

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Gary Schmit
U.S. Patent No.: 11,998,854 Attorney Docket No. SSCO-406PGR
Issue Date: June 4, 2024
Appl. Serial No.: 18/349,347
Filing Date: July 10, 2023
Title: LOW-FRICTION RECREATIONAL SLIDE SYSTEM

DECLARATION OF DR. JON RUST

I. INTRODUCTION AND SCOPE OF WORK

I, Dr. Jon Rust Ph.D. declare that:

1. I have been retained by Wood, Herron & Evans, LLP, on behalf of Slick Slide, LLC (“Patent Owner”), as an independent expert consultant in this post grant review (“PGR”) proceeding before the United States Patent and Trademark Office.
2. I previously submitted the Declaration of Dr. Jon Rust on January 9, 2025. I incorporate by reference that Declaration herein.
3. The ‘854 patent: In my previous declaration, I described the ‘854 patent in detail. The ‘854 patent describes the claim term “mesh layer” as follows: “[T]he mesh material is a woven mesh” and “the mesh material 46 includes a number of warp threads 70 which extend generally perpendicular to a number of weft threads 72 to form a plurality of interstitial openings 74 therebetween.” EX1001, 10:19-25. The specification of the ‘854 patent provides that “the interstitial openings 74 may be within a range of between about 45 micron to about 1200 micron, for example, and

the open area of the mesh material 46 may be within a range of between about 25% to about 65%, for example.” *Id.*, 10:30-35.

4. Passages in the specification and one independent claim (claim 22) refer to the open area of the mesh as certain percentage ranges, *i.e.*, 25% to 65% and 35% to 50%. See also Ex. 1001, 13:6–8 (“the open area of the mesh layer is within a range of between about 35% to about 50%).

5. The specification provides additional description with regard to the embodiment of Figure 5: “The open area of the mesh material 46 refers to the total percentage of open space or voids in the mesh structure. It represents the portion of the mesh material 46, and the bottom surface 56 of the ride vehicle 14, that is not occupied by solid material such as threads.” Ex. 1001, 10:46–50.

6. The specification goes on to provide the range of diameters of the warp and weft threads in the mesh material of Figure 5 and their density, measured in threads per centimeter of mesh material. *Id.* at 11:10–14.

7. Claim 25 describes a mesh layer that “includes a plurality of weft threads each having a thread diameter within a range of between 0.1 mm to 0.6 mm and a plurality of warp threads each having a thread diameter within a range of between 0.1 mm to 0.6 mm.” *Id.* at 14:19–23; see also *id.* at 2:37–46, 3:25–29.

8. These portions of the specification and claim language demonstrate to a POSITA that “mesh layer” means a layer of material which is characterized by open spaces between threads. The passages in the specification and independent claim 22

refer to the open area of the mesh as certain percentage ranges, providing examples and demonstrating that a “mesh layer” is characterized by open spaces. In addition, portions of the specification and claim language describe the warp and weft threads, having a particular thread diameter. This is consistent with a POSITA’s understanding that what those threads comprise, *i.e.*, a “mesh layer,” is characterized by open spaces.

9. Sheeting and mesh: In my previous declaration, I described sheeting and mesh in detail. A POSITA understands what is a sheeting, which is not characterized by open spaces, and a mesh, which is characterized by open spaces.

10. A POSITA also knows the lower bound of the range of open spaces that still is considered a mesh, and the line of demarcation between that and sheeting, which is not characterized by open spaces.

11. Phillips: In my previous declaration, I described the Phillips reference in detail. Phillips does not use the term “mesh” to describe the low friction, durable sheeting material for use with the sliding vehicles. EX1004. Instead, Phillips consistently describes the material as membranes or sheeting materials. *Id.*, 1:22-25; 4:40–41.

12. Phillips distinguishes the low friction, durable sheeting material from “nylon netting.” In this regard, Phillips describes the use of nylon netting for attaching “various sliding elements 1606” which “can be added end-to-end or side-to-side to slide element 1602 in order to create slides of additional length and/or width.”

EX1004, 9:50-52. Specifically, Phillips describes that “[a]ttachment can be by any well-recognized means such as through the use of Velcro hook and loop connectors, snaps, zippers, ropes, springs, nylon netting and similar expedients.” *Id.*, 9:53-55.

13. A POSITA would recognize nylon netting as a type of mesh fabric. EX2032.

14. Thus, the referenced “nylon netting” is not used for forming the bottom surface of the ride vehicle. EX1004, 9:50-55. Rather, it is only disclosed as attaching ride surfaces together. *Id.*

15. In doing so, Phillips demonstrates that sheeting is to be used for forming the bottom of the ride vehicle, and that nylon netting is not to be used for that purpose. This distinction highlights to a POSITA that nylon netting serves a different purpose than and is not equivalent to the low friction, durable sheeting material central to Phillips’ slide and sliding vehicle embodiments.

16. Sheeting is durable, and more durable than mesh. Sheeting is more durable than mesh because it incorporates more fibers, and therefore demonstrates more durability, than mesh.

17. For the sports board (100), Phillips describes that the “durable low friction sheeting material 114 can be applied to bottom surface 116 by applying adhesive 115 to sheeting material 114 and adhering it to board 111.” Ex.1004, 7:10-12. Likewise, for the sliding element (120), Phillips describes that the “low friction durable sheeting material 121 is adhered to a body section 122.” Ex. 1004, 7:23-25.

Notably, in every disclosed embodiment, Phillips describes attaching the low friction, durable sheeting material to sliding vehicles using adhesive.

18. A POSITA would know from Phillips that adhesive would need to be utilized to adhere the material forming the bottom of the ride vehicle to the bottom of the ride vehicle.

19. If a mesh were used as the bottom of the ride vehicle, a POSITA would know that the adhesive would permeate through the mesh. At least some adhesive would be present on the surface. A POSITA would therefore avoid using a mesh with an adhesive, because it would permeate through the mesh fabric interstices, thereby altering the friction coefficient of the bottom of the ride vehicle.

20. POSITA: In my previous declaration, I described a POSITA in detail. A person with formal education in fiber science would have a greater depth of understanding regarding the material, chemical structure, and morphology involved in this dispute. A person with formal education in fiber science would also have additional training relating to fibers and their different applications, as well as specialized experience in characterizing the microstructure of fibers. For these reasons, a person with formal education in fiber science would be better prepared to understand how materials interact when they come in contact with each other.

21. When fabrics are in contact with each other, it is well known that ploughing takes place whereby fibers or yarns on opposing surfaces interact with each one another and push one another tending to displace one another. For

example, the raised surface features of a fabric interact with the surface they are in contact with. This process is not typically a desirable outcome but is a key component of how fabrics interact and wear over time.

22. An individual that does not understand this concept of how fabric surfaces interact is not likely to be an expert in this industry.

23. The Fairchild Books Dictionary of Textiles is an accepted resource in this industry. An individual that is not familiar with The Fairchild Books Dictionary of Textiles is not likely to be an expert in this field.

24. EX1027. In connection with my previous declaration, I reviewed EX1027. The data provided in EX1027 is for a flat sliding surface. Because mesh is not a flat sliding surface, the data provided in EX1027 is not for or applicable to a mesh material.

25. In my opinion, the different morphology of a mesh would result in a greater resistance to motion and a greater frictional force than that of a flat sliding surface reported in EX1027. That is because the morphology of a mesh would result in more interaction with the fibers.

DATE: September 11, 2025

NAME: Dr. Jon Rust

SIGNATURE:  _____