CLAIMS

1. A cleaning device for cleaning a substrate, the cleaning device comprising:

a mandrel; and

a brush formed of an absorbent material and engaged to the mandrel, wherein the brush comprises a single continuous Archimedean screw thread form formed with a variety of pitches along its length protruding from a surface of the brush.

2. The cleaning device of claim 1, wherein the brush comprising the Archimedean screw thread form is one of:

a molded brush, or

a machined pattern on the brush.

3. The cleaning device of claim 1, wherein one or both of the mandrel and the brush are cylindrical in shape.

4. The cleaning device of claim 1, wherein one or both of the mandrel and the brush are conical in shape.

5. The cleaning device of claim 1, wherein the brush is formed of one of poly vinyl acetate foam, polyurethane foam, and polymeric foam.

6. The cleaning device of claim 1, wherein the mandrel comprises:

an outer surface,

an inner surface that forms a hollow fluid channel, and

a plurality of pores extending radially outward from the hollow fluid channel to the outer surface.

7. The cleaning device of claim 1, wherein a length of the brush is substantially equal to a length of the mandrel.

8. The cleaning device of claim 1, wherein the mandrel comprises a first engagement member on an outer surface, and the brush having a hollow bore comprises a second

engagement member on an inner surface of the brush, wherein the second engagement member is configured to engage to the first engagement member to hold the mandrel securely to the brush.

9. The cleaning device of claim 1, wherein the Archimedean screw thread form extends from a first end of the brush to a second end of the brush opposite the first end.

10. The cleaning device of claim 1, wherein the Archimedean screw thread comprises at least two different pitches along its length.

11. The cleaning device of claim 6, wherein the brush is formed of one of poly vinyl acetate foam, polyurethane foam, and polymeric foam.

12. The cleaning device of claim 6, wherein a length of the brush is substantially equal to a length of the mandrel.

13. The cleaning device of claim 6, wherein the mandrel comprises a first engagement member on the outer surface, and the brush having a hollow bore comprises a second engagement member on the inner surface of the brush, wherein the second engagement member is configured to engage to first engagement member to hold the mandrel securely to the brush.

14. The cleaning device of claim 6, wherein the Archimedean screw thread form extends from a first end of the brush to a second end of the brush opposite the first end.

15. The cleaning device of claim 10, wherein a length of the brush is substantially equal to a length of the mandrel.

16. The cleaning device of claim 10, wherein the mandrel comprises a first engagement member on an outer surface, and the brush having a hollow bore comprises a second engagement member on an inner surface of the brush, wherein the second engagement member is configured to engage to first engagement member to hold the mandrel securely to the brush.

17. The cleaning device of claim 10, wherein the Archimedean screw thread form extends from a first end of the brush to a second end of the brush opposite the first end.