

**(12) United States Patent
Wood**

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- (54) **NASAL VENTILATION INTERFACE**
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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 0 days.

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- (21) Appl. No.: **09/524,371**
- (22) Filed: **Mar. 13, 2000**

Related U.S. Application Data

- (60) Provisional application No. 60/124,323, filed on Mar. 13, 1999.
- (51) **Int. Cl.⁷** **A61M 15/08**
- (52) **U.S. Cl.** **128/207.18; 128/207.13**
- (58) **Field of Search** 128/207.18, 207.13, 128/207.12, 203.29, 204.12, 204.26, 205.27, 205.29, 206.11, 206.15, 206.18; 600/529, 538, 532

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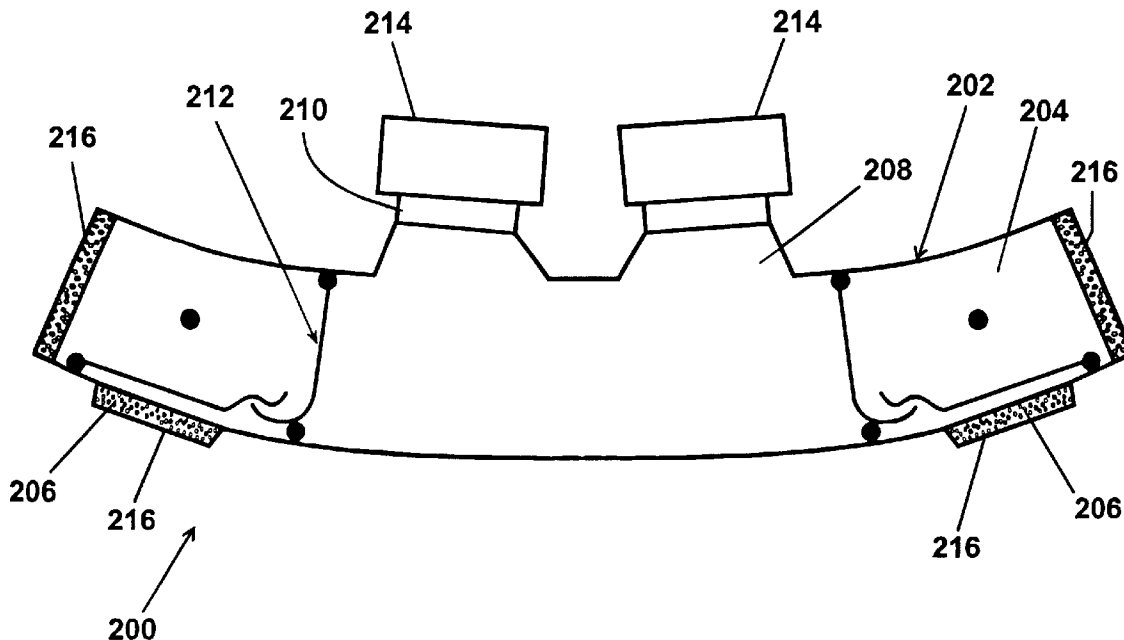
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(57) **ABSTRACT**

A nasal ventilation interface comprising a hollow body having at least one and preferably two nasal apertures, and at least one and preferably two inhale apertures, and at least one and preferably two nasal insert tubes each associated with one of the nasal apertures and having an annular sleeve that forms a seal with a nostril of the patient. The hollow body has at least one and preferably two exhale apertures and at least one valve assembly associated with the exhale apertures that is capable of preventing air from passing through the exhale aperture upon the patient inhaling and allowing air to pass through the exhale aperture upon exhaling. The hollow body may also have at least one and preferably two filters for retaining heat and moisture from the exhale air and transferring the retained heat and moisture into the inhale air.

10 Claims, 8 Drawing Sheets



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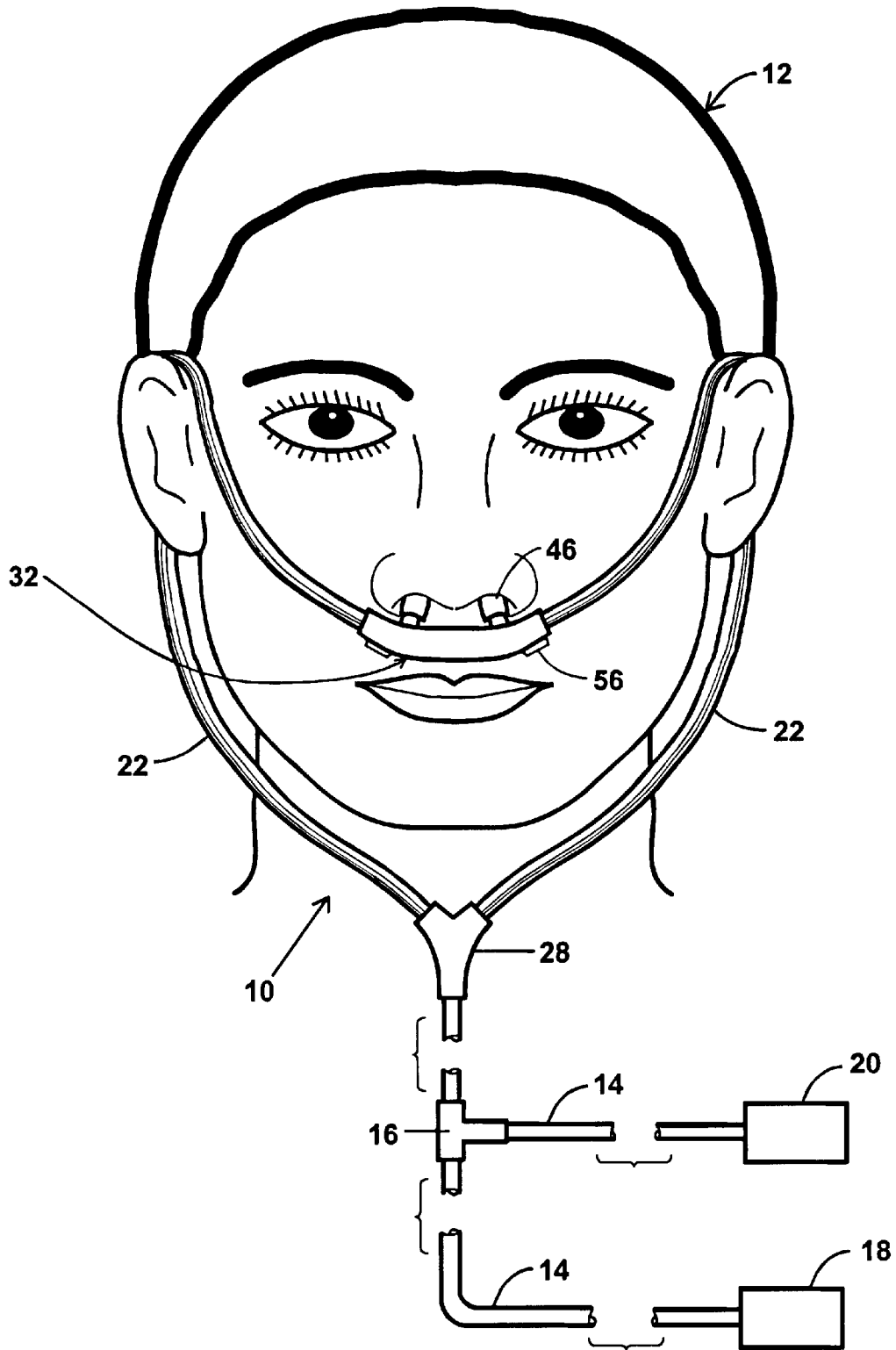


FIG. 1

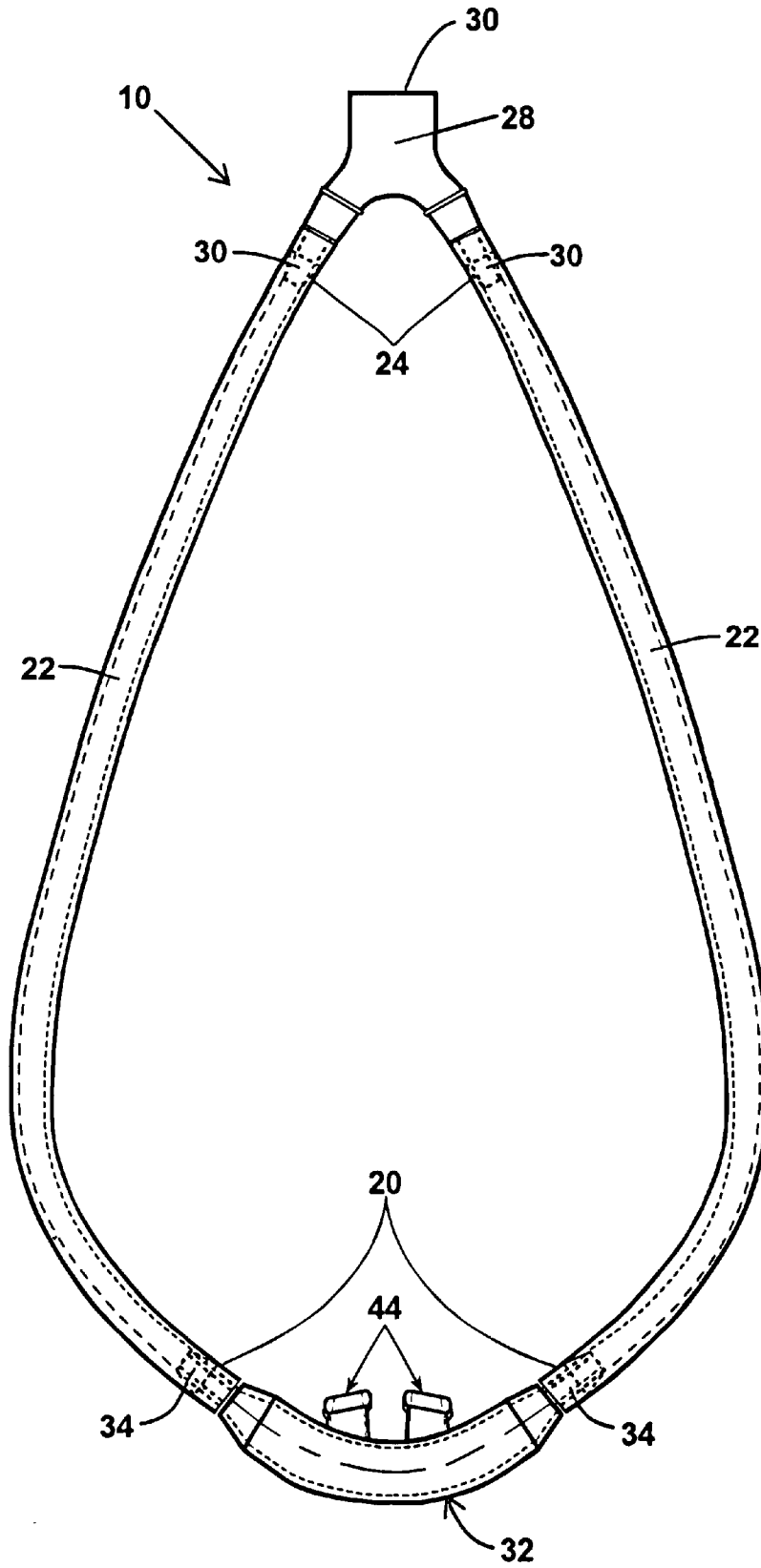


FIG. 2

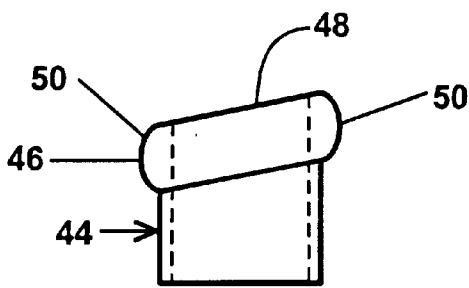


FIG. 5

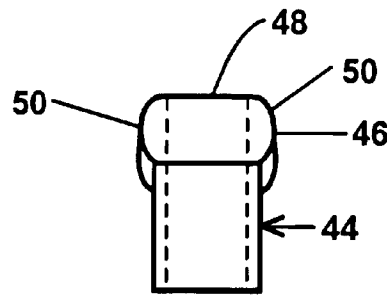


FIG. 6

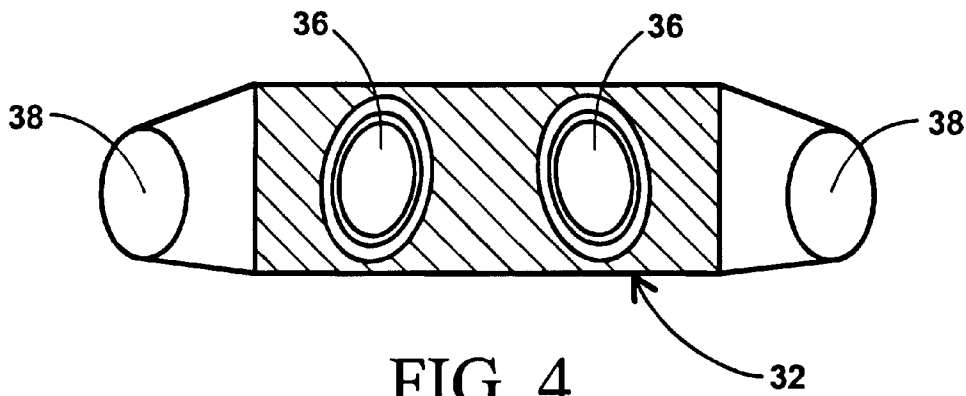


FIG. 4

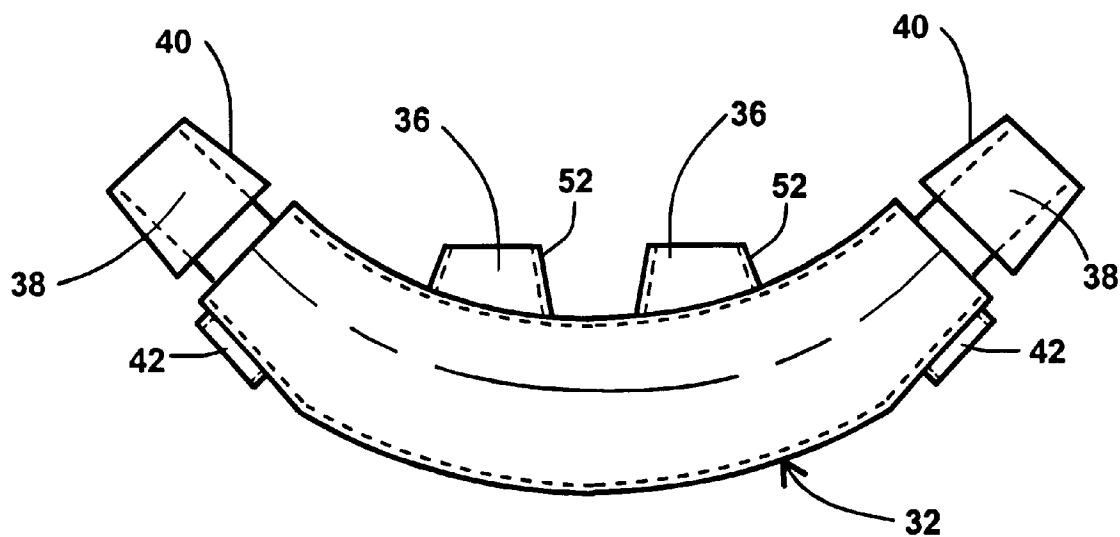


FIG. 3

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