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(12) **United States Patent**
Wegner

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(54) **REFLECTOR HAVING INFLECTION POINT AND LED FIXTURE INCLUDING SUCH REFLECTOR**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 62 days.

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(51) **Int. Cl.**
F21V 7/09 (2006.01)
F21V 7/20 (2006.01)

(52) **U.S. Cl.** **362/296.05**; 362/304; 362/347; 362/350

(58) **Field of Classification Search** 362/296.01, 362/304, 310, 296.05-296.09, 347, 348, 362/350, 364-366
See application file for complete search history.

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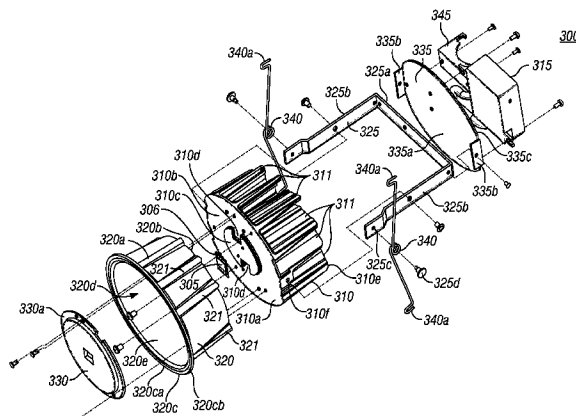
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(57) **ABSTRACT**

A recessed light fixture includes an LED light source and a reflector extending 360 degrees around a center line of light output from the light source. A cross-sectional geometry of the reflector includes a bell-shaped curve with two radii of curvature that join together at an inflection point. One of the radii defines a top portion of the curve, which is disposed above the inflection point and reflects light in a concentrated manner to achieve desired light at higher angles. The other radii defines a bottom portion of the curve, which is disposed below the inflection point and is more diverging than the top portion.

16 Claims, 12 Drawing Sheets
(1 of 12 Drawing Sheet(s) Filed in Color)



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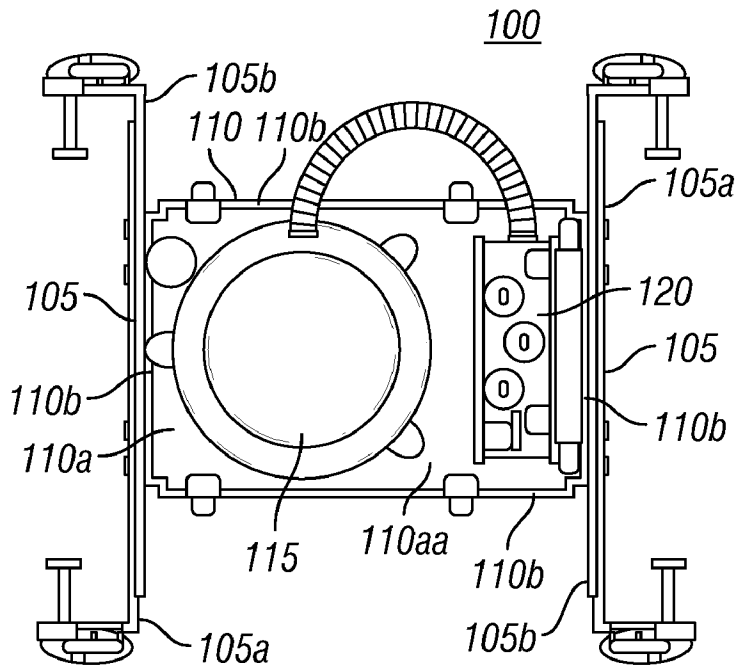


FIG. 1

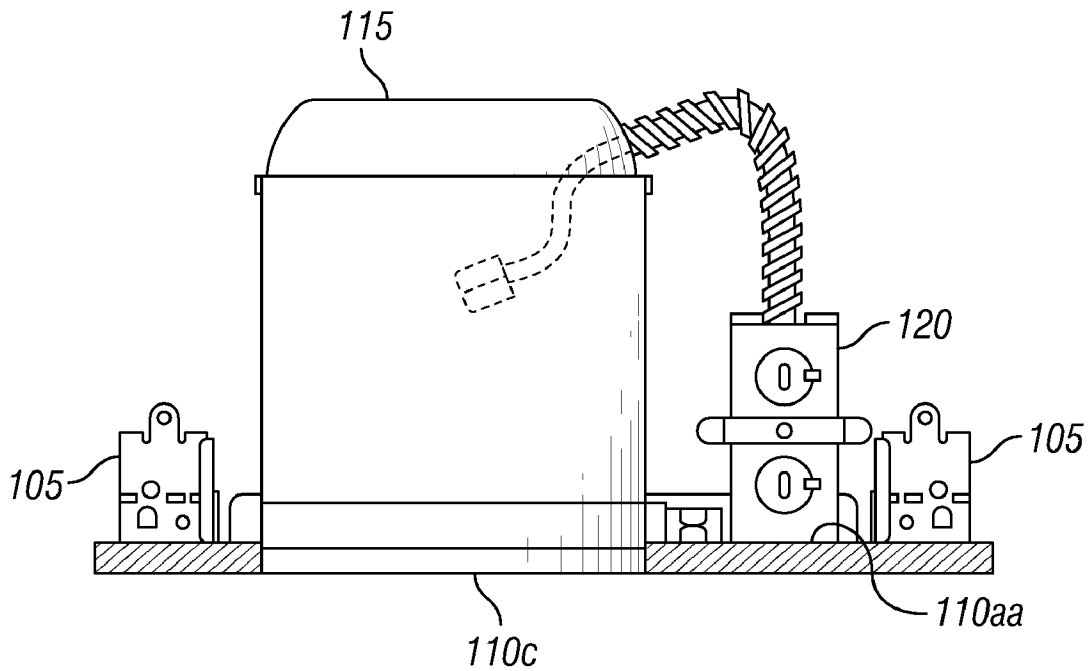


FIG. 2

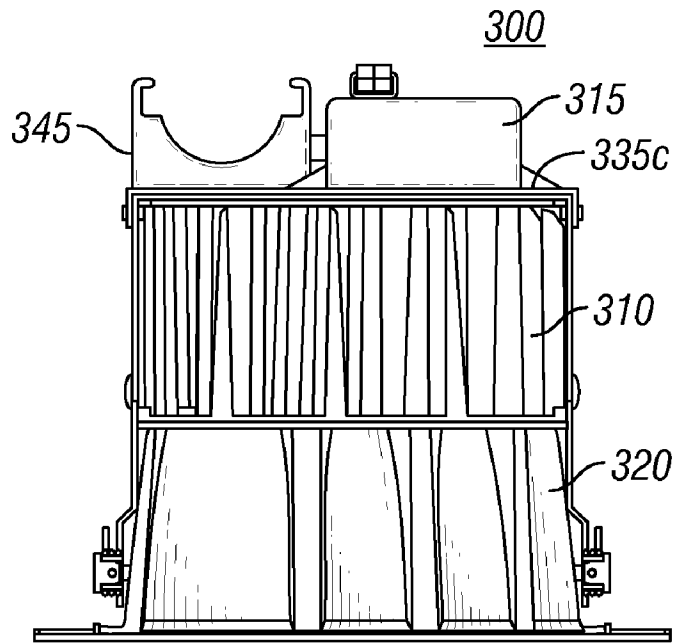


FIG. 3

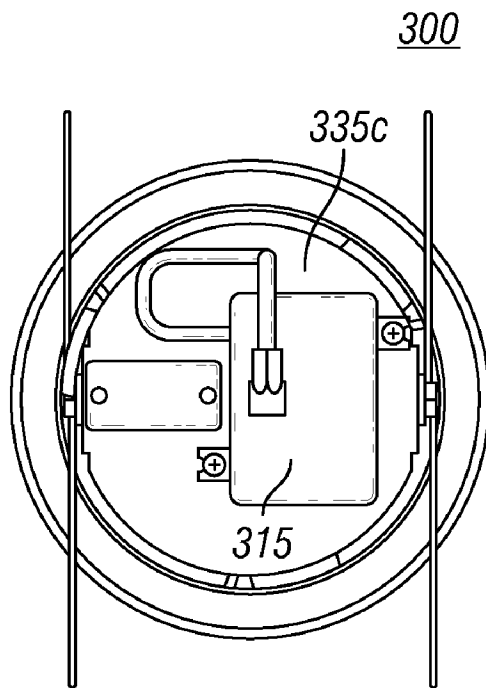


FIG. 4

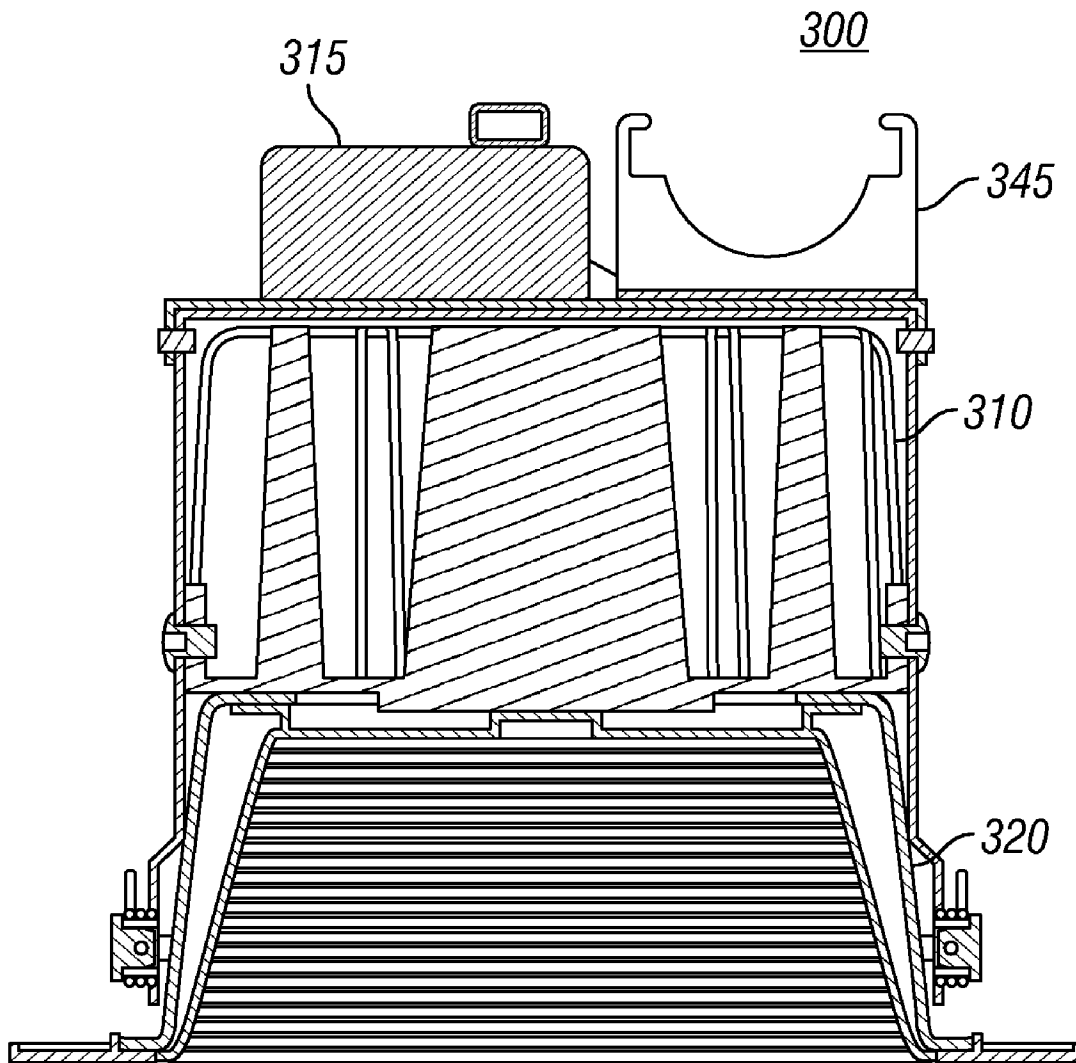


FIG. 5

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