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 HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.

Appeal 2007-1106
Application 10/965,055
Technology Center 2800

Decided: 25 May 2007

Before RICHARD TORCZON, SALLY G. LANE, and SALLY C. MEDLEY, *Administrative Patent Judges*.

TORCZON, *Administrative Patent Judge*.

DECISION ON APPEAL

INTRODUCTION

The claims on appeal relate generally to a battery for a portable electronic device, where the battery housing does not impede docking of the device to a docking station. The examiner has rejected claim 22 as anticipated and claims 1-10, 18-21, and 23 as having been obvious. The appellant (HP) seeks review of the rejections. We reverse the anticipation

rejection, affirm the obviousness rejections, and enter a new ground of rejection for claim 22.

BACKGROUND

The claimed invention is simple. Portable electronic devices, such as notebook computers, typically run on batteries. Extending battery life typically requires use of a larger battery, with a housing that may project out of the device. Many portable electronic devices are used with docking stations. A projecting battery housing might interfere with the docking. To resolve this problem, HP has modified the battery housing to include a recess that avoids interfering with docking.

The examiner relies on one reference[1] (Shin) for the anticipation of claim 22. Claims 1-10, 18-21, and 23 stand rejected as having been obvious over combinations of Shin with three other references[2] (Fuchida, Ohnishi, and Fukushima). There are three independent claims other than claim 22 (claims 1, 18, and 21). Claims 1 and 18 are rejected over Shin and Fuchida,[3] while claim 21 is rejected over Shin, Fuchida, and

---

[1] T. Shin & M. Ohnishi, "Portable computer equipped with add-on battery", U.S. Patent 6,563,702 B1 (granted 13 May 2003).

[2] H. Fuchida, "Function-expansion device detachably connecting electronic equipment", U.S. Patent 6,742,070 B2 (granted 25 May 2004);
M. Ohnishi, "Battery unit and electronic apparatus", U.S. Patent 6,617,063 B1 (granted 9 September 2003); and
A. Fukushima, I. Miwa & N. Kawashima, "Portable computer docking apparatus including a key mechanism controlling a power supply and a locking mechanism", U.S. Patent 5,450,271 (granted 12 September 1995).

[3] Answer 4-7.

Fukushima.[4] The examiner has withdrawn the rejection against claims 11-17.[5]

ANTICIPATION

Claim 22 is written in means-plus-function format as follows:[6]

> 22. A battery, comprising:
>
> means for providing power;
>
> means for housing the means for providing power;
>
> means for attaching the means for housing to a bottom surface of a notebook computer; and
>
> means, associated with the means for housing, for receiving at least a portion of the [sic, a] docking station when the means for housing is attached to the notebook computer and the notebook computer is attached to the docking station.

The examiner urges[7] that claim 22 is anticipated because Shin shows a battery **4**, which the examiner notes inherently contains cells for providing power, housing for the cells (the surfaces of the battery), attaching means **46**, and means for receiving a portion of the docking station, which the examiner associates with the bottom of the battery **4**.

HP contests the examiner's construction of the receiving means.[8] Specifically, HP points to Figures 1-3 of the specification for the

---

[4] Answer 8-9.
[5] Answer 2.
[6] All claim language is taken from the appendix to the Appeal Brief (Appeal Br.). The portions of the agency record cited in this opinion may be viewed via the Patent Application Information and Retrieval system.
[7] Answer 3-4.
[8] Appeal Br. 5-6.

corresponding structure to the receiving means.[9] We note that all three figures show a U-shaped housing that wraps around a protrusion on the docking structure shown in Figure 3. We further note, however, that HP's specification contemplates other geometries, including an L-shape, an arc, a W-shape, or any other shape with a recess **104** for receiving the docking station.

Our claim construction for the contested receiving means is constrained by 35 U.S.C. 112(6), which limits the breadth of the receiving means to the corresponding structure in the disclosure (and equivalents). As is too often the case with means-plus-function limitations, neither the applicant nor the examiner has provided much guidance on the scope of the corresponding structures and equivalents. The receiving means is not limited to the U-shape shown in HP's figures, but it does require a shape with a recess into which some portion of the docking station fits during docking. While Us, Ls, Ws, and arcs are specifically disclosed, other recessed shapes (As, Bs, Cs, etc.) would be equivalent.

Shin on its face does not anticipate a properly construed claim 22. In Shin, the recess is in the docking station, not the battery housing. Although the examiner elsewhere characterizes the housing as having an L-shape,[10] even if true the L-shape is formed to receive the computer, not the docking station. Since Shin does not teach a limitation of the claim, the anticipation rejection of claim 22 is reversed.

---

[9] Appeal Br. 6.
[10] Answer 6.

OBVIOUSNESS

In analyzing obviousness, the scope and content of the prior art must be determined, the differences between the prior art and the claims ascertained, and the ordinary level of skill in the art resolved. Objective evidence of the circumstances surrounding the origin of the claimed subject matter (so-called secondary considerations) may also be relevant. Such secondary considerations guard against the employment of impermissible hindsight.[11]

Claim 1 defines the invention broadly as follows:

> 1. A battery for a dockable electronic device, the battery comprising:
>
> a housing having a recess;
>
> at least one battery cell disposed in the housing;
>
> wherein the recess of the housing is operable to receive a docking station platform when the dockable electronic device is docked at the docking station while the housing is coupled to a bottom surface of the dockable electronic device.

Claim 18 defines the invention more narrowly in terms of three members as follows:

> 18. A housing for a battery for a dockable electronic device, the housing comprising:
>
> a transverse member having opposite ends;

---

[11] *Graham v. John Deere Co.*, 383 U.S. 1, 36, 148 USPQ 459, 474 (1966), cited with approval in *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). The record on appeal does not contain objective evidence of secondary considerations.

a first lateral member that extends from one end of the transverse member;

a second lateral member that extends from another end of the transverse member; and

wherein the transverse and lateral members so positioned present a recess positionable to receive at least a portion of a docking station platform further wherein at least one of the members is constructed to be able to hold at least one battery therein.

Claim 21 defines the invention in terms of a method for charging the battery as follows:

21. A method for charging a battery, the method comprising:

attaching a dockable electronic device to a docking station while a battery is attached to a bottom surface of the notebook computer, at least a portion of a docking station platform is [sic, being?] positionable within a recess in the battery; and

providing power to the battery from the docking station through the dockable electronic device such that the battery is charged.

Scope and content of the prior art

Shin teaches a battery housing **4** protruding from a portable computer **1**. The computer has a variety of recesses **20**, **21** for engaging the housing. A docking station **6**, for use with the computer, also has a recess **61** for accommodating the battery housing.

Fuchida teaches a notebook computer **101**, docking stations **102**, **104**, and a battery housing **103**. The battery housing as illustrated has an L-shape that fits into a corresponding recess **145**, **202** in a docking station **102**, **104** (respectively). The battery housing also fits into a corresponding recess **141** on the bottom of the computer. The battery pack is only installed in one component at a time, although it can provide power to both the docking station and the computer when installed in the docking station.[12]

Fukushima teaches a docking station **1** with a power supply **60** that provides power for charging a battery in a portable computer **22**. Ohnishi shows the use of a six-cell battery[13] to supply higher performance, long-term power.[14]

Differences

For claims 1-10[15] and 21,[16] HP notes that Shin does not teach a recess in the battery housing for receiving a portion of the docking station.[17] HP further argues that the battery housing of Fuchida does not have a recess for receiving a portion of the docking station.[18] While Shin does not have a

---

[12] Fuchida 6:25-29 and 8:1-5.
[13] Ohnishi Fig. 6 and 6:18-34.
[14] Ohnishi 2:3-10.
[15] Although the basis for rejecting claim 5 is slightly different, in that it relies on Ohnishi for the showing of a six-cell battery, HP relies on its arguments for claim 1 and does not otherwise separately argue for the patentability of claim 5. Appeal Br. 10.
[16] Although claim 21 is a method claim, and the rejection additionally relies on Fukushima to show battery charging, HP relies on its "recess" arguments and does not separately argument for the patentability of claim 21. Appeal Br. 10.
[17] Appeal Br. 7-8.
[18] Appeal Br. 8.

recess, Fuchida plainly does. The L-shaped battery housing **103** of Fuchida has an indentation (hence the L-shape) that corresponds to a projection on the docking stations **102**, **104**.

For claims 18-20, HP argues that none of the references teach a battery housing with a transverse member and with first and second lateral members that define a recess.[19] The examiner construes "member" very broadly to include the edges of the battery housing.[20] Consequently, an orthogonal structure, like the battery in Fuchida, will have a transverse edge connecting lateral edges. HP does not point to a specific definition of "member", but consistently uses the term to mean a solid structural element.[21] The examiner's construction of "member" is broader than would be reasonable to one skilled in the art in view of the specification. Moreover, HP's use in the specification comports with the ordinary meaning of member as a constituent part rather than a defining boundary. Nevertheless, HP's use of member in the specification does not compel us to read the specific proportions of the drawings into the claim limitations. Fuchida's battery housing necessarily has a transverse member connected at one end to a single lateral member to form an L-shape. Fuchida does not teach a second lateral member.

For claim 23, which depends from claim 22 with the further limitation of means to provide power to charge the battery, HP relies on the examiner's

---

[19] Appeal Br. 9-10.
[20] Answer 5.
[21] E.g., Specification at ¶¶0013-0014, items **106**, **108**, and **110**.

failure to show a receiving means in the context of the anticipation rejection.[22]

Level of skill in the art

The skill artisan understood that a battery protruding from a laptop computer could pose difficulties when docking the computer to a docking station. Shin shows the problem being resolved by adapting the docking station to accommodate the battery. Those skilled in the art would also have been familiar with adaptations of both battery housing and the recess such as the L-shape of both the battery housing and the various recesses (in both the computer and the docking stations) of Fuchida.

Those skilled in the art understood that batteries and recesses need to be mutually adapted to fit each other. In Shin the relative conformations of battery and recess are simple block shapes, but in Fuchida the battery and recesses are L-shaped such that each wraps around the other.

Those skilled in the art would have appreciated the need to vary the number of cells in the battery to meet performance and duration goals, specifically including the six-cell battery shown in Ohnishi. Similarly, those skilled in the art would have appreciated the convenience of using the docking station to recharge the laptop battery as shown in Fukushima.

Synthesis of findings

The art, particularly in Shin, shows an appreciation of the problem: getting a protruding battery to work with a docking station. Fuchida shows that irregularly shaped laptop computer batteries were in use. If the

[22] HP does not otherwise separately argue the patentability of claim 23. Appeal Br. 11.

protruding battery of Shin had an irregular shape like Fuchida's, then Shin's recess would also need an irregular shape. The breadth of "receiving" as used in HP's claims and disclosure is sufficient to encompass the indentation in the L-shaped battery of Fuchida receiving the protrusion of the docking station into the docking station recess to form a corresponding L-shaped recess.

More broadly, those skilled in the art understood the interplay between docking station and protruding battery to avoid physical obstruction of docking. The problem immediately suggests three solutions. First, the modification of the docking station to receive the protruding battery (as shown in Shin). Second, the modification of the battery to receive the docking station. Third, the modification of each to accommodate the other (as suggested by the shapes in Fuchida). Note that the claims encompass both the second and third alternatives,[23] that is, they do not exclude embodiments in which both the battery housing and the docking station have corresponding protrusions and recesses.

The reason for combining the teachings of the references need not be the same as the ones that inspired the applicant.[24] Fuchida uses a battery with an interlocking shape, presumably to ensure proper orientation. If Fuchida's battery were bulkier to provide additional power as Shin teaches, the need for proper orientation would still exist. In the case of orthogonal interlocking members, more members would further constrain the possible

---

[23] Indeed, the protruding docking portion of HP's Figure 3 appears to be custom-fitted to the recess in the battery housing.

[24] *In re Dillon*, 919 F.2d 688, 692-94, 16 USPQ2d 1897, 1901-02 (Fed. Cir. 1990) (en banc).

orientations. Hence, a U-shape might be more constraining than an L-shape, and an E-shape might be even more constraining.

The interlocking features on the computer, battery, and docking station are familiar in the art and work in predictable ways. The problem of accommodating bulky batteries to docking stations was also known. Solving both problems in a single system would have been obvious for the advantages that each solution confers.

NEW GROUND OF REJECTION

Although we have concluded that claim 22 is not anticipated, based on our analysis of the content and skill in the art, claim 22 would have been obvious in view of Shin and Fuchida. The system of Shin could be modified to provide an L-shaped interlocking battery housing as in Fuchida for the reasons discussed above. The resulting battery would have power means (inherent in a battery), a housing (shown in both references) means for attaching to the bottom of the computer (shown at least in Shin), and means for receiving a portion of the docking station (the portion within the L-shaped interlock).

AFFIRMED-IN-PART

sd

Hewlett Packard Company
P.O. Box 272400
3404 E. Harmony Road
Intellectual Property Administration
Fort Collins, CO 80527-2400