Claims

Claim:

1. A slip track comprising:

a continuous circuitous track including a layered printed circuit board, wherein the layered printed circuit board includes a top track layer configured to supply electric power to a device having a contact element sliding across the top track layer, the layered printed circuit board further having a lower layer connected to the top track layer, the lower layer configured to supply electric power to the top track layer, wherein the layered printed circuit board is flexible and is bent around curves in the continuous circuitous track.

2. The slip track of claim 1, wherein the layered printed circuit board includes a plurality of sections that create the continuous circuitous track.

3. The slip track of claim 2, wherein the continuous circuitous track is mounted to a plurality of connected modular sections.

4. The slip track of claim 1, wherein the continuous circuitous track is configured to receive a plurality of devices such that the plurality of devices travel around the continuous circuitous track independently from each other, each of the plurality of devices having a contact element configured to slide across the top track layer.

5. The slip track of claim 1, wherein the top track layer includes a first track and a second track, and wherein the lower layer includes a first lower layer and a second lower layer, wherein first lower layer supplies electric power to the first track and wherein the second lower layer supplies electric power to the second track, and wherein the first track is configured to supply a first voltage to the device and wherein the second track is configured to provide a second voltage to the device.

6. The slip track of claim 1, wherein the layered printed circuit board further includes an electrical component integrated into at least one of the top track layer and the lower layer.

7. The slip track of claim 5, wherein at least one of the first track and the second track are configured to supply an electrical bus communication to the device.

8. The slip track of claim 5, wherein the layered printed circuit board further includes at least one ground track located between the first track and the second track.

9. The slip track of claim 5, wherein the layered printed circuit board further includes at least one ground layer proximate at least one of the first lower layer and the second lower layer.

10. An assembly machine comprising:

a plurality of dispensing heads configured to at least partially assemble an unfinished product, the plurality of dispensing heads each including a contact element; and

a track configured to supply electric power to each of the plurality of dispensing heads when the contact element contacts the track as each of the plurality of dispensing heads moves along the track, wherein the track includes a layered printed circuit board having a top track layer configured to supply electric power to each of the plurality of dispensing heads and a lower layer connected to the top track layer, the lower layer configured to supply electric power to the top track layer, wherein the track is circuitous and includes curves, and wherein the layered printed circuit board is flexible and is bent around the curves in track.

11. The assembly machine of claim 10, wherein the assembly machine is a pick and place machine for assembling circuit boards, and wherein the plurality of dispensing heads are each pick and place heads and include a pick and place nozzle.

12. The assembly machine of claim 10, wherein the top track layer includes a first track and a second track, and wherein the lower layer includes a first lower layer and a second lower layer, wherein first lower layer supplies electric power to the first track and wherein the second lower layer supplies electric power to the second track, and wherein the first track is configured to supply a first voltage to the plurality of dispensing heads and wherein the second track is configured to provide a second voltage to the plurality of dispensing heads.

13. The assembly machine of claim 12, further comprising a plurality of connected modular sections, and wherein the track is disposed on the plurality of connected modular sections.

14. The assembly machine of claim 10, further comprising a housing, and wherein the track includes a plurality of track sections each attached to the housing.

15. The assembly machine of claim 13, wherein at least one of the first track and the second track are configured to supply an electrical communication to the plurality of dispensing heads.

16. The assembly machine of claim 13, wherein the layered printed circuit board further includes at least one ground layer proximate at least one of the first lower layer and the second lower layer.

17. A method of assembly comprising:

printing a layered circuit board having a top track layer and a lower layer under the top track layer;

supplying electrical power to the top track layer with the lower layer;

providing a dispensing head with a contact element;

moving the dispensing head along the top track layer while the contact element contacts the top track layer;

supplying power to the dispensing head with the top track layer; and

bending the layered circuit board to create a circuitous track from the layered circuit board.

18. The method of assembly of claim 17, wherein the top track layer includes a first track and a second track, and wherein the lower layer includes a first lower layer and a second lower layer, the method further comprising:

supplying power to the first track with the first lower layer; and

supplying power to the second track with the second lower layer; and

supplying power to the dispensing head with each of the first track and the second track.

19. The method of assembly of claim 17, printing a plurality of the layered circuit boards in sections and attaching the sections to create the circuitous track.

20. The method of assembly of claim 18, further comprising supplying a bus communication to the dispensing head with at least one of the first track and the second track.