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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LUCIANO CAPRIOTTI and ELMAR EHRMANN

Appeal 2017-005651
Application 13/328,192¹
Technology Center 3700

Before CHARLES N. GREENHUT, FRANCES L. IPPOLITO, and
ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Luciano Capriotti and Elmar Ehrmann (“Appellants”) seek review under 35 U.S.C. § 134(a) of the Examiner’s decision, as set forth in the Final Office Action dated November 5, 2015 (“Final Act.”), rejecting claims 1–11, 14, 16, 18, and 20–22. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ Appellants identify MULTIVAC SEPP HAGGENMULLER GMBH & CO. KG as the real party in interest. Appeal Br. 1.

BACKGROUND

The disclosed subject matter “relates to a work station for a packaging machine.” Spec. ¶ 2. Claims 1, 18, 20 are independent.² Claim 1 is reproduced below:

1. A work station for a packaging machine, the work station comprising:

a tool structure comprising an upper part and a lower part, the upper part and the lower part defining a chamber and being disposed for movement relative to each other between an open position and a closed position, the chamber being hermetically sealed in the closed position;

a tool disposed within the chamber of the tool structure and the tool being disposed for movement relative to the tool structure;

a guide disposed for guiding movement of the tool relative to the tool structure; and

a drive for moving the tool relative to the tool structure, wherein the drive is operably connected to the tool with a transfer device, the drive comprising an electromagnet for selectively creating an electromagnetic force upon the application of an electrical current through the electromagnet, a countermagnet operably connected to the transfer device, wherein the countermagnet is disposed for linear movement between a position of rest and an operating position, and wherein the countermagnet is selectively moved between the position of rest and the operating position to move the tool by

² Any discussion of the claims refers to the version in the Claims Appendix filed on July 21, 2016 rather than the version filed on April 4, 2016 (with the Appeal Brief).

selectively applying an electrical current through the electromagnet to apply one of an attraction force or a repulsion force upon said counter magnet.

REJECTIONS

1. Claims 1–9, 11, 18, and 20–22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bergstrom (US 3,481,100, issued Dec. 2, 1969) and Morita (US 2002/0093408 A1, published July 18, 2002).
2. Claim 10 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Bergstrom, Morita, and Hardy (US 6,538,544 B1, issued Mar. 25, 2003).
3. Claims 14 and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bergstrom, Morita, and Baumann (US 4,965,695, issued Oct. 23, 1990).

DISCUSSION

Rejection 1 – Claims 1–9, 11, 18, and 20–22

For independent claim 1, the Examiner relied on Bergstrom for certain limitations but stated that Bergstrom fails to satisfy the final clause, which begins “a drive for moving the tool relative to the tool structure” (“the drive clause”). *See* Final Act. 3–4. The Examiner found, however, (1) that “Bergstrom does teach that the tool is moved relative to the tool structure ‘by any convenient means’” (citing Bergstrom, 5:73–74) and (2) that Morita teaches the drive clause. Final Act. 4. According to the Examiner,

Given the teachings of Morita, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the “any convenient means” for

driving the tool structure of Bergstrom with the electromagnetic arrangement of Morita so that the operator may have better control over the tool due to the controllable magnetic field. Doing so would also provide for an easily manipul[]able means to moving the tool a set distance via electromagnetic forces.

Id.

For independent claims 18 and 20, the Examiner similarly relied on Bergstrom for certain limitations, and relied on Morita for: (1) in claim 18, the clause beginning “a drive operably connected to the tool by a transfer device” and (2) in claim 20, the clause beginning “a drive for moving the tool relative to the tool structure within the chamber.” *See* Final Act. 8–11. The Examiner provided similar reasoning for claims 18 and 20 as for claim 1. *Compare id.* at 4 (claim 1), *with id.* at 10 (claim 18), 11 (claim 20).

Appellants argue that the relied-on structure from “Morita is not a ‘convenient means’ to drive the heat sealing head 82 [of Bergstrom] because the actuator of Morita is incapable of driving the heat sealing head 82 as arranged in Bergstrom through an entire sealing operation cycle.” Appeal Br. 11 (quoting Bergstrom, 5:73–74 & Final Act. 4). More specifically, Appellants argue that “[t]he actuator taught in Morita is configured solely to be used in applications where a biasing load W is applied in an upwardly direction to the coupling member 7 (see Figs. 1 and 5, paras. [0042], [0049])” whereas “the exact opposite condition would be present when the heat sealing head 82 of Bergstrom is connected to the actuator of Morita” as proposed by the Examiner. Appeal Br. 12. Appellants contend that “Morita teaches that the actuator of Morita uses the electromagnet to pull the iron core 1 downward for the downward stroke, but is used just to apply enough current in the electromagnet to overcome the permanent magnet to allow biasing load W to move the plunger upward during the upward stroke” and

that, “[a]s such, Morita requires the upwardly directed load W to be applied in order for the iron core 1 to travel through its entire upstroke.” *Id.* at 13.

As an initial matter, we agree with Appellants’ understanding of the teachings of Morita. *See* Morita ¶¶ 41–49, Fig. 1–5. Further, for the reasons stated by Appellants (as summarized above) and for the reasons discussed below, we determine that the Examiner has not adequately explained how Bergstrom would be modified in view of Morita so as to arrive at the claimed invention in which, for example, “the counter magnet is selectively moved between the position of rest and the operating position to move the tool.” Claims App. 24 (claim 1), 26 (claims 18 and 20).

We understand the Examiner to take the position that, in the modified device, the actuating rod above heat sealing head 82 in Bergstrom (*see, e.g.*, Fig. 6) would move in a manner similar to coupling member 7 in Morita. *See, e.g.*, Final Act. 4 (discussing Morita Figs. 1–5 and ¶¶ 41, 42, 45, 46). As noted by Appellants, however, in the relied-on embodiment of Morita, moveable core 1 moves upwards only when the upward-directed bias force—which is *external* and *not* provided by the relied-on structures—exceeds the combined downward-directed forces (F_0 and F_r in Figure 5) provided by the relied-on structures. *See* Morita ¶ 49 (discussing Figure 5 and providing “the attracting force F_0 exerted to the end face of the plunger 5 is decreased, and therefore, the movable iron core 1 *is moved upward by a load force*” (emphasis added)), *discussed at* Appeal Br. 12–13. Indeed, as disclosed in Morita, switching the direction of the current through coil 3 does not generate an upward force on core 1; rather, it merely creates a magnetic field (B_c) that cancels *some* of the magnetic field provided by permanent magnet 12 (B_m) to make the overall downward force (from F_0

and F_r in Figure 5) less than the upward-directed bias force (“LOAD FORCE” in Figure 5). *See* Morita ¶ 49 (“The release operation is effected by passing a current through the coil **3** in a direction reverse to that of the current applied during the attracting operation. A magnetic field produced by this coil current runs through the magnetic path **02** so as to cancel out the magnetic field B_m produced by the permanent magnet **12**.”).

As noted by Appellants, however, the upward-directed bias force acting on coupling member 7 in Morita would *not* be present in the context of the modified device. *See* Appeal Br. 12–13. Instead, in the context of the modified device, heat sealing head 82 in Bergstrom would provide a *downward*-directed bias force (from gravity) on coupling member 7 from Morita. *Id.* at 12 (discussing how “biasing load W is applied in an upwardly direction to the coupling member 7” in Morita and how “the exact opposite condition would be present when the heat sealing head 82 of Bergstrom is connected to the actuator of Morita”). This downward-directed bias force on the coupling member in the modified device would be *in addition* to the downward-directed forces already provided by the relied-on structures from Morita—all of which act to maintain core 1 in the *downward position*. In the context of the modified device, the Examiner has not adequately explained how core 1 of Morita would move to the *upward position* (*see, e.g.,* Morita, Fig. 1) so as to satisfy, for example, the limitation reciting that “the counter magnet is selectively moved between the position of rest and the operating position to move the tool.” Claims App. 24 (claim 1), 26 (claims 18 and 20); *see also* Reply Br. 4 (arguing that “in view of the teachings of Morita, combining the drive of Morita in Bergstrom would not result in a functioning device”).

In the Answer, the Examiner states that “an upwardly directed biasing load is not a claimed limitation.” Ans. 16. Whether an upwardly directed biasing force is recited is not the issue. For example, Appellants are not arguing that the prior art lacks an upwardly directed biasing force when such a limitation is not actually recited. *See e.g., In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (rejecting arguments “not based on limitations appearing in the claims”). Instead, as discussed above, the issue is how the modified device would result in the claimed invention when the upward-directed bias force present in Morita is replaced by a downward-directed bias force in the context of the modified device. *See Reply Br. 4* (arguing that “even though [the] claim[s] do[] not address a biasing load, this teaching of Morita must be considered, particularly because it would lead away from the asserted combination because it evidences that the drive of Morita is not a ‘convenient means’ to drive the sealing head 82 of Bergstrom through its entire range of motion”).

For these reasons, we do not sustain the rejection of claims 1, 18, and 20, and also do not sustain the rejection of claims 2–9 and 11 (which depend from claim 1) and claims 21 and 22 (which depend from claim 20).³

Rejections 2 and 3 – Claims 10, 14, and 16

Claims 10, 14, and 16 depend from claim 1. Claims App. 25. The Examiner’s added reliance on Hardy (regarding Rejection 2) and Baumann (regarding Rejection 3) does not remedy the deficiencies in the rejection based on Bergstrom and Morita, discussed above, regarding claim 1 (*see*

³ Although claim 21 currently depends from itself, Appellants state that claim 21 will be amended to depend from claim 20. Appeal Br. 27.

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Rejection 1). Thus, for the same reasons discussed above, we do not sustain the rejection of claims 10, 14, and 16.

DECISION

We *reverse* the decision to reject claims 1–11, 14, 16, 18, and 20–22 under 35 U.S.C. § 103(a).

REVERSED