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EXAMINER

MA, CALVIN

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GREGORY HOWARD WILFORD

Appeal 2014-006789
Application 12/773,054
Technology Center 2600

Before KRISTEN L. DROESCH, TERRENCE W. MCMILLIN,
and NORMAN H. BEAMER, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–17 and 19–21.¹ Claim 18 is cancelled. We have jurisdiction over the pending rejected claims under 35 U.S.C. § 6(b).

We reverse.

¹ Appellant identifies Whirlpool Corporation as the real party in interest. (App. Br. 2.)

THE INVENTION

Appellant's disclosed and claimed invention is directed to a capacitive touch switch capable of displaying a "dead-front" user interface. (Spec., Title.) According to the Specification:

When an icon is not illuminated, it may be desirable for the icon to be invisible or substantially invisible to the user. When some or all of the icons in a user interface disappear from view, a dead-front effect results in which the panel appears to the user as a monochromatic surface.

(Spec. ¶ 3.)

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A capacitive touch switch comprising:
 - a transparent insulating panel;
 - a filtering layer positioned behind the transparent insulating panel, wherein the filtering layer has an opaque color and a transparent icon is defined in the filtering layer;
 - a transparent substrate positioned behind the filtering layer, wherein the transparent substrate includes a capacitive electrode and is formed of a tinted material that substantially matches the opaque color of the filtering layer; and
 - a light source configured to transmit light through the transparent substrate, the transparent icon, and the transparent insulating panel when energized.

REJECTIONS

The Examiner rejected claims 1, 3–7, 11–17, and 19–21 under 35 U.S.C. § 103(a) as being unpatentable over Schaefer et al. (US 7,532,131 B2, issued May 12, 2009), Caldwell et al. (US 5,239, 152, issued Aug. 24,

1993), and Knoerzer et al. (US 2003/0048635 A1, pub. Mar. 13, 2003).
(Final Act. 2–11.)

The Examiner rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Schaefer, Caldwell, Knoerzer, and Nishikawa et al. (US 2007/218957 A1, pub. Sep. 20, 2007). (Final Act. 11–12.)

The Examiner rejected claims 8–10 under 35 U.S.C. § 103(a) as being unpatentable over Schaefer, Caldwell, Knoerzer, and Wijaya et al. (US 2009/0278813 A1, pub. Nov. 12, 2009). (Final Act. 12–13.)

ISSUE ON APPEAL

Appellant’s arguments in the Appeal Brief present the following dispositive issue:²

Whether the Examiner erred in finding the combination of Schaefer, Caldwell, and Knoerzer teaches or suggests the independent claim 1 limitation, “a transparent substrate . . . formed of a tinted material that substantially matches the opaque color of the filtering layer,” and the similar limitation recited in independent claims 11 and 16. (App. Br. 6–13, 20–21.)

ANALYSIS

The specification discusses the limitation at issue with respect to independent claims 1, 11, and 16, “a transparent substrate . . . formed of a

² Rather than reiterate the arguments of Appellant and the findings of the Examiner, we refer to the Appeal Brief (filed Dec. 2, 2013); the Reply Brief (filed May 23, 2014); the Final Office Action (mailed Jun. 28, 2013); and the Examiner’s Answer (mailed Mar. 26, 2014) for the respective details.

tinted material that substantially matches the opaque color of the filtering layer,” as follows:

The transparent substrate 108 which carries the capacitive electrodes 110 is tinted to substantially match the opaque color of the filtering layer 104 . . . Tinting of the transparent substrate 108 to substantially match the opaque color of the filtering layer 104 presents the user 200 with the appearance of a monochromatic surface when the icon 128 is not illuminated.

(Spec. ¶ 25.)

In finding Schaefer, Caldwell, and Knoerzer teach or suggest this limitation, the Examiner relies on the disclosure in Schaefer of a keypad including a transparent substrate positioned behind a filtering layer, wherein the transparent substrate includes a capacitive sensor. (Final Act. 2–3; Schaefer, Figs. 2, 3, element 30, col. 3, ll. 8–29.)³ The Examiner further relies on the disclosure in Caldwell of a capacitive touch sensor panel including a substrate supporting a plurality of transparent electrically capacitive sensing pads and an optical filter layer that is colored so that the above-described dead front appearance is achieved: “The application of an optical filter behind substrate 12 creates the appearance of a substantially homogeneous plain colored panel until one or more of the light sources in light matrix 18 is actuated.” (Final Act. 3; Caldwell, Figs. 1A, 1B, col. 2, l. 31–col. 3, l. 56.) The Examiner also relies on the disclosure in Knoerzer of an electroluminescent film made up of layers including a transparent

³ The Examiner incorrectly stated that the transparent substrate of Schaefer is “tinted.” (Final Act. 2.) This is harmless error in light of the correct findings of the Examiner with respect to the cited references as a whole.

electrode layer that can be tinted with color. (Final Act. 4; Knoerzer, Fig. 3, ¶ 33.)

Appellant argues the Examiner errs because none of the cited references disclose a transparent substrate tinted to match the opaque color of a filtering layer. (Ans. 6–10.) We agree with Appellant. Although Caldwell discloses a technique to achieve the dead front effect that is the focus of the invention at issue, it does so using a tinted filter that is transparent, not opaque, and does not teach or suggest anything in regard to a color of a transparent capacitive electrode layer. (Ans. 8–9.) The Examiner does not sufficiently explain how the cited references, taken alone or in combination, teach or suggest the limitation at issue, and we are not otherwise persuaded by the Examiner’s analysis. (*See* Ans. 10–11.) Therefore, on the record before us, we are constrained to find the Examiner errs in rejecting independent claims 1, 11, and 16.

CONCLUSIONS

For the reasons stated above, we do not sustain the obviousness rejections of claims 1, 11, and 16. We also do not sustain the obviousness rejections of claims 2–10, 12–15, 17, and 19–21, which claims depend from claims 1, 11 or 16.

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Application 12/773,054

DECISION

We reverse the Examiner's rejections of claims 1–17 and 19–21.

REVERSED