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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHANNES BULLING and ERICH HARSCH

Appeal 2016-007508
Application 13/809,404
Technology Center 3600

Before LISA M. GUIJT, BRADLEY B. BAYAT, and FREDERICK C. LANEY, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's rejection[2] of claims 1, 3–16, and 18–21. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was conducted on August 14, 2018.

We REVERSE.

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[1] Appellants identify the real party in interest as Liebherr-Components Biberach GmbH. Appeal Br. 3.

[2] Appeal is taken from the Final Office Action dated March 25, 2015.

STATEMENT OF THE CASE

Claims 1 and 11 are the independent claims on appeal. Claim 1, reproduced below, is exemplary of the subject matter on appeal.

> 1. A winch, comprising:
>
> a winch drum arranged on a drum shaft;
>
> at least one main drive driving the drum shaft, the main drive arranged coaxially with the winch drum shaft; and
>
> at least one emergency drive driving the drum shaft in case of emergency, the emergency drive comprising a drive wheel,
>
> wherein at least one emergency drive is coupleable to a driven wheel of the drum shaft as required via at least one intermediate gear, the intermediate gear in constant engagement with the emergency drive, via the drive wheel, independent of a current position of the intermediate gear and shiftably mounted for coupling in and out in a direction of its shaft axis, the driven wheel arranged on the drum shaft between the winch drum and the main drive.

THE REJECTIONS

I. Claims 1, 3–7, 9–14, 16, 18, 19, and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Somerville (DE 2709089; published Sept. 8, 1977)[3] and Cundy (US 4,974,814; issued Dec. 4, 1990).

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[3] We refer to the corresponding US Patent 4,132,387, issued January 2, 1989, as Somerville, which is identified by the Examiner as the English language translation of DE 2709089. *See* Ans. 2. The Examiner's reference to "Murray" is to the same inventor of DE 2709089 and US 4,132,287, namely, William Murray Somerville. *Id.* Appellants acknowledge reviewing Somerville "to gain a better understanding of the teachings [of the German corresponding patent]." Appeal Br. 9. Thus, we are not persuaded by Appellants' argument that Appellants were "not given fair notice of the actual grounds of rejection." Reply Br. 3–4.

II. Claim 8 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Somerville, Cundy, and Morse (US 2003/0127635 A1; published July 10, 2003).

III. Claim 8 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Somerville, Cundy, and Weinberg (US 2008/0045374 A1; published Feb. 21, 2008).

IV. Claims 15 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Somerville, Cundy, and Macrander (US 3,661,279; issued May 9, 1972).

ANALYSIS

Rejection I

Independent claim 1 and dependent claims 3–7, 9, 10, and 19

Regarding independent claim 1, the Examiner finds, *inter alia*, that Somerville discloses a winch drum (i.e., winding drum 10) arranged on a drum shaft (i.e., output shaft 112A) driven by at least one main drive (i.e., compensating motor 112) arranged coaxially with shaft 112A, as claimed. Final Act. 2; *see e.g.*, Somerville 2:46–49, 5:1–22, Fig. 3. The Examiner finds that main motor 120 is coupleable to a driven wheel (i.e., gear 16) of shaft 112A via at least one intermediate gear (i.e., gears 126, 128), as claimed. *Id.*; *see, e.g.*, Somerville, Fig. 3. The Examiner determines that gears 126, 128 are in constant engagement with main motor 120, via gear 124, independent of a current position of gears 126, 128, as claimed. *Id.*; *see e.g.*, Somerville 5:1–22, Fig. 3. In particular, the Examiner determines that "when [main motor] (120) is engaged, via clutch (122) and gear (124)," Somerville's *gear 126* "reads on the constant engagement limitation." Ans. 3.

The Examiner determines that Somerville does not disclose that the intermediate gear is shiftably mounted for coupling in and out in a direction of its shaft axis, and the Examiner relies on Cundy for disclosing shiftably mounting an intermediate gear (i.e., traveler gear B1) for coupling in and out in a direction of its shaft axis via a lever mechanism (i.e., cam-operated lever 22). Final Act. 3; *see e.g.*, Cundy 5:50–6:24, Figs. 5–10. The Examiner determines that it would have been obvious "to have provided [Somerville] with the shiftable coupling in and out gear, as taught by Cundy, for the purpose of saving energy of the emergency drive when not in use and increasing the gear's fatigue life cycle." *Id.*; *see also id.* at 4 (explaining that "Cundy's gear acts as a clutch, and as such, would be recognized by one skilled in the art as a replacement for Somerville's clutch 122"). The Examiner explains that Cundy's teaching "would allow for *the gear (126) to be removed from contact* with [gear] (124) thus increasing the fatigue life cycle of gears (124 and 126), and removing the inertia force on gear (126) from drive gear (124)." Ans. 3 (emphasis added).

Appellants argue that claim 1 requires the intermediate gear to be in constant engagement with the emergency drive, via the drive wheel, and that, in Somerville, intermediate gears 126, 128 and main motor 120 are "not in engagement via gear 124, seeing as gear 124 is not in engagement with motor 120 when clutch 122 is disengaged." Appeal Br. 13. Alternatively, Appellants argue that the Examiner's proposed modification "would not be … an intermediate gear which is both (1) in constant engagement with an emergency drive, via a drive wheel, independent of a current position of the intermediate gear and (2) shiftably mounted for coupling in and out in a direction of its shaft axis," because the Examiner's proposed modification

involves "removing gear 126 . . . from contact with gear 124," such that "gear 126 would not be in constant engagement with main motor 120." Reply Br. 10.

Claim 1, as set forth *supra*, requires "at least one emergency drive driving the drum shaft . . . [and] comprising a drive wheel," and "at least one intermediate gear . . . in constant engagement with the emergency drive, via the drive wheel, independent of a current position of the intermediate gear." As written, the emergency drive comprises, or includes a drive wheel. As set forth *supra*, the Examiner finds that Somerville's main motor 120 drives the drum shaft and comprises gear 124. Figure 3 of Somerville is reproduced below.

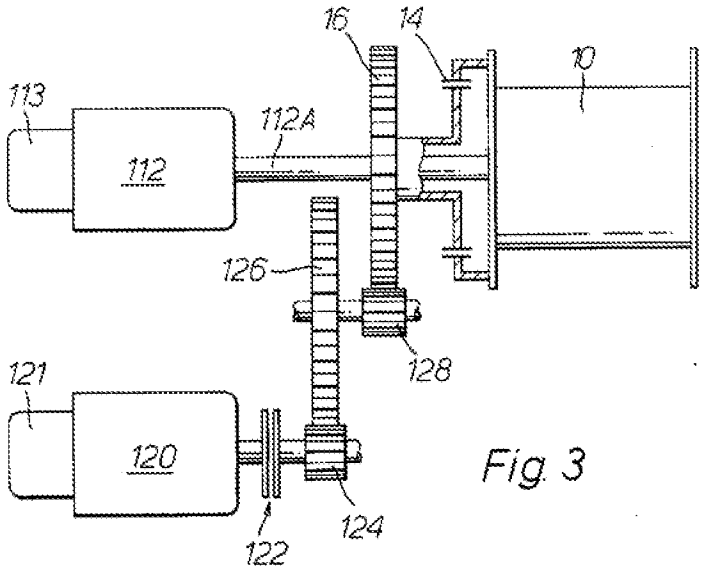

Fig. 3

Somerville's Figure 3 depicts compensating motor 112 having an output shaft 112A connected to drum 10, reduction gear system 124, 126, 128, 16, and main motor 120 comprising clutch 122 and drivingly connectable to gear 124. *See, e.g.*, Somerville 5:1–22. As depicted in Somerville's Figure

3, regardless of whether Somerville's clutch is disengages main motor 120 from gear 124, gear 126 is in constant engagement with the emergency drive, via the drive wheel, because *gear 126 is in constant engagement with gear 124, of which the emergency drive is comprised.*

Notwithstanding, we are persuaded by Appellants' argument that the Examiner's proposed modification fails to result in the claimed subject matter. The Examiner fails to explain how the Examiner's proposed modification results in at least one intermediate gear (i.e., gear 126, 128) being both in constant contact with the emergency drive (i.e., main motor 120), via the drive wheel (i.e., gear 124), and being shiftably mounted. For example, Cundy discloses shifting gear B1 in and out of contact with a second gear (i.e., D1, D2), but does not disclose that gear B1 maintains contact with a third gear during such shifting.

Accordingly, we do not sustain the Examiner's rejection of independent claim 1, and claims 3–7, 9, 10, and 19 depending therefrom.

Independent claim 11 and claims 12–14, 18, and 21

Regarding independent claim 11, the Examiner finds, *inter alia*, that Somerville discloses an emergency drive (i.e., main motor 120) coupleable to a driven wheel of the drum shaft of a winch drum (i.e., gear 16 of shaft 112A of drum 10), and also at least one intermediate gear (i.e., gears 126, 128), as claimed. Final Act. 5–6; *see, e.g.*, Somerville, Fig. 3. The Examiner determines that Somerville does not disclose that the intermediate gear (i.e., gears 126, 128) are shiftably mounted for coupling in and out in a direction of its shaft axis, or that the intermediate gear is shifted along its shaft axis via actuation of a lever mechanism until it engages in the driven

wheel, as claimed. *Id.* at 6. The Examiner relies on Cundy for disclosing that

> [i]ntermediate gear (B1) [is] shiftably mounted for coupling in and out in a direction of its shaft axis; wherein, when the emergency drive (4) drives the drum shaft (A), the intermediate gear (B1) is shifted along its shaft axis via actuation of a lever mechanism (22) until it engages in the driven wheel (D2).

Id. The Examiner reasons that it would have been obvious "to have provided Murray with the shiftable coupling in and out gear, as taught by[] Cundy, for the purpose of saving energy of the emergency drive when not in use and increasing the gear's fatigue life cycle." *Id.*

Appellants repeat their arguments as applied to independent claim 1, *supra*. Appeal Br. 20–21 ("the evidence of record supports a conclusion that a person of ordinary skill in the art would not be motivated to combine Murray and Cundy in the proposed manner").

We are persuaded by Appellants' argument. Although the Examiner has provided support from Cundy for modifying Somerville's gear 126 to be shifted along its shaft axis via an actuation lever mechanism into and out of contact with gear 124, the Examiner has not provided sufficient support for concluding that such shifting results in gear 126 engaging gear 16.

Accordingly, we do not sustain the Examiner's rejection of independent claim 11, and claims 12–14, 16, 18, and 21 depending therefrom.

Rejections II–IV

The Examiner's reliance on Morse, Weinberg, and/or Macrander fails to cure the deficiencies in the Examiner's rejection of independent claims 1 and 11, as set forth *supra*. Therefore, for essentially the reasons set forth

supra, we also do not sustain the Examiner's rejections of claims 8, 15, and 20.

DECISION

The Examiner's decision rejecting claims 1, 3–16, and 18–21 is REVERSED.

REVERSED