CLAIMS

1. A method of performing at least one of a cleaning, buffing, and polishing action on a surface, without requiring water, comprising the steps of:

providing a core member;

providing at least one sheet of material, the at least one sheet of material being comprised of closed-cell silicone foam rubber and having a first free end portion, in which the at least one sheet of material is attached to the core member with the first free end portion extending away from the core member;

providing a flexible structural element disposed adjacent a trailing side of the at least one sheet of material, in which the flexible structural element is configured to increase the pressure between the at least one sheet of material and the surface during the sliding contact, in which the flexible structural element does not contact the surface during the cleaning, buffing, and/or polishing operation; and

causing the core member to move in a first direction such that a portion of the at least one sheet of material is brought into sliding contact with the surface in a repeating pattern;

in which the sliding contact between the at least one sheet of material and the surface occurs under a pressure and relative velocity sufficient to generate a force that results in at least one of a cleaning, buffing, and polishing.

2. A method according to Claim 1, in which the first direction is a rotational direction.

3. A method according to Claim 1, further including the step of causing the core member to move in a second direction, in which the second direction is a translational direction.

4. A method according to Claim 1, in which the core member includes a flat surface adjacent the attachment of each the sheet of material.

5. A method according to Claim 1, further including the step of providing a second sheet of material, the second sheet of material consisting of closed-cell silicone foam rubber and having a first free end portion, in which the second sheet of material is attached to the core member at a position opposite the at least one sheet of material, with the first free end portion of the second sheet of material extending away from the core member.

6. A method according to Claim 1, in which the at least one sheet of material includes a second free end portion and a middle section disposed between the first and second free end portions, and in which at least a portion of the middle section is attached to a C-channel groove of the core member and the first and second free end portions extend away from the core member.

7. A brush configured to perform at least one of a cleaning, buffing, and polishing action on a surface, comprising:

a core member, the core member having a central axis and a periphery;

at least one sheet of material, the at least one sheet of material being comprised of closed-cell silicone foam rubber and having at least a first free end portion; and

a flexible structural element disposed adjacent the at least one sheet of material and positioned to remain clear of contact with the surface, in which the flexible structural element is configured to increase a pressure between the at least one sheet of material and the surface during the contact by the at least one sheet of material;

in which the at least one sheet of material is attached to the core member with the at least first free end portion extending away from the periphery of the core member such that the material attachment is substantially parallel to the central axis of the core member;

in which the core member includes a flat surface adjacent the attachment of each the sheet of material; in which the core member and the at least one sheet of material are configured for relative movement with respect to the surface in at least a first direction;

in which the motion in the first direction causes the at least first free end portion of the at least one sheet of material to contact the surface at a non-zero velocity;

in which the motion of the at least first free end portion of the at least one sheet of material produces at least one of the cleaning, buffing and/or polishing action on the surface.

8. A brush according to Claim 7, in which the core member defines a substantially cylindrical member having curved portions adjacent each flat surface.

9. A brush according to Claim 7, in which the core member has a rigidity in excess of the rigidity of the at least one sheet of material.

10. A brush according to Claim 7, in which the core member is configured for relative movement in the first direction such that the core member is configured to move and the surface is substantially stationary.

11. A brush according to Claim 7, in which the core member is configured for relative movement in the first direction such that the core member is configured to remain substantially stationary relative to a moving surface.

12. A brush according to Claim 7, in which the first direction of movement of the core member is either translational or rotational movement.

13. A brush according to Claim 7, in which the core member, and the at least one sheet of material, are configured for movement in at least a second direction.

14. A brush according to Claim 13, in which the second direction of movement is rotational about the central axis of the core member.

15. A brush according to Claim 7, in which the at least one sheet of material includes a second free end portion and a middle section disposed between the first and second free end portions, and in which at least a portion of the middle section is attached to the core member and the first and second free end portions extend away from the periphery of the core member.

16. A brush configured to perform at least one of a cleaning, buffing, and polishing action on a surface comprising:

a core member, the core member having a central axis and a periphery; and

a sheet of material, the sheet of material being comprised of closed-cell silicone foam rubber and having at least a first free end portion;

in which the sheet of material is attached to the core member with the at least first free end portion extending away from the periphery of the core member such that the material attachment is substantially parallel to the central axis of the core member;

in which the core member includes a flat surface adjacent the attachment of said sheet of material; in which the core member and the sheet of material are configured for relative movement with respect to the surface in at least a first direction;

in which the motion in the first direction causes the at least first free end portion of the sheet of material to contact the surface at a non-zero velocity; and

in which the motion of the at least first free end portion of the sheet of

material produces at least one of the cleaning, buffing and/or polishing action on the surface,

in which the sheet of material includes a second free end portion and a middle section disposed between the first and second free end portions, and in which at least a portion of the middle section is attached to the core member and the first and second free end portions extend away from the periphery of the core member,

in which the middle section of the sheet of material includes first and second portions, and the first portion of the middle section is attached to the core member at a first location and the second portion of the middle section is attached to the core member at a second location, and

in which a third portion of the middle section of the sheet of material is disposed between the first and second portions, and in which the third portion extends about a periphery of the core member between the first and second locations.

17. A brush, configured to perform at least one of a cleaning, buffing, and polishing action on a surface comprising:

a core member, the core member having a central axis and a periphery;

a sheet of material, the sheet of material being comprised of closed-cell silicone foam rubber and having at least a first free end portion; andat least one securement coil, in which the coil is disposed within the c-channel groove to retain the middle section of the sheet of material within the c-channel groove;

in which the sheet of material is attached to the core member with the at least first free end portion extending away from the periphery of the core member such that the material attachment is substantially parallel to the central axis of the core member;

in which the core member includes a flat surface adjacent the attachment of said sheet of material; in which the core member and the sheet of material are configured for relative movement with respect to the surface in at least a first direction;

in which the motion in the first direction causes the at least first free end portion of the sheet of material to contact the surface at a non-zero velocity; and

in which the motion of the at least first free end portion of the sheet of material produces at least one of the cleaning, buffing and/or polishing action on the surface.