

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASATAKA HASHIZUME,
SHINICHI KIMURA, and KOHJI TAKAHASHI

Appeal 2008-1424
Application 10/321,937¹
Technology Center 2600

Decided: September 18, 2008

Before JOSEPH F. RUGGIERO, JOHN A. JEFFERY, and MARC S.
HOFF, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1-15. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

Appellants' invention relates to a disk drive device including an inertia latch mechanism for latching and stopping the drive actuator in its

¹ Application filed December 17, 2002. The real party in interest is International Business Machines Corporation.

escape position when an impact is applied thereto in a state where the actuator is located in the escape position (Spec. 4).

Claims 1 and 12 are exemplary:

1. A disk drive device comprising:
 - a disk-shaped recording medium;
 - a head slider including a head element for recording data in the disk-shaped recording medium and reading the recorded data;
 - an actuator including a head arm having the head slider mounted thereon, the actuator being for unloading the head arm to an escape position and loading the head arm from the escape position so that the head slider is disposed close to a surface of the disk-shaped recording medium; and
 - an inertia latch mechanism for latching and stopping the actuator in the escape position when an impact is applied thereto in a state where the actuator is located in the escape position,
 - wherein the inertia latch mechanism includes:
 - a latch member capable of swinging between a release position of the actuator and a latching position of the actuator around a specified swing shaft, the latch member moving from the release position of the actuator to the latching position thereof to latch the actuator when the impact is applied thereto;
 - an inertia member swinging by inertial force of the impact to move the latch member when the impact is applied thereto, such that the inertia member is free of contact with the actuator;
 - a fixed member fixed at a specified position of the disk drive device;

and

 - a swing permitting member for permitting the swing of the inertia member, the swing permitting member being interposed between the fixed member and the inertia member.

12. An inertia lever disposed in a case of a disk drive device and used for an inertia latch mechanism for latching and stopping a rotary actuator in an escape position when an impact is applied thereto in a state where the rotary actuator is located in the escape position,
 - the inertia lever comprising:
 - a lever body swinging by inertia of the impact when the impact is applied thereto;

a fixture fixed to the case; and
a swing permitting member for connecting the lever body and the
fixture and permitting the swing of the lever body, such that the swing
permitting member is located between the fixture and the lever body to
cantilever the body with respect to the fixture.

The prior art relied upon by the Examiner in rejecting the claims on
appeal is:

Watson

US 6,624,980 B1

Sep. 23, 2003

Claims 1-15 stand rejected under 35 U.S.C. § 102(e) as being
anticipated by Watson.

Appellants contend that Watson does not teach an inertia member that
is free of contact with the actuator (Br. 6, 7), nor an inertia member that is
cantilevered with respect to and capable of swinging in connection to the
elastic member (Br. 7).

Rather than repeat the arguments of Appellants or the Examiner, we
make reference to the Brief (filed November 14, 2006²) and the Answer
(mailed September 22, 2006) for their respective details.

² Appellants' Brief was originally filed on July 13, 2005. The "Second
Substitute Appeal Brief" filed on November 14, 2006 is substantively
identical to the originally filed brief, but includes, responsive to the
Notification of Non-Compliant Appeal brief mailed October 16, 2006, a
revised Summary of Claimed Subject Matter.

ISSUE

There are three principal issues in the appeal before us.

The first issue is whether the Examiner erred in holding that Watson teaches an inertia member that is free of contact with the actuator, as required by claim 1.³

The second issue is whether the Examiner erred in holding that Watson teaches an inertia member cantilevered with respect to and capable of swinging in connection to the elastic member, as required by claim 2.

The third issue is whether the Examiner erred in holding that Watson teaches a swing permitting member located between the fixture and the lever body to cantilever the body with respect to the fixture, as required by claim 12.

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, the invention relates to a disk drive device including an inertia latch mechanism for latching and stopping the drive actuator in its escape position when an impact is applied thereto in a state where the actuator is located in the escape position (Spec. 4).

Watson

2. Watson teaches a disk drive including a restraining member connected to the body of the inertial latch proximate the pivot axis, wherein

³ Independent claims 6 and 9 contain nearly identical limitations.

the restraining member vertically restrains the inertial latch (col. 2, ll. 44-46).

3. Watson discloses that “[t]he protruding arm 28 of the inertial latch 24 comprises a hook member 28A at its distal end” (col. 3, ll. 60-61).

4. When Watson’s disk drive 2 is subject to a physical shock, “the inertial latch 24 rotates in a clockwise direction such that the protruding arm 28 engages the actuator arm 8 (e.g., the hook member 28A engages the tab 38) to prevent the actuator arm 8 from unlatching” (col. 4, ll. 40-45).

5. Watson’s Fig. 2 illustrates protruding arm 28 being connected at its proximal end (and not at its distal end) to strip-spring 32 (via body 26). Figure 2 also clearly shows that the protruding arm is capable of swinging in connection to the strip-spring.

6. Watson’s Figure 2 shows that the strip-string is not located *between* the pivot surface and the protruding arm, but is connected on the opposite side of the pivot from the protruding arm.

PRINCIPLES OF LAW

Anticipation is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

In an appeal from a rejection for anticipation, the Appellants must explain which limitations are not found in the reference. *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (“[W]e expect that the Board’s anticipation analysis be conducted on a limitation by limitation

basis, with specific fact findings for each *contested* limitation and satisfactory explanations for such findings.”)(emphasis added). *See also In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

ANALYSIS

Claims 1 and 6-11

Appellants argue that Watson does not teach an inertia member free of contact with the actuator, as required by claim 1, because protruding arm 28 contacts the actuator of Watson at tab 38 (Fig. 2). The Examiner’s position is that “inertia member” (protruding arm) 28 does not contact the actuator because hook member 28A is the part that does the contacting, rather than protruding arm 28 (Ans. 3-4, 6-7).

We are not persuaded by the Examiner’s reasoning. As Appellants point out, hook member 28A is shown as an integral part of protruding arm 28, not as a separate part (Watson Fig. 2). Watson discloses that “[t]he protruding arm 28 of the inertial latch comprises a hook member 28A at its distal end” (FF 3). The term *comprises* and the pronoun *its* both communicate that hook member 28A is *not* separate from protruding arm 28. In operation, when Watson’s disk drive 2 is subject to a physical shock, “the inertial latch 24 rotates in a clockwise direction such that the protruding arm 28 engages the actuator arm 8 (e.g., the hook member 28A engages the tab 38) to prevent the actuator arm 8 from unlatching” (FF 4). This sentence is

further evidence that Watson's hook member 28A is but a subpart of protruding arm 28.

We can find no support in Watson for the Examiner's contention that hook member 28A is not an integral part of protruding arm 28. The Examiner's further argument that Watson still meets the claim because "the members [i.e., hook member 28A] are not always in engagement with tab 38 of actuator arm 8" is also unpersuasive, because the claim requires the inertia member to be *free of contact* with the actuator, not merely contacting the actuator less than 100% of the time.

We therefore find that Watson does not teach every element of the invention recited in claim 1. We also find that Watson does not teach every element of independent claims 6 and 9, both of which require an inertia lever being "free of contact with the rotary actuator." We thus find error in the Examiner's rejection of claims 1 and 6-11 under 35 U.S.C. § 102(e).

Claims 2-5

We select claim 2 as representative of this group, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

At issue in claim 2 is whether Watson teaches the limitation of "an inertia member cantilevered with respect to and capable of swinging in connection to the elastic member."

Appellants argue that the elastic member 32 of Watson is not cantilevered, because Figure 3B clearly shows that it is supported on both ends, with yet a third point of support via post 32 (Br. 7-8). Appellants' argument is not persuasive of error by the Examiner, however, because the claim requires the *inertia member* to be cantilevered. We agree with the

Examiner's position that Watson's inertia member (protruding arm 28) is cantilevered as the claim requires (Ans. 7). Watson's Fig. 2 illustrates protruding arm 28 being connected at its proximal end (and not at its distal end) to strip-spring 32 (via body 26) (FF 5). Figure 2 also clearly shows that the protruding arm is capable of swinging in connection to the strip-spring (*id.*).

We therefore do not find error in the Examiner's rejection of claim 2, nor that of claims 3-5 dependent therefrom and not separately argued, under 35 U.S.C. § 102(e).

Claims 12-15

We select claim 12 as representative of this group, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

Appellants argue that Watson does not teach a swing permitting member "located between the fixture and the lever body to cantilever the body with respect to the fixture," as claim 12 requires. By contrast, according to Appellants, Watson's spring 32 is located on one side of pivot 29 (i.e., its fixture) and supported at up to three points, and the lever 28 is on the other side (Br. 8).

We agree with Appellants, and are persuaded of error in the Examiner's rejection. In Watson, protruding arm 28 corresponds to the claimed "lever body," interior pivot surface 30 (and exterior pivot surface 29) corresponds to the claimed "fixture," and strip-spring 32 corresponds to the claimed "swing permitting member." Watson's Figure 2, however, shows that the strip-spring is not *between* the pivot surface and the protruding arm, but is connected on the opposite side of the pivot from the

protruding arm (FF 6). Necessarily, then, Watson's strip-string is not located so as to cantilever the protruding arm ("lever body") with respect to the pivot surface ("fixture").

Because Watson does not teach every element of the claimed invention, we therefore find error in the Examiner's rejection of claim 12-15 under 35 U.S.C. § 102(e).

CONCLUSION OF LAW

We conclude that Appellants have not shown that the Examiner erred in rejecting claims 2-5. Claims 2-5 are not patentable. We further conclude that Appellants have shown the Examiner erred in rejecting claims 1 and 6-15. On the record before us, claims 1 and 6-15 have not been shown to be unpatentable.

DECISION

The Examiner's decision rejecting claims 2-5 is affirmed. The Examiner's decision rejecting claims 1 and 6-15 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2008-1424
Application 10/321,937

AFFIRMED-IN-PART

eld

BRACEWELL & GIULIANI LLP
PO BOX 61389
HOUSTON TX 77208-1389