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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PHILLIP M. GOODMAN

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Appeal 2020-000866  
Application 15/582,267  
Technology Center 3700

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Before MURRIEL E. CRAWFORD, DAVID C. McKONE, and  
PHILIP J. HOFFMANN, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner’s rejection of claims 14–20 and 22–33. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

According to Appellant, the invention is directed to “devices for orthodontic torquing.” Spec. ¶ 2. Claims 14, 23, and 28 are the independent

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Phillip M. Goodman as the real party in interest. Appeal Br. 3.

claims on appeal. Below, we reproduce independent claim 14 as illustrative of the appealed claims.

14. An orthodontic torquing spring device, consisting of:
- a first spring coil portion having active coils;
  - a second spring coil portion having active coils, wherein each of the active coils of the first spring coil portion and the second spring coil portion have a common outer diameter; and
  - a loop portion extending between the first and second spring coil portions.

#### REJECTIONS AND PRIOR ART

The Examiner rejects the claims as follows:

- I. Claims 14, 15, and 28 under 35 U.S.C. § 102(b) as anticipated by Sosnay (US 3,975,823, issued Aug. 24, 1976); and
- II. Claims 16–20, 22–27, and 29–33 under 35 U.S.C. § 103(a) as unpatentable over Sosnay.

#### ANALYSIS

##### Rejection I—Anticipation rejection of claims 14, 15, and 28

##### Independent claim 14 and dependent claim 15

As set forth above, independent claim 14 recites, in relevant part, “[a]n orthodontic torquing spring device, *consisting of* . . . a first spring coil portion having active coils[, and] . . . a second spring coil portion having active coils, wherein each of the active coils of the first spring coil portion and the second spring coil portion have a common outer diameter.”

Appeal Br., Claims App. (emphasis added).

Initially, we note that claim 14 recites the orthodontic torquing spring device “consisting of” certain elements. *Id.* The transitional phrase “consisting of” excludes any element not specified in the claim. *See In re*

*Gray*, 53 F.2d 520 (CCPA 1931). Thus, as claimed, the first and second spring coil portions have only active coils of a common outer diameter, and exclude any active coil or coils having a different outer diameter than any other coil, and exclude any inactive coil or coils. Appeal Br. 6–8. In the application as originally filed, Appellant shows and describes such a device. In particular, Appellant’s Figure 1 illustrates an orthodontic torquing spring device in which first spring coil portion’s active coils 102, 104, 106, and 108, and second spring coil portion’s active coils 110, 112, 114, and 116, “each hav[e] *an* outer diameter 136”—i.e., all of the active coils have a common (that is, same) outer diameter. Spec. ¶29 (emphasis added). Further, as shown and described, each of the first and second spring coil portions lacks any inactive coils.

Appellant argues that the Examiner’s anticipation rejection is in error because Sosnay’s “outer-coil set 26 is composed not of active coils, but of inactive coils, which are excluded from claim 14.” Appeal Br. 8; *see also id.* at 7. Appellant further argues that the Examiner errs because Sosnay’s “inner-coil set 24 has a first diameter[, while] . . . outer-coil set 26 has a different, smaller, diameter.” *Id.* at 7.

Nonetheless, according to the Examiner, the rejection is proper because Sosnay’s “orthodontic torquing spring device (18) . . . includes all the claimed elements before it is installed and anchored to the dental arch[ ]wire (16) at the connection point (28).” Answer 3–4. Specifically, according to the Examiner, the coils in Sosnay’s “outer-coil set 26 are inactive coils only when they are attached to the arch[ ]wire, through welding or soldering, therefore . . . [both coil sets] 24 and 26 are active before . . . install[ation] on the arch[ ]wire.” Final Action 12.

Based on our review of the record, the Examiner does not support adequately, either through technical reasoning or by reference to any evidence, that Sosnay's coil sets 26 are ever understood by one of ordinary skill to be active coils. Conversely, the Examiner acknowledges that when connected to the arch wire, the coils in Sosnay's "coil set 26 are inactive coils." Final Action 12. Because Sosnay's device includes coils that are inactive after installation on the arch wire, and the Examiner does not support adequately that the coils are ever understood to be active coils, such as before installation on the arch wire, we do not sustain the rejection.

However, even assuming that Sosnay's coil set 26 may be characterized as active coils prior to installation of Sosnay's device on the arch wire, as discussed above claim 14 requires that all active coils have a common (i.e., same) diameter. The Examiner does not support adequately that prior to installation on arch wire 16, Sosnay's coil sets 24 and coil sets 26 all have a common outer diameter. Instead, Sosnay at least implies that coil sets 24 are formed with a different outer diameter than coil sets 26. *See* Appeal Br. 7; *see, e.g.*, Sosnay col. 8, ll. 63–68 ("The ends of the loop [forming the coil sets] are turned in a suitable sequence upon a two-step arbor or mandrel to form the coil sets. The shape and diameters of the steps of the arbor conform to that of the desired inner diameter of each of the contiguous coil sets.").

Thus, inasmuch as the Examiner does not support adequately that Sosnay discloses all active coils having a common outer diameter, and no inactive coils, we do not sustain the Examiner's anticipation rejection of independent claim 14. Consequently, we also do not sustain the Examiner's

rejection of claim 15 that depends from, and the Examiner rejects with, claim 14.

Independent claim 28

Independent claim 28 recites, in relevant part,

An orthodontic torquing spring device formed from a wire having a first terminal end and a second terminal end distal to the first terminal end, comprising . . . a first spring coil portion having active coils that terminate at the first terminal end of the wire forming the orthodontic torquing spring device[, and] . . . a second spring coil portion having active coils that terminate at the second terminal end of the wire forming the orthodontic torquing spring device.

Appeal Br., Claims App.

Appellant argues that the Examiner's anticipation rejection based on Sosnay is in error because Sosnay does not show two sets of *active coils* that terminate at the first and second ends of the wire forming the orthodontic torquing device, as claimed, but instead shows *inactive coils* terminating at the wire ends. Appeal Br. 8–9. More specifically, according to Appellant,

the torquing device of Sosnay has a wire with ends that terminate not with active coils (the inner coil-set 24), but rather with . . . inactive coils (e.g., the outer coil-set 26). That is, in contrast to claim 28, which recites “active coils that terminate at the . . . terminal end of the wire forming the orthodontic torquing spring device . . . [,]” Sosnay instead discloses active coils that terminate at the outer-coil set 26; . . . [i.e.,] Sosnay discloses inactive coils that terminate at the terminal end of the wire forming the orthodontic torquing spring device.

*Id.* at 9.

Based on our review of the record, we agree with Appellant. Particularly, for the reasons set forth above, the Examiner does not support adequately that the coils in Sosnay's coil sets 26, which terminate at the ends

of the wire forming Sosnay's U-shaped form, are active coils. *See* Answer 9–10. Further, the Examiner does not support adequately that Sosnay's arrangement in which inactive coils are disposed between the active coils and the wire ends discloses "active coils that terminate at the . . . terminal end[s] of the wire forming the orthodontic torquing spring device," as claimed. *Id.*, Appeal Br., Claims App. (Claim 28). Consequently, we do not sustain the Examiner's anticipation rejection of independent claim 28.

*Rejection II—Obviousness rejection of claims 16–20, 22–27, and 29–33*

Dependent claims 16–20 and 22

Claims 16–20 and 22 depend from independent claim 14. The Examiner does not support adequately that an obvious variation of Sosnay remedies the above-discussed deficiency in claim 14's anticipation rejection. Thus, we do not sustain the Examiner's obviousness rejection, based solely of Sosnay, of dependent claims 16–20 and 22.

Independent claim 23 and dependent claims 24–27

Independent claim 23 recites the following:

23. An orthodontic torquing spring device, *consisting essentially of*:

a first spring coil portion having active coils;

a second spring coil portion having active coils, wherein each of the active coils of the first spring coil portion and the second spring coil portion have a common outer diameter; and

a loop portion extending between the first and second spring coil portions, where each of the first spring coil portion, the second spring coil portion, and the loop portion are formed of a wire having a diameter of 0.330 to 0.356 millimeters.

Appeal Br., Claims App. (emphasis added).

We note that claim 23 recites the orthodontic torquing spring device “consisting essentially of” certain elements. *Id.* We agree with Appellant (*see id.* at 9–10) that the transitional phrase “consisting essentially of” limits the scope of a claim to the specified elements “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention (*In re Herz*, 537 F.2d 549, 551–552 (CCPA 1976) (emphasis added)). This is because, as Appellant points out (Appeal Br. 10), “[a] ‘consisting essentially of’ claim occupies a middle ground between closed claims that are written in a ‘consisting of’ format and fully open claims that are drafted in a ‘comprising’ format” (*PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354 (Fed. Cir. 1998)).

With reference to our discussion of independent claim 14 above, we determine that the basic and novel characteristics of the claimed invention recited in independent claim 23 are first and second spring coil portions that have only active coils of a common outer diameter, and exclude any active coil or coils having a different outer diameter than any other coil, and exclude any inactive coil or coils. Appeal Br. 9–11. This is because, to the extent that Appellant shows and describes the first and second spring coil portions prior to installation, the spring coil portions are only shown and described as having active coils all of the same size—that is, Appellant does not show a device with active coils of any other outer diameter, and does not show a device with inactive coils. *See, e.g.*, Figs. 1, 4; *see Spec.* ¶ 29.

With further reference to our discussion of claim 14, the Examiner does not support adequately that Sosnay discloses a device having active coils with a common diameter, without inactive coils. Additionally, the Examiner does not support adequately that it would have been obvious to



modify Sosnay so that Sosnay's device includes active coils with a common diameter, and excludes inactive coils. Accordingly, we do not sustain the Examiner's obviousness rejection of independent claim 23. Further, we also do not sustain the Examiner's rejection of claims 24–27 that depend from, and the Examiner rejects with, claim 23.

Dependent claims 29–33

Claims 29–33 depend from independent claim 28. The Examiner does not support adequately that an obvious variation of Sosnay remedies the above-discussed deficiency in claim 28's anticipation rejection. Thus, we do not sustain the Examiner's obviousness rejection, based solely of Sosnay, of dependent claims 29–33.

CONCLUSION

We REVERSE the Examiner's anticipation and obviousness rejection of claims 14–20 and 22–33.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
14, 15, 28	102(b)	Sosnay		14, 15, 28
16–20, 22–27, 29–33	103(a)	Sosnay		16–20, 22–27, 29–33
<b>Overall Outcome:</b>				14–20, 22–33

REVERSED