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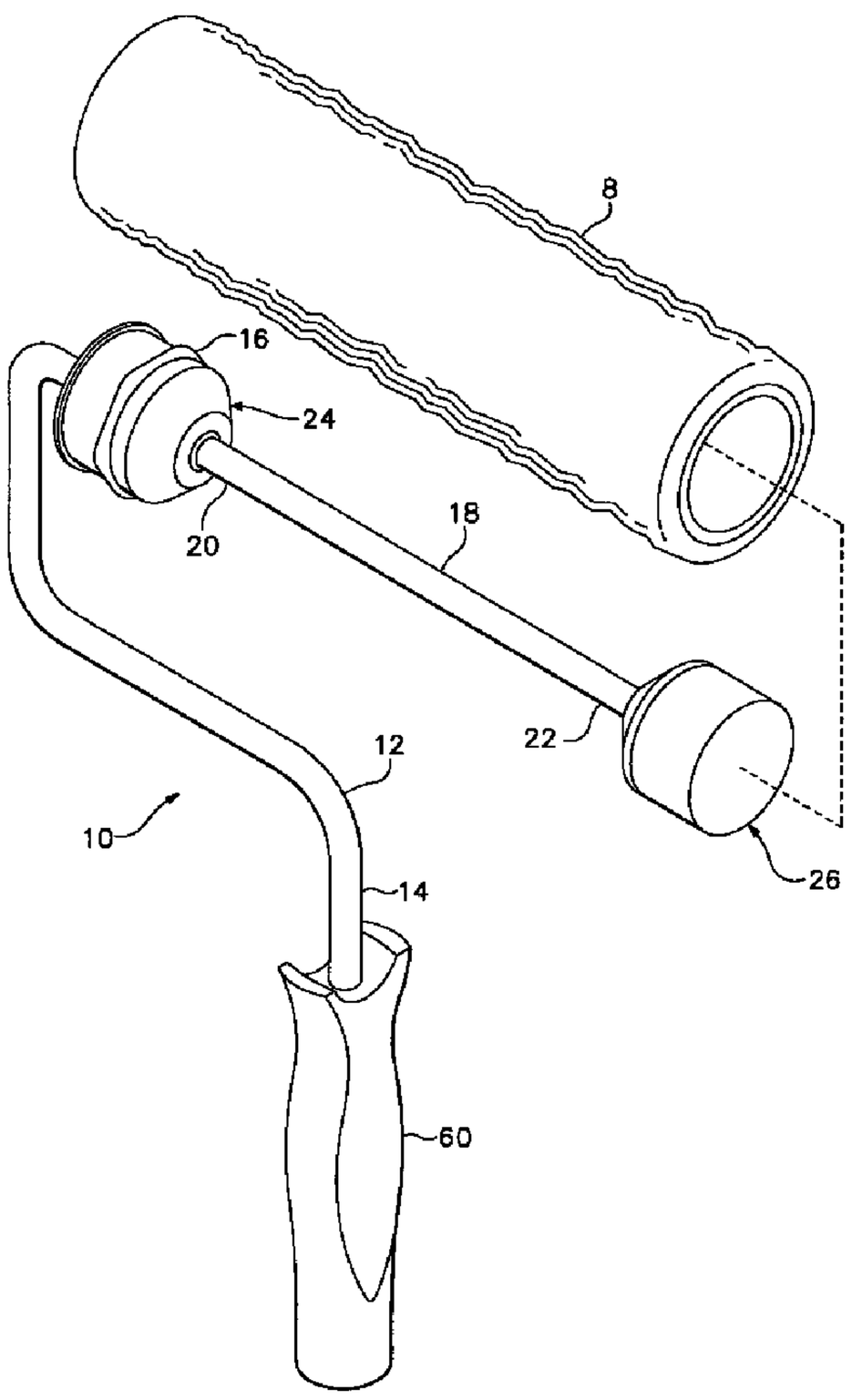
(54) Title: PAINT ROLLER SUPPORT



(57) Abrégé/Abstract:
Embodiments of a paint roller support for rotatably supporting a conventional paint roller cover are disclosed. In one embodiment, a paint roller support comprises a frame having an elongated shaft and at least one hub rotatably coupled to the shaft for supporting

CA 2643526 A1 2004/09/17

(21) 2 643 526

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(57) Abrégé(suite)/Abstract(continued):
a conventional roller cover. A locking spring exerts a retaining force against an inner surface of the roller cover for frictionally retaining the roller cover on the hub while the paint roller support is used to deliver paint to a surface. Embodiments of a method for manufacturing a paint roller support also are disclosed.

PAINT ROLLER SUPPORT

ABSTRACT

Embodiments of a paint roller support for rotatably supporting a conventional paint roller cover are disclosed. In one embodiment, a paint roller support comprises a frame having an elongated shaft and at least one hub rotatably coupled to the shaft for supporting a conventional roller cover. A locking spring exerts a retaining force against an inner surface of the roller cover for frictionally retaining the roller cover on the hub while the paint roller support is used to deliver paint to a surface. Embodiments of a method for manufacturing a paint roller support also are disclosed.

What is claimed is:

1. A paint roller support comprising:

a frame having an elongated shaft

first and second bearings disposed on the shaft at spaced apart locations such that the bearings are retained against rotational and axial movement relative to the shaft; and

first and second rotatable hubs disposed on the first and second bearings, respectively, the hubs being configured to rotate relative to the bearings and to each other and having outer surfaces on which a roller cover is placed during use;

wherein the first and second hubs are retained on the shaft by the first and second bearings, respectively.

2. The paint roller support of claim 1, wherein the first hub substantially encloses the first bearing and the second hub substantially encloses the second bearing.

3. The paint roller support of claim 1 wherein:

the first bearing has a central portion having a first diameter and opposite end portions having a second diameter that is less than the first diameter, and the first hub has opposite end portions that rotate on respective end portions of the first bearing; and

the second bearing has a central portion having a first diameter and opposite end portions having a second diameter that is less than the first diameter, and the second hub has opposite end portions that rotate on respective end portions of the second bearing.

4. The paint roller support of claim 3, wherein:

the first hub has a central portion extending between the opposite end portions thereof, the central portion positioned generally co-axially with respect to the central portion of the first bearing and having an inner diameter that is greater than the inner diameters of the opposite end portions thereof; and

the second hub has a central portion extending between the opposite end portions thereof, the central portion positioned generally co-axially with respect to the central portion of the second bearing and having an inner diameter that is greater than the inner diameters of the opposite end portions thereof.

5. The paint roller support of claim 1, further comprising a biasing mechanism support by the first hub, the biasing mechanism configured to exert a radially outwardly directed biasing force against an inner surface of the roller cover sufficient to retain the roller cover on the hubs while in use yet allowing removal of the cover when desired.

6. The paint roller support of claim 1, wherein the shaft has first and second embossed surface portions, the first bearing being frictionally retained at a fixed position on the first embossed surface portion, and the second bearing being frictionally retained at a fixed position on the second embossed surface portion.

7. The paint roller support of claim 6, wherein the embossed surface portions are formed by stamping the shaft.

8. The paint roller support of claim 6, wherein the first embossed surface portion has a larger diameter than the second embossed surface portion.

9. The paint roller support of claim 5, wherein the biasing mechanism comprises a non-circular split ring.

10. The paint roller support of claim 1, wherein the first hub comprises respective first and second hub portions that are secured to each other, and the second hub comprises respective first and second hub portions that are secured to each other.

11. The paint roller support of claim 10, wherein the hub portions of each of the first and second hubs are secured to each other by a snap-fit connection.

12. The paint roller support of claim 1, wherein the first and second bearings are retained against rotational and axial movement relative to the shaft by frictional engagement of the bearings with the shaft.

13. The paint roller support of claim 12, wherein the first and second bearings frictionally engage first and second raised surface portions, respectively, on the shaft.

14. A method of manufacturing a paint roller support, the method comprising:

placing first and second bearings on an elongated shaft at spaced apart locations such that the bearings are retained against rotational and axial movement relative to the shaft; and

placing first and second rotatable hubs on the first and second bearings, respectively, the hubs being configured to rotate relative to the bearings and to each other and having outer surfaces on which a roller cover is placed during use;

wherein the first and second hubs are retained on the shaft by the first and second bearings, respectively.

15. The method of claim 14, wherein the first hub substantially encloses the first bearing and the second hub substantially encloses the second bearing.

16. The method of claim 14 wherein:

the first bearing has a central portion having a first diameter and opposite end portions having a second diameter that is less than the first diameter, and the first hub has opposite end portions that rotate on respective end portions of the first bearing; and

the second bearing has a central portion having a first diameter and opposite end portions having a second diameter that is less than the first diameter, and the second hub has opposite end portions that rotate on respective end portions of the second bearing.

17. The method of claim 16, wherein:

the first hub has a central portion extending between the opposite end portions thereof, the central portion positioned generally co-axially with respect to the central portion of the first bearing and having an inner diameter that is greater than the inner diameters of the opposite end portions thereof; and

the second hub has a central portion extending between the opposite end portions thereof, the central portion positioned generally co-axially with respect to the central portion of the second bearing and having an inner diameter that is greater than the inner diameters of the opposite end portions thereof.

18. The method of claim 14, further comprising mounting a biasing mechanism on the first hub, the biasing mechanism configured to exert a radially outwardly directed biasing force against an inner surface of the roller cover sufficient to retain the roller cover on the hubs while in use yet allowing removal of the cover when desired.

19. The method of claim 14, wherein the hubs are placed on the bearings prior to the bearings being placed on the shaft.

20. The method of claim 19, wherein the shaft has first and second embossed surface portions, the first bearing and first hub are placed together on the shaft by sliding them over the second embossed surface portion and onto the first embossed surface portion so that the first bearing is frictionally retained at a fixed position by the first embossed surface portion, and the second bearing and second hub are placed together on the shaft by sliding the second bearing onto the second embossed surface portion so that the second bearing is frictionally retained at a fixed position by the second embossed surface portion.

21. The method of claim 20, wherein the embossed surface portions are formed by stamping the shaft.

22. The method of claim 20, wherein the first embossed surface portion has a larger diameter than the second embossed surface portion.

23. The method of claim 18, wherein the biasing mechanism comprises a non-circular split ring.

24. The method of claim 14, wherein the act of placing first and second rotatable hubs on the first and second bearings, respectively, comprises assembling the first hub from respective first and second hub portions by placing the first bearing within the respective hub portions and securing the hub portions to each other, and assembling the second hub from respective first and second hub portions by placing the second bearing within the respective hub portions and securing the hub portions to each other.

25. The method of claim 24, wherein the hub portions of each of the first and second hubs are secured to each other by a snap-fit connection.

26. The method of claim 14, wherein the first and second bearings are retained against rotational and axial movement relative to the shaft by frictional engagement of the bearings with the shaft.

27. The method of claim 26, wherein the first and second bearings frictionally engage first and second raised surface portions, respectively, on the shaft.

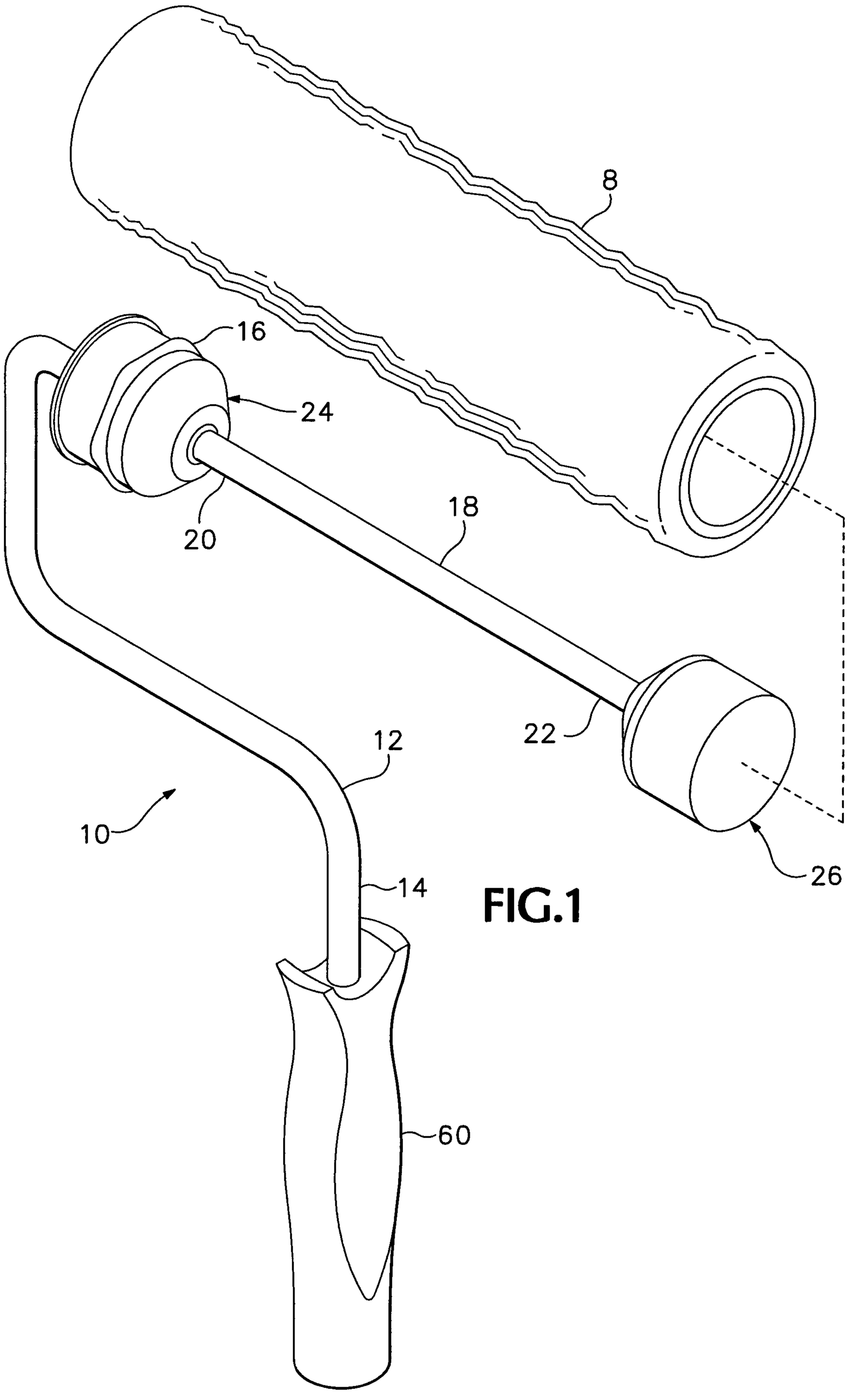

FIG.1

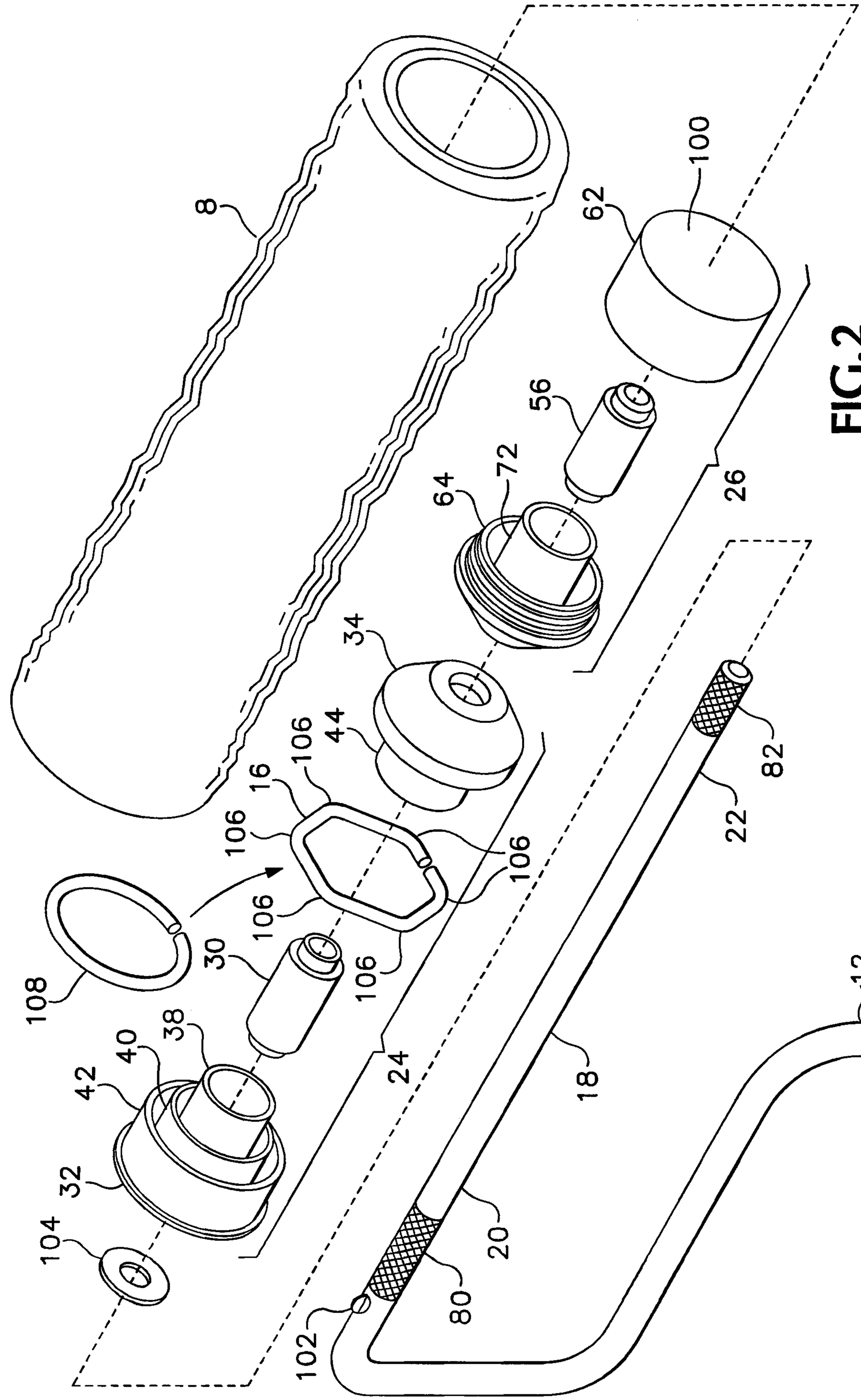
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FIG.2

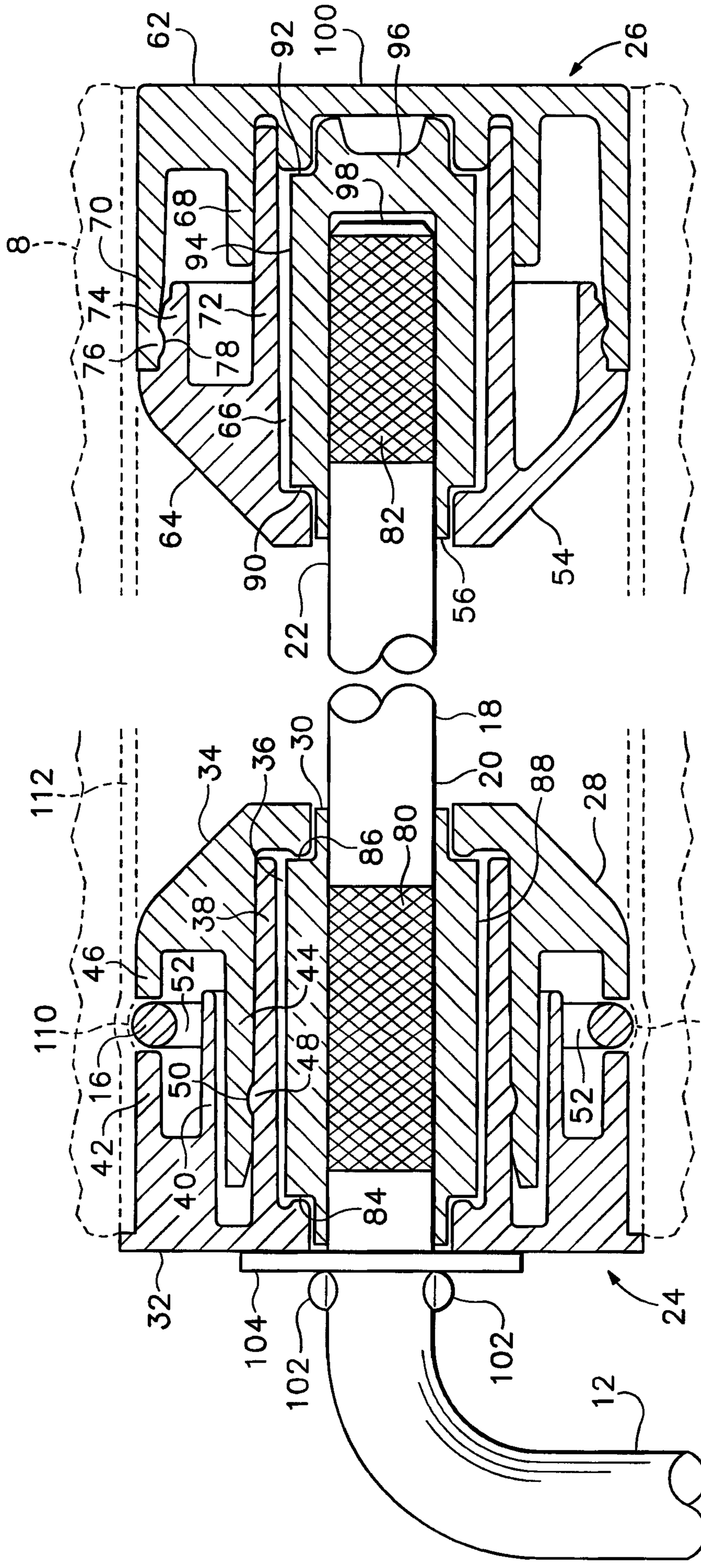
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FIG.3

FIG.4

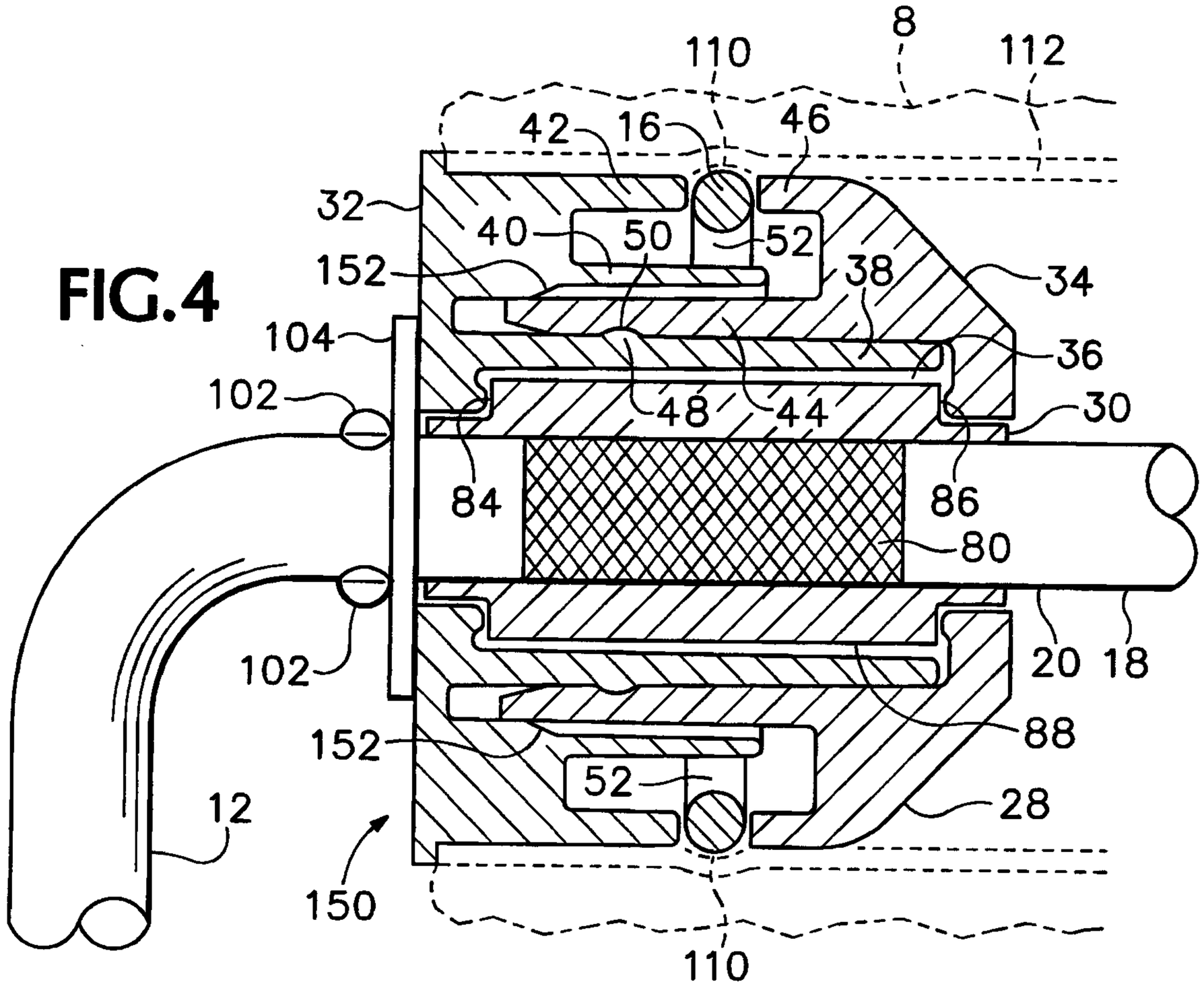
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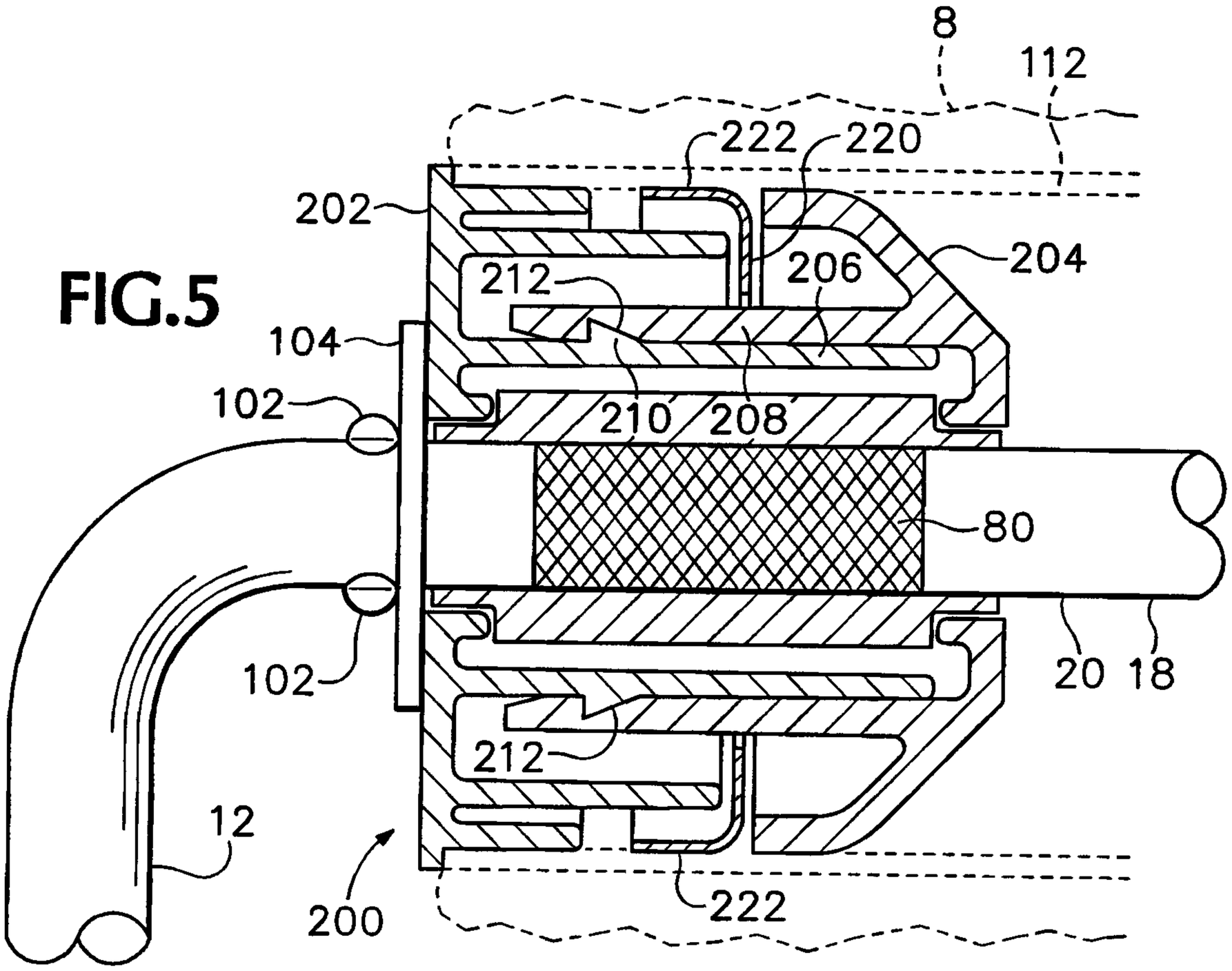
FIG.5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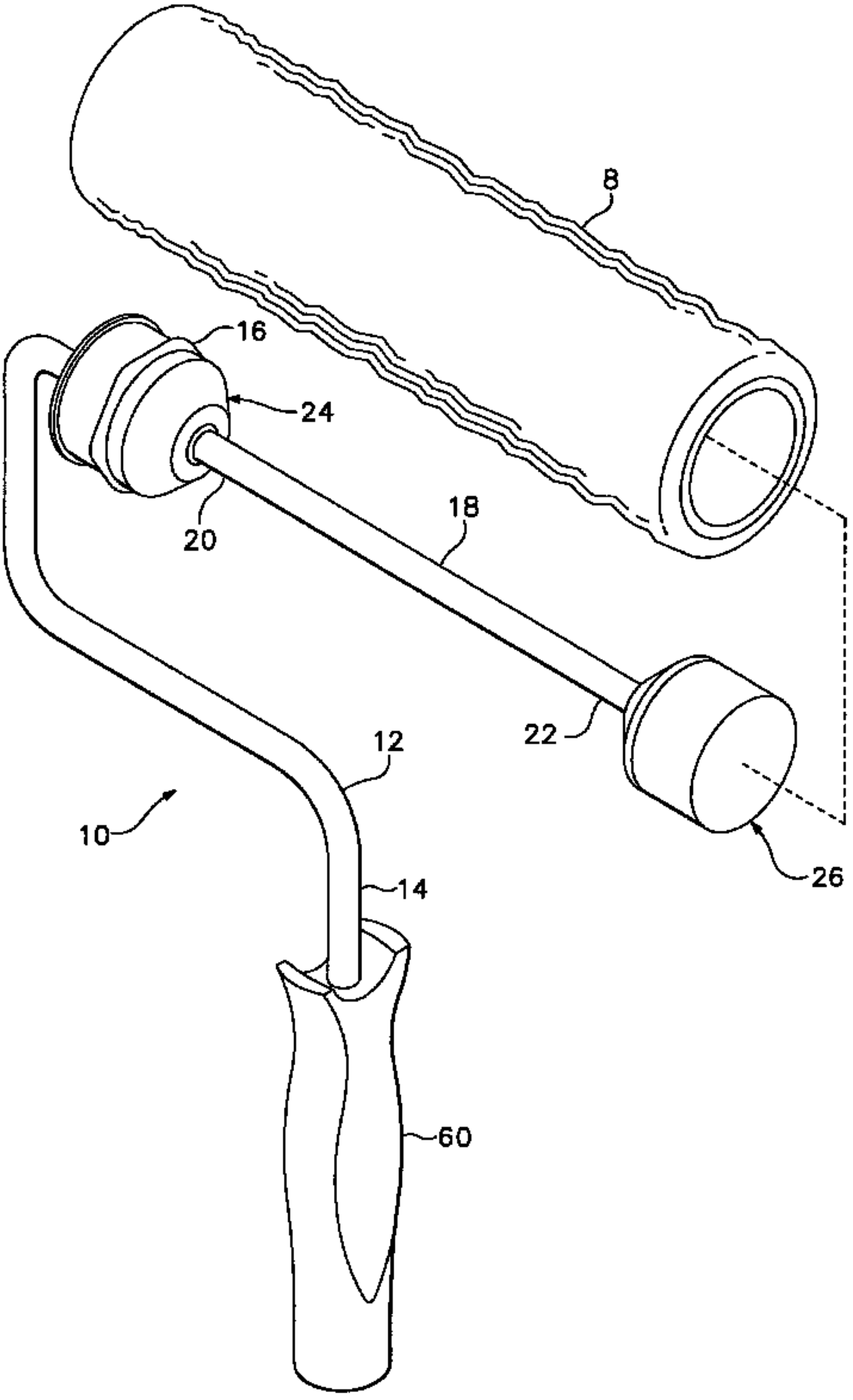
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