

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DONG GUAN LEAFY WINDOWARE CO. LTD.,
Petitioner,

v.

ANLI SPRING CO., LTD. and
HSIEN-TE HUANG,
Patent Owner.

PGR2020-00001
Patent 10,174,547 B2

Before GEORGE R. HOSKINS, MICHAEL L. WOODS, and
SCOTT C. MOORE, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
Denying Patent Owner's Motion to Amend
35 U.S.C. § 328(a)

I. INTRODUCTION

Dong Guan Leafy Windoware Co. Ltd. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) pursuant to 35 U.S.C. §§ 321–329 to institute a post-grant review of claims 1–4 of U.S. Patent No. 10,174,547 B2 (Ex. 1001, “the ’547 patent”). The Petition asserted nine grounds challenging the patentability of these four claims. *See* Pet. 2–3. Anli Spring Co., Ltd. and Hsien-Te Huang (collectively, “Patent Owner”) oppose these challenges.

At the institution stage, we determined it was more likely than not that claims 1–4 were unpatentable based on only two of the Petition’s nine grounds. *See, e.g.*, Paper 7 (“Institution Decision” or “Inst. Dec.”), 13–14; 35 U.S.C. § 324(a). Therefore, we instituted a trial as to all nine grounds, pursuant to USPTO policy implementing *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018) (“*SAS*”). *See* Inst. Dec. 13–14, 53.

Now, upon review of the parties’ post-institution arguments and the full evidentiary record, we determine Petitioner *has not shown* by a preponderance of the evidence that claims 1 and 3 are unpatentable under any ground, and *has shown* by a preponderance of the evidence that claims 2 and 4 are unpatentable as indefinite, the only challenge to those claims.

Due to the latter conclusion, we also consider Patent Owner’s Contingent Motion to Amend the ’547 patent, proposing to replace claims 2 and 4 of the ’547 patent with substitute claims 5 and 6. Upon review of the parties’ arguments and the full evidentiary record, we *deny* the Motion to Amend, because proposed substitute claims 5 and 6 seek to add new matter to the application leading to the issuance of the ’547 patent, and lack written description support in the ’547 patent.

II. BACKGROUND

A. *Real Parties in Interest and Related Proceedings*

Petitioner identifies Dong Guan Leafy Windoware Co. Ltd. as the sole real party in interest for Petitioner. Pet. 1. Patent Owner identifies Anli Spring Co., Ltd. and Hsien-Te Huang as the owners of the '547 patent, and the real parties in interest for Patent Owner. Paper 12, 2. The parties identify *Union Winner Int'l Co. Ltd. v. Hsien-Te Huang, Anli Spring Co., Ltd., and Elegant Windows Inc.*, No. 3:19-cv-2060 (N.D. Tex.), as a matter that might affect, or be affected by, a decision in this proceeding. Pet. 1; Paper 12, 2. This District Court litigation has been dismissed voluntarily by joint stipulation of the parties. *See* Paper 12, 2; *Union Winner*, ECF No. 29 (filed Jan. 27, 2020).

B. *The '547 Patent*

The '547 patent is directed to a spring motor using a coil spring that can automatically fold back a curtain. Ex. 1001, code (57).

Prosecution of the '547 patent began with the filing of a patent application in Taiwan. *Id.* at code (30); Ex. 2016, 16, 65, 96, 107. As often occurs, the translation of the parent application's disclosure (Ex. 2016, 68–95) into English (*id.* at 27–63) for filing in the United States appears to have included a few awkward translations of technical terms. Our discussion of the '547 patent and claims throughout this Decision remains faithful to the terms used in the '547 patent.

1. *Admitted Prior Art to the '547 Patent*

The '547 patent illustrates and describes the structure and operation of a prior art curtain set. Ex. 1001, Figs. 1–5, 1:16–3:53, 4:29–38. Figures 2

and 3 illustrate the structure of spring motor 2 for providing a feedback force to the curtain set, and are reproduced below.

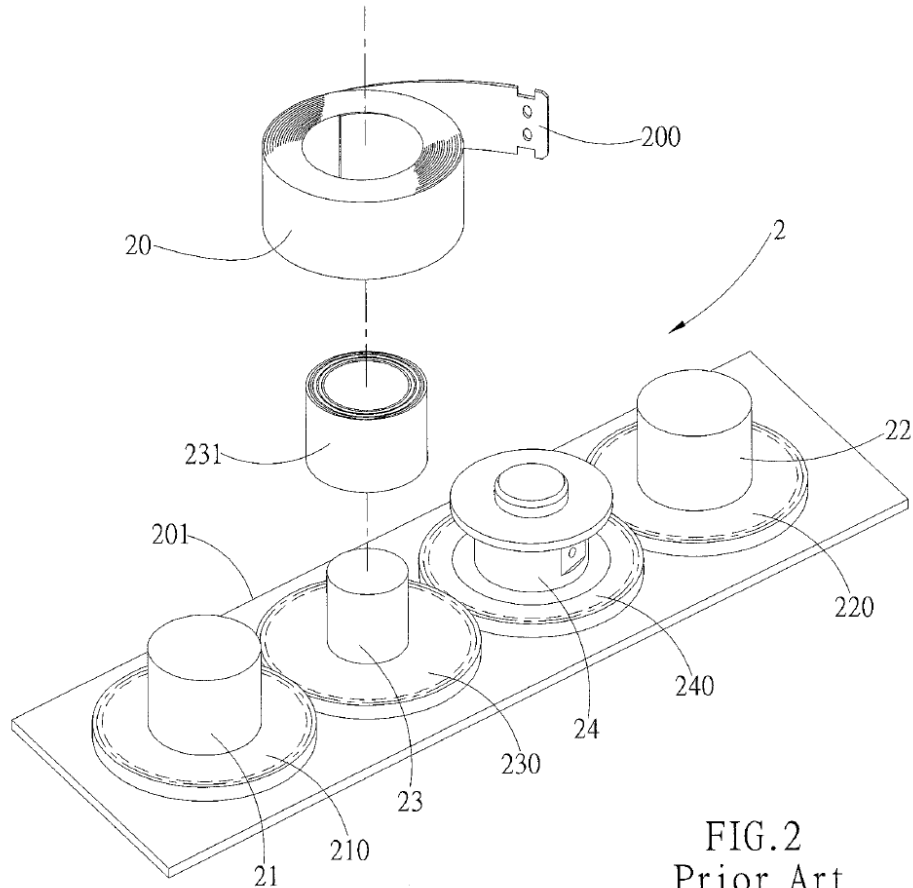


FIG. 2
Prior Art

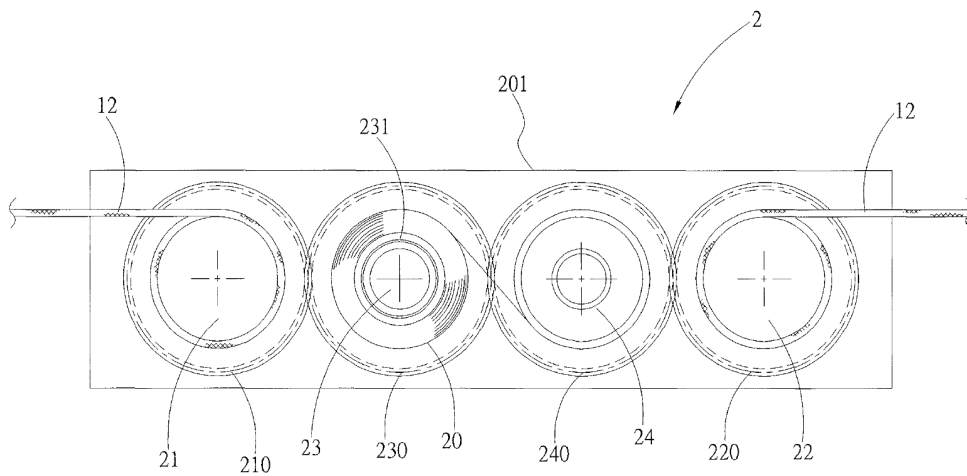


FIG. 3
Prior Art

Figure 2 is a three-dimensional structural view, and Figure 3 is a top view, of spring motor 2. *Id.* at 4:31–34. Spring motor 2 applies a feedback force to two pull cords 12, which support a lower beam and curtain pieces supported on the lower beam. *Id.* at Figs. 1 & 4–5 (illustrating spring motor 2, lower beam 14, and curtain 15 with curtain pieces 150), 1:19–29, 2:32–53. Figure 5 illustrates that, as the lower beam moves down away from spring motor 2, more and more curtain pieces are supported by ladder strings rather than the lower beam. *Id.* at Fig. 5, 3:6–19.

When the lower beam is at its uppermost position to support all of the curtain pieces, almost the entire length of equal-torque coil spring 20 is wound on axle 23, with a small portion of spring 20 received on coiling axle 24. *Id.* at Figs. 1 & 3, 1:53–63, 2:3–11. When a user grasps the lower beam and pulls it downward to close the curtain, cords 12 unwind from reel drums 21 and 22. *Id.* at 1:37–40. The resulting rotation of reel drums 21 and 22 causes equal-torque coil spring 20 to unwind from axle 23 and wind on to coiling axle 24, due to the interactions among chainrings 210, 220, 230, and 240. *Id.* at Fig. 3, 1:53–2:6. The user’s pulling down of the lower beam thereby stores the energy of equal-torque coil spring 20 as it winds on to coiling axle 24, so the tendency of coil spring 20 to wind back on to axle 23 provides a feedback force that: (a) holds the lower beam and the curtain pieces supported on the lower beam at a height selected by the user, and (b) assists the user to raise the lower beam to open the curtain. *Id.* at 1:17–37, 2:6–17, 2:32–42, 2:54–60, 3:20–30.

Coil spring 20 of the disclosed prior art curtain set 1 is an “equal-torque” spring, meaning the spiral shape of spring 20 “generates an

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