The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte SRI K. CANAKAPALLI

Appeal 2007-1428
Application 09/817,719
Technology Center 2600

Decided: July 19, 2007

Before JOHN C. MARTIN, JOSEPH L. DIXON, and JOHN A. JEFFERY, *Administrative Patent Judges.*

DIXON, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 7-10. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

Appellant's invention relates to enabling manual adjustment of pointing device cursor speed. An understanding of the invention can be derived from a reading of exemplary claim 7, which is reproduced below.

> 7. A mouse comprising:
>
> a body including an element to detect movement of the body; and
>
> a control to enable the user to manually change the rate at which a cursor image moves in response to movement of said body, said control being positioned to lie under the user's thumb when the body is positioned in the user's hand.

PRIOR ART

The prior art reference of record relied upon by the Examiner in rejecting the appealed claims is:

JAASKELAINEN, JR.	US 6,115,029	Sep. 5, 2000

REJECTIONS

Claims 7-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JAASKELAINEN, JR.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellant regarding the above-noted rejection, we make reference to the Examiner's Answer (mailed Aug. 25, 2003) for the reasoning in support of the rejections, and to Appellant's Brief (filed Jul. 31, 2003) and Reply Brief (filed Sep. 12, 2003) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellant's Specification and claims, to the applied prior art reference, and to the respective positions articulated by Appellant and the Examiner. As a consequence of our review, we make the determinations that follow.

35 U.S.C. § 103

A rejection under 35 U.S.C. § 103(a) must be based on the following factual determinations: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective indicia of non-obviousness. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966)).

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Leapfrog Enter., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161, 82 USPQ2d 1687, 1691 (Fed. Cir. 2007) (quoting *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1739, 82 USPQ2d 1385, 1395 (2007)). *KSR* further explains:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida* [*v. AG Pro, Inc.,* 425 U.S. 273, 189 USPQ 449 (1976)] and *Anderson's-Black Rock* [*, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 163 USPQ 673 (1969)] are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR, 127 S. Ct. at 1740, 82 USPQ2d at 1396. Where, on the other hand, the claimed subject matter involves more than the simple substitution one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness must be based on "an apparent reason to combine the known elements in the fashion claimed." *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). That is, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, 127 S. Ct. at 1741, 82 USPQ2d at 1396 (quoting *In re Kahn*, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)). However, it is not necessary to look only to the problem the patentee was trying to solve; "*any* need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed," *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397 (emphasis added).

The reasoning given as support for the conclusion of obviousness can be based on interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art. *KSR*, 127 S. Ct. at 1740-41, 82 USPQ2d at 1396. *See also Leapfrog*, 485 F.3d at 1157, 1161, 82 USPQ2d at 1691 (held "obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost").

The main issue disputed by Appellant is that Jaaskelainen does not teach "a control to enable the user to manually change the rate at which a cursor image moves in response to movement of said body, said control being positioned to lie under the user's thumb when the body is positioned in the user's hand." The Examiner maintains that while Jaaskelainen does not expressly disclose that the user's thumb would be over the adjustment element 80, it would have been obvious to one skilled in the art at the time of the invention "for the thumb of the user to fall on the side of the mouse device, in order to control the dial, as well known by those skilled in the conventional art." (Final Rejection at 3, as incorporated into the Answer at 3).

We agree with the Examiner's finding. Additionally, we find that the size of a user's hand and the exact placement of a user's hand and thumb on the mouse will vary widely for any given user. Indeed, such placement will even vary to some degree for the same user each time the mouse is used. Given these ergonomic considerations, placement of any control switch to be

adjacent the user's thumb or finger would have been considered by those skilled in the art. Here, we find the Examiner's position to be reasonable. Therefore, we find the Examiner has made a proper initial showing, and we look to Appellant's arguments to show error therein.

From our review of Appellant's Brief and Reply Brief, we find that Appellant's position is replete with supposition and unsupported speculation. Appellant asserts that the cited reference "probably operates in a different fashion" without providing any support for this interpretation (Reply Br. 1). Therefore, Appellant's argument is not persuasive. Appellant asserts that "[a]ny finger could be utilized to operate the switch, since the switch is probably operated before beginning operation of the mouse itself through the mouse buttons." (Reply Br. 1). Again, Appellant provides no support for this assertion. Therefore, Appellant's argument is not persuasive. Appellant argues that there "is no way to position the body within the user's hand, and still get the thumb up on the mouse button." (Reply Br. 2). We disagree with Appellant's unsupported assertion, and we find that a user's fingers and thumb are easily placed as recited in independent claim 7 on the mouse taught by Jaaskelainen without any contortion or stretch.

Appellant seems to imply that the mouse and the entire palm of the hand must be in contact to hold the mouse "as intended" and that the thumb would not be able to contact the variable speed control (Br. 4). We cannot agree with Appellant's position – a position based on pure speculation without evidentiary support. In any event, the exact placement of a user's hand on a mouse during use is as variable as each individual user: what one user may find comfortable, another may find uncomfortable.

With these subjective considerations in mind, we find Jaaskelainen's mouse capable of being operated in the manner claimed – at least for some users. Although a user's index finger naturally extends beyond the thumb as Appellant points out, merely slightly bending the fingers while cradling the mouse would decrease the distance between the fingers and the thumb. We see no reason why a user could not reasonably hold Jaaskelainen's mouse in such a fashion – a position that would place the user's thumb in the vicinity of the index finger and facilitate actuation of the dial control 80 with the thumb and selection button 42 with the index finger.

Appellant argues that the Examiner's position is based upon inherency. Appellant disputes this position since it is not inherent to place the forefingers and thumb as the Examiner maintains, then Jaaskelainen teaches away from the claimed invention. We cannot agree with this contorted reasoning. The Examiner has set forth a convincing line of reasoning with respect to the teaching of Jaaskelainen, and Appellant has not shown error therein. Therefore, we will sustain the rejection of independent claim 7 and dependent claims 8-10 grouped therewith.

CONCLUSION

To summarize, we have sustained the rejection of claims 7-10 under 35 U.S.C. § 103(a).

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

MARTIN, *Administrative Patent Judge,* concurring.

For the following reasons, I concur in the majority's affirmance of the rejection. Claim 2 recites an apparatus (namely, a mouse) rather than a method of using a mouse. The claim recites two elements: (1) "a body including an element to detect movement of the body"; and (2) "a control to enable the user to manually change the rate at which a cursor image moved in response to movement of said body."

The position of the control is recited using the following functional language: "said control being positioned to lie under the user's thumb when the body is positioned in the user's hand." A patent applicant is free to recite features of an apparatus either structurally or functionally. *In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997) (citing *In re Hallman*, 655 F.2d 212, 215, 210 USPQ 609, 611 (CCPA 1981), *In re Swinehart*, 439 F.2d 210, 212, 169 USPQ 226, 228 (CCPA 1971), *In re Ludtke*, 441 F.2d 660, 663-64, 169 USPQ 563, 566-67 (CCPA 1971)). However, as explained in *Schreiber*,

> choosing to define an element functionally, i.e. , by what it does, carries with it a risk. As our predecessor court stated in *Swinehart*, 439 F.2d at 213, 169 USPQ at 228:
>
> > where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in

> fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

Schreiber, 128 F.3d at 1478, 44 USPQ2d at 1432.

Inherency in this context means that the prior art is capable of operation in a manner that satisfies the functional language of the claim. *See Schreiber*, 128 F.3d at 1475, 1478, 44 USPQ at 1430, 1432 (claimed dispensing top for use on a popcorn container and "having a generally conical shape and an opening at each end, the opening at the reduced end allows several kernels of popped popcorn to pass through at the same time, . . . the taper of the top being uniform and such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container" held prima facie anticipated by a prior-art spout for nozzle-ready cannisters, such as oil cans, because the prior-art spout appeared to inherently capable of satisfying the functional limitations if used on a popcorn container). *See also Ludtke*, 441 F.2d at 664, 169 USPQ at 566 (claimed parachute that opens sequentially during deployment held prima facie anticipated by reference parachute that appeared to be inherently capable of opening sequentially if deployed at a sufficient velocity).

The functional language in Appellant's claim 2 requires that the control be *capable* of lying under the user's thumb when the body of the mouse is positioned in a user's hand. The claim does not specify the location of any other fingers or the palm of the hand. The mouse shown in Figure 5A of the reference is inherently capable of being positioned in the user's hand with control dial 80 lying under the user's thumb. For example,

the mouse can be picked up by grasping it between with thumb (engaging the control wheel) and one or more other fingers (engaging the opposite side of the mouse). Because the claim does not specify the location of any other fingers or the palm of the hand, there is no merit to Appellant's argument that the user's thumb cannot engage control dial 80 at the same time the user's index finger is engaging button 42 (Br. 4).

For the foregoing reasons, I would find that claim 2 is anticipated by the reference and would affirm the § 103 rejection on the ground that anticipation is the epitome of obviousness. *In re McDaniel*, 293 F.3d 1379, 1385, 63 USPQ2d 1462, 1466 (Fed. Cir. 2002). For the same reasons, would also affirm the rejection as to claims 8-10, which are not separately argued.

gw

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