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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BIXOLON CO., LTD., Petitioner,

v.

SHINHEUNG PRECISION CO., LTD., Patent Owner.

> Case IPR2017-00086 Patent 6,629,666 B2

Before KEN B. BARRETT, BARRY L. GROSSMAN, and AMANDA F. WIEKER, *Administrative Patent Judges*.

WIEKER, Administrative Patent Judge.

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DECISION Denying Institution of *Inter Partes* Review 37 C.F.R. § 42.108

I. INTRODUCTION

Bixolon Co., Ltd. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–18 of U.S. Patent No. 6,629,666 B2 (Ex. 1001, "the '666 patent"). Paper 1 ("Pet."). In response, Patent Owner, ShinHeung Precision Co., Ltd., filed a Preliminary Response. Paper 8 ("Prelim. Resp."). 35 U.S.C. § 314 provides that an *inter partes* review may not be instituted "unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

For the reasons set forth below, we deny institution of an *inter partes* review of the '666 patent.

A. Related Matters

According to the parties, the '666 patent is involved in the following lawsuit: *ShinHeung Precision Co., Ltd. v. Bixolon Co., Ltd. et al.*, 2:16-cv-00109-CAS-SS (C.D. Cal.). Pet. 1; Paper 6, 1. Additionally, Petitioner challenged claims 1–18 of the '666 patent in IPR2016-01068, in which institution of an *inter partes* review was denied. Pet. 1; Prelim. Resp. 1.

B. The '666 Patent

The '666 patent relates to a printer "for detecting a termination of a web of printing medium that is continuously fed from a supply reel." Ex. 1001, 1:8–11. Figure 2 of the '666 patent is reproduced below.

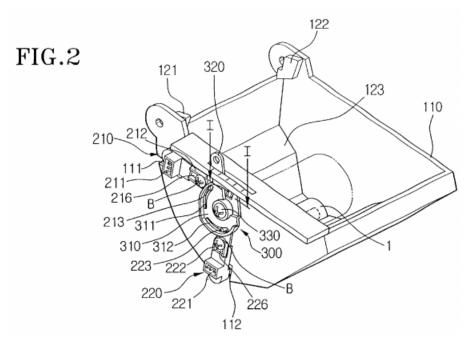


Figure 2 depicts the detecting device of a printer according to the '666 patent. *Id.* at 3:65–67. Printer frame 110 includes "a first printing medium detecting means 210 and a second printing medium detecting means 220 for non-contact detecting the termination of the printing medium." *Id.* at 4:50–54. Detecting means 210/220 include windows 111/112 for transmitting light, photo sensor modules 211/221 for emitting light to the windows and detecting light reflected from the windows, and housings 212/222 having apertures 217, for movably supporting the sensor modules. *Id.* at 5:13–23, Figs. 2, 4A, 4B. Because both first and second detecting means are provided, termination of the printing medium can be detected "in a desktop posture or wall mount posture without having to adjust an initially set posture" of the detecting device. *Id.* at 2:53–58, 4:31–38, Figs. 2–3.

Figure 9A of the '666 patent is reproduced below.

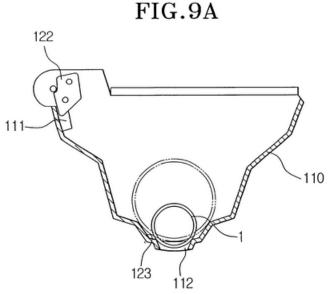


Figure 9A depicts printer frame 110 positioned in a horizontal, desktop posture. *Id.* at 5:3–7. Figure 9A also depicts, in broken line, an original diameter of printing medium roll 1 and depicts, in solid line, a reduced diameter of the roll. *Id.* at 5:3–7, 7:11–15. When the diameter is so reduced, the roll of printing medium sits in the lowest portion of frame 110, along guiding end 123. *Id.* In such a position,

one end of the roll is exposed through the window 112 ... [and] light emitted from the photo sensor module 221 is reflected back to the photo sensor module 221. In response, the main controller (not shown) outputs the results in the form of an electric signal. Accordingly, information indicating the termination or near-termination of the printing medium 1 is detected, and this information is conveyed to the user through a display or a certain form of an alarm.

Id. at 7:14–25; *see also id.* at 5:8–12, 7:26–37, Fig. 9B (explaining comparable operation of sensor module 211 when printer frame 110 is mounted in a vertical, wall mount posture).

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Figure 2 of the '666 patent, reproduced above, also depicts position adjusting means 300, which adjusts the initial set position of first and second detecting means 210/220 according to the initial diameter of the roll of printing medium. *Id.* at 4:55–60, 8:27–35. Position adjusting means 300 includes rotary knob 310 with lever 320 and first and second cam grooves 311/312, which constrain cam pins 213/223 provided on housings 212/222 of detecting means 210/220. *Id.* at 6:1–12, Figs. 6A–6B. Therefore, to set the initial position of the detecting means,

rotary lever 320 is rotated in direction a or b, [such that] the position adjusting means 300 moves the housing 212 in direction c or d according to the cam following movement of the first and the second cam grooves 311 and 312 and the cam pins 213 and 223. At the same time, the housing 222 is moved in a direction e or f. As a result, according to the diameter of the roll of the printing medium 1 in use, the detection points of the photo sensor modules 211 and 221 can be adjusted higher or lower within the windows 111 and 112, and the initial set position of the photo sensor modules 211 and 221 can be adjusted easily.

Id. at 8:41–53, Fig. 8.

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C. Illustrative Claim

Challenged claims 1 and 6 are independent. Challenged claims 2–5 depend directly or indirectly from claim 1, and challenged claims 7–18 depend directly or indirectly from claim 6.

Claim 1, reproduced below, is illustrative:

1. An apparatus of a printer for detecting a termination of a printing medium, comprising:

a frame, the frame housing and supporting a roll of the printing medium;

printing medium detecting means for non-contact detecting of the termination or a near-termination of the

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