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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/698,307	02/02/2010	Colin Edward Sullivan	SULLIVAN 2A	3748

1444 7590 11/01/2016

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ART UNIT	PAPER NUMBER
3771	

MAIL DATE	DELIVERY MODE
11/01/2016	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte COLIN EDWARD SULLIVAN and PAUL WILKIE

Appeal 2013-004791
Application 12/698,307[1]
Technology Center 3700

Before MICHAEL C. ASTORINO, BRUCE T. WIEDER, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1–6 and 8–20. We have jurisdiction over the appeal under 35 U.S.C. § 6(b). An oral hearing was held on October 17, 2016.

We REVERSE.

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[1] According to the Appellants, "[t]he present application is owned by Australian Centre for Advanced Medical Technology Ltd., of A.C.N. 084 736 381, of David Read Laboratories D06, Department of Medicine, University of Sydney, New South Wales, Australia 2006." Appeal Br. 1.

STATEMENT OF THE CASE

Claimed Subject Matter

Claim 1, the sole independent claim, is representative of the subject matter on appeal and is reproduced below with added emphasis.

> 1. A mask for supplying gas under pressure to the nasal airway of an infant human, including;
>
> a manifold for supplying air to an aperture in the mask;
>
> a support structure for supporting the manifold;
>
> a shaped membrane structure formed from a thin walled membrane extending generally away from the support structure having a front face, the shaped membrane structure defining an enclosure for receiving at least the nares of an infant human nose; and
>
> an aperture which is a generally trapezoidal aperture, the aperture being formed in the front face and having a top, first and second sides and a base adapted to fit around the nasal area of the infant human;
>
> wherein the *generally trapezoidal aperture is bounded by a notional isosceles trapezium* that is defined by a straight top line, first and second straight side lines and a straight base line,
>
> wherein at least a portion of the top of the aperture is coincident with at least a portion of the top line of the isosceles trapezium, at least a portion of the first side of the aperture is coincident with at least a portion of the first side line of the isosceles trapezium, at least a portion of the second side of the aperture is coincident with at least a portion of the second side line of the isosceles trapezium, and at least a portion of the base of the aperture is coincident with at least a portion of the base line of the isosceles trapezium;
>
> wherein the top line and base line of the isosceles trapezium each have a length and the length of the top line of the isosceles trapezium is between about five ninths to one third of the length of the base line of the isosceles trapezium and

> wherein at least a portion of the membrane of the front face adjacent the top of the trapezoidal aperture is generally planar while other parts of the membrane around the aperture are sufficiently flexible to mould to the shape of the infant human's nasal area or are contoured to generally match the contours around that nasal area whilst the membrane structure itself has sufficient rigidity to support the weight of the support structure without collapsing.

References

Blasdell et al. (hereinafter "Blasdell")	US 5,419,317	May 30, 1995
Landis et al. (hereinafter "Landis")	US 5,657,752	Aug. 19, 1997
Kidd	US 5,746,201	May 5, 1998
Gregg, III et al. (hereinafter "Gregg")	US 5,768,715	June 23, 1998
Goldstein	US 6,012,455	Jan. 11, 2000
Boros, Sr. (hereinafter "Boros")	US 6,098,201	Aug. 8, 2000
Correa et al. (hereinafter "Correa")	US 6,119,694	Sept. 19, 2000
Chen	US 6,615,832 B1	Sept. 9, 2003
Ziaee	US 6,626,177	Sept. 30, 2003
Sullivan	WO 96/17643	June 13, 1996

Rejections

Claims 1–4, 9, 10, 17, 19, and 20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Chen, Kidd, Blasdell, Boros, and Ziaee.

Claims 5, 6, 8, and 11–13 are rejected under 35 U.S.C. § 103(a) as unpatentable over Chen, Kidd, Blasdell, Boros, Ziaee, and Sullivan.[2]

Claims 14–16 are rejected under 35 U.S.C. § 103(a) as unpatentable over Chen, Kidd, Blasdell, Boros, Ziaee, Landis, Correa, and Gregg.

Claim 18 is rejected under 35 U.S.C. § 103(a) as unpatentable over Chen, Kidd, Blasdell, Boros, Ziaee, and Goldstein.

ANALYSIS

The Examiner finds, among other things, that Chen teaches a mask including a shaped membrane structure (interface pad) 26 having an aperture able to fit around the nasal area of an infant human. *See* Final Act. 3; *see also* Chen, Fig. 1, col. 4, ll. 27–35. The Examiner also finds that Chen fails to teach:

> a generally trapezoidal aperture bounded by a notional isosceles trapezium, wherein the top, sides and base of the notional isosceles trapezium is coincident with the top, sides and base of the trapezoidal aperture, and wherein the length of the top of this notional isosceles trapezium is about five ninths to one third of the length of the base of the notional isosceles trapezium.

Final Act. 4.

To remedy this deficiency, the Examiner finds that "Blasdell teaches in figs. 14 and 15 a mask in use having a generally trapezoidal aperture (22)

[2] The Examiner appears to have overlooked listing claim 6 as a rejected claim for this ground of rejection. *See* Final Act. 7.

which is capable of being bounded by a notional isosceles trapezium having coincident top, sides[,] and base." Final Act. 4. The Examiner concludes that "[i]t would have been obvious to one of ordinary skill in the art . . . to modify the shape of the central opening[, i.e., aperture,] of the mask of Chen with the generally trapezoidal aperture as taught by Blasdell to provide a smaller contact footprint." *Id.*

The Appellants argue that the Examiner's reasoning supporting the modification of the shape of the aperture of Chen's mask in view of the shape of aperture of Blasdell's mask "to provide a smaller contact footprint" lacks rational underpinning because a trapezoidal shaped aperture would be larger than Chen's triangular shaped aperture when sized proportionally for use. *See* Appeal Br. 18–19.

In response, the Examiner finds that:

> A trapezoidal shape has a smaller peak than a triangular shape and thus would cover less of an area around a user's eyes thereby enhancing comfort. For example, the mask in fig. 14 of Blasdell has a trapezoidal shape with sides and peak further away from a user's eyes than the triangular shaped mask shown in figs. 1 and 10 of Blasdell. The mask in figs. 1 and 10 covers a larger area close to a user's eyes than the trapezoidal mask of fig. 14 which creates a larger contact footprint near the eyes.

Ans. 12.

The Examiner's response appears to be based on speculation. For example, the Examiner's comparison of the relationship between the adult faces and Blasdell's mask 20 in Figures 1 and 10 and Figure 14 is based on drawings illustrated from a perspective view. *See* Blasdell, col. 3, ll. 48–50, col. 4, ll. 11–13, 23–24. And, because the Figures are drawn in a perspective view, in this case we determine that the comparison cannot

reasonably disclose or suggest to one of ordinary skill in the art that the mask illustrated in Figure 14 has a smaller contact footprint with the face of an adult human user than the masks illustrated in Figures 1 and 10. *See also In re Aslanian*, 590 F.2d 911, 914 (CCPA 1979). As such, the Examiner's reason for modifying the aperture of Chen's mask in view of the aperture of Blasdell's mask lacks adequate rational underpinning.

Further, it appears the Examiner may also rely on the shape and the dimensions of the aperture of Boros's mask to supplement the modification of Chen's aperture to be a generally trapezoidal aperture as required by claim 1. *See* Final Act. 4, Ans. 13. In this regard, the Examiner finds that "Boros teaches in fig. 1 a trapezoidal aperture capable of being bound by a coincident notional isosceles trapezium with a length of the top being one third the length of the base." Final Act. 4 (citing Boros, col. 2, ll. 42–45). The Examiner concludes that "[i]t would have been obvious to one of ordinary skill in the art . . . to manufacture the aperture of the modified Chen to have a top one third the length of the base as taught by Boros to provide a comfortable fit for different users." Final Act. 4.

The Appellants argue that the use of Boros's mask is different than Chen's mask at least because Boros's mask is designed to overlie and mold to the entire face of the wearer. *See* Appeal Br. 24. The Appellants point out that the aperture of Boros's mask "provide[s] an opening to which a filter is attached." *Id.* Also, after the filter is attached, the "the mask is fitted to the face of the wearer by deforming the portion of the mask that goes over the bridge of the nose of the wearer by appropriately bending this portion while applying the mask directly to the face of the wearer." Boros, col. 4, ll. 12–15. As such, Boros instructs one of the ordinary skill in the art

to deform the originally shaped trapezoidal aperture to fit to the face of a user to provide a comfortable fit for different users. Because the shape and the dimensions of the aperture of Boros's mask are deformed when the mask is applied to a user's face, the original non-deformed shape and dimensions of Boros's aperture cannot be relied upon for the reason provided by the Examiner.

The Examiner's remaining modifications to Chen's teachings do not remedy the deficiencies of the Examiner's rejection of claim 1. Therefore, we determine that the Examiner's reason to modify the shape of Chen's aperture to be "generally trapezoidal," as required by claim 1, lacks adequate rational underpinning.

Thus, we do not sustain the Examiner's rejection of independent claim 1 and dependent claims 2–4, 9, 10, 17, 19, and 20. The remaining rejections based on Chen, Kidd, Blasdell, Boros, and Ziaee in combination with Sullivan, or Landis, Correa, and Gregg, or Goldstein rely on the same inadequate conclusion as discussed above. As such, we do not sustain the Examiner's rejections of dependent claims 5, 6, 8, 11–16, and 18.

DECISION

We REVERSE the Examiner's decision rejecting claims 1–6 and 8–20.

REVERSED