

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NIKOLAOS SARANDITIS

Appeal 2006-2171
Application 10/840,715
Technology Center 3600

Decided: March 27, 2007

Before BRADLEY R. GARRIS, PETER F. KRATZ, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-5, 8, 10-18, 25, 26, 31 and 34-36. We have jurisdiction over the appeal pursuant to 35 U.S.C. §§ 6(b) and 134.

We AFFIRM.

INTRODUCTION

Appellant invented a method and apparatus for collecting excess water leaking from a stuffing box of an inboard engine boat propeller shaft (Specification 3). The stuffing box provides a watertight seal to the propeller shaft of the boat. Appellant's method includes monitoring a rate of water collected in a tank exclusively for water discharged from a stuffing box and communicating a warning if the rate of water collection exceeds a preset value (Claim 1). The rate of water collection is based upon the number of times a pump is operated to discharge the water from the holding tank within a predetermined period of time (claim 10). The apparatus includes a containment vessel surrounding the stuffing box, a holding tank for receiving the water contained in the containment vessel, a pump with a float switch for removing the water from the holding tank, a counting circuit for determining the number of times the pump is operated during a predetermined period of time thereby monitoring the rate of water collection and an alerting device for communicating a warning signal (claim 13).

Claims 1, 10, 11, 13, 18 and 26 are illustrative:

1. A method for monitoring water leaking from a stuffing box of an inboard engine boat propeller shaft, comprising the steps of:

- shielding an engine compartment from a discharge of water from said stuffing box;

- collecting said discharge of water in a holding tank exclusively provided for said discharge of water from said stuffing box;

- monitoring a rate of water collection in said holding tank; and

- communicating a warning if said rate of water collection exceeds a preset value.

10. The method according to claim 8, wherein said monitoring step further comprises:

automatically operating a pump to remove said water from said holding tank when it reaches a predetermined level; and

counting the number of times said pump is operated within a predetermined period of time.

11. The method according to claim 10, further comprising the step of communicating a warning if said number of times said pump is operated within a predetermined period of times exceeds a predetermined number.

13. A water management system for a boat propeller shaft stuffing box, comprising:

a containment vessel disposed around a stuffing box, said containment vessel shielding an engine compartment of said boat from a discharge of water from said stuffing box, and collecting said discharge of water;

a holding tank in fluid communication with said containment vessel and exclusively receiving water collected by said containment vessel;

a pump connected to said holding tank and a float switch connected to said pump for automatically turning said pump on and off, said pump removing at least a portion of said water from said holding tank; when said water reaches a predetermined level;

an electronic circuit for monitoring the rate of water collection in said holding tank, said electronic circuit comprising a counting circuit for determining the number of times said pump is operated during a predetermined period of time; and

an alerting device for communicating a warning indication when said pump is operated a certain number of times within a predetermined period of time.

18. The water management system according to claim 17, wherein said mounting structure comprises a shaft log.

26. A water management system for a propeller shaft stuffing box, comprising:

a containment vessel, sized and shaped to fit around a propeller shaft stuffing box, said containment vessel having first and second axially-aligned shaft bores at opposing ends thereof;

a support structure supporting said containment vessel in axial alignment with said propeller shaft;

a holding tank in fluid communication with said containment vessel for accumulating water from said containment vessel;

a pump responsive to an automatic switch, said automatic switch responsive to a water level in said holding tank for automatically operating said pump;

a control unit, said control unit monitoring a rate of water accumulation in said holding tank and generating a warning signal when said rate of water accumulation exceeds a predetermined rate;

wherein said control unit monitors said rate of water accumulation in said holding tank based on the number of times said pump is operated during a predetermined period of time.

The Examiner relies on the following prior art references as evidence of unpatentability:

Price	US 4,341,178	Jul. 27, 1982
Herzhauser	US 5,030,150	Jul. 9, 1991

The rejection as presented by the Examiner is as follows:

1. Claims 1-5, 8, 10-18, 25-26, 31 and 34-36 are rejected under 35 U.S.C. § 103(a) as unpatentable over Herzhauser in view Price.

Rather than reiterate the respective positions advocated by the Appellant and by the Examiner concerning this rejection, we refer to the Brief and the Reply Brief, and to the Answer respectively for a complete exposition thereof.

Appellant separately argues claims 1, 10, 11, 13, 18, and 26. Accordingly we address Appellant's arguments regarding those claims in our opinion below.

OPINION

CLAIM 1

The Examiner rejected claim 1 under § 103(a) over Herzhauser in view of Price. The Examiner found that Herzhauser does not disclose monitoring the rate of water collection in the holding tank (Answer 4). The Examiner found that Price discloses monitoring the rate of water collection in a bilge (Answer 5). The Examiner concluded it would have been prima facie obvious to one of ordinary skill in the art to “provide to the holding tank, pump and switch of Herzhauser a monitor, timer and alarm similar to those discussed in column 3, lines 17-36 of Price so that in Herzhauser the . . . rate of water collection in said holding tank can be monitored . . . to indicate to the boat owner when the packing [i.e., stuffing] box is leaking too much” (Answer 5-6).

Appellant argues lack of motivation for the combination of Price's bilge water pump monitoring with Herzhauser's stuffing box water containment and removal method (Br. 7). Specifically, Appellant argues Herzhauser discloses pumping out the water from the holding tank "in the usual manner" which indicates that no efforts are made to monitor the rate of water accumulation (Br. 7). Appellant contends that Herzhauser's disclosure to remove water from sump 46 in the "usual manner" actually teaches away from "monitoring water collected exclusively from a packing box" (Br. 7).

Appellant further contends that Price merely teaches removing bilge water which may accumulate from various sources (i.e., rain, ocean spray, etc.), not necessarily from a stuffing box such that monitoring bilge water accumulation will not necessarily indicate that the stuffing box requires maintenance (Br. 7, 8). Based upon this contention, Appellant argues that Price neither discloses nor suggests a method or apparatus for monitoring water leakage from a stuffing box of an inboard engine propeller shaft (Br. 7).

Furthermore, Appellant contends that his invention permits the quick and easy determination of whether a stuffing box is leaking which was not possible prior to Appellant's invention (Br. 8).

The Examiner responds that Herzhauser discloses that water leaking through the stuffing box into sump 46 is leaking into the bilge of the marine craft (Answer 13). The Examiner further states that "Price suggests monitoring leakage into a bilge whether it be through stuffing box leakage or through some other type of leakage" (Answer 13-14). The Examiner finds that Price monitors the water leakage to prevent "catastrophic results due to continuous running of the bilge pump" (Answer 14). The Examiner further

finds that “[e]xcessive leakage into the facility [i.e, sump] 46 of Herzhauser could cause the pump 48 to run to the extent that the battery is exhausted or the leakage could be so excessive that the facility [i.e, sump] 46 overflows into the bilge area” (Answer 14). Because Price provides a monitor of bilge pump operation, and because the pump 48 of Herzhauser is effectively a bilge pump, the Examiner concludes “suggestion is present for monitoring the operation of pump 48 of Herzhauser with [an] apparatus similar to that of Price” (Answer 14).

The Examiner further responds that “if Price teaches monitoring of leakage into the bilge of a sea craft, then monitoring of all types of leakage into the bilge of the sea craft is undertaken including leakage from a stuffing box” (Answer 15).

We agree with the Examiner’s ultimate conclusion that claim 1 is unpatentable under § 103(a) over Herzhauser in view of Price.

Appellant’s argument that Herzhauser teaches away from the combination is not persuasive. While Herzhauser teaches that the water collected in sump 46 is removed in the “usual manner,” such disclosure does not discourage the solution claimed (i.e., monitoring the sump). *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004) (explaining “[t]he prior art’s mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed”).

Rather, we agree with the Examiner that Price’s disclosure to monitor the “rate of leakage” of water to avoid catastrophic results such as exhausting the bilge pump battery or overwhelming the bilge pump (Price,

col. 1, ll. 27-34, 46-49), would have provided motivation to one of ordinary skill in the art for combining Price's bilge water level monitoring method with Herzhauser's method of containing and removing water bypassing a stuffing box. As the Examiner indicated, Herzhauser's stuffing box splash guard funnels the water into sump 46 located in the bilge of the craft such that Price's reasons indicated above for using his bilge water monitoring method and device would provide motivation for the combination of Price's bilge water monitoring method with Herzhauser's method of containing and removing water bypassing a stuffing box (Answer 14).

Appellant appears to be arguing a long-felt-need in the boat art when he states "[b]efore, [Appellant's invention] boat mechanics would have to visually inspect the stuffing box assembly to inspect whether the packing box has been improperly adjusted or if the packing material needed to be replaced" but Appellant's invention provides an easy determination of the source of leakage without having to inspect the bilge area (Br. 8). We note that Appellant has not provided any declaration or affidavit to support his argument. However, objective evidence must be factually supported by appropriate affidavit or declaration to be of probative value. *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972). Attorney arguments cannot take the place of such evidence on the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

From the foregoing, we sustain the Examiner's rejection of argued claim 1 and non-argued claims 2-5, and 8 under § 103(a) over Herzhauser in view of Price.

CLAIMS 10, 11, 13 AND 26

Method claims 10 and 11 ultimately depend on claim 1. Claim 10 recites, in relevant part, that the “monitoring step” further includes “counting the number times said pump is operated within a predetermined period of time” (claim 10). Claim 11, depends on claim 10 and further recites “communicating a warning if said number of times said pump is operated within a predetermined period of times exceeds a predetermined number” (claim 11).

Claim 13 and claim 26 are independent apparatus claims. Claim 13 recites, in relevant part, that the apparatus has “a holding tank . . . exclusively receiving water collected by said containment vessel” and “an electronic circuit for monitoring the rate of water collection in said holding tank, said electronic circuit comprising a counting circuit for determining the number of times said pump is operated during a predetermined period of time, and an alerting device for communicating a warning indication when said pump is operated a certain number of times within a predetermined period of time.”

Claim 26 recites, in relevant part, similar features as claim 13, with the exception that the “holding tank” need not be “exclusively” for accumulating water from said containment vessel. Specifically, claim 26 recites, in relevant part, “a control unit, said control unit monitoring a rate of water accumulation in said holding tank and generating a warning signal when said rate of water accumulation exceeds a predetermined rate; wherein said control unit monitors said rate of water accumulation in said holding tank based on the number of times said pump is operated during a predetermined period of time.”

The Examiner rejected claims 10, 11, 13 and 26 under § 103(a) over Herzhauser in view of Price. The Examiner found that Herzhauser does not teach “counting the number of times the pump is operated within a predetermined period of time” (claim 10 and 11), “said electronic circuit comprising a counting circuit for determining the number of times said pump is operated during a predetermined period of time” (claim 13) or “said control unit monitors said rate of water accumulation in said holding tank based on the number of times said pump is operated during a predetermined period of time” (claim 26) (Answer 4, 5, 7, 10). The Examiner found that Price discloses a control device for a bilge pump by “counting the number of times the pump is operated within a predetermined period of time” (Answer 5, 7, 10). Based on Price’s disclosure, the Examiner concluded that it would have been prima facie obvious to use Price’s control system and method that determine the frequency of pump operation to assess the rate of water leakage with Herzhauser’s device and method for controlling water leakage into a boat via a stuffing box “to alert the boat owner when the packing [i.e., stuffing] box is leaking too much” (Answer 6, 7, 11).

Appellant makes similar arguments regarding claims 10, 11, 13 and 26 as were made with respect to claim 1. We are unpersuaded by those arguments for the same reasons discussed above regarding claim 1.

We are also unpersuaded by Appellant’s additional argument regarding claims 10, 11, 13 and 26 that Price does not disclose counting the number of times a pump operates to determine the rate of leakage. Price discloses that the “on-time of the bilge pump is accumulated over a predetermined period of time and compared with a corresponding reference parameter” (Price, col. 1, l. 68 to col. 2, l. 3). Moreover, Price provides an

example of bilge pump operation by using a timer to accumulate successive operating intervals of the bilge pump (Price, col. 3, ll. 17-30). In the example, Price states that “if the bilge motor operates during seven two-minute intervals over a one hour period, the timer will be accumulated to fourteen minutes” (Price, col. 3, ll. 26-28). From this disclosure, Price suggests taking into account the number of times the pump is activated (i.e., “if the *bilge motor operates during seven two-minute intervals*” (emphasis added)).

Based on Price’s disclosure, it would have been obvious to one of ordinary skill in the art to combine Price’s bilge water monitoring system and method that include an electronic circuit or control unit for counting the number of times a pump is activated using a timer for determining the rate of leakage with Herzhauser’s stuffing box water containment and removal system and method to avoid the catastrophic results caused by excessive water leakage disclosed by Price (Price, col. 1, ll. 27-34).

Accordingly, we sustain the Examiner’s § 103(a) rejection of argued claims 10, 11, 13 and 26 and non-argued claims 12, 14-17, 25, 31, and 34-36.

CLAIM 18

Claim 18 ultimately depends on claim 13 and further recites that the “mounting structure” for attaching the containment vessel “comprises a shaft log.”

The Examiner rejected claim 18 under § 103(a) over Herzhauser in view of Price. The Examiner found that Herzhauser, the primary reference, taught mounting a containment vessel to a “shaft log” (Answer 8). The

Examiner interpreted Herzhauser's "attachment member 22" as being the "shaft log" (Answer 8).

Appellant argues that Herzhauser's attachment member 22 is not a "shaft log." (Br. 13). Rather, Appellant contends that as shown in Appellant's Figure 5, Herzhauser's attachment member 22 is similar to Appellant's compression sleeve 128 (Br. 13).

The Examiner responds that Appellant has not set forth any structure for the "shaft log" that would prohibit Herzhauser's attachment member 22 from satisfying the "shaft log" claim feature (Answer 27-28).

We agree with the Examiner's ultimate conclusion that claim 18 is unpatentable under § 103(a) over Herzhauser in view Price.

We are unpersuaded by Appellant's arguments noted above for two reasons. First, Appellant has not provided any evidence that the Examiner's interpretation of "shaft log" is incorrect. As the Examiner stated, Appellant did not specify any particular structure for the "shaft log" in claim 18 or his Specification. The most Appellant states is that "[t]he shaft log 110 is generally formed as a hollow cylindrical housing 122 with an outer flange 118" (Specification, ¶ [0022]). Attachment member 22 meets those disclosed features as it is coaxial with propeller shaft 18 and has a outward extending flange.

Second, in Appellant's Figure 5 embodiment the containment vessel 300 is indirectly attached via concentric ring pieces (316a, 316b, 316c) and flexible hose 124. Similarly, Herzhauser's housing 14 is indirectly attached to the element Appellant argues should be construed as corresponding to the claimed "shaft log" via the interposed members comprising the seal arrangement (i.e., attachment member 22, connector element 64, etc. to

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where the propeller shaft 18 exits the hull of the boat). Under either construction, Herzhauser discloses mounting the housing 14 to a “shaft log” as claimed.

We sustain the Examiner’s § 103(a) rejection of claim 18 over Herzhauser in view of Price.

CONCLUSION

We have affirmed the § 103(a) rejection of claims 1-5, 8, 10-18, 25, 26, 31, and 34-36 over Herzhauser in view of Price.

The Examiner’s decision 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)(1)(iv)(2006).

AFFIRMED

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Sacco & Associates, PA
P.O. Box 30999
Palm Beach Gardens, FL 33420-0999