson, Inc.
POSITA	person[s] of ordinary skill in the art

I. INTRODUCTION

Patent Owner Omachron Intellectual Property Inc. provides the following Preliminary Response to the Petition filed by Dyson Technology Limited and Dyson, Inc. requesting *inter partes* review of claims 1–20 of U.S. Patent No. 10,568,477.

Petitioners had the burden of showing that there is a reasonable likelihood that it would prevail with respect to at least one of the challenged claims. 35 U.S.C. § 314(a). Petitioners did not meet that burden. In fact, there are fundamental and irreconcilable differences between Petitioners' references and the challenged claims of the '477 Patent.

Petitioners first rely on a combination of Dimbylow—a reference thoroughly examined by the Patent Office during prosecution—and Howes. Although Dimbylow discloses a surface cleaning device with an openable door to a dirt collection region (as claimed), neither Dimbylow nor Howes teaches or renders obvious the claimed “lock engaging member” on the door that “is inhibited from moving to [a] disengaged position when [an] accessory is connected” to the device. Furthermore, in addition to missing a claimed feature, Petitioners' proposed combination of Dimbylow and Howes (two different types of vacuums) is flawed and illogical.

Petitioners then rely on obviousness based on Brown alone. But Brown suffers from an even more fundamental flaw than Dimbylow and Howes: it lacks

an openable door to a dirt collection region. Petitioners propose numerous modifications of Brown—most without even an attempt to show why a skilled artisan would have been motivated to make such a modification—but even with those modifications, Brown still lacks “a dirt collection region having an openable door.” Petitioners’ proposed combination of Brown with Vuijk does not remedy this fundamental flaw of Brown either.

For at least these reasons and those set forth below, Petitioners fail to show a reasonable likelihood of success on any Challenged Claim, and the Board should deny institution of IPR.

II. CLAIM CONSTRUCTION

A claim subject to IPR shall be construed using the same standard as in a civil action. 37 C.F.R. § 42.100(b). The Board need only construe terms “to the extent necessary to resolve the controversy.” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). At this stage, Patent Owner does not submit any terms for construction. Patent Owner reserves the right to subsequently submit claim terms for construction should the Board institute IPR.

III. LEVEL OF ORDINARY SKILL IN THE ART

Solely for the purpose of this Preliminary Response, Patent Owner does not challenge Petitioners’ proposed definition of a POSITA. Patent Owner reserves the right to provide an alternative definition of a POSITA if IPR is instituted.

IV. TECHNICAL BACKGROUND

A. Summary of the '477 Patent

The '477 Patent is directed to an improved emptying mechanism for hand vacuum cleaners that includes a dirt collection region having an openable door, where when an accessory is connected to a dirty air inlet of the hand vacuum cleaner, the “door lock” on the openable door is inhibited from being disengaged. Ex1001, Abstract, 1:13–16, 1:41–60.

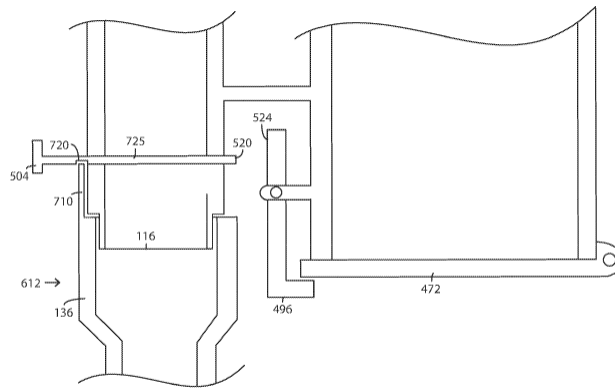


Fig. 33

Id., Fig. 33.

In one exemplary embodiment, the hand vacuum is designed such that when an accessory is attached to a dirty air inlet of the hand vacuum cleaner (*e.g.*, wand 136 with an engagement portion, flange 710), the engagement portion of the accessory (flange 710) is received in a notch 720 and inhibits door release actuator 504 from moving towards lock engaging member 496, thereby inhibiting door 472 from being moved to an open position. *Id.*, 37:32–43, cl. 1.

B. Prosecution History of the '477 Patent

For over two years, the United States Patent and Trademark Office examined the application that issued as the '477 Patent. *See generally* Ex1004. The Office on June 26, 2019, issued one rejection on the merits, after thoroughly analyzing the same base reference raised by Petitioners here—Dimbylow (U.S. Pub. 2017/0079489, Ex1005), and rejected pending claims 1–7, 14, 15, and 20–25 as anticipated, while finding that pending claims 8–13 and 16–19 contained allowable subject matter in view of Dimbylow. Ex1004, 254–58. At the time, pending claim 8 recited:

The surface cleaning apparatus of claim 1 further comprising an ***openable door lock comprising a lock engaging member*** and a door release actuator drivingly connected to the lock engaging member, the lock engaging member moveable between an engaged position in which the lock engaging member secures the openable door in a closed position and a disengaged position in which the openable door is openable ***wherein the lock engaging member is inhibited from moving to the disengaged position when the accessory is connected to the dirty air inlet.***

Id., 89–90 (emphases added).

Patent Owner amended pending claim 1 to incorporate the element of pending claim 8 and distinguished the claimed features of the '477 Patent from the cited Dimbylow reference. *Id.*, 270. In doing so, Patent Owner was clear that it was not agreeing with the Examiner that Dimbylow disclosed the features of independent claim 1. *Id.* Patent Owner similarly amended pending independent claim 20 (issued as independent claim 18) to recite that the lock deactivation member can be moved

to a blocking position which inhibits the openable door lock moving to a door openable position. *Id.*, 266–67, 272–73. And Patent Owner amended pending independent claim 7 (issued as independent claim 13) to specifically recite (1) that the dirty air inlet is positioned above the air treatment member; (2) that the openable door has a first side having a hinge; and (3) that the openable door has a second opposed side positioned adjacent the dirty air inlet such that, when the accessory is connected to the dirty air inlet, the accessory overlies the second opposed side thereby inhibiting the openable door from opening. *Id.*, 272.

The Examiner agreed and accepted the Applicant's arguments distinguishing each of the allowed independent claims from the teachings of Dimbylow, noting on the record that the “prior art of record considered as a whole . . . neither anticipates nor renders obvious” these recited elements in claims 1, 7, 16, and 20, after further renumbering of the claims. *Id.*, 310–11.

Ignoring this background, Petitioners distort the file history and incorrectly state that Examiner found only the “door release actuator” limitation not taught by Dimbylow, even though the Examiner never stated or indicated so. Pet., 9. Petitioners additionally argue that Patent Owner “never disputed that Dimbylow teaches” certain other limitations. Pet., 11, 32–35. But the record does not support Dyson's characterization of the file history, and Patent Owner never agreed with the Examiner's characterization of Dimbylow. Ex1004, 270. Further, Petitioners'

superficial treatment of the very features that the Examiner considered and explicitly included in the reasons for allowance—most notably, the door lock elements—underscores their failure to meet their burden and is fatal to their challenge.

C. Overview of Asserted References

1. Dimbylow

Dimbylow is a 2017 U.S. patent application assigned to Dyson, disclosing a handheld vacuum cleaner with a cyclonic separating unit having a first end and a second end, where the cyclonic separating unit is arranged to extend away from the handle so that the first end is further from the handle than the second end. Ex1005, Abstract. This arrangement, according to Dimbylow, is “compact” and “results in a versatile vacuum cleaner.” *Id.*, ¶10. While Dimbylow discloses an openable end wall that is held in place by a “catch,” it does not provide any details on how the “catch” operates. *Id.*, ¶37. Dimbylow was analyzed and discussed in detail by the Patent Office during the examination, as discussed above.

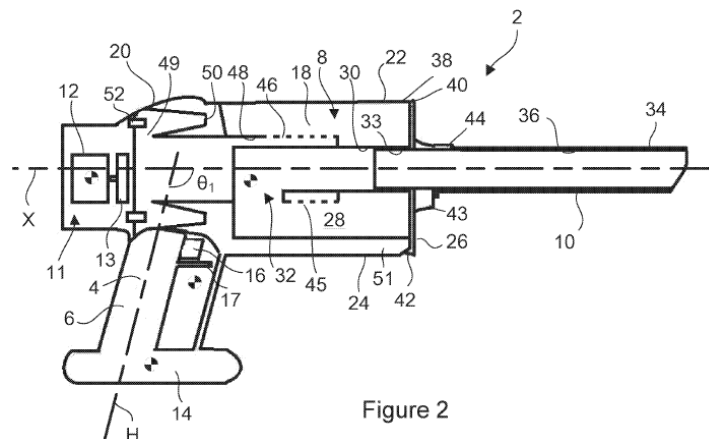
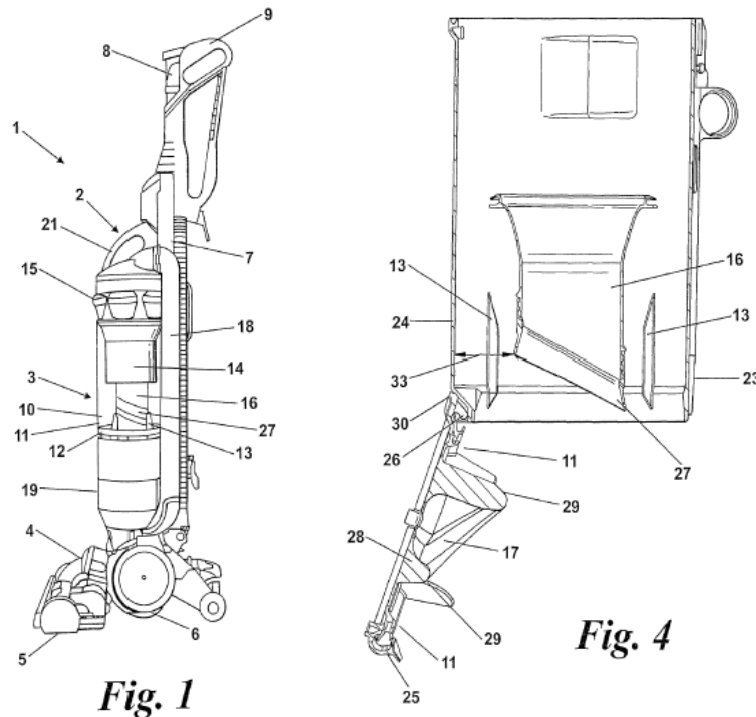


Figure 2

Id., Fig 2.

2. Howes

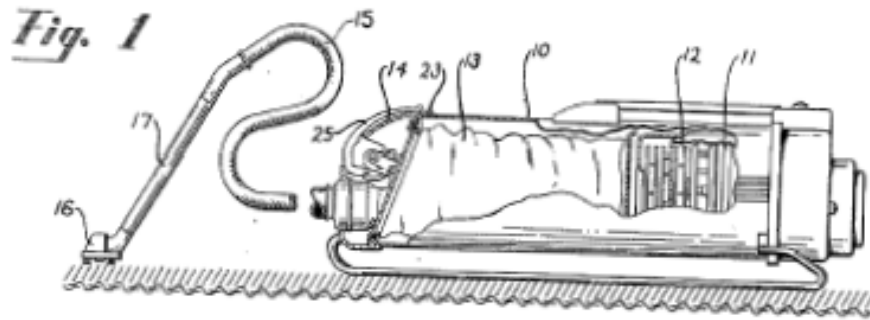
Howes is a U.S. patent claiming a 2006 priority date that discloses an upright bagless vacuum cleaner with a collection chamber base wall that is hinged and a dividing wall separating first and second stage collection regions. Ex1006, Abstract, 2:7–28.



Id., Figs. 1, 4.

3. Brown

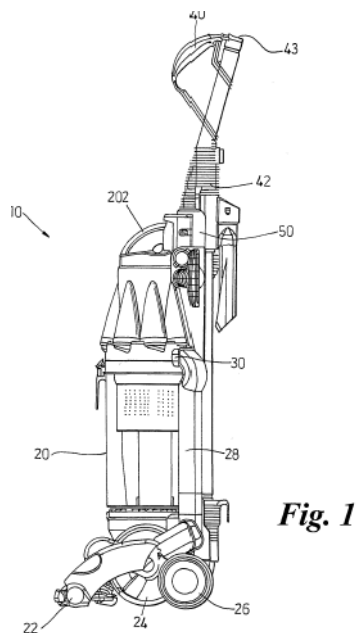
Brown is a U.S. patent claiming a 1945 priority date that discloses a cover and cover latching means for a “conventional tank type cleaner,” specifically a cover and latching assembly where “simple camming action will provide for the tight securement of the cover.” Ex1007, 1:1–53.



Id., Fig. 1.

4. Vuijk

Vuijk is a 2002 International patent publication, which discloses an upright bagless vacuum cleaner with a removable dust collecting chamber, where the chamber can be stowed in the chassis of the cleaner, and when the chamber is stowed, a user is inhibited from accidentally opening the chamber. Ex1008, Abstract, 2:22–3:13.



Id., Fig. 1.

V. SPECIFIC GROUNDS OF UNPATENTABILITY

A. Petitioners Failed to Show that Dimbylow in Combination with Howes Renders Obvious Challenged Claims 1–7, 12, and 14–15 (Ground 1)

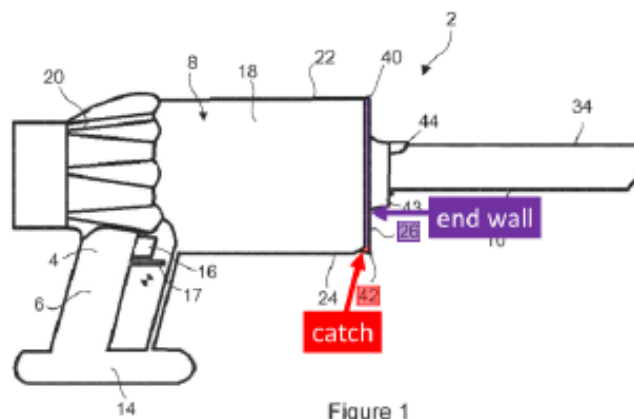
- 1. Dimbylow does not teach the claimed “wherein the lock engaging member is inhibited from moving to the disengaged position when the accessory is connected to the dirty air inlet” [1d3] / “wherein the lock engaging member is inhibited from moving to the disengaged position when the accessory is connected in air flow communication with the dirty air inlet” [14d3]**

Petitioners rely on Dimbylow alone for these limitations (hereinafter collectively or separately “lock engaging member limitations”). Pet., 45. Notably, during prosecution, the Patent Office carefully examined Dimbylow and determined that it does not disclose or teach these limitations. Ex1004, 310 (“The following is an examiner’s statement of reasons for allowance: prior art of record [*i.e.*, Dimbylow] considered as a whole alone or in combination neither anticipates nor renders obvious . . . wherein the lock engaging member is inhibited from moving to the disengaged position when the accessory is connected to the dirty air inlet . . .”). Petitioners state that “[d]uring prosecution, the Examiner found that Dimbylow disclosed this limitation.” Pet., 47. Petitioners’s statement is based on a misunderstanding of the prosecution history, in part due to an apparent error by the Examiner. In the Office Action, the Examiner rejected claims 1–7 based on Dimbylow, but only objected to claim 8 as being dependent on a rejected base claim.

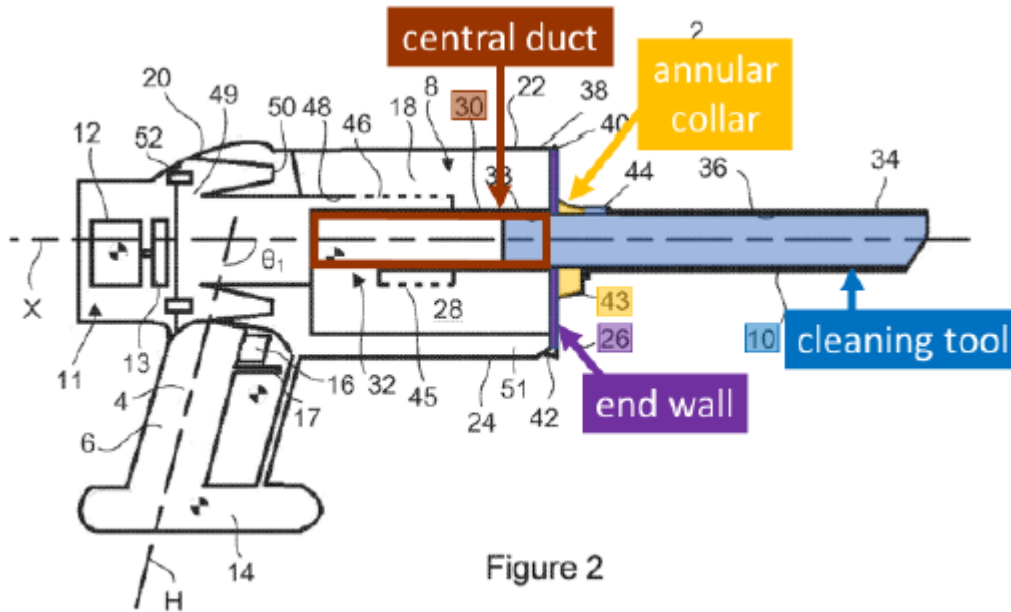
Ex1004, 255–58. In the discussion of the rejection of claims 1–7, the Examiner listed the lock engaging member limitations among those disclosed by Dimbylow. *Id.*, 257. But the lock engaging member limitations were not in claims 1–7 at that time; rather, pending claim 8 is where the lock engaging member limitations were first recited. Thus, there was never a finding that Dimbylow disclosed the lock engaging member limitations. Indeed, as noted above, this specific limitation was one identified by the Examiner in his Reasons for Allowance. *Id.*, 310.

The Examiner is correct—Dimbylow does not disclose “wherein the lock engaging member is inhibited from moving to the disengaged position when the accessory is connected to the dirty air inlet.” Petitioners’ arguments are based on disclosure in Dimbylow that does not exist, and the arguments are inconsistent with Dimbylow’s actual disclosure.

Specifically, Petitioners identify “user-operable catch 42” (below, red) from Dimbylow as the allegedly claimed lock engaging member, which secures “end wall 26” (purple) in a “closed position” when engaged. Pet., 39, 44.



Id., 44 (annotated in Petition). As annotated below by Petitioners, Dimbylow further teaches that an “annular collar 43” of “cleaning tool 10” inhibits “end wall 26” from opening when the cleaning tool is connected. *Id.*, 46.



Id., 46 (annotated in Petition).

Based on this disclosure (and nothing more), Petitioners wrongly conclude that the identified “lock engaging member” (user-operable catch 42) is inhibited from moving to the disengaged position when the accessory (cleaning tool) is attached. In other words, Petitioners *wrongly equate* Dimbylow’s disclosure that the **end wall 26** can be held closed by a cleaning tool’s annular collar to mean that somehow the **catch 42**—which is not physically engaged with the annular collar and is disclosed to be “hand operable”—is similarly completely inhibited from moving while the cleaning tool is attached. This is incorrect.

Nothing in Dimbylow's disclosure discloses or suggests that the user-operable catch 42 cannot move to an open (or "disengaged") position when the cleaning tool is attached. That is, nothing prevents catch 42 from moving to a disengaged position, even while annular collar 43 separately and independently holds the end wall closed. Indeed, Dimbylow provides very few details regarding catch 42 at all. The entirety of the disclosure in Dimbylow regarding catch 42 is the following:

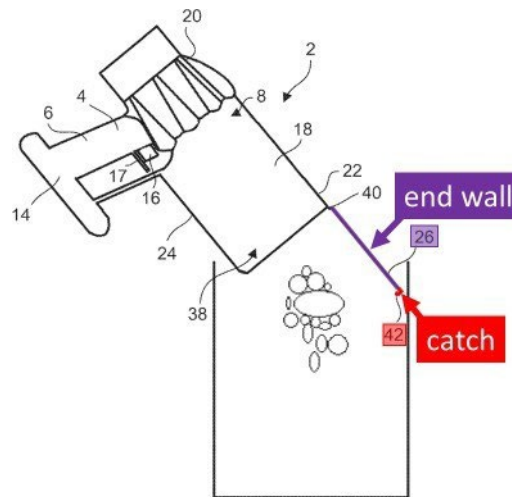
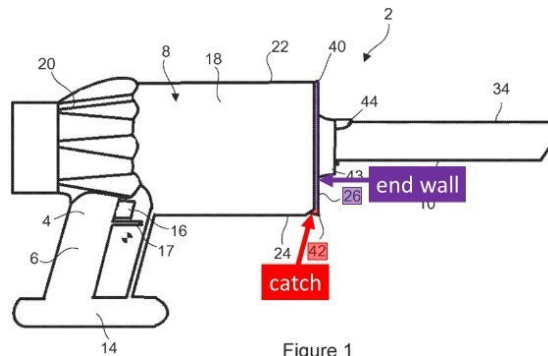
The end wall 26 is connected to the cylindrical outer wall 24 by a pivot 40 and is held in a closed position by a ***user-operable catch 42***. The end wall 26 can be moved from the closed position, in which dirt is retained within the dirt collector 38, to an open position, in which dirt can be removed from the dirt collector 38, by releasing the ***catch 42*** and pivoting the end wall 26 away from the end of the cylindrical outer wall 24. . . .

Referring to FIG. 8, in order to empty the dirt collector 38 and the fine dust collector 51 of either of the described embodiments, the user first disconnects the cleaning tool 10 or the wand 110. Then, whilst gripping the handle 6, the user points the vacuum cleaner 2 towards a suitable receptacle (e.g. a waste bin or bag) into which the dirt is to be emptied. The ***catch 42*** is then released by the user and the end wall 26 pivoted from its closed position into its open position.

Ex1005, ¶¶37, 48 (emphases added).

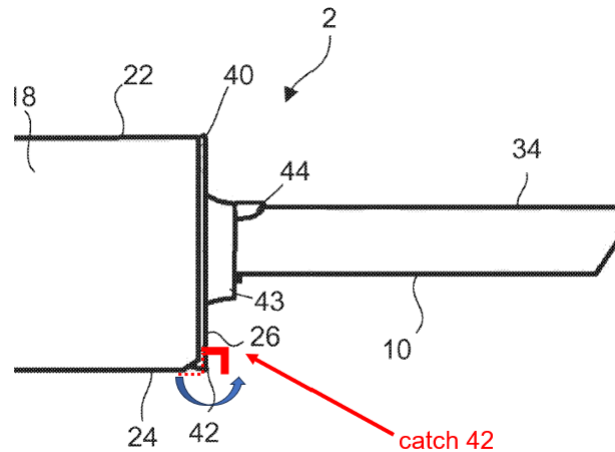
There is no physical connection between annular collar 43 of the cleaning tool and catch 42 that would inhibit movement while a cleaning tool is connected. As shown below, Figures 1 and 8 (as well as Petitioners' own annotations) show that this manual catch 42 is still able to be manually manipulated even when the end wall 26 is closed. Nothing in Dimbylow teaches that the catch 42 is ever inhibited from

movement, nor can the Petitioners cite to any support other than parroting a declaration that itself cites not support for this proposition.



Ex1005, Figs 1, 8 (annotated by Petitioners, showing engaged (top) and disengaged (bottom) position of the catch).

As noted above, there is very limited disclosure in Dimbylow on the operation of catch 42. As depicted below, if, for example, catch 42 is implemented as a pivotable or even bendable engagement member, there is nothing that would inhibit catch 42 from “moving to the disengaged position when the accessory is connected to the dirty air inlet,” as claimed.



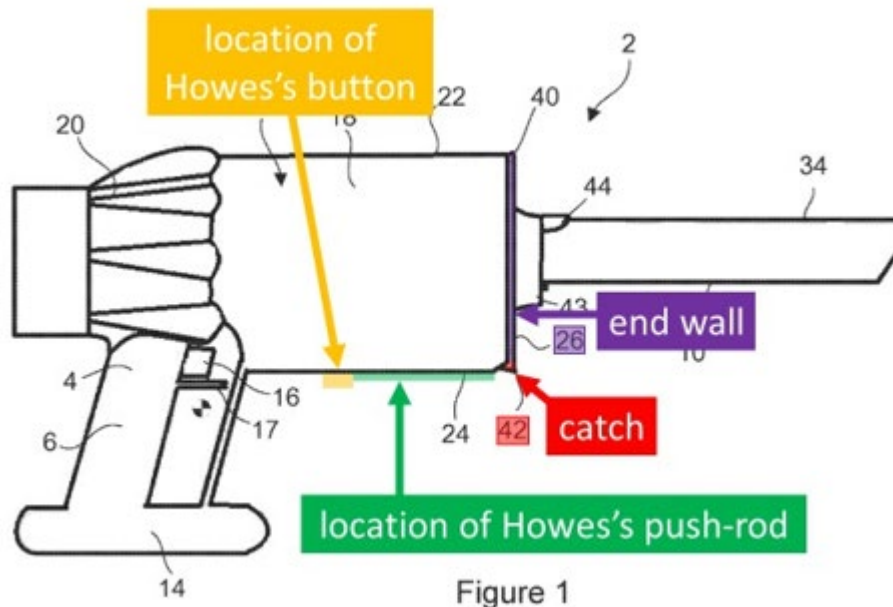
Ex1005, Fig. 1 (excerpted and annotated by Patent Owner, showing a potential disengaged position of the catch, even when the cleaning tool is connected).

Petitioners have not shown that Dimbylow discloses these limitations, and Petitioners do not rely on Howes at all for these limitations. *See* Pet., 45–47. Thus, Petitioners have not shown that elements [1d3] or [14d3] are taught by the combination of Dimbylow and Howes.

2. Petitioners have not shown that a POSITA would have been motivated to combine Dimbylow and Howes, with reasonable expectation of success

Petitioners' Ground 1 fails for the additional reason that Petitioners have not sufficiently demonstrated a motivation to combine Dimbylow and Howes. Rather, Petitioners provide conclusory statements about cherry-picked substitution and alleged advantages of modifying Dimbylow based on Howes's disclosure without providing any explanation for such conclusory statements.

For example, Petitioners assert that a POSITA would have combined Dimbylow and Howes in a very specific manner:



Pet., 28 (showing Petitioners' annotations for the proposed combination).

The only rationale Petitioners provided for the combination was that Dimbylow does not teach how a user releases its “catch.” Petitioners took Dimbylow’s silence as free canvas for hindsight-based cherry-picking from Howes. Nothing in Dimbylow or Howes, however, suggests that a push-rod from a detachable dirt collection chamber of an upright vacuum can be fitted to a handheld vacuum. Dimbylow does not identify “catch 42” as a problem or issue to be resolved.

In fact, it is difficult for a POSITA to combine Dimbylow and Howes, because Dimbylow envisions accessories such as a cleaning tool 10, similarly to the '477 Patent's disclosed “accessory cleaning tool.” Howes, by contrast, discloses

a different form factor of vacuum cleaner, *i.e.*, an upright vacuum cleaner. The removable dirt collection chamber according to Howes is mounted to a main chassis 2, above a motor housing 19. Howes does not disclose an attachable cleaning tool at all. Therefore, there is no evidence a POSITA would have looked to Howes to fill in alleged gaps in Dimbylow. Furthermore, it is clear that Howes' dirt collection chamber is intended to be used in an upright orientation. For example, Howes teaches that "[t]he dirt and dust separated here falls under gravity towards the base 12 of the chamber 10 through a conduit formed by a dividing wall 16." Ex1006, 3:47–50. A POSITA, without more, would not take a feature from Howes's direct collection chamber and simply rotate it horizontally before plugging it into a handheld vacuum.

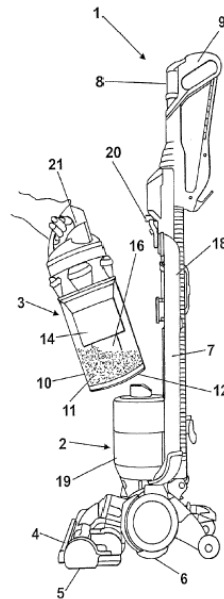


Fig. 2a

Ex1006, Fig. 2a.

Each of Petitioners' alleged rationales for this combination are merely conclusory statements with no explanation for why the combination should be conducted in the specific proposed manner, why the alleged advantages of the pushrod mechanism apply to the handheld vacuum according to Dimbylow, or why the modifications would improve the vacuum of Dimbylow.

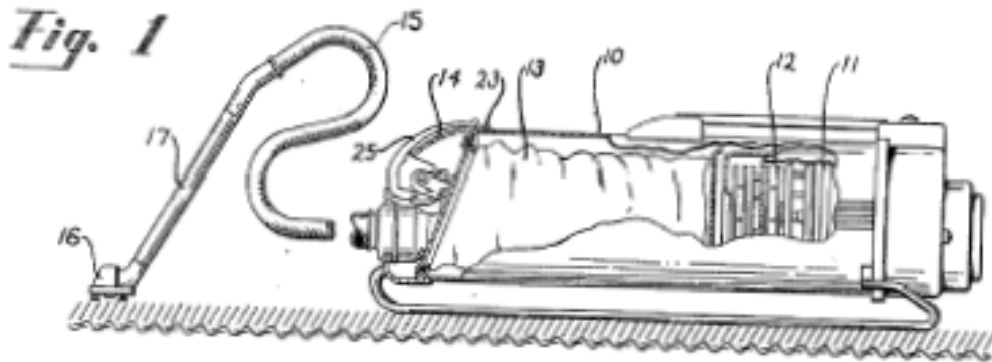
To support these alleged rationales for combining these two references, Petitioners cite the Declaration of Mr. Giachetti (Ex1002). However, these paragraphs also merely make conclusory statements about simple substitution and alleged advantages without providing any explanation for such conclusory statements. *E.g.*, Ex1002, ¶¶91–104. For example, neither Petitioners nor Mr. Giachetti provide any explanation for why a POSITA, reading Dimbylow, would have been motivated to install a push-rod beyond the hindsight-informed statement that such set up would not necessitate a user to place his or her hand near the dirt. *See id.*

Thus, Petitioners failed to meet their burden of showing that the Challenged Claims would have been obvious in view of Dimbylow in combination with Howes under Ground 1.

**B. Petitioners Failed to Show that Brown Renders Obvious
Challenged Claims 1–20 (Ground 2)**

1. Brown does not disclose or teach an air treatment member comprising a dirt collection region having an openable door [1b]/[13b]/[14b]/[18b]

Brown is a 79-year-old disclosure that discloses a cover and cover latching means for an obsolete “conventional tank type cleaner.” Ex1007, 1:1–53.



Id., Fig. 1. In order to distort this old machine and map it onto the more modern handheld vacuum embodiments of the '477 Patent claims, Petitioners improperly attempt to stretch Brown in every dimension imaginable.

Every challenged claim requires “an air treatment member comprising a dirt collection region having an openable door.” Brown does not disclose a dirt collection region having an openable door. Indeed, Brown does not disclose an “openable door” at all. Brown discloses a “conventional tank type cleaner” with a long cylindrical “casing” (10). *Id.*, 1:40–46, 2:7–9. Within the casing is “dust bag 13” to “separate the dust from the air.” *Id.*, 2:12–14. At the end of casing 10 (*i.e.*,

on the left side of Figure 1) is “[a] removable front cover 14 [that] secures dust bag 13 in casing 10,” permitting “access to remove dust bag 13 to empty it.” *Id.*, 2:14–17. Petitioners point to “removable front cover 14” as the claimed “openable door,” Pet., 54, but nowhere does Brown describe the removable front cover as a “door.”¹

Notably, Brown’s front cover does not open a “a dirt collection region” as claimed. As noted above, Brown discloses a dust bag 13 that separates the dust from air and holds the dust as well. *Id.*, 2:12–14. Petitioners creatively invents a new term not disclosed in Brown, “dust compartment,” to label the tank body that holds the dust bag. Pet., 54. Petitioners assert that “[a] POSA would understand that Brown’s “dust compartment,” including “dust bag 13,” is an air treatment member comprising a dirt collection region.” *Id.* Based on this creation, Petitioners call a “removable front cover 14” to the tank body the claimed openable door of a dirt collection region. Pet., 55.

¹ For claim 13 only, Petitioners argue that it would “have been obvious to add a hinge to Brown’s openable door (‘cover’), such that Brown’s openable door has first and second opposed sides.” Pet., 74. Petitioners have no support for this argument, citing only to Paragraph 233 of its expert declaration that states the same conclusion without explaining why such a modification would have been obvious to a POSITA. *See* Ex1002, ¶233.

This is wrong. By its plain and ordinary meaning, a “dirt collection region” is where the dirt separated from the air is collected. In the disclosure of Brown, the “dirt collection region,” if anything, would be the interior of dust bag 13. But dust bag 13 does not have a “door.” The purported “door” (front cover 14) is not on the dust bag, but, instead, the cover opens up to an interior tank space that holds the dust bag.

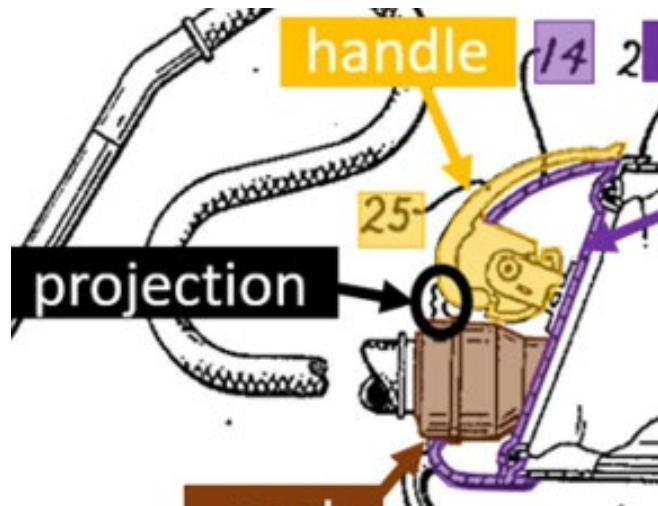
Thus, Petitioners failed to meet their burden of showing that Brown discloses “a dirt collection region having an openable door.”

2. Brown does not disclose or teach a removably connectable accessory [1c]/[13c]/[14c]/[18c]

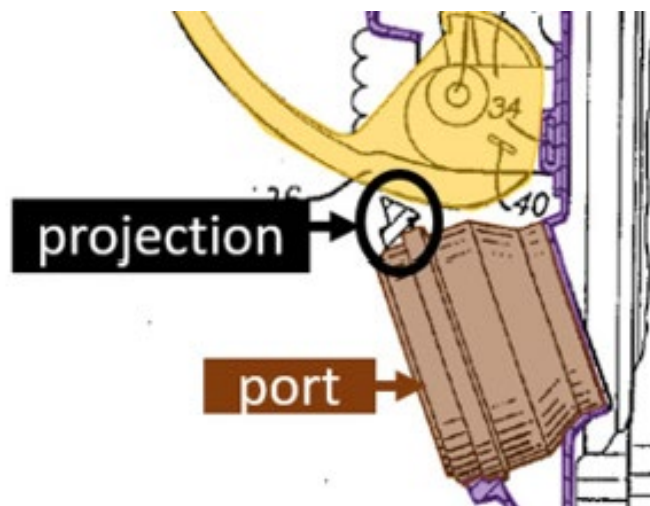
Petitioners point to the hose 15 as well as handle member 17 and cleaning tool 16 as the removably connectable accessory. Pet., 58. Hose is disclosed to be connected to cover 14. But nothing in Brown discloses or suggests that it is in anyway removable. Petitioners cite to Figure 3 as support and say that it depicts the hose 15 as removed. Pet., 58–59. However, Brown makes it clear that “Fig. 3 is a vertical transverse section through the cover.” Ex1007, 1:34–35. Nothing in this suggests that the hose 15 is removable simply because it’s not shown in a vertical transverse section view.

3. Brown does not disclose or teach “when the accessory is connected to the dirty air inlet, the openable door is inhibited from opening” [1c]/ the lock engaging member limitations

Brown has no description of this feature. Creatively, Petitioners point to a “projection” located on the “port” according to Figures 1 and 3 which has no textual description whatsoever to be a physical feature that allegedly prevents the cover from opening. Pet., 59–60.



Ex1007, Fig. 1 (excerpted, annotated by Petitioners).



Ex1007, Fig. 3 (excerpted, annotated by Petitioners).

While the only disclosures in Brown are these two wiggly illustrations (termed “projection” by Petitioners) without explanation, nothing in Brown explains what exactly these lines represent, or how these structures (if physical at all) interact with any other parts. Against zero textual description, Petitioners tries to create fiction and pass it on as Brown’s disclosure. For example, Petitioners imagine that “Brown teaches a projection located on its ‘port’ that inhibits Brown’s ‘removable front cover 14’ from opening because it contacts and provides resistance against Brown’s ‘handle 25,’ which must be ‘grasped and moved about . . . the pintle 27’ to open Brown’s door.” Pet., 59. However, Brown has no disclosure whatsoever about this “projection” or its purported role in providing resistance against anything. Brown’s disclosure about the pintle 27 has nothing to do with the projection. *See* Ex1007, 2:40–47.

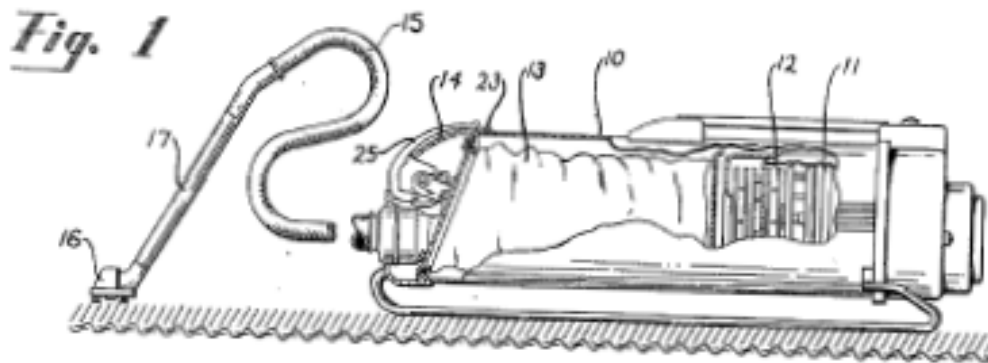
Worse still, Petitioners improperly attempt to move the wiggly lines representing a “projection” from the port to the hose 15. Pet., 61. The “projection” has zero text description to begin with, let alone any teachings regarding how to modify it. As discussed above, the hose 15 is never disclosed to be “removable” at all. Petitioners fail to establish that a POSITA would have any motivation to move the so-called “projection” if there was any such physical structure to the hose 15. Petitioners’ rationales are therefore entirely baseless and conclusory.

C. Petitioners Failed to Show that Brown in View of Vuijk Renders Obvious Challenged Claims 1–20 (Ground 3)

1. Petitioners have not shown that a POSITA would have been motivated to combine Brown and Vuijk

Petitioners' Ground 3 fails from the start because Petitioners have not demonstrated a motivation to combine Brown and Vuijk.

Brown and Vuijk disclose very different form factors (and different generations) of vacuum cleaners. Despite Petitioners' empty assertions to the contrary, Brown and Vuijk are not analogous at all. Brown is a nearly century-old tank type vacuum cleaner with a dirt bag as both the separator and the dirt collection, while Vuijk is a more modern upright vacuum with a cyclone separator and a detachable dirt collection chamber. The only reason Petitioners have combined them together is by hindsight, in an attempt to cure deficiencies of Brown's disclosure by cherry-picking from Vuijk. The form factors of Brown and Vuijk's disclosed embodiments speak for themselves:



Ex1007, Fig. 1.

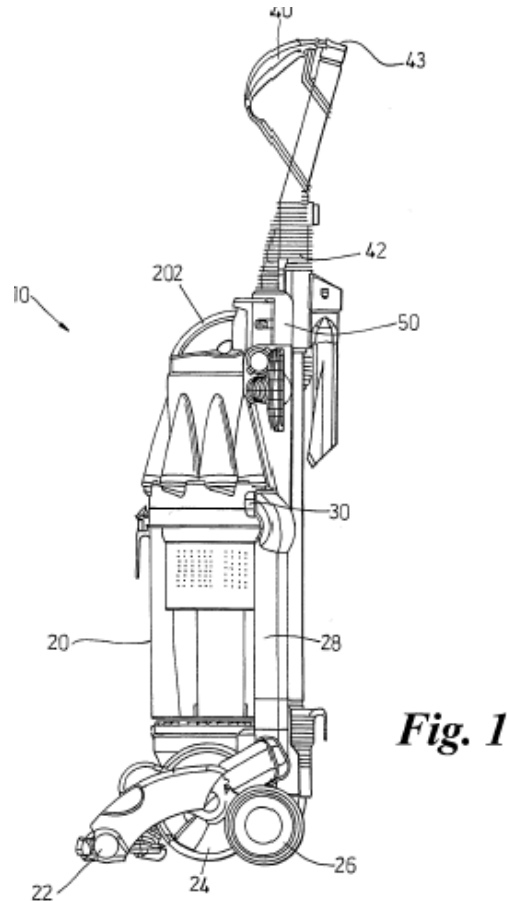


Fig. 1

Ex1008, Fig. 1

Petitioners fail to propose how to specifically combine the two references either. Rather, Petitioners only pick a disclosed “projection 218” from Vuijk and try to place it on the hose 15 according to Brown. Pet., 91–92. But Petitioners fail to provide any support from either disclosure on why a POSITA would have been motivated to make such a modification.

Vuijk’s projection 218 is disclosed to be a part of the chassis 50. On the other hand, Brown does not disclose the hose 15 to be “removable.” Petitioners provide conclusory statements about cherry-picked substitution and alleged advantages of

modifying Dimbylow based on Howes's disclosure without providing any explanation for such conclusory statements.

Again, to support these alleged rationales for combining, Petitioners only cite the Declaration of Mr. Giachetti (Ex1002) which, as discussed multiple times above, merely parrots the Petition and makes conclusory statements about simple substitution and alleged advantages without providing any explanation for such conclusory statements. *E.g.*, Ex1002, ¶¶278–96.

Thus, Petitioners failed to meet their burden of showing that the Challenged Claims were obvious in view of Brown in combination with Vuijk under Ground 3.

2. The proposed combination of Brown and Vuijk does not cure any deficiencies of Brown

As discussed above in Section V.B, Brown is deficient and does not render any challenged claims obvious. In the Petition, Petitioners rely on Vuijk for its purported teachings on how “a POSA would have been motivated to modify Brown such that Brown's projection is located on its accessory.” Pet., 88. Even if Petitioners were correct (they are not), and even if there were a motivation to combine Brown and Vuijk (there is not), the proposed combination of Brown and Vuijk does not cure the deficiencies of Brown identified above.

For example, Petitioners do not show how Vuijk teaches or discloses an air treatment member comprising a dirt collection region having an openable door ([1b]/[13b]/[14b]/[18b]), let alone how any “door” in Vuijk would have been

implemented in Brown. Similarly, Petitioners do not explain how Vuijk teaches or discloses a removably connectable accessory ([1c]/[13c]/[14c]/[18c]). Vuijk envisions that the dirt collection chamber is mounted on a chassis 50 but does not disclose any removable accessory. Thus, these fundamental deficiencies of Brown continue to exist, even when combined with Vuijk.

Thus, Petitioners failed to demonstrate that the Brown and Vuijk combination teaches every element of each challenged claim, and Ground 3 fails for this additional reason.

VI. CONCLUSION

For the foregoing reasons, Petitioners failed to meet their burden of showing a reasonable likelihood that at least one of the Challenged Claims is unpatentable, and institution of *inter partes* review should be denied.

DATED: July 24, 2024

Respectfully Submitted,

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CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned attorney hereby certifies that this document complies with the type-volume limitations of 37 C.F.R. § 42.24(b). The word count of the foregoing Patent Owner's Preliminary Response is 4,556, according to the word count tool in Microsoft Word.

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CERTIFICATE OF SERVICE

The undersigned certifies service pursuant to 37 C.F.R. § 42.120 of a copy of this Patent Owner's Preliminary Response and supporting materials upon Petitioners by email on July 24, 2024, to the following email addresses of record:

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