



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
14/160,475 01/21/2014 Igorce Srbinovski JUDI-P.e19 7192

129471 7590 02/26/2018
BROOKS ACORDIA IP LAW, P.C.
31365 Oak Crest Drive
SUITE 225
Westlake Village, CA 91361

Table with 1 column: EXAMINER

FIGUEROA, FELIX O

Table with 2 columns: ART UNIT, PAPER NUMBER

2833

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

02/26/2018

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@brooksacordia.com
officeaction@apcoll.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte IGORCE SRBINOVSKI

Appeal 2017-006229
Application 14/160,475¹
Technology Center 2800

Before ROMULO H. DELMENDO, KAREN M. HASTINGS, and
JAMES C. HOUSEL, *Administrative Patent Judges*.

PER CURIAM.

DECISION ON APPEAL

Appellant seeks our review under 35 U.S.C. § 134(a) of the
Examiner's decision rejecting claims 1–20.

We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Appellant is the Applicant, JUDCO PARTNERSHIP, LLC, which,
according to the Appeal Brief, is the real party in interest (Appeal Br. 2).

Independent claim 1 is illustrative of the subject matter on appeal
(emphasis added):

1. A pushbutton switch, comprising:
 - a housing including a body and a cover configured to engage the body, the body including a barrel;
 - a plunger longitudinally movable in the barrel;
 - a ratchet coaxial with the plunger including a plurality of longitudinally extending camming teeth; and
 - at least one longitudinally extending camming tooth on the plunger for engagement with the camming teeth on the ratchet;

wherein the body and the cover further include mechanisms for engaging the body and the cover together by interference fit therebetween;

wherein said mechanisms comprise a synthetic polymer material selected to provide heat resistance, and provide sufficient push apart force for maintaining the body and the cover engaged to resist separation of the body from the cover during switch operation.

The Examiner maintains the following rejections:²

(a) claims 1–8 and 10–19 under 35 U.S.C. § 103(a) as being unpatentable over Bartok, (US 6,191,376 B1, issued Feb. 20, 2001) (“Bartok”) in view of Niu et al. (US 8,822,858 B2, issued Sept. 2, 2014) (“Niu”); and

(b) claims 9 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Bartok in view of Niu and further in view of Krakinowski, (US 3,584,162, issued June 8, 1971) (“Krakinowski”).

² We refer to the Specification, filed Jan. 21, 2014 (“Spec.”); Final Office Action, notice emailed Dec. 31, 2015 (“Final Act.”), Appeal Brief, filed Oct. 13, 2016 (“Appeal Br.”); Examiner’s Answer, mailed Jan. 6, 2017 (“Ans.”); and the Reply Brief, filed Mar. 3, 2017 (“Reply Br.”).

ANALYSIS

The § 103(a) rejection over Bartok and Niu

Appellant sets forth arguments for claim 1, claims 2–8 and 10, claim 11, claims 12–16, claim 17, and claims 18 and 19 (Appeal Br. 9–19). We address claims separately from representative claim 1 only to the extent that they have been argued separately pursuant to 37 C.F.R. § 41.37(c)(1)(iv).

Appellant’s principal argument regarding claim 1 is that Niu is non-analogous and therefore should not qualify as prior art under 35 U.S.C. § 103 (Appeal Br. 9). Specifically, Appellant contends Niu is directed to a backlit keyboard assembly that controls halo brightness and contrast and thus is not in the same field of endeavor as the claimed invention, which Appellant characterizes as “pushbutton switches with a plunger and ratchet mechanism,” and because Niu is not reasonably pertinent to the particular problem faced by the inventor, which Appellant describes as providing an interference fit in a pushbutton switch (Appeal Br. 9–11; Reply Br. 2).

Appellant’s arguments are not persuasive. The Examiner determines that Niu is in the same field of endeavor as the claimed invention, which is a pushbutton switch (Ans. 2–3). Consistent with the Examiner’s determination, Niu discloses that its invention is directed to keyboards and methods of controlling its backlight but describes a scissor-type mechanism to regulate the vertical movement of a key when depressed by a user (Niu 1:14–19, 6:35–51). Thus, Niu’s field of endeavor is sufficiently close to support a determination that one of ordinary skill in the art would have considered Niu when contemplating the field of pushbutton switches.

The Examiner also determines that Niu is reasonably pertinent to Appellant’s problem (Ans. 3). Although Niu does not disclose an

interference fit, Niu exemplifies what materials are suitable for components of a pushbutton switch, which include materials that are strong and prevent mechanisms from wearing too quickly (Niu 7:12–26). Thus, Niu is reasonably pertinent because it would have commended itself to an inventor’s attention when determining what materials would be suitable for a pushbutton switch and what advantageous properties those materials may provide. “A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

Past decisions have demonstrated that inventors would have considered sources outside the specific field with which they were concerned. For instance, the Federal Circuit stated in *ICON Health*:

[A]n inventor considering a hinge and latch mechanism for portable computers would naturally look to references employing other ‘housings, hinges, latches, springs, etc.,’ which in that case came from areas such as ‘a desktop telephone directory, a piano lid, a kitchen cabinet, a washing machine cabinet, a wooden furniture cabinet, or a two-part housing for storing audio cassettes.

In re ICON Health and Fitness, Inc., 496 F.3d 1374, 1380 (Fed. Cir. 2007) (quoting *In re Paulsen*, 30 F.3d 1475, 1481–82 (Fed. Cir. 1994)).

Moreover, in *KSR*, the Supreme Court understood the court below to have held in a § 103 context that “unless the ‘prior art references address[ed] the precise problem that the patentee was trying to solve,’ the problem would not motivate an inventor to look into those references.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 414 (2007). However, the Court observed:

In determining whether the subject matter of a . . . claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is . . . [unpatentable] under § 103. One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims.

Id. at 419–420.

In view of the above guidance and the evidence in the record, we agree that Niu is analogous art and is available as prior art under 35 U.S.C. § 103(a).

Appellant asserts the scissor-type mechanism disclosed by Niu, which moves up and down in a scissor-like action, should not be confused with mechanisms for engaging a body and cover together via interference fit, as recited in claim 1 (Appeal Br. 11). Appellant further argues there would have been a lack of reason to make a modification in view of Niu to provide the interference fit recited in claim 1 and therefore the Examiner has not set forth a prima facie case of obviousness (Appeal Br. 12; Reply Br. 2–4).

Appellant's arguments are unpersuasive. As the Examiner finds (Final Act. 2–3), Bartok discloses a switch including a cover 2, a body 3 (including a planar portion 4), a plunger 30, and a ratchet 40 (Bartok 2:55–57). Bartok discloses that the cover 2 includes recesses, the body 3 includes pin members, and “[t]he cover and the body are preferably held together by

means of an interference fit between the holes and the pin members” (*id.* 4:33–42). Bartok does not disclose specific materials that the body and cover can be made of (Final Act. 3).

Guided by the disclosure of Bartok that an interference fit is the preferable mechanism for securing the cover and body of a switch together, it would have been obvious for one of ordinary skill in the art to consider materials for this mechanism in view of the practical need for such materials to build the mechanism given their absence in Bartok’s disclosure (*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp”)).

Here, Niu discloses suitable materials for components of a pushbutton switch, including glass-filled plastics, and discloses that such materials are strong and prevent mechanisms from wearing too quickly (Niu 7:12–26).³ Such a disclosure provides a basis for the selection of Niu’s material (e.g., glass-filled plastics) for use in Bartok’s device. *See In re Leshin*, 277 F.2d 197, 199 (CCPA 1960) (“[m]ere selection of known plastics to make a container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious.”). In addition, it would have been obvious to select the material disclosed by Niu in order to provide the device of Bartok

³ By listing “glass-filled plastics” as an alternative to polyoxymethylene (POM), which is described as strong and as preventing Niu’s scissor-type mechanism from wearing too quickly, one can infer that glass-filled plastics would also have some degree of strength and wear resistance so as to be an alternative or equivalent to POM.

with wear resistance, as the Examiner concludes (Final Act. 3), and to select a material that is strong, as disclosed by Niu (Niu 7:12–26).

Appellant presents similar arguments regarding a lack of reason to combine Bartok and Niu for independent claims 11 and 17 (Appeal Br. 13–16; Reply Br. 3–4). These arguments are not persuasive, as discussed above with regard to claim 1.

Appellant further contends the Examiner reversibly erred by concluding it would have been obvious to modify the amount of glass in a glass-filled plastic to determine the workable or optimal range of glass filling, thus arriving at the amount of glass filling recited in claim 17, because the applied references do not recognize the amount of glass filling as a result-effective variable or the effect of glass filling upon a plastic material (Appeal Br. 16–18; Reply Br. 4–5). These arguments are also unpersuasive. The Examiner finds Niu discloses its materials have strength and abrasion resistance and concludes it would have been obvious to modify the amount of glass filling in glass-filled plastics to determine its workable amount for achieving the properties disclosed by Niu (where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456 (CCPA 1955)).

Given Niu's disclosure that metal and composite materials (e.g., glass-filled ceramics) are alternatives for a material that is strong, one of ordinary skill in the art would have inferred that the glass filling enhances the strength of a plastic, which are generally not as strong as metals. Given that inference, we find no error in the Examiner's position as set forth on page 8 of the Answer.

In addition, Appellant asserts Niu is not concerned with heat resistance and does not address the countervailing considerations of achieving a proper interference fit while preventing material degradation and melting during soldering (Appeal Br. 17–18; Reply Br. 5–6). These arguments are also unpersuasive. The problem faced by an applicant is a relevant factor to take into consideration in an obviousness determination. However, an invention may be obvious for reasons the inventor did not contemplate. *See In re Dillon*, 919 F.2d 688, 693 (Fed. Cir. 1990) (en banc) (“In particular, the statement [in *In re Wright*] that a *prima facie* obviousness rejection is not supported if no reference shows or suggests the newly-discovered properties and results of a claimed structure is not the law.”) (overruling-in-part *In re Wright*, 848 F.2d 1216 (Fed. Cir. 1988)). Further, “the motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish obviousness.” *In re Kemps*, 97 F.3d 1427, 1430 (Fed. Cir. 1996). The above analysis demonstrates the claimed inventions would have been obvious over Bartok and Niu even though the rationale supporting a conclusion of obviousness may differ from the properties and advantages recognized by Appellant.⁴

Moreover, Appellant does not direct us to objective evidence of any secondary considerations, such as unexpected results, in support of nonobviousness. *Dillon*, 919 F.2d at 692 (explaining that where the prior art

⁴ With regard to the recited push apart force to resist separation of the body and cover, Bartok discloses mating its cover and body via interference fit (Bartok 4:33–42). It is reasonable to infer from Bartok that its interference fit mechanism would adequately function for its purpose and thus maintain engagement of the body and cover, as recited in the claims.

gives reason or motivation to make the claimed invention, the burden and opportunity to produce evidence such as unexpected results then falls on an applicant to rebut that prima facie case).

Appellant submits arguments for dependent claims 2–8, 10, and 12–16 by arguing the Examiner “adopted impermissible ‘obvious to try’” and states the dependent claims are allowable if the independent claims from which depend are patentable (Appeal Br. 12–15, 18–19). In order to overcome the Examiner’s rejection, Appellant’s must identify with sufficient particularity what the Examiner did wrong, i.e., identify a reversible error in the examiner’s rejection. *In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011); *Ex parte Frye*, 94 USPQ2d 1072 (BPAI 2010). Appellant’s argument, which is general in nature and lacking in any degree of specificity, does not identify a reversible error in the rejection of claims 2–8, 10, and 12–16.

For the reasons discussed above and those set forth in the Examiner’s Answer, we sustain the Examiner’s § 103(a) rejection of claims 1–8 and 10–19 over Bartok and Niu.

The § 103(a) rejection of claims 9 and 20 over Bartok, Niu, and Krakinowski

With regard to claim 9, Appellant asserts Krakinowski “only mentions lubricants such as silicone for parts, but does not teach or suggest lubricants are deposited on the plunger and the ratchet, wherein the lubricant is selected to provide temperature resistance” and therefore the Examiner has not set forth a prima facie case of obviousness (Appeal Br. 19–20).

Krakinowski is directed to switch mechanisms for a keyboard and discloses the use of a lubricant (e.g., silicone) to reduce friction that would

otherwise counteract the movement of the key mechanism (Krakinowski 1:7–10, 4:45–52). Thus, the combination of Bartok (which discloses a pushbutton switch including a plunger and a ratchet), Niu, and Krakinowski would have suggested the application of lubricant to the mechanism of Bartok to reduce friction in its movements, as concluded by the Examiner (Final Act. 9). “[T]he test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art.” *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971).

With regard to providing temperature resistance, as recited in claim 9, the Examiner’s rejection demonstrates the switch of claim 9 would have been obvious over Bartok, as modified by Niu and Krakinowski, even though the rationale supporting a conclusion of obviousness may differ from the properties and advantages recognized by Appellant. Moreover, a degree of “temperature resistance” is not specified in claim 9 and therefore encompasses a wide range of temperature resistance, including the ability to withstand room temperature. One can reasonably infer from the disclosure of Krakinowski that its lubricant would at least withstand room temperature, such as during assembly of its switch mechanism.

Appellant does not argue claim 20 separately from independent claim 17 (Appeal Br. 20). Appellant merely reiterates the arguments set forth in support of the patentability of claim 17. For the reasons set forth above, those arguments do not identify a reversible error.

For these reasons and those set forth in the Examiner’s Answer, we sustain the Examiner’s § 103(a) rejection of claims 9 and 20 over Bartok, Niu, and Krakinowski.

Appeal 2017-006229
Application 14/160,475

DECISION

The Examiner's rejection of claims 1–20 is affirmed.

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

AFFIRMED