



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
95/002,039	07/16/2012	7159789	36563-0007RX1	8762

128 7590 08/17/2012
HONEYWELL INTERNATIONAL INC.
PATENT SERVICES
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

FOSTER, JIMMY G

ART UNIT	PAPER NUMBER
----------	--------------

3993

MAIL DATE	DELIVERY MODE
-----------	---------------

08/17/2012

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patents and Trademark Office
P.O.Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

DO NOT USE IN PALM PRINTER

THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS

FISH & RICHARDSON P.C. (TC)

P.O. BOX 1022

MINNEAPOLIS, MN 55440-1022

Date:

MAILED

AUG 17 2012

CENTRAL REEXAMINATION UNIT

**Transmittal of Communication to Third Party Requester
Inter Partes Reexamination**

REEXAMINATION CONTROL NO. : 95002039

PATENT NO. : 7159789

TECHNOLOGY CENTER : 3999

ART UNIT : 3993

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified Reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the inter partes reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an ex parte reexamination has been merged with the inter partes reexamination, no responsive submission by any ex parte third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the Central Reexamination Unit at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

**OFFICE ACTION IN INTER PARTES
REEXAMINATION**

Control No.	Patent Under Reexamination
95/002,039	7159789
Examiner	Art Unit
JIMMY G. FOSTER	3993

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:

Patent Owner on _____

Third Party(ies) on _____

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Response:

2 MONTH(S) from the mailing date of this action. 37 CFR 1.945. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.956.

For Third Party Requester's Comments on the Patent Owner Response:

30 DAYS from the date of service of any patent owner's response. 37 CFR 1.947. NO EXTENSIONS OF TIME ARE PERMITTED. 35 U.S.C. 314(b)(2).

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

This action is not an Action Closing Prosecution under 37 CFR 1.949, nor is it a Right of Appeal Notice under 37 CFR 1.953.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892
2. Information Disclosure Citation, PTO/SB/08
3. _____

PART II. SUMMARY OF ACTION:

- 1a. Claims 1-9 and 11-30 are subject to reexamination.
- 1b. Claims 10 are not subject to reexamination.
2. Claims _____ have been canceled.
3. Claims _____ are confirmed. [Unamended patent claims]
4. Claims _____ are patentable. [Amended or new claims]
5. Claims 1-9 and 11-30 are rejected.
6. Claims _____ are objected to.
7. The drawings filed on _____ are acceptable are not acceptable.
8. The drawing correction request filed on _____ is: approved. disapproved.
9. Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has:
 been received. not been received. been filed in Application/Control No 95002039.
10. Other _____

Art Unit: 3993

Introduction

This is a first Office action on the merits, which is accompanied by an Order granting inter partes reexamination.

Examination

I. Claims 22-25, 29 and 30

Rejection

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-25, 29 and 30 are rejected under 35 U.S.C. § 102(b) as being anticipated by U. S. Patent No. 4,078,601 to Kolbow.

The detailed basis of the support for the rejection is substantially that as explained in the Request (see Sections V.A.1, p 9 and V.A.2, pp 11-17), which explanation is adopted herein by reference in its entirety.

Summarizing, however, Kolbow discloses a thermostat 10 having a housing 19 comprising a rotatable selector (knob 12) having a front face (annular surface of knob facing upwardly in Fig. 4) and having a range of rotatable positions (see col. 2, lines 7-13) wherein a desired parameter value is identified by the position of the rotatable selector along a range of rotatable positions (see indicator 13 and scale shown in Fig. 1). The selector is rotatable about a rotation axis (which is coaxial with the axis of screw 34). The thermostat additionally includes a non-rotating element (scale or index 14) which overlaps the face of the rotatable member 12 (see

Art Unit: 3993

Fig. 4) and which is fixed relative to the thermostat housing (19) via a support member (shaft 33/support member 29; Fig. 4). The support member is laterally offset relative to said rotation axis, in view of the uppermost portion thereof being shown un-centered relative to said axis (see Fig. 4), as pointed out on page 12 of the Request. Additionally the support member extends through an opening (at hub 37) in the rotatable selector 12 (see Fig. 4).

Accordingly, Kolbow meets what is claimed in claim 22.

Regarding claim 23, the rotatable selector 12 of Kolbow rotates in an arc about the rotation axis of the rotatable selector. This is evident from Figure 1 of the reference. Accordingly, Kolbow meets claim 23.

It is noted that claim 24, compared to claim 22, does not call for the support member to be laterally offset relative to the rotation axis of the rotatable selector and does not call for the support member to extend through an opening or slot in the rotatable selector.

Regarding claim 24's requirement (which distinguishes over claim 22) of a user interface to adjust a parameter value and requirement (which distinguishes over claim 22) that the rotatable selector be accessible and rotatable directly by the user's hand, the knob 12 of Kolbow is accessible to be rotated by hand (see col. 2, lines 17-19), and the rotation of the knob adjusts the set temperature (see col. 2, lines 7-12). Accordingly, Kolbow meets claim 24.

Regarding claim 25, the scale or index 14 of Kolbow comprises a temperature indicator which indicates the temperature when the pointer 13 is positioned to point to any of the range markings (15, 20) thereon (see col. 2, lines 12-15). Accordingly, Kolbow meets claim 25.

Regarding claim 29, the rotatable selector 12 of Kolbow is coupled to a *mechanical-to-electrical translator* (i.e., cooling heating switches 24, 25, bi-metal element 21, and activation switch 22; see col. 3, lines 5-12). Accordingly, Kolbow meets claim 29.

Art Unit: 3993

It is noted that distinctive from claim 22, the non-rotating element in claim 30 is recited as having the support member. Additionally, the non-rotating element is recited in claim 30 as overlapping the back surface instead of the front face of the rotatable selector. Also, the housing is recited in claim 30 as having an aperture adapted to accept the rotatable selector. However claim 30 does not call for the support member to be laterally offset to the rotation axis of the rotatable selector.

The non-rotating element 14, 33, 29 of Kolbow includes the lower base portion of post 29 of the support element 33, 29, which overlaps a back surface of the sleeves 35, 36 of the rotation selector 12, 37, 36, 35. Additionally, the housing cover 19 of Kolbow includes an aperture adapted to accept knob 12 of the rotating selector 12, 37, 36, 35. Accordingly, Kolbow meets claim 30.

II. Claims 1-9, 11-21 and 26-28

Rejection

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this, Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-21 and 26-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolbow in view of U.S. Patent No. 4,390,859 to Kasprzyk et al (Kasprzyk).

The detailed basis of the support for the rejection is substantially that as explained in the Request (see Sections V.A.1, pp 9-11; V.A.3, pp 18-37), which explanation is adopted herein by reference in its entirety.

Art Unit: 3993

Summarizing, however, Kolbow discloses a thermostat 10 having a housing 19. The thermostat comprises a rotatable selector (including knob 12) having a front face (i.e., the annular surface of knob facing upwardly in Fig. 4) and having a range of rotatable positions (see col. 2, lines 7-13), wherein a desired parameter value becomes identified by the position of the rotatable selector along a range of rotatable positions (see indicator 13 and the scale shown in Fig. 1). The selector is rotatable about a rotation axis (which would be substantially coaxial with the axis of the screw 34, as viewed in Fig. 4).

The thermostat of Kolbow additionally has a controlling mechanism by which a circuit to a heating system or to a cooling system becomes activated. This mechanism includes (among other things) a bi-metal element 21, a switch 22 at the end of the bi-metal element, and a sector gear 31 for adjusting the position of the bi-metal 21 element and switch 22 to set the activation temperature of the switch. The mechanism is adjusted by a gear sector 45 on a driven member 35, which is part of the rotating selector (which also includes the knob 12). Rotation of the selector, including the knob, will adjust the set temperature of the thermostat.

The Kolbow's thermostat additionally includes a non-rotating element (scale or index 14) which overlaps a front face of the rotatable member (i.e., of knob 12, see Fig. 4) and which is held fixed relative to the thermostat housing (19) via a support member (shafts 33, 29; Fig. 4). The support member is laterally offset relative to said rotation axis, in view of the uppermost portion thereof being shown off-centered relative to said axis (see Fig. 4), as pointed out on page 20 of the Request. Additionally the support member extends through an opening (at hub 37) in the rotatable selector (see Fig. 4).

However, Kolbow fails to disclose the temperature-setting mechanism as including a potentiometer.

Nonetheless, use of a potentiometer for setting the temperature in a thermostat by knob adjustment was well known in the art at the time of the invention. As an example, Kasprzyk discloses a potentiometer (31) having a shaft (30) received within the hole (27) in the hub in a rotatable selector (i.e., a knob 25; see Fig. 2) and being engaged thereby for rotation by the knob (see col. 2, lines 16-23). The potentiometer operates as a temperature setting mechanism (see col. 1, lines 64-68; col. 3, lines 20-25; claim 1). The potentiometer is connected by leads 32 to a

Art Unit: 3993

printed circuit board that has electric components defining the electric control circuit for the thermostat (see col. 1, line 68 – col. 2, line 6).

Each of (1) the adjustable potentiometer combined with a control circuit in Kasprzyk and (2) the adjustable bi-metal element combined with the switch in Kolbow satisfies the same basic objectives of setting temperature and controlling activation (of a heating or cooling system) based on the room temperature at a thermostat. Adjustment of the temperature setting in each case is provided by the same input of a user rotating a knob. Therefore, they define known substitutes in the thermostat art for performing the same ultimate functions.

Simple substitution of one known element for another to obtain predictable results constitutes an exemplary rationale supporting a conclusion of obviousness. See MPEP 2143 (B).

As argued by Third Party Requester, one of ordinary skill in the art would have been prompted to substitute the potentiometer/circuitry arrangement of Kasprzyk for the bi-metal/switch arrangement of Kolbow, for the purpose updating an electric thermostat to be an electronic thermostat. Additionally one of ordinary skill in the art would have been prompted to incorporate such a feature because to do so would merely constitute a simple substitution of one known element for another to obtain predictable results. Accordingly, it would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have substituted a potentiometer and electronic controller circuitry in place of the bi-metal/switch arrangement in Kolbow.

Accordingly, claim 1 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 2, Kasprzyk further teaches disposing a potentiometer (31, 30) along the same axis as a rotatable selector (knob 25). Accordingly, it would further have been obvious to have done this when substituting the potentiometer in Kolbow. Thus, claim 2 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 3, Kasprzyk of the art combination further teaches mounting a potentiometer to a printed circuit board in order to provide support for the potentiometer and provide support for the electronic circuitry for the thermostat (see col. 2, lines 2-6). Accordingly, it would have been

Art Unit: 3993

obvious in view of Kasprzyk also to have provided the thermostat of Kolbow with a printed circuit board. Thus claim 3 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 4, the non-rotating element of Kolbow of the art combination intersects the rotation axis of the rotatable selector. Thus claim 4 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 5, the scale or index 14 of the non-rotating element of Kolbow of the art combination is shown in Figure 4 to have sufficient rigidity to maintain a substantially planar configuration even for unsupported portions thereof. Therefore, the scale/index 14 defines a scale plate. Thus, claim 5 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 6, the ranges 15, 20 on the scale or index 14 of Kolbow of the art combination define a temperature scale (see Fig. 1; col. 2, lines 12-15 and lines 39-54). Thus, claim 6 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 7, the knob 12 of Kolbow of the art combination includes a pointer/indicator 13 (see Fig. 4) which is positioned by rotation of the knob 12 (see col. 2, lines 7-12). Thus, claim 7 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 8, the scale or index 14 of Kolbow has markings, which indicate temperature based on pointing of the pointer 13 of the rotating selector thereto. Thus, claim 8 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 9, to the extent claimed, the markings on the scale 14 of Kolbow point to numerals representing temperature (see Fig. 1). Temperature is indicated based upon pointing of the pointer 13. Thus, claim 9 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 11, Third Party Requester has asserted that:

Art Unit: 3993

- (1) The limitation regarding a "logo" element is one that is to non-functional printed matter and thus unable to support patentability, and
- (2) incorporation of a logo on thermostats constitutes something Patent Owner has been doing since the 1950's.

The Examiner agrees with Requester. For the reasons indicated by Requester, the limitation regarding the logo, no matter where the logo is placed, fails to define a basis for patentability, including over the applied art combination. Thus, claim 11 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 12, Kolbow's thermostat includes a ring or cover 19 that encloses the mechanism of the thermostat (see col. 2, lines 19-20) and therefore would define a housing. The aperture in the ring 19 accommodates the rotatable selector 12 there-through (see Fig. 1). Thus, claim 12 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 13, the device of Kolbow constitutes a thermostat 10 and therefore, by definition, it senses the temperature and automatically activates a system, in Kolbow's case a heating or cooling system, based upon the temperature. As a result, the *temperature of activation* is *indicated* when activation takes place. Moreover, the mechanism in the thermostat includes a bi-metal sensor 21 in combination with a switch 22 (which switch is described as being similar to the mercury switch of U.S. Reissue Patent No. RE28,676), with which a change in temperature will be sensed, by which the temperature of activation becomes indicated. When activation occurs, moreover, the thermostat provides a control signal via the switch 22 for operating the cooling or heating apparatus, as indicated in column 2, lines 21-45. The providing of the signal from the switch 22 is dependent on the actual temperature indicated by the functioning of the bi-metal strip and the switch and further dependent on the setting of temperature by the knob 12, which adjusts the bi-metal strip 21.

Kolbow also discloses the thermostat 10 as having a housing 19 comprising a rotatable selector (including knob 12) having a front face (annular surface of knob facing upwardly in Fig. 4) and having a range of rotatable positions (see col. 2, lines 7-13) wherein a set point is identified by the position of the rotatable selector along a range of rotatable positions (see

Art Unit: 3993

indicator 13 and scale shown in Fig. 1). The selector is rotatable about a rotation axis (which is coaxial with the axis of screw 34).

The thermostat of Kolbow additionally has a controlling mechanism by which a circuit to a heating system or to a cooling system becomes activated. This mechanism includes (among other things) a bi-metal element 21, a switch 22 at the end of the bi-metal element, and a sector gear 31 for adjusting the position of the bi-metal 21 element and switch 22 to set the activation temperature of the switch. The mechanism is adjusted by a gear sector 45 on a driven member 35, which is part of the rotating selector (which also includes the knob 12). Rotation of the selector, including the knob, will adjust the set temperature of the thermostat.

The Kolbow's thermostat additionally includes a non-rotating element (scale or index 14) which overlaps the face of the rotatable member 12 (see Fig. 4) and which is fixed relative to the thermostat housing (19) via a support member (shaft 33/support member 29; Fig. 4). The support member is laterally offset relative to said rotation axis, in view of the uppermost portion thereof being shown off-centered relative to said axis (see Fig. 4), as pointed out on page 20 of the Request.

However, Kolbow fails to disclose the temperature-setting mechanism as being a potentiometer.

Nonetheless, use of a potentiometer for setting the temperature in a thermostat by knob adjustment was well known in the art at the time of the invention. As an example, Kasprzyk discloses a potentiometer (31) having a shaft (30) received within the hole (27) in the hub in a rotatable selector (i.e., a knob 25; see Fig. 2) and being engaged thereby for rotation by the knob (see col. 2, lines 16-23). The potentiometer operates as a temperature setting mechanism (see col. 1, lines 64-68; col. 3, lines 20-25; claim 1). The potentiometer is connected by leads 32 to a printed circuit board that has electric components defining the electric control circuit for the thermostat (see col. 1, line 68 – col. 2, line 6).

Each of (1) the adjustable potentiometer combined with a control circuit in Kasprzyk and (2) the adjustable bi-metal element combined with the switch in Kolbow satisfies the same basic objectives of setting temperature and controlling activation (of a heating or cooling system) based on the room temperature at a thermostat. Adjustment of the temperature setting in each

Art Unit: 3993

case is provided by the same input of a user rotating a knob. Therefore, they define known substitutes in the thermostat art for performing the same ultimate functions.

Simple substitution of one known element for another to obtain predictable results constitutes an exemplary rationale supporting a conclusion of obviousness. See MPEP 2143 (B).

As argued by Third Party Requester, one of ordinary skill in the art would have been prompted to substitute the potentiometer/circuitry arrangement of Kasprzyk for the bi-metal/switch arrangement of Kolbow, for the purpose updating an electric thermostat to be an electronic thermostat. Additionally one of ordinary skill in the art would have been prompted to incorporate such a feature because to do so would merely constitute a simple substitution of one known element for another to obtain predictable results. Accordingly, it would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have substituted a potentiometer and electronic controller circuitry in place of the bi-metal/switch arrangement in Kolbow.

Accordingly, claim 13 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 14, Kolbow of the art combination discloses that the support member (shaft 33/support member 29) extends through the opening in the rotatable member (knob 12). Thus, claim 14 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 15, the opening of Kolbow within the hub 37 and sleeve 36 of the rotatable selector (knob 12) is elongated in the vertical direction in Figures 4, 5 and extends in an arc about the rotation axis of the selector, defined between the shaft of the screw 34 and the interior surface of hub 37/sleeve 36 (additionally see Fig. 3). This opening receives the support member (shaft 33 and shaft 29). Thus, claim 15 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 16, Kolbow of the art combination further shows a round housing (see Fig. 1) and shows that the knob 12 is disposed such that its rotation axis is substantially at the centroid of the round housing. Thus, claim 16 is found to be unpatentable over Kolbow in view of Kasprzyk.

Art Unit: 3993

Regarding claim 17, Kolbow discloses a thermostat 10 having a housing 19 comprising a rotatable selector (including knob 12) having a range of rotatable positions (see col. 2, lines 7-13) wherein a desired parameter value is identified by the position of the rotatable selector along a range of rotatable positions (see indicator 13 and scale shown in Fig. 1). The selector is rotatable about a rotation axis (which is coaxial with the axis of screw 34).

The thermostat of Kolbow additionally has a controlling mechanism by which a circuit to a heating system or to a cooling system becomes activated. This mechanism includes (among other things) a bi-metal element 21, a switch 22 at the end of the bi-metal element, and a sector gear 31 for adjusting the position of the bi-metal 21 element and switch 22 to set the activation temperature of the switch. The mechanism is adjusted by a gear sector 45 on a driven member 35, which is part of the rotating selector (which also includes the knob 12). Rotation of the selector, including the knob, will adjust the set temperature of the thermostat.

The Kolbow's thermostat additionally includes a non-rotating element (scale or index 14) which overlaps the rotatable member 12 (see Fig. 4) and which is fixed relative to the thermostat housing (19) via a support member (shaft 33/support member 29; Fig. 4). The support member is laterally displaced relative to said rotation axis, in view of the uppermost portion thereof being shown off-centered relative to said axis (see Fig. 4), as pointed out on page 20 of the Request.

However, Kolbow fails to disclose the temperature-setting mechanism as being a potentiometer.

Nonetheless, use of a potentiometer for setting the temperature in a thermostat by knob adjustment was well known in the art at the time of the invention. As an example, Kasprzyk discloses a potentiometer (31) having a shaft (30) received within the hole (27) in the hub in a rotatable selector (i.e., a knob 25; see Fig. 2) and being engaged thereby for rotation by the knob (see col. 2, lines 16-23). The potentiometer operates as a temperature setting mechanism (see col. 1, lines 64-68; col. 3, lines 20-25; claim 1). The potentiometer is connected by leads 32 to a printed circuit board that has electric components defining the electric control circuit for the thermostat (see col. 1, line 68 – col. 2, line 6).

Each of (1) the adjustable potentiometer combined with a control circuit in Kasprzyk and (2) the adjustable bi-metal element combined with the switch in Kolbow satisfies the same basic

Art Unit: 3993

objectives of setting temperature and controlling activation (of a heating or cooling system) based on the room temperature at a thermostat. Adjustment of the temperature setting in each case is provided by the same input of a user rotating a knob. Therefore, they define known substitutes in the thermostat art for performing the same ultimate functions.

Simple substitution of one known element for another to obtain predictable results constitutes an exemplary rationale supporting a conclusion of obviousness. See MPEP 2143 (B).

As argued by Third Party Requester, one of ordinary skill in the art would have been prompted to substitute the potentiometer/circuitry arrangement of Kasprzyk for the bi-metal/switch arrangement of Kolbow, for the purpose updating an electric thermostat to be an electronic thermostat. Additionally one of ordinary skill in the art would have been prompted to incorporate such a feature because to do so would merely constitute a simple substitution of one known element for another to obtain predictable results. Accordingly, it would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have substituted a potentiometer and electronic controller circuitry in place of the bi-metal/switch arrangement in Kolbow.

Accordingly, claim 17 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 18, the rotatable selector 12 of Kolbow of the art combination includes a shaft at hub 37 coupled to a shaft member at 36 coupled to a driven member at 35. Thus, claim 18 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 19, the non-rotating element (scale or index 14) at least partially overlaps the front face of the rotatable selector 12. See Figures 1 and 4. Thus, claim 19 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 20, the scale or index 14 of Kolbow of the art combination intersects the rotation axis of the rotatable selector (knob 12). Thus, claim 20 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Art Unit: 3993

Regarding claim 21, the non-rotating element 14, 33, 29 of Kolbow includes the lower base portion of post 29 of the support element 33, 29, which overlaps the back face of members 35, 36 of the rotation selector 12, 37, 36, 35, as shown in Figures 4 and 5. Thus claim 21 is also found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 26, which is dependent on claim 25 which is dependent on claim 24, this Office has explained above (in the rejection over Kolbow alone) how Kolbow meets claims 24 and 25. Additionally (as to the limitation of claim 26) Kolbow fails to teach using a potentiometer that performs as a *mechanical to electrical translator*.

Nonetheless, use of a potentiometer for setting the temperature in a thermostat by knob adjustment was well known in the art at the time of the invention. As an example, Kasprzyk discloses a potentiometer (31) having a shaft (30) received within the hole (27) in the hub in a rotatable selector (i.e., a knob 25; see Fig. 2) and being engaged thereby for rotation by the knob (see col. 2, lines 16-23). The potentiometer operates as a temperature setting mechanism (see col. 1, lines 64-68; col. 3, lines 20-25; claim 1). The potentiometer is connected by leads 32 to a printed circuit board that has electric components defining the electric control circuit for the thermostat (see col. 1, line 68 – col. 2, line 6).

Each of (1) the adjustable potentiometer combined with a control circuit in Kasprzyk and (2) the adjustable bi-metal element combined with the switch in Kolbow satisfies the same basic objectives of setting temperature and controlling activation (of a heating or cooling system) based on the room temperature at a thermostat. Adjustment of the temperature setting in each case is provided by the same input of a user rotating a knob. Therefore, they define known substitutes in the thermostat art for performing the same ultimate functions.

Simple substitution of one known element for another to obtain predictable results constitutes an exemplary rationale supporting a conclusion of obviousness. See MPEP 2143 (B).

As argued by Third Party Requester, one of ordinary skill in the art would have been prompted to substitute the potentiometer/circuitry arrangement of Kasprzyk for the bi-metal/switch arrangement of Kolbow, for the purpose updating an electric thermostat to be an electronic thermostat. Additionally one of ordinary skill in the art would have been prompted to incorporate such a feature because to do so would merely constitute a simple substitution of one

Art Unit: 3993

known element for another to obtain predictable results. Accordingly, it would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have substituted a potentiometer and electronic controller circuitry in place of the bi-metal/switch arrangement in Kolbow.

Accordingly, claim 26 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 27, Kasprzyk of the art combination further teaches disposing a potentiometer along the rotation axis of a rotatable selector (knob 12), because it teaches disposing a potentiometer knob (25; i.e., a rotatable selector) for movement coaxial with the shaft (36) of a potentiometer (31) (see col. 2, lines 16-18; also Fig. 2). Thus, it further would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have disposed the potentiometer in Kolbow such that rotation of the selector knob adjusts the potentiometer. Accordingly, claim 27 is found to be unpatentable over Kolbow in view of Kasprzyk.

Regarding claim 28, Kasprzyk of the art combination further teaches mounting a potentiometer (31) to a printed circuit board (33) which is fixed (see Fig. 2; col. 1, line 68 – col. 2, line 9) to the thermostat housing. This circuit board is taught as fixed because Kasprzyk teaches that the circuit board supports the potentiometer and that the body portion 34 of the potentiometer is fixed within the thermostat by lead wires (32) to the circuit board. In addition to supporting the potentiometer, the circuit board also includes the electronic control circuitry of the thermostat. Thus it further would have been obvious to one of ordinary skill in the art in view of Kasprzyk to have provided a circuit board as part of the thermostat of Kolbow, either in place of or in addition to the base 11, for the purpose of providing support for the potentiometer and electronic circuitry for the thermostat. Thus claim 28 is found to be unpatentable over Kolbow in view of Kasprzyk.

III. Claims 22, 23 and 30

Art Unit: 3993

Rejection

Claims 22, 23, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kolbow.

The detailed basis of the support for the rejection is substantially that as explained on pages 64-67 and 69-72 of the Request, which explanation is adopted herein by reference in its entirety.

Summarizing, however, Brown discloses a thermostat with a thermostat housing (including a cover 66). Brown additionally discloses a rotatable selector (knob 58) having a range of rotatable positions, wherein a desired values is identified by the position of the rotatable selector along the range of positions (see col. 4, lines 4-19; Figs. 1 and 2). Rotation of the selector adjusts the rotary encoder switch 42 of a microcomputer thermostat controller.

Although Brown does not disclose a non-rotating element distinct from the housing cover 66 or disclose a support element that fixes a non-rotating element relative to the housing, the reference of Kolbow (according to Requester, see Request page 66) teaches employing a non-rotating element distinct from a thermostat housing and disposing the non-rotating element in fixed relation to the hosing, via a supporting member. Kolbow's non-rotating element (scale or index 14) overlaps a portion of the rotatable selector (knob 12). The non-rotating element is fixed relative to the thermostat housing (i.e., the outer housing 19 and base 11) via a support member (shaft 33 and support shaft 29). The support element extends through an opening (in hub 37) in the rotatable selector. Although the non-rotating element overlaps a portion of the rotatable selector, the rotatable selector nonetheless includes a pointer (13) providing an indication of the selector position relative to the scale. Moreover, as argued by Requester (Request, pp 66-67),

an artisan of ordinary skill would have been prompted to use an arrangement like that shown in Kolbow when implementing the features of Brown in a ubiquitous round thermostat shape so as to allow rotational components to operate in a limited space that is provided with round thermostats. For example, placing a support through an opening or slot in the rotatable selector would permit the support to be located inside a periphery of the selector, and thus to reduce the size of the thermostat, and avoid creating a component that might stick out to one side of the rotatable selector and interfere with the round symmetry of the

Art Unit: 3993

thermostat. Further, a skilled artisan would have been prompted to incorporate this particular feature because to do so would be merely a "[s]imple substitution of one known element for another to obtain predictable results." MPEP § 2143(B).

The Examiner agrees. Accordingly, it firstly would have been obvious in view of Kolbow to have constructed the cover 66 of Brown as an enclosing outer housing that together with a base (like Kolbow's base 11) encloses the mechanism of the thermostat, for protecting the mechanism. Secondly, instead as disclosed in Brown of fixing a scale (62) to the rotatable selector (knob 58) viewable through the housing (cover 66), it further would have been obvious in view of Kolbow to have fixed a non-rotating element, similar to the scale or index 14 of Kolbow, within such a housing and placed to partly overlap Brown's rotatable selector (knob 58) and to have provided the selector with a pointer to indicate the set temperature on the scale. Thirdly, as taught by Kolbow at 33, 29 it further would have been obvious to have fixed such a non-rotating element via a support member which extends through an opening in the rotatable selector at the axis. Fourthly, as taught by Kolbow at Fig. 4 (see the annotated figure on p 66 of the Request), it further would have been obvious to have made a portion of the support member off-centered relative to the rotation axis and therefore laterally offset relative to the axis of rotation of the selector in order to accommodate the selector's pointer, when constructing Brown's connection between the selector and the control mechanism, in the manner taught by Kolbow at 36, 37. As indicated by Requester, obviousness of the modifications would have been based on the obviousness to one of ordinary skill in the art to substituting of alternative arrangements within the same art, to provide predictable results. Thus, claim 22 is found to be unpatentable over Brown in view of Kolbow.

Regarding claim 23, Kolbow of the art combination teaches making a rotatable selector's hub (37) extend about the rotating axis of the selector in an arc (having 360°). It further would have been obvious in view of Kolbow to have made the hub of the selector knob 58 of Brown wherein it extends in an arc about the rotating axis. Thus, claim 23 is found to be unpatentable over Brown in view of Kolbow.

Art Unit: 3993

Regarding claim 30, Kolbow of the art combination additionally teaches providing the lower base portion of a support member (29, 30) of a non-rotating element (14, 33, 29), where the support member overlaps a back surface of the rotatable selector (12, 37, 36), as shown in Figures 4 and 5. Accordingly the lower base of the support member act to provide a *backing support function* for the selector. Kolbow additionally teaches constructing a thermostat in a manner such that the rotatable selector (knob 12) extends through an aperture in the housing cover (19), which would permit the thermostat to occupy less wall space, as opposed to having the selector extending out a lateral side from the housing (as with Brown). Accordingly, it further would have been obvious in view of Kolbow to have provided *backing support* for the rotatable selector of Brown as modified in view of Kolbow by having the support member of the non-rotating element overlap a back surface of the selector. And it further would have been obvious in view of Kolbow at 19 to modify the housing cover 66 and the selector 58 of Brown to include an aperture in the housing sized to accept the selector and thus in that way reduce the size of wall space coverage by the thermostat. Thus, claim 30 is found to be unpatentable over Brown in view of Kolbow.

Conclusion

All correspondence relating to this *inter partes* reexamination proceeding should be directed:

By Mail to: Mail Stop *Inter Partes* Reexam
 Attn: Central Reexamination Unit
 Commissioner of Patents
 United States Patent & Trademark Office
 P.O. Box 1450
 Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
 Central Reexamination Unit

By hand: Customer Service Window
 Randolph Building
 401 Dulany St.
 Alexandria, VA 22314

Art Unit: 3993

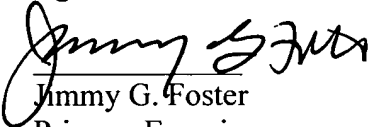
By EFS-Web: Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at:

<https://efs.uspto.gov/efile/myportal/efs-registered>

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

signed



Jimmy G. Foster

Primary Examiner

Central Reexamination Unit 3993

Conf.: 