

We Claim:

1. A gemstone analysis tool detachable member, the member comprising,
a housing for a probe member, said probe member capable of obtaining one or more
5 characteristics information;

a circuitry component for co-operating with said probe member, the circuitry component
comprising one or more electrical connections for transmitting said one or more characteristics
information to a separate processing member of a gemstone analysis tool such that said one or more
characteristics information is capable of being used by the separate processing member for analysis;

10 wherein the probe member is capable of being used with an object under test, said object
comprising a gemstone; and

wherein the circuitry component is configured to be in removable electrical communication with
the separate processing member.

15 2. The gemstone analysis tool detachable member as claimed in claim 1, further
comprising a mating part for detachably coupling the detachable member to the separate processing
member.

3. The gemstone analysis tool detachable member as claimed in claims 1 or 2, wherein
20 the gemstone analysis tool is a portable gemstone analysis tool.

4. The gemstone analysis tool detachable member as claimed in claim 3, wherein the
portable gemstone analysis tool is a hand-held analysis tool.

25 5. The gemstone analysis tool detachable member as claimed in any one of claims 1 to
4, wherein the circuitry component is capable of being electrically coupled to the probe member, said
probe member being configured at one contact end for analysis.

6. The gemstone analysis tool detachable member as claimed in any one of claims 1 to
30 5, wherein the circuitry component comprises one or more contact pads for said removable electrical
communication.

7. The gemstone analysis tool detachable member as claimed in any one of claims 1 to
6, wherein the circuitry component is configured to be in said removable electrical communication with
35 one or more connection members of the separate processing member.

8. The gemstone analysis tool detachable member as claimed in claim 7, wherein the
one or more connection members comprises a spring means.

9. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 8, comprising said probe member and wherein the probe member comprises a cylindrical rod.

10. The gemstone analysis tool detachable member as claimed in claim 9, wherein the
5 cylindrical rod comprises one or more biasing members for providing a spring action upon contact.

11. The gemstone analysis tool detachable member as claimed in claim 10, wherein the one or more biasing members are arranged to switch on the separate processing member upon contact with a surface.

10 12. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 11, wherein said one or more characteristics information comprises electrical information, thermal information or both.

15 13. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 12, further comprising a base cover for exposing said one or more electrical connections, wherein the base cover is configured to maintain the housing and the circuitry component within the detachable member.

20 14. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 13, further comprising a usage sensor configured to inform a user on replacement of the detachable member.

25 15. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 14, further comprising a calibration module for enabling calibration of the detachable member.

30 16. The gemstone analysis tool detachable member as claimed in any one of claims 1 to 15, wherein said one or more characteristics information is capable of being used by the separate processing member for analysis to characterise the object under test.

17. A gemstone analysis tool processing member, the processing member comprising,
a mating part to detachably couple the processing member to a gemstone analysis tool detachable member as claimed in any one of claims 1 to 16;
a connector portion for receiving one or more characteristics information obtained at the
35 gemstone analysis tool detachable member, the connector portion being arranged to be in electrical communication with a processing module for analysis of said one or more characteristics information;
wherein the processing member is capable of being used with an object under test, said object comprising a gemstone; and

wherein the connector portion is configured to be in removable electrical communication with the gemstone analysis tool detachable member.

18. The gemstone analysis tool processing member as claimed in claim 17, wherein the
5 gemstone analysis tool is a portable gemstone analysis tool.

19. The gemstone analysis tool processing member as claimed in claim 18, wherein the portable gemstone analysis tool is a hand-held analysis tool.

10 20. The gemstone analysis tool processing member as claimed in any one of claims 17 to 19, wherein the connector portion comprises connection members for said removable electrical connection to the gemstone analysis tool detachable member.

21. The gemstone analysis tool processing member as claimed in claim 20, wherein the
15 connection members comprise spring-loaded pins.

22. The gemstone analysis tool processing member as claimed in any one of claims 17 to 21, wherein said one or more characteristics information comprises electrical information, thermal information or both.

20 23. The gemstone analysis tool processing member as claimed in any one of claims 17 to 22, further comprising an inner cover for exposing one or more connection points of the connector portion, wherein the inner cover is configured to maintain the connector portion within the processing member.

25 24. The gemstone analysis tool processing member as claimed in any one of claims 17 to 23, further comprising a usage sensor configured to inform a user on replacement of the gemstone analysis tool detachable member.

30 25. The gemstone analysis tool processing member as claimed in any one of claims 17 to 24, further comprising a calibration member for enabling calibration of the gemstone analysis tool detachable member and/or the processing member.

35 26. The gemstone analysis tool processing member as claimed in any one of claims 17 to 25, wherein said analysis of said one or more characteristics information comprises characterising the object under test.

40 27. A gemstone analysis tool, the analysis tool comprising,
a gemstone analysis tool detachable member as claimed in any one of claims 1 to 16;
a gemstone analysis tool processing member as claimed in any one of claims 17 to 26;

wherein the detachable member is detachably coupled to the processing member; and
wherein the detachable member is in removable electrical communication with the processing member.

28. The gemstone analysis tool as claimed in claim 27, wherein the gemstone analysis tool is a portable gemstone analysis tool.

29. The gemstone analysis tool as claimed in claim 28, wherein the portable gemstone analysis tool is a hand-held analysis tool.

30. A kit for a gemstone analysis tool, the kit comprising,
a gemstone analysis tool detachable member as claimed in any one of claims 1 to 16; and
a gemstone analysis tool processing member as claimed in any one of claims 17 to 26.

31. The kit as claimed in claim 30, wherein the gemstone analysis tool is a portable gemstone analysis tool.

32. The kit as claimed in claim 31, wherein the portable gemstone analysis tool is a hand-held analysis tool.

33. A method of analysing a gemstone, the method comprising,
providing a gemstone analysis tool detachable member as claimed in any one of claims 1 to 16;
providing a gemstone analysis tool processing member as claimed in any one of claims 17 to 26;

detachably coupling the gemstone analysis tool detachable member to the gemstone analysis tool processing member such that the gemstone analysis tool detachable member is in removable electrical communication with the gemstone analysis tool processing member; and
analysing the gemstone using the gemstone analysis tool detachable member in removable electrical communication with the gemstone analysis tool processing member.

34. A gemstone analysis tool tip sensor holder, the holder comprising,
a housing for a probe member, said probe member capable of obtaining one or more characteristics information;

one or more electrical connections provided for electrically coupling to the probe member; said
one or more electrical connections further arranged to electrically couple to a circuitry component of the gemstone analysis tool;

wherein transmission of said one or more characteristics information to a separate processing member, separate from the tip sensor holder, is capable of being performed via said one or more electrical connections; and

wherein the circuitry component is configured to be in removable electrical communication with the separate processing member.

35. The holder as claimed in claim 34, wherein the gemstone analysis tool is a portable
5 gemstone analysis tool.

36. The holder as claimed in claim 35, wherein the portable gemstone analysis tool is a hand-held analysis tool.

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Dated this 15th day of April, 2015



ANUPAM TRIVEDI
OF K & S PARTNERS
ATTORNEY FOR THE APPLICANT(S)

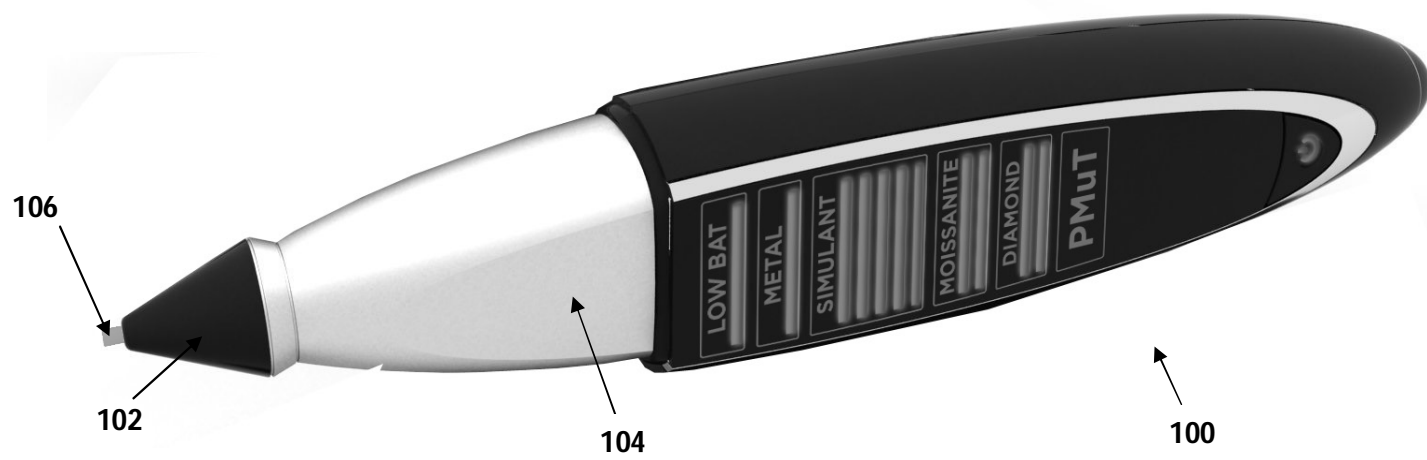


Figure 1

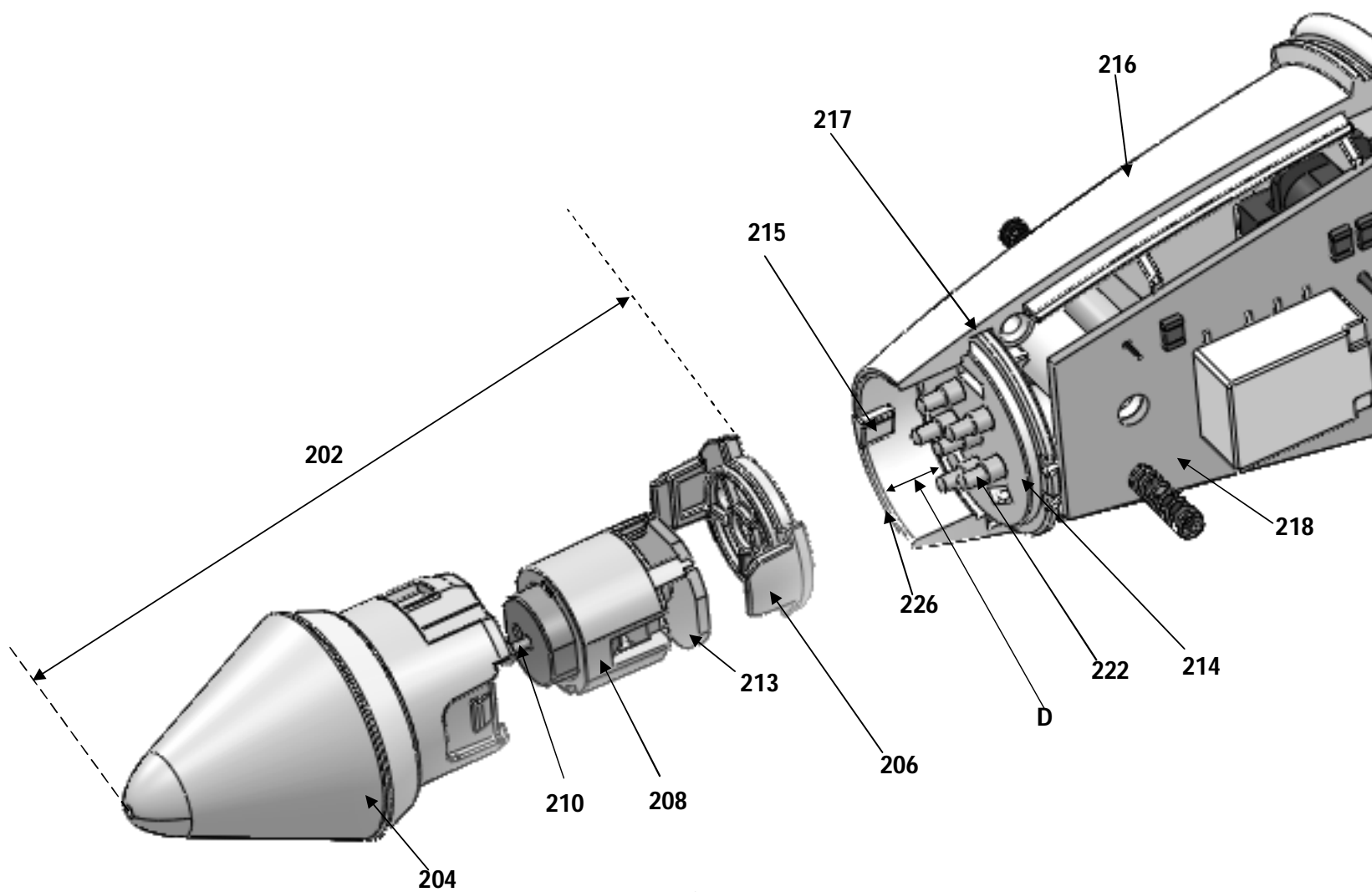


Figure 2

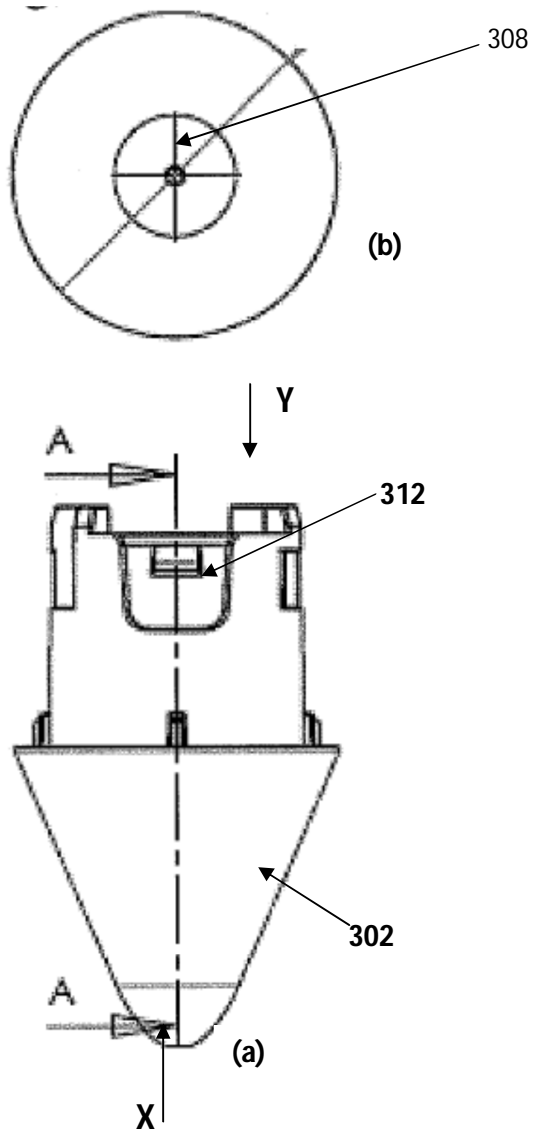


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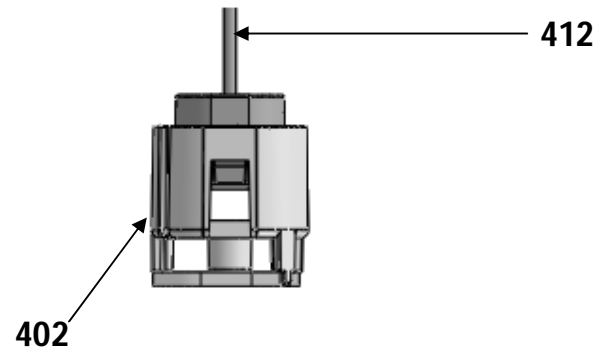


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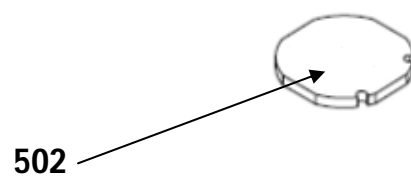
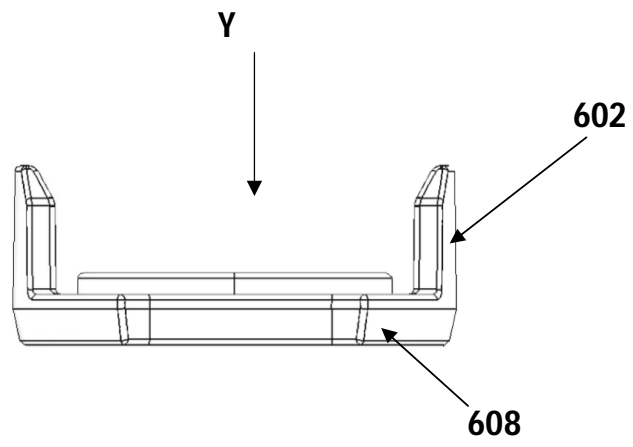
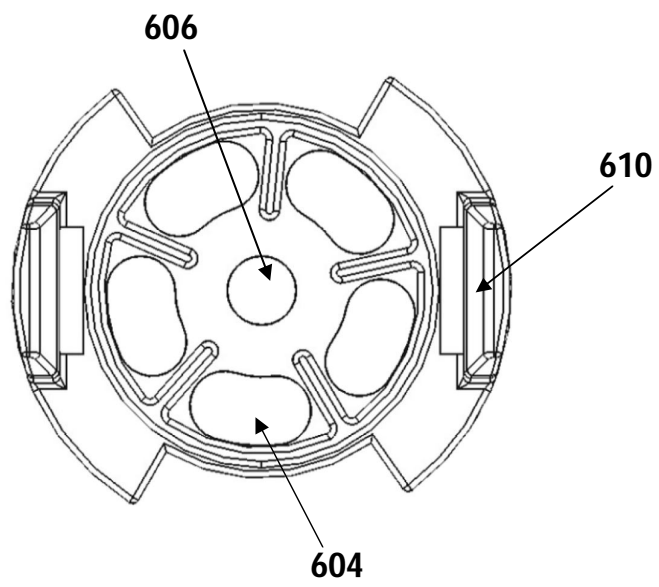


Figure 5

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(a)



(b)

Figure 6

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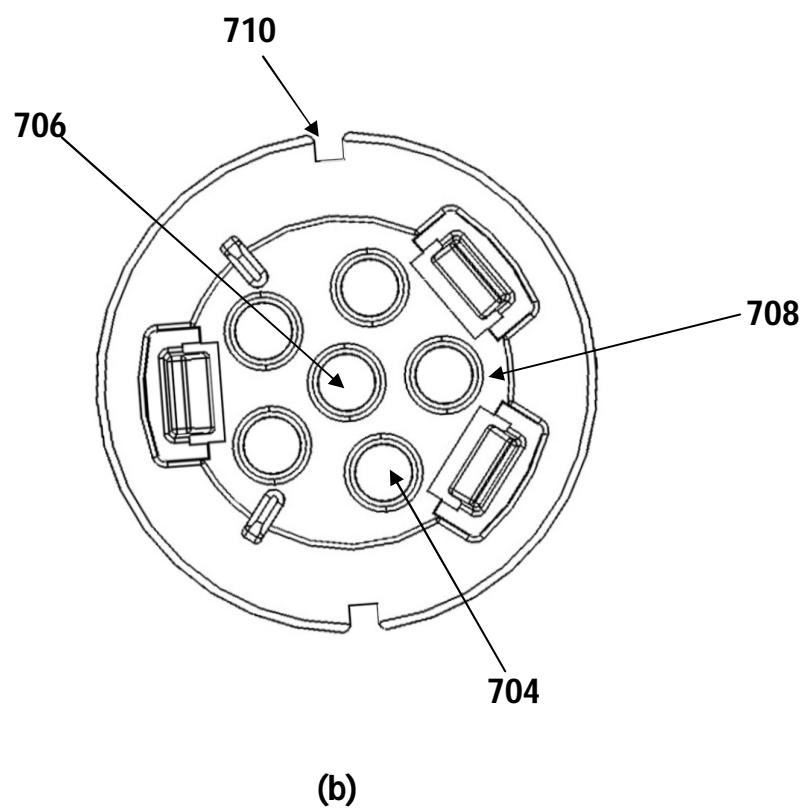
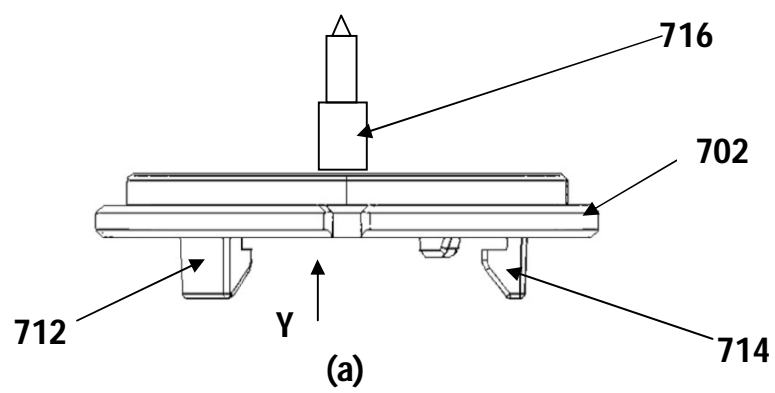


Figure 7

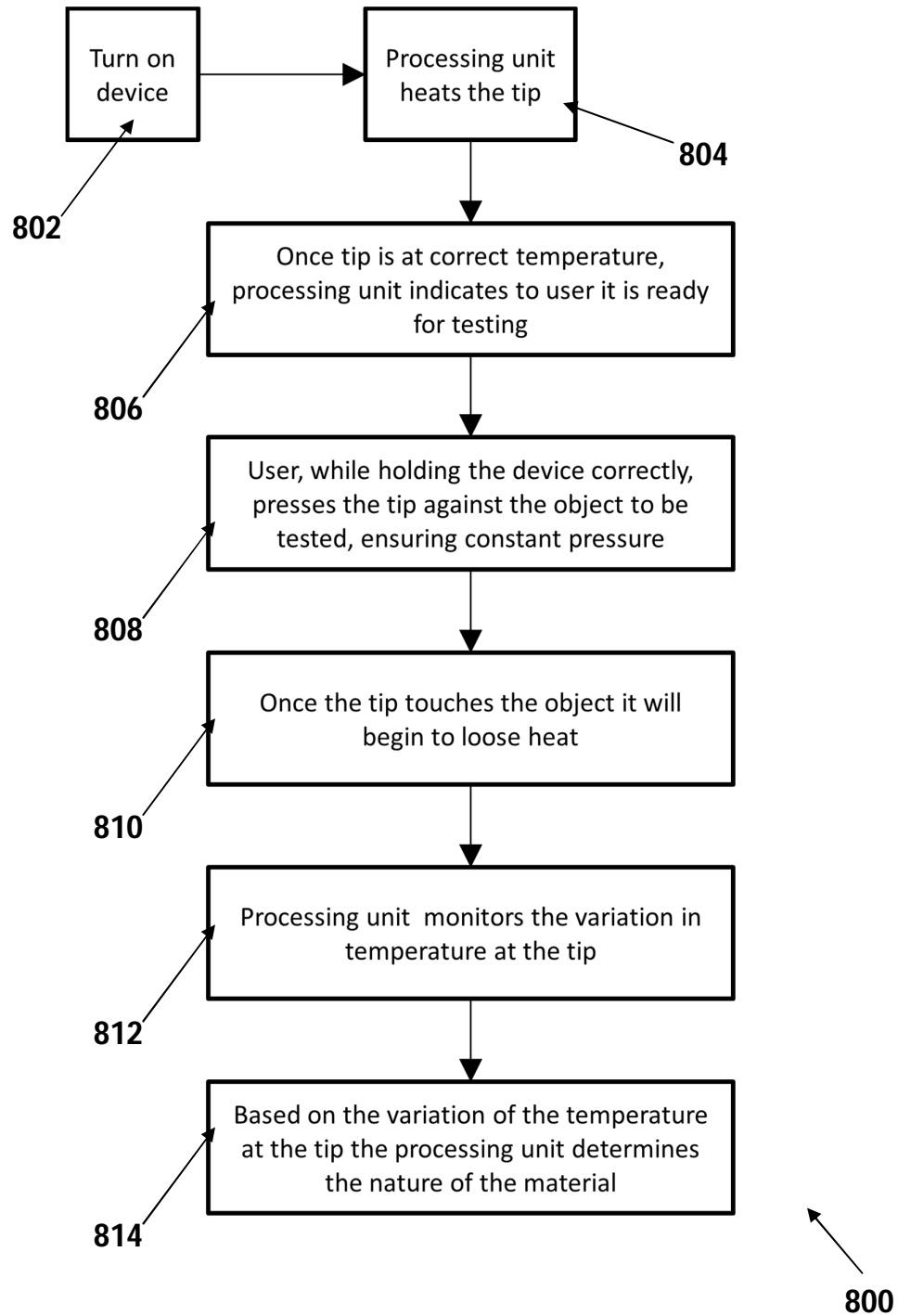


Figure 8