

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**DBR FINANCE, INC.,
Petitioner,**

v.

**RUGGED CROSS HUNTING BLINDS, LLC,
Patent Owner**

**Case IPR 2024-00291
Patent 11,399,535
Issue Date: August 2, 2022**

Title: CAMOUFLAGE MATERIAL, FOR A HUNTING BLIND

**DECLARATION OF CHRISTOPHER SEATON IN OPPOSITION TO
PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 11,399,535**

DECLARATION OF MR. CHRISTOPHER SEATON
UNDER 37 C.F.R. §1.132

1. My name is Christopher Seaton, and I am one of the named inventors in the above-identified patent U.S. Patent No. 11,399,535 (the '535 Patent). I am over the age of majority and competent to make this declaration based on my personal and professional knowledge. I have a bachelor's degree in exercise science.

2. The other named inventor is my brother, Mr. Timothy Seaton (hereinafter referred to as "Tim"). Tim and I are both first responders. Tim is a firefighter for Tampa Fire Rescue, and I am a retired detective for the Hillsborough County Sherriff's Office in Florida. Tim has a bachelor's degree in psychology.

3. I served as a detective in the Special Investigations Division and Criminal Investigations Division for 13 years before retiring in 2018. My role in the Special Investigations Division included undercover assignments in narcotics, gang operations, the Florida Governor's Pill Mill Task Force, the Sheriff's Target Area Response (surveillance unit), and the Warrants Extradition Unit. Additionally, I participated in several federal task forces and collaborated with the FBI, DEA, Secret Service, Homeland Security, and ATF. In the Criminal Investigations Division, I focused on Violent Crimes, Crimes Against Children, White Collar Crimes, and Homicide, with specific assignments in the Crimes Against Children Unit and the Homicide Unit.

4. I am a principal of the Patent Owner, Rugged Cross Hunting Blinds, LLC (“RCHB”). RCHB was originally established in 2015, to make and sell hunting blinds that my brother and I designed and included a one-way see-through mesh material as described below.

5. RCHB was founded by my brother after we invented our below-described hunting blinds with a one-way see-through mesh material that enhances both visibility and concealment for hunters in hub-style or pop-up ground blinds. In addition to manufacturing and selling these advanced hunting blinds, RCHB actively licenses its patented technology to other industry players, expanding our influence and ensuring broader adoption of our innovations. Beyond our core business and since the inception of RCHB, I have also engaged extensively in the outdoor industry through consulting roles. This has included advising on product development, strategic planning, and market expansion for various outdoor brands, leveraging my expertise to drive growth and innovation in the field.

6. I am an avid hunter and outdoors person and have been for most of my life. Tim and I came up with the idea of using a banner mesh material for use in a hunting blind in 2015, when we were looking to build a hunting blind so I could hunt with my son, who was six (6) years old at the time. I wanted to spend more time with my son, as my job as a detective for the previous seven (7) years required me to work long hours in any one day.

7. I focused on developing a ground blind that was structurally sound and safe for my son to hunt in and protect him from the outside environment, while including sufficient ventilation for the hot Florida weather. We wanted to build a blind with extruded aluminum frame members to meet our goal of a structurally sound frame for the blind. I also wanted to build a blind that had a window that would open at a height of my six-year-old could see through the window opening.

8. To that end, I was familiar with banner mesh materials that I believed would snugly fit within the spline grooves of the frame members and obtained some of this mesh material to install as panels for a blind. I thought the use of the mesh material would provide sufficient ventilation and air flow to provide a comfortable setting for hunting. One could also see through the mesh, but I was unsure of the clarity of the view it may provide. Regardless, we expected to view exterior to the blind for wild game through the opened windows of the blind.

9. Based on my experience, mesh material used for hunting was more of a “netting” material and was very thin and flimsy and could not practically be affixed to the extruded frame members. Moreover, the material was primarily used for protection against insects such as mosquitoes and would not have provided a clear view of the outside of a blind. The holes were also larger so you could see through it and into the blind.

10. The mesh material we used for our blind was a scrim banner mesh material. A copy of the specification sheet for this mesh material is attached as Exhibit A. This banner mesh material was thicker than the mesh textile. I was familiar and would not slip out of the fastening systems that we would use on the blind.

11. The mesh material we used was white so we applied a camouflage pattern on what would be an exterior side of the blind. The camouflage pattern was applied using an eco-solvent ink from an ink cartridge.

12. The other side (what would be the interior) was not coated and left white.

13. We went ahead and installed it on the blind frame, which we had already built. Unfortunately, the ink coating of the camouflage leaked through the apertures of the mesh and created a one-sided coated mesh that was difficult to see through and had a messy looking interior. We then applied a dark bronze color spray paint to the inside surface of the mesh strictly for cosmetics, so we didn't have to look at the blotchy interior of the blind. The results were very surprising and quite unexpected. We could see through the mesh, albeit the view was not that clear. Again, viewing through the mesh was not our goal, that's why we included windows in the design. But after seeing that there was some level of viewing clarity through the mesh material, after the addition of the spray paint, we tested further.

14. Timothy and I then tried coating the exterior with the same camouflage pattern (with an eco-solvent ink) and coated the interior side with a black eco-solvent ink to prevent the blotching of ink that had leaked through to the inside surface. The use of the black ink dramatically improved the see-through characteristic that we had surprisingly found by applying the dark bronze colored spray paint. More specifically, the mesh material allowed a clear view of the exterior from inside the blind; however, one viewing from the exterior could not make out or see what or who was on the other side of the mesh material.

15. This one-way see-through effect was entirely unexpected. Again, I was trying to build a blind for my son that had a window at a height where he could open the window and see through. We did not expect the result we got when printing and using the banner mesh material.

16. We realized that the mesh material and the blind that we had designed and built provided a clear view of the exterior of the blind, which was a huge advantage over existing ground blinds and shooting houses that I was familiar with. The existing blinds or shooting houses required open windows to see game. However, the views from the windows were obstructed by the walls of the blinds, thereby requiring a hunter to awkwardly lean forward to see to the sides to see game or if game was approaching, or otherwise expand a hunter's field of view. That is the walls, including the walls with windows, are blinds spots that can only be

overcome by one moving in the blind to spot game. Wild game, such as turkey and whitetail deer, which I have hunted extensively, can see and readily detect such movement within a blind.

17. To get a more complete view, the hunter has to move, and with an open window, game can see or detect the movement as the hunter is visually exposed to the game outside the blind. Moreover, the open window allows scent from the hunter to be detected by the wild game.

18. When Tim and I set out to build this blind we had no expectation to go into the business of building hunting blinds; however, we knew we had something, so we decided to form the company, Rugged Cross Hunting Blinds, LLC (hereinafter “RCHB”) in October of 2015.

19. RCHB then built another blind (we called it the “Austin”) and displayed the blind at the 2016 National Wild Turkey Federation (NWTf) convention in February 2016, in Nashville, Tennessee. Images of the Austin blind are shown the attached Exhibits B, C and D, which were taken from a YouTube video [Rugged Cross Blinds @ 2016 NWTfShow \(youtube.com\)](#). This video filmed at the 2016 NWTf convention and describes and displays the Austin blind in detail.

20. Exhibit B is an image from the video at time of 1:50 minutes into the video showing by brother, Tim, in the blind with the door open.

21. Exhibit C is an image from the video at time of 1:53 minutes into the video with Tim having closed the door to the blind. As depicted, a person standing outside the blind cannot see Tim standing inside the blind.

22. Exhibit D is an image from the video at time of 3:40 minutes show the view from the interior of the blind. More specifically, the image demonstrates the clear view of the exterior of the blind from an interior, or from standing inside the blind.

23. The Austin hunting blind included, and to this day comprises:

- a roof including an insulated panel fixed between roof frame members, and the roof has a black inside surface, so light does not pass through it;

- extruded aluminum frame members along the sides and roof four sides, all including the one-way see-through mesh, which serve as wall, window and door panels;

- a mesh material along each of the sides of the blind providing a 360° view of the exterior of the blinds; and, the mesh material has a camouflage pattern on a first side that faces an exterior or the blind, and a dark color (black ink) on a second side that faces an interior of the blind.

24. As further shown, in the lighting within the convention center, persons inside the blind have a clear view of the exterior of the blind when standing outside the blind, one cannot see others positioned within the blind.

25. In addition, the Austin blind included, or includes an aluminum roof panel that has a high-density polystyrene core, so light does not pass through the roof.

26. The Austin blind also includes windows to open for further viewing or shooting. The windows also have the one-way see-through mesh material so when closed, one can see through the windows without being seen by game. If one sees game when the window is closed, then the window can be opened for shooting.

27. The Austin blind with the above-described mesh material was met with rave reviews as evidenced by the comments from Josh Honeycutt of Realtree and entitled “Cool Hunting Gear from the 2016 NWTF Convention”.¹ See, Exhibit E.

28. The Realtree article includes the heading “Awesome Gear from an Awesome Convention” over a photo of the RCHB Austin blind displayed at the 2016 NWTF Convention. As described by Realtree, “The camo material is completely see-through from the inside, but it prevents anyone--or anything--on the outside from seeing in.”

29. Realtree designs camouflage patterns that are licensed for use on various hunting and outdoor related products, such as clothing, hunting blinds, hats,

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<https://link.edgepilot.com/s/bae67c2c/LnanwvQfL0iXQKDMKj8fmA?u=https://www.realtree.com/turkey-hunting/galleries/cool-hunting-gear-from-the-2016-nwtf-convention> is a copy of the link to the post. Copies of links to exhibit posts/articles are set forth in corresponding footnotes.

belts, fishing gear etc. Realtree is the most popular and preeminent company that designs camouflage patterns for the outdoor industry.

30. In addition, Bowhunting.com mentioned us in the attached article, posted February 17, 2016, by Brodie Swisher and entitled “Great Turkey Gear from the NWTF Show.” (See, Exhibit F).² Our blind was described as follows:

The **really cool** feature of this material is that you can see out, but game cannot see in. It offers true 360-degree viewing. You can see it all with this blind. No obstructed views and peeking out windows. (emphasis added).

31. While attending the 2016 NWTF convention, Mr. Jason Harris of Primos Hunting (hereinafter “Primos”) approached Tim and me and expressed his excitement about the RCHB mesh material and the Austin blind. Mr. Harris also mentioned that his employer, Primos, would be very interested in talking with the us/RCHB about a business relationship that would involve Primos developing products that incorporated our novel mesh material.

32. More specifically, Mr. Harris mentioned that he believed that the one-way see-through mesh material would be a great addition to the Primos’ Double Bull pop-up (hub-style) ground blinds.

²https://link.edgepilot.com/s/914c0a12/VR8zOzk7Ek68tbesa6X_zA?u=https://www.bowhunting.com/blog/2016/02/16/great-turkey-gear-from-the-nwtf-show/

33. During 2016-2017, RCHB and Primos began developing products, namely hunting blinds, and in particular pop-up hunting blinds, that incorporated the RCHB novel mesh material. In 2017 RCHB, having previously filed provisional and non-provisional patent applications covering hunting blinds with this mesh material, granted Primos an exclusive license relative to the one-way see covered in our pending patent application.

34. Eventually, Primos completed development of a series of hunting blinds that it called its Double Bull SURROUNDVIEW blinds, which incorporated the RCHB novel mesh material.

35. More specifically, the mesh material was incorporated in the Primos Double Bull hunting blinds. In January 2018, Primos introduced the new Double Bull SURROUNDVIEW blinds at the Archery Trade (ATA) trade show in Indianapolis, Indiana.

36. Similar to the RCHB Austin blind, the outdoor industry heaped praise on the SURROUNDVIEW hunting blinds.

37. I have purchased several SURROUNDVIEW blinds and inspected the SURROUNDVIEW blinds at the 2018 ATA, which comprised and today comprise:

a roof made of non-mesh --- material that is not light transmissive
(light does not pass through it);
four sides;

a mesh material along one or more sides of the blind; and, the mesh material has a camouflage pattern on a first side that faces an exterior of the blind, and a dark color on a second side that faces an interior of the blind.

38. The mesh material of the SURROUNDVIEW blinds forms outer surface(s) of the blind; and, if one is inside the blind one can have a clear view of an exterior of the blind, but someone that is standing outside the blind cannot see into the interior of the blind.

39. In addition, the SURROUNDVIEW blinds are types of ground blinds that are referred to as “pop-up” or “hub-style” blinds. That is the frame of the blind includes interconnected flexible frame members (or rods) that form side frames and a roof frame. The frame members are connected to hubs such that the frame members can be collapsed so the blind can be stored or carried; and the frame members can be separated to expand into a frame to support the exterior coverings to form the standing ground blind. That is the frame “pops up.” The mesh material and frame form a shell-like structure when expanded, so the mesh material defines exterior surfaces of the blind.

40. In 2016-2017, I worked with Primos and in particular with Jason Harris, in negotiating a licensing arrangement with Primos and assisting of incorporation of the RCHB one-way see-through mesh material in the Primos Double Bull hub-style blinds.

41. For example, I provided specification sheets of the mesh material we used to build the RCHB blinds to Primos during the development of the SURROUNDVIEW blinds. I also sold Primos an entire roll of the banner mesh material we used to make the Austin blind. In addition, I provided information on the inks used and printing methods used to make the mesh material with a camouflage pattern on one side and black on the other side. To that end, the SURROUNDVIEW blinds then and now have the same feature of being able to see an exterior of the blind from inside; however, one cannot see into the interior of the blind from outside.

SECONDARY CONSIDERATIONS - INDUSTRY PRAISE

42. Evidence of the success of the SURROUNDVIEW blinds and praise from the outdoor industry is set forth in industry articles/posts that provide positive reviews heaping praise on the Primos SURROUNDVIEW hunting blinds that incorporated the RCHB novel mesh material. These articles tout the same feature of a hunter having a clear field of view of the exterior of a blind, while at the same time game cannot see a hunter who is inside the blind. These articles also identify the problem that the SURROUNDVIEW blinds solved relative to then existing ground blinds. Copies of these posts/articles are attached as Exhibits G through L.

43. Exhibit G is an article from Grand View Outdoors, January 18, 2018, written by Jace Bauserman and provides:

New ground blinds for 2018 – yes, ground blinds – made a splash at the ATA

Show

Primos SurroundView 360

I hate the word game-changer, but I simply can't think of a better description for Primos' new SurroundView ground blind series...

You have to see it to believe it. No more craning your neck to spot approaching game through a side window. You have a full view (front, left and right) of your surroundings. It's really kind of freaky, and I know the first time I see a tom approaching from the side I will be ducking for cover. You feel so exposed, but you're not. You can see them. They can't see you. (emphasis added).³

44. With respect to Exhibit H, the SURROUNDVIEW blinds are described in an article, entitled "The Blind Without a Blind Sport" from Sportsman's Warehouse, which I believe was posted in 2018:

A New Innovation

This exclusive fabric has unique properties that allow it to function like a two-way mirror—hiding the hunter from the game outside the blind but offering a full view **without gaping windows**.

³https://link.edgepilot.com/s/6853f5a2/3UWY4Bpst06vxEl_cUB6vA?u=https://www.grandviewoutdoors.com/bowhunting/the-surprising-product-category-that-saw-a-lot-of-innovation-for-2018

“It’s a sort of optical illusion,” explained Jason Harris, Senior Product Manager for Double Bull. “From the outside, the camouflage pattern tricks the eye, human or animal, into thinking it’s completely solid. The inverse is when you’re on the inside, your eyes are able to focus through the pinholes and your mind disregards the blank black fabric between the holes.”

The benefits to hunters are pretty obvious: No more silent gobblers sneaking in the back door. No wary bucks skirting the setup just out of view of a window.

Hunting Without a Blindspot

Anyone who has hunted in a pop-up blind, or even a shooting house, can understand the limitations to a reliance on windows. It seems you are always trying to see what you can’t see, because narrow shooting portals, or windows, only provide a limited point of view. With SurroundView, there are no surprises. You can see when a deer is coming from the far corner of the field. You can see if it was a squirrel making noises... or a raccoon... or a deer. It gives you ample opportunity to prepare yourself if an animal is approaching in what would traditionally be a blind spot. It gives you the ability to anticipate and be prepared for when it’s time to take the shot.

“It is a huge benefit to be able to see your entire surroundings, know what’s about to happen, and also prepare for it,” Harris said. “Also, if you’re sitting with kids, or someone who’s new to the sport, they can just sit still and see everything. That’s a big difference from what I’ve

seen happen a lot in other kinds of blinds. The kids are having to hunch over, move back and forth, and look through each window to really see what's going on around them. With SurroundView technology, you can sit comfortably and survey all around without much movement, yet you're totally hidden." (emphasis added).⁴

45. On January 12, 2018, Lynn Burkhead of Bowhuntingmag.com, provided yet another extremely positive review of the SURROUNDVIEW blinds at the 2018 ATA show, Top New Treestands, Ground Blinds & Accessories:

Primos Double Bull SurroundView Ground Blind

The word **revolutionary** gets tossed around a lot at the annual ATA Show, but in this case, that might be the perfect word to describe the new Double Bull SurroundView ground blind from Primos. With exclusive one-way, see-through walls that look solid outside the blind and yet offer a wide open view from inside the blind, this Double Bull model has to be seen to be believed. (emphasis added)(See, Exhibit I, pg. 3).⁵

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<https://link.edgepilot.com/s/11fc354a/thiTmljPjECafLpkWYWHPA?u=https://news.sportsmans.com/product-review/blind-without-blind-spot>

⁵https://link.edgepilot.com/s/5ca5b454/q0zz7y8wF0ahAm_cK75yxg?u=https://www.bowhuntingmag.com/editorial/ata-2018-top-new-treestands-ground-blinds-accessories/309560

46. In March 2018, an article by Nancy Jo Adams was posted on Gritr Outdoors blog, referring to the Primos Double Bull SURROUNDVIEW 360° blinds displayed in February 2018 at the NWTF in Nashville, Tennessee as follows:

“This blind has received more attention in the Bowhunting and hunting world than any other product since its release at ATA in January. The one-way see-through walls allow the hunter inside the blind to have an unobstructed 180° view of the surroundings. (emphasis added) (See, Exhibit J).”⁶

47. Exhibit K is a post from bowhuntingmag.com written by Christian Berg, dated July 5, 2018, entitled “Gear Review: Primos SurroundView Series Blinds” provides:

“There are hundreds of new bowhunting products released every year, but relatively few are **unique, useful and innovative** enough to truly stand out from the crowd. However, the new SurroundView ground blinds from Primos Double Bull certainly stand out. In fact, I believe SurroundView blinds — featuring an exclusive, one-way fabric that appears completely solid from the outside but allows a panoramic view of your surroundings from the inside — **will revolutionize** the category by eliminating the closed-in feeling so many bowhunters have hated about ground blinds in the past. (emphasis added).

⁶<https://link.edgepilot.com/s/427fad0e/UynEBVAJb0CT6YnIxCjCbA?u=https://blog.gritroutdoors.com/best-of-nwtf-2018-part-1/>

The one-way fabric in SurroundView blinds isn't designed to be shot through, so you still have to arrange the various window openings based on your hunting style and anticipated shot opportunities. **However, the unrestricted views the fabric offers eliminate the need to constantly stand up or lean awkwardly to "peek" from side and rear windows.**” (emphasis added).⁷

48. On July 17, 2018, Deer & Deer Hunting posted the following:

“We first saw it at the January trade shows, but when our staff was able to finally test this **revolutionary** Primos Double Bull Blind on a June axis deer hunt in Texas, we were blown away. Primos touts the **SurroundView** as the “Blind Without A Blind Spot” – and it truly is. Thanks to the exclusive one-way, see-through walls that let you see all of your surroundings without being seen, hunters now can spot all of the movement that you missed with traditional blinds that have solid walls, yet remain just as concealed. It’s like looking through a one-way mirror! (See, Exhibit L) (emphasis added).”⁸

⁷https://link.edgepilot.com/s/16dde877/yzTXhuytnE6vmuedX_CYMQ?u=https://www.bowhuntingmag.com/editorial/gear-review-primos-surroundview-series-blinds/309428

⁸<https://link.edgepilot.com/s/0404eb65/Dx0bJfcfa0CdUCFAfOBmsw?u=https://www.deeranddeerhunting.com/content/articles/deer-hunting-gear/primos-newest-double-bull-blind-the-surroundview>

49. On October 24, 2018, a post/article by Brodie Swisher was published on the bowhunting blog of bowhunting.com about the Double Bull SURROUNDVIEW blind and provided:

“If there’s one hunting product that stirred up the hunting industry about as much as anything else this year, it would have to be the new Primos Double Bull SurroundView ground blinds. There were a lot of folks talking about this one the moment it was released. **It was something new and innovative that answered the demand for more visibility when it comes to hunting from the ground blind.** The Primos crew stepped up and changed the game with this exciting new blind for 2018.” (emphasis added) (See Exhibit M).⁹

50. All this activity culminated in an article posted December 27, 2018, by the NRA American Hunter publication announcing the winners of the 2019 Golden Bullseye Awards (See, Exhibit N) posted on www.americanhunters.org.¹⁰ The American Hunter’s 2019 Golden Bullseye Awards included the Primos Double Bull SURROUNDVIEW 360 blind, which won the “Gear of the Year Award.” The article even lists the qualifications considered to win such an award including:

⁹<https://link.edgepilot.com/s/91357d72/IcDhxaa3Ek2tJmNyZ7wOQ?u=https://www.bowhunting.com/blog/2018/10/24/primos-double-bull-surroundview-270-ground-blind-review-video/?amp>

¹⁰<https://link.edgepilot.com/s/08a14253/rp9hcZL7GEqyDqvAR1Qdw?u=https://www.americanhunter.org/articles/2018/12/27/american-hunters-2019-golden-bullseye-award-winners/>

- Recently introduced and available to consumers prior to the selection of the Golden Bullseye Awards;
- Used/tested by a staff member or regular contributor to the magazine and/or affiliated media;
- Reliable in the field, meeting or exceeding the evaluator's expectations;
- **Innovative in design and function;**
- Readily perceived as a value to the purchaser; and
- Styled in a manner befitting the shooting and hunting industry and, perhaps more importantly, its enthusiasts.

It works like a two-way mirror – you can see out 360 degrees, but that deer or turkey will never know what lurks inside. Dubbed as the first blind without a blind spot,' the Promos Double Bull SurroundView 360 blind utilizes a see-through fabric to allow complete visual awareness without the need to open windows.

– Jon Draper, Managing Editor

SECONDARY CONSIDERATION - COPYING BY OTHERS INCLUDING THE PETITIONER, DBR

51. Primos successfully sold its SURROUNDVIEW ground blinds and to continues to do so today; however, in 2019 and 2020, competitors of Primos, who were not licensed by RCHB, began manufacturing and selling, and continue to sell ground blinds, that incorporate the RCHB novel mesh material. Indeed, each of these “copycat” companies use words like, “innovated,” “revolutionary” and “unique” to describe their mesh material and hub-style ground blinds.

52. For example, GSM Outdoors advertised its Infinity series of ground blinds as, “**Innovative** SHADOW MESH means you can see game, but they can’t see you. GSM sells four different ground blinds under the series names INFINITY and PREVUE, each of which includes the one-way see through mesh. (See, Exhibits O, P and Q). These exhibits are images that were captured from GSM website in 2023, but GSM still offers these blinds for sale its INFINITY and PREVUE blinds which can be found at [Ground Blinds | Muddy Outdoors \(gomuddy.com\)](https://gomuddy.com).

53. Similarly, GSM is also selling the Ameristep hub-style blinds including the PRO SERIES™ **EXTREME VIEW™** HUB BLIND and describes its blind as: “Ground blinds are only as good as their visibility and convenience. The Pro Series™ Extreme View™ blind takes these features to *pro-level status* with new Extreme View one-way, see-through mesh.” The features are described as “NEW Extreme View™ one-way, see-through mesh for undetected visibility.” (See, Ex. R, emphasis added).

PETITIONER’S COPYING

54. Another culprit was Outdoor Product Innovations, Inc. n/k/a DBR, Inc., who is the Petitioner in this case. Petitioner started selling its Rhino 180 hub-style ground blinds in 2020 touting the unique benefits of a one-way see-through mesh material used in the Rhino 180 blinds. For example, the Rhino 180 blind was promoted as a “...see through blind that takes ground hunting blinds to a whole new

level! This *unique* 2-way mesh system prevents wild game from seeing in while allowing you, the hunter, to see out crystal clear without any obstruction.” (See, Ex. 19) (emphasis added). Exhibit S is an image taken in 2023 from the www.rhinoblinds.com website.

55. Indeed, an article, published in the April 2022 edition of Inside Archery, quotes a DBR representative shamelessly describing its Rhino 180 blinds as follows:

Another factor that has greatly contributed to Rhino Blinds’ success in recent years is the company’s approach to product innovation. **For instance, just look at the Rhino 180 See Through Blind, which uses a revolutionary mesh material that allows hunters to see out without game seeing in.**

“We launched the Rhino 180 See Through Blind towards the end of 2020 and It just took off like wildfire,” Danny Reaser said, “Our customers even ended up generating some organically viral content on social media. TikTok was getting more popular around that time, and our customers were posting videos of the “Houdini effect” by showing what the blind looked like on the outside and then taking the camera inside to reveal what the one-way mesh can really do. There was one video that even reached about 1.4 million views. That grew a lot of awareness of the product and people were just buying them left and right. The Rhino 180 See Through Blind also really captured the eyes of our dealers as something hot and new, and I believe every single

one of our dealers is carrying it this year.” (See, Exhibit T) (emphasis added).

56. I hope the PTAB sees the irony in this case. That is, the Petitioner, DBR, who filed a petition is arguing that the ‘535 Patent is invalid because claims of the ‘535 Patent are “obvious”. However, a little over two years ago DBR was representing to the public that it had developed an innovative product with, “...**a revolutionary mesh material that allows hunters to see out without game seeing in.**” Accordingly, DBR essentially admitted that RCHB’s invention of a camouflage structure (hunting blind) with a one-way see through mesh was not obvious.

57. The Barronett HI-FIVE blind is advertised as “**FEATURING 1-WAY FABRIC!**” As described, “the 1-way fabric provides an undistorted view from the inside, while the exterior appears completely solid to keep you shielded from prey.” (See, Ex. U)(emphasis added). This image was taken from the www.barronettblinds.com website [HI-FIVE – Barronett Blinds®](#)

58. Yet another blind incorporating the RCHB novel mesh material is a blind manufactured and sold by Tidewe. Tidewe describes its blind as having a “ **【 Unique Invisible Design】** TIDEWE hunting blind is equipped with three full panels of one-way see-through mesh.” (See, Ex. V)(emphasis added). Tidewe continues to sell its blinds at [See Through Hunting Blind 270 Degree Pop Up Tent – TideWe](#).

59. Ironically, a non-licensed company, Buck Bourbon, shamelessly advertised its Rackhouse 300 + ONE WAY MESH HUNTING BLIND as having “Patented One Way Mesh® Windows.” (See, Exs. W and X). This blind can be found at [Rackhouse™ 300+ One Way Mesh Hunting Blind - Buck Bourbon](#).

60. All of the above-referenced companies came out with their respective blinds well after RCHB introduced its Austin blind in 2016 and after Primos introduced its SURROUNDVIEW blinds in 2018. As apparent from the above advertising, all of these copycat manufacturers and sellers have adopted the RCHB mesh technology and incorporated the technology in their hunting blinds.

61. RCHB has sent letters to each of the above companies notifying these companies that they are infringing claims of the ‘535 Patent. In each claim for infringement RCHB included a claim chart referencing claim 1 of the ‘535 Patent and the alleged infringing ground blind. A copy of the letter and claim chart, with respect to the ‘535 Patent, sent to GSM Outdoors is attached as Exhibit Y.

62. In addition, RCHB sent the attached correspondence to DBR in 2022, and which letter includes a claim chart comparing the Rhino 180 blind to claim 1 of the ‘535 Patent. (See, Exhibit Z).

63. It is a matter of public record that DBR sold substantially all of its assets to FeraDyne Outdoors, LLC in October 2022, including its Rhino 180 inventory.

64. In December of 2022, RCHB filed a patent infringement lawsuit against FeraDyne alleging FeraDyne infringes the '535 Patent for FeraDyne's sales of the Rhino 180 blinds. RCHB filed suit in the Western District of Wisconsin, *Rugged Cross Hunting Blinds, LLC v. FeraDyne Outdoors, LLC*; Case No. 3:22-cv-00690-jpd. This case has been stayed.

65. In addition, RCHB filed suit against DBR for direct and indirect patent infringement as to the '535 Patent in the Northern District of Ohio, Eastern Division, *Rugged Cross Hunting Blinds, LLC v. DBR Finance, Inc.*; Case No. 3:23-cv-02231. That case has also been stayed. The court in Ohio stayed this case in view of the case pending in Wisconsin.

66. The NWTF and ATA trade shows are two of the largest trade shows held each year, and suppliers to the outdoor industry like GSM and DBR (Rhino 180), attend those shows every year. So, GSM and DBR knew about the SURROUNDVIEW blinds if not by seeing the blinds at the ATA tradeshow then by reading about the blinds for example in the above-referenced articles and posts. The timeline bears this out, because the Austin blinds were introduced in 2016, the SURROUNDVIEW blinds were introduced in 2018, and then the competitor copycat blinds came out in 2019 and/or 2020. In addition, as far as I am aware there

are only a handful (3-5) of overseas suppliers that make this blinds and that are, or were, used by companies like GSM and DBR, including for example Nine Bulls, Tru-View and One Source.

67. In addition, attorneys for RCHB sent letters to GSM and DBR in August 2020 and December 2020, respectively, notifying these companies of the issuance of the U.S. Patent No. 10,765,108, which is the parent patent to this patent application. Presumably, they knew the '535 Patent was going to issue, and they knew we filed this patent application, yet they continued to make the copycat blinds.

68. In fact, in June 2021, DBR asked for a sample of our mesh material which I sent to them. I even met with DBR representatives that same month in Indiana to inspect a manufacturing facility for the manufacture of the Rhino 180 blinds. However, DBR declined to enter a business relationship with RCHB and continued to make the Rhino 180 blinds without authorization of RCHB.

69. Attached as Exhibits AA and BB are images of an Ameristep Pro Series Extreme View ground blind sold by GSM that I purchased and inspected earlier this year. In addition, I have inspected blinds made and sold by Rhino and others. The suppliers, including DBR (now FeraDyne), and GSM are using the same banner scrim mesh material that I originally used and Primos uses. More specifically, it is a polyester fabric that is woven or overlain to create a mesh with equally spaced holes. The holes are same size holes of the mesh material that I and Primos used

and use now. In addition, all samples of mesh materials of the copying companies have the same diagonal yarn that is woven or knitted on the polyester mesh substrate and extends diagonally across each aperture as shown in Exhibit BB.

RCHB Licensing

70. RCHB currently has four different non-exclusive licensees for the technology disclosed in the '535 Patent including Bushnell Holdings, Inc. (Primos); Primal Treestands, Inc. (Primal), Millenium Outdoors LLC (Millenium) and Outtech Inc. (Outtech).

71. These license agreements were **not** born from accusations of patent infringement from RCHB, but from the licensees' strong interest in making ground blinds with a one-way see-through mesh materials or panels of such mesh material.

72. As mentioned above, Jason Harris of Primos approached me and my brother expressing his and Primos' enthusiasm and interest in the RCHB concept of using the one-way see-through mesh in ground hunting blinds. Eventually, RCHB and Bushnell Holdings, Inc. entered into an exclusive license agreement in 2017.

73. That exclusive license agreement was terminated and RCHB and Bushnell entered into a non-exclusive license in 2023 with respect to its SURROUNDVIEW blinds.

74. In 2021, representatives of Outtech reached out to me expressing an interest in a license agreement, and RCHB and Outtech entered into a non-exclusive license with respect to the '535 Patent in December 2021.

75. Similarly, in 2022 representatives of Millenium Outdoors contacted me and expressed an interest a license. RCHB and Millenium Outdoors later entered licensing agreements in December 2022, and January 2023, with respect to Milleniums use of one-way see-through mesh with camouflage printed on one side and a color coating printed on the other side.

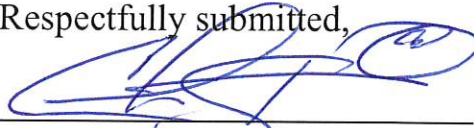
76. RCHB and Primal Treestands, Inc. entered into a non-exclusive license agreement in July 2022 soon after Primal began selling hub-style blinds with a one-way see-through mesh.

77. Based on my research, polyester or polyester/cotton blend camouflage materials that were not mesh material and one could not see through materials have had denier ratings of as low as 150 denier. Apparently, these materials were used along the walls and roofs, and one could not see through the material; and, these materials may or may not have had a black inside surface.

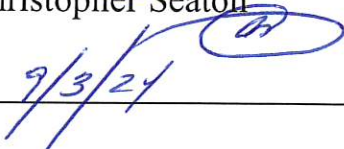
78. I hereby declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that with false statement and the like so made are punishable by fine or imprisonment, or both,

under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,



Mr. Christopher Seaton



Date



Technical Data Sheet

UltraMesh® Plus

UltraMesh® Plus is an 8 oz. coated, polyester scrim, mesh banner material. The economical light weight material allows 37% air-flow through making it ideal for buildings, stadiums and fence wraps. UltraMesh Plus may be printed on one side and is compatible for use with solvent, eco-solvent, UV, Latex and screen printers using mesh kits. The product is also available with a PVC backer that peels off after printing and is called Strip Mesh Plus. Available in 126" and 196" widths.

Material Details

CHARACTERISTICS	TEST METHOD	METRIC	ENGLISH
Support Cloth	DIN 60001	Polyester	Polyester
Yarn dtex	DIN 53830	1100 x 1100 dtex	1000 x 1000 denier
Type of Coating	N/A	PVC	PVC
Total Weight	DIN EN ISO 2286-2	280 g/m ²	8 oz/yd ²
Tensile Strength	ASTM D 751 :2006, C.R.E	1400 x 1400 N/5cm	160 x 160 lbs/in
Tear Strength (warp/weft)	ASTM D 4830:1988 C.R.E	300 x 300 N/5cm	34 x 34 lbs/in
Flame Resistance	DIN 75200	NFPA701, Title 19, CSFM, ASTM E84	
Low Temperature (No Crack at:)	ISO 1876	-30° C	-22° F
RF Weldable (Heat Sealable)	DIN 53354	Yes	
Air Permeability (200 Pascal)	ISO 9237	2650mm/sec	
Fungus Resistant	ASTM G21	Treated	

Applications

	Back-lit	Banner	Billboard	Blockout	Building Wrap	Display Systems	Truckside
Applications		■			■		

Ink Printability

Solvent	Eco Solvent	UV	Latex	Screen Printing	Dye Transfer	Dye Direct
■	■	■	■	■		

Available Sizes

Metric (m)	English (inches)
3.20, 5.00	126, 196

The information on physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. A legally binding guarantee of specific properties is not to be inferred from our specifications. They are given without guarantee and do not constitute a warranty. The purchaser should independently determine, prior to use, the suitability of the material for his/her specific purpose. (Data represents averages and is not intended for use as a specification.)



www.ultraflexXX.com
updated: 06/2017

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EXHIBIT A

EX. 2032-A



#NWTFShow

Rugged Cross Blinds @ 2016 NWTFShow



Becky Lou Outdoors
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EXHIBIT 1

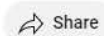
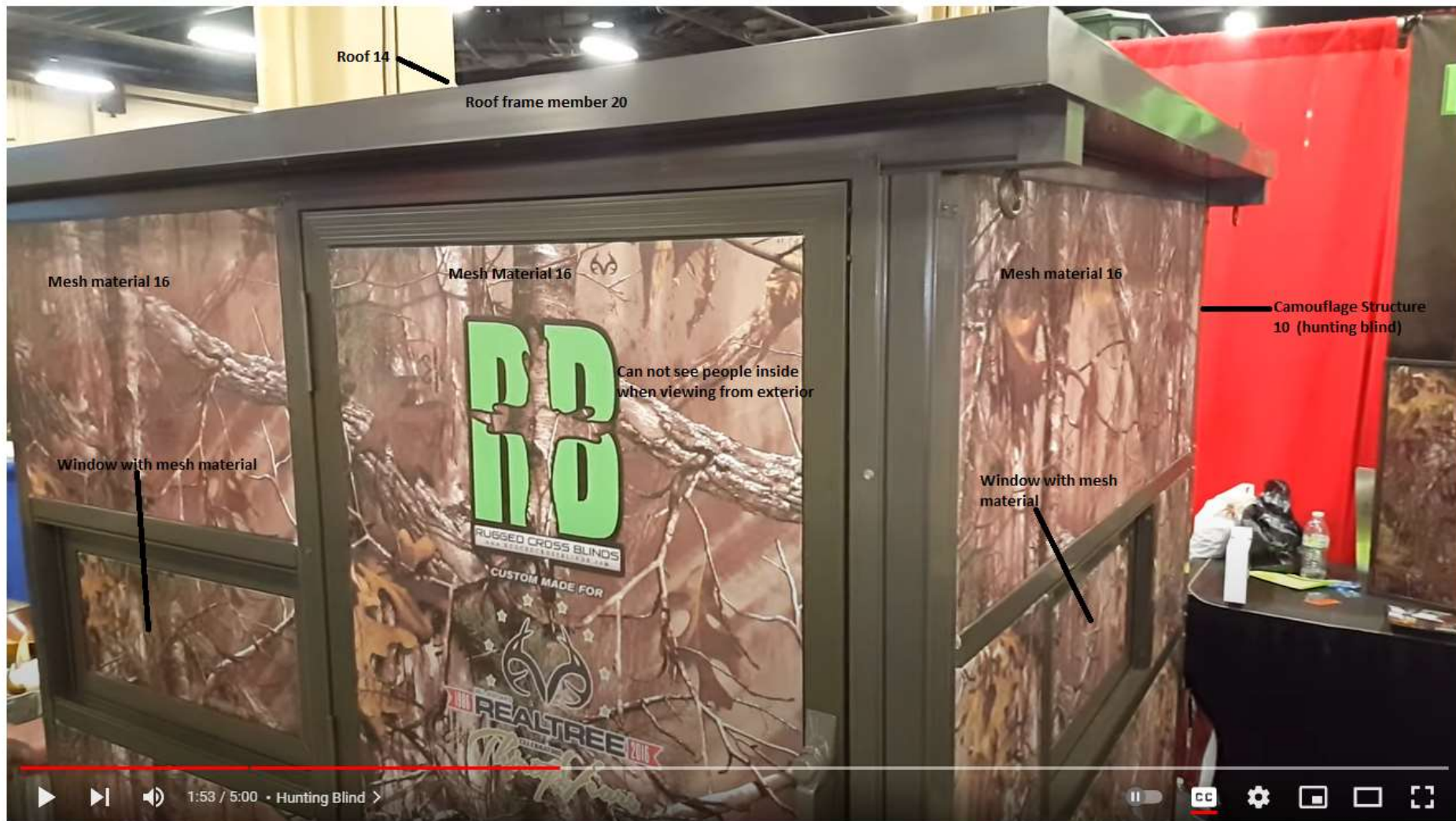


EXHIBIT B

EX. 2032-B



#NWTFShow

Rugged Cross Blinds @ 2016 NWTFShow



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EXHIBIT 2



4



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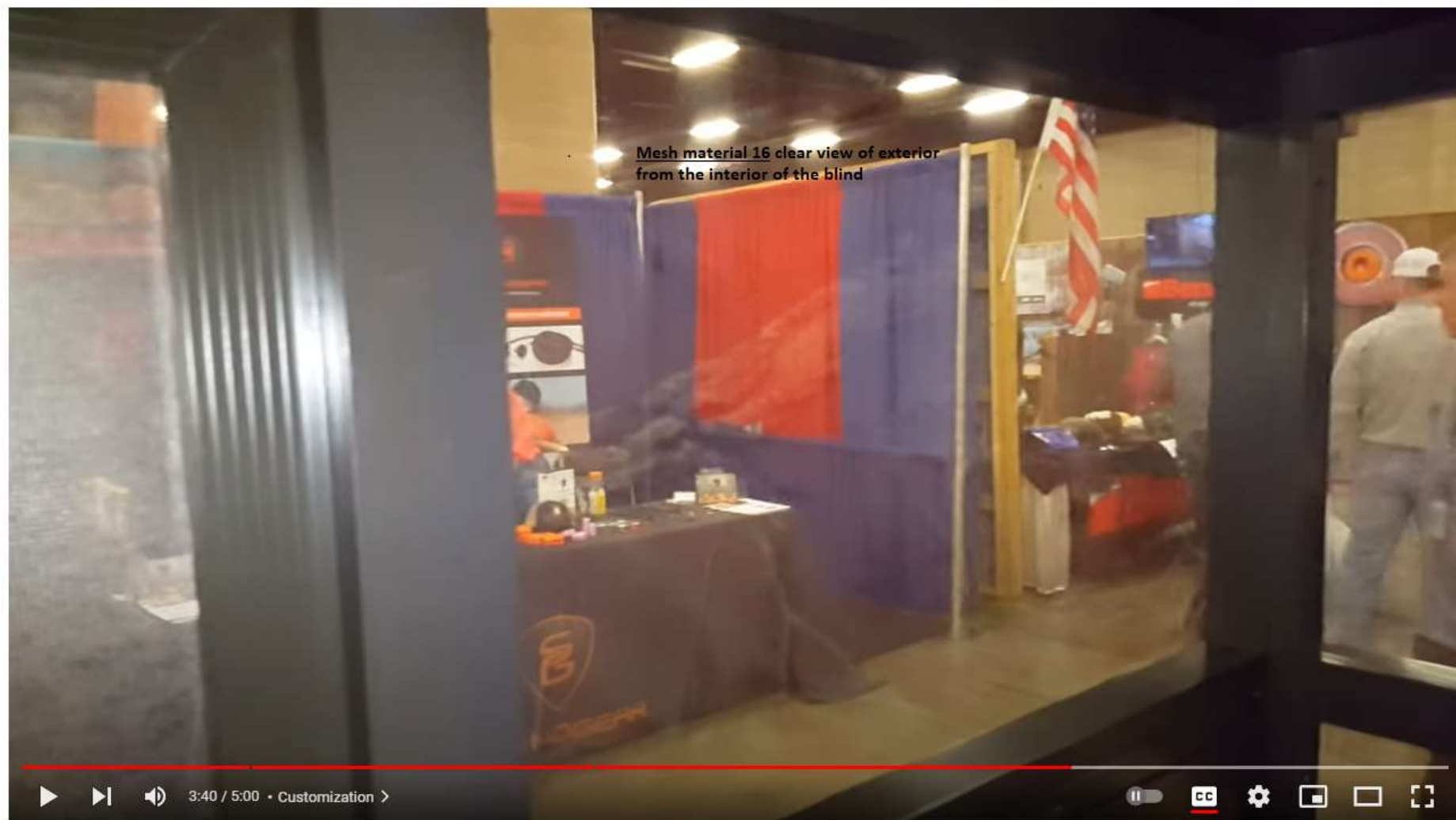


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EXHIBIT C

EX. 2032-C



#NWTFShow

Rugged Cross Blinds @ 2016 NWTFShow



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EXHIBIT 3



4



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EXHIBIT D

EX. 2032-D

Cool Hunting Gear From the 2016 NWTF Convention

BY JOSH HONEYCUTT FEBRUARY 17, 2016

Awesome Gear From an Awesome Show



1 | RUGGED CROSS AUSTIN BLIND

Talk about effective ground blinds. The Austin from **Rugged Cross** is just that. Its aluminum frame is durable, yet lightweight for easy mobility. The camo material is completely see-through from the inside, but it prevents anyone—or anything—on the outside from seeing

EXHIBIT E

EX. 2032-E

in. You have virtually-unobstructed, 360-degree viewing capabilities with this blind. This one is both a bow blind and a shooting house. Comes in Realtree Xtra. (MSRP: \$2,400)



2 | RUGGED CROSS MICHAEL BLIND

The Michael, also from **Rugged Cross**, is much like the Austin. It only weighs 100 pounds. However, this one is a full-fledged shooting house. It offers the same concealment as the Austin. This blind comes in Realtree Xtra. (MSRP: \$2,100)

<https://www.bowhunting.com/blog/2016/02/16/great-turkey-gear-from-the-nwtf-show/>

1. BOWHUNTING BLOG

Great Turkey Gear from the NWTF Show

By Brodie Swisher February 16, 2016

The 2016 National Wild Turkey Federation Convention & Sport Show is in the books. It's been another great show with plenty to see and do for diehard turkey hunters. We had a chance to check out some slick new products over the weekend that are sure to be welcomed items in any turkey camp. Here's a look at some of the great turkey gear from the NWTF show.



Ultimate Predator Turkey Decoy

Fanning for turkeys has become quite the rage in recent years as hunters crawl their way up to a gobbler in the wide open with the use of a strutting decoy. It's an adrenaline rush you won't find in any other method. The problem

EXHIBIT F

has been most of the decoys used for this tactic make it difficult to use when bowhunting.

For 2016, a better solution has arrived. The Stalker Decoy line from Ultimate Predator Gear includes a turkey decoy that easily mounts to your bow and features a shoot-through design. No more peeking or shooting around the side of your decoy.

Go undetected as you draw, aim, and shoot with this decoy.

See more at www.ultimatepredatorgear.com

Avian-X Laydown Hen Decoy

The new Laydown Hen decoy from Avian-X answers the demand of turkeys that have been wanting a decoy that realistically simulates the breeding ritual of the spring turkey. This decoy nails it exactly. When a gobbler sees this life-like decoy in the ready-and-waiting position, he will come running. The decoy is also a great option for using at mid-day dust bowl locations. This decoy will be the death of many gobblers this spring, no doubt.

See the complete line of Avian-X decoys at www.avian-x.com.



Trophy Sculptures

Looking for a better way to display your turkey fans? Trophy Sculptures offers a creative and classy way to show off your turkey fans. Trophy Sculptures are a fresh and modern spin on the traditional method of displaying hunted trophies. Artist, Andy Campbell, uses a special multi-step method of cold cast bronze to create an affordable way to manufacture these unique bronze sculptures.



The “Bronze Strutter” is approximately 3/4 the size of a lifesize turkey. Choose from Rio Grande, Eastern, Osceola, or Merriam Turkey with a unique design specific to each subspecies.



The Bronze Strutter allows you to display the fan, beard, and spurs of your trophy bird.

Check it out at www.trophysculptures.com.

T.O.M. Targets

There's a new and exciting way to practice for the moment of truth when it comes to making the shot on turkeys. T.O.M. Targets has introduced a reactionary target that allows you to see the impact of your shot. It's a great concept for young hunters and newcomers to the sport of turkey hunting.

Shotgun hunters will be able to pattern their loads with this unique target, but I'm thinking it would also be a slick option for the archer too..especially when practicing with broadheads designed for head shots.

Check it out at www.tomtargets.com.



Custom Barnwood Plaques

One of the coolest man-cave items I've come across in a long time was a box call shaped coffee table made from barnwood. The craftsmanship was impressive, to say the least. It would be a great addition to any den, man-cave, or even at the foot of your bed..if you can pull that one off with your wife. The company specializes in plaques and pedestals to display your trophies as well as a line of really cool barnwood home décor.

See them at www.custombarnwoodplaques.com.



Rugged Cross Blinds

We came across a very unique new blind concept from the guys at Rugged Cross Blinds. These blinds feature a strong and durable aluminum frame with a high quality mesh material. The really cool feature of this material is that you can see out, but game cannot see in. It offers true 360-degree viewing. You can see it all with this blind. No obstructed views and peeking out windows. Designed for warmer climates, Rugged Cross Blinds are the only blind on the market that allows for constant airflow. These blinds truly allow you to see more and stay much more comfortable on warm weather hunts. www.ruggedcrossblinds.com

The surprising product category that saw a lot of innovation for 2018

New ground blinds for 2018 — yes, ground blinds — made a splash at the ATA Show.

By Jace Bauserman
January 18, 2018



ATN OTS LT SERIES
THERMAL MONOCULAR



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It wasn't a racy bow, high-tech clothing or a sleek new broadhead that created the big buzz at this year's ATA Show. Although there were plenty of oohs and aaahs in the shooting lanes and I did hear more than one side conversation about Rage's X-treme Four Blade, there was just no trumping the excitement surrounding the ground blind category. After looking at the blinds on display at the Show, it wasn't hard to see why.

This is the year of the ground blind.

EXHIBIT G

X

EX. 2032-G

Primos SurroundView 360

I hate the word game-changer, but I simply can't think of a better description for Primos' new SurroundView ground blind series. The series includes 180-, 270- and 360-degree models, but it was the SurroundView 360 that really surprised me.



Primos SurroundView 360

With a fighting weight of 23 pounds, this 60 x 60 x 70-inch pop-up blind is constructed with one-way see-through walls. You have to see it to believe it. No more craning your neck to spot approaching game through a side window. You have a full view (front, left and right) of your surroundings. It's really kind of freaky, and I know the first time I see a tom approaching from the side I will be ducking for cover. You feel so exposed, but you're not. You can see them. They can't see you. Like other popular Double Bull models, the SurroundView 360 boasts a full front shooting window, offers five shoot-through ports and is built like a German Tiger Tank.

According to Vista Communications Coordinator Vic Ziliani, the see-through material shouldn't fade, crackle in the cold or be any less durable. I loved it. You will too.

The Blind Without a Blind Spot

Double Bull Introduces SurroundView Blinds

Double Bull has been the premier brand in hunting blinds for many years. What started as a small Minnesota company founded by two hunting buddies, grew to be the most trusted name and the originator of the pop-up-style, five-hub ground blind.

Ever since that original product, Double Bull has continued to introduce advances, such as the double-wide door, 180-degree window, silent slide buckles, and many other innovations. And throughout that history, Double Bull has been revered as having the highest quality and longevity.

In 2018, Double Bull is again turning the hunting blind industry on its head.

A New Innovation

Always looking for the next advancement, Double Bull engineers are first and foremost hunters. They are constantly on the lookout for innovation that provides true value to the user. A little over two years ago, Double Bull began experimenting with a new fabric technology. This exclusive fabric has unique properties that allow it to function like a two-way mirror—hiding the hunter from the game outside the blind, but offering a full view without gaping windows.

The basis of the technology, now dubbed SurroundView, is a special tiny pinhole pattern. When printed with a camouflage design, the holes are hidden and appear solid. Yet, when colored in solid black, they allow a near-transparent view.

“It’s a sort of optical illusion,” explained Jason Harris, Senior Product Manager for Double Bull. “From the outside, the camouflage pattern tricks the eye, human or animal, into thinking it’s completely solid. The inverse is

when you're on the inside, your eyes are able to focus through the pinholes and your mind disregards the blank black fabric between the holes."

The benefits to hunters are pretty obvious: No more silent gobblers sneaking in the back door. No wary bucks skirting the setup just out of view of a window.

Hunting Without a Blind Spot

Anyone who has hunted in a pop-up blind, or even a shooting house, can understand the limitations to a reliance on windows. It seems you are always trying to see what you can't see, because narrow shooting portals, or windows, only provide a limited point of view. With SurroundView, there are no surprises. You can see when a deer is coming from the far corner of the field. You can see if it was a squirrel making noises... or a raccoon... or a deer. It gives you ample opportunity to prepare yourself if an animal is approaching in what would traditionally be a blind spot. It gives you the ability to anticipate and be prepared for when it's time to take the shot.

"It is a huge benefit to be able to see your entire surroundings, know what's about to happen, and also prepare for it," Harris said. "Also, if you're sitting with kids, or someone who's new to the sport, they can just sit still and see everything. That's a big difference from what I've seen happen a lot in other kinds of blinds. The kids are having to hunch over, move back and forth, and look through each window to really see what's going on around them. With SurroundView technology, you can sit comfortably and survey all around without much movement, yet you're totally hidden."

Three Versions of the Ultimate Hide

SurroundView blinds incorporate other Double Bull innovations that hunters have come to love. First and foremost, the SurroundView technology uses Primos Truth Camo, which is a proprietary camo pattern that was created specifically for large-format applications, such as blinds.

There are plenty of camouflage patterns on the market that perform well in a tree, or in certain conditions, but Truth camo was developed specifically for the ground-level, no matter the conditions or environment. It works spring or fall, in green cover or brown, and breaks up large objects such as blinds exceedingly well.

SurroundView blinds will be available in three models. Named for the degrees of see-through viewing provided by the exclusive SurroundView fabric, there will be a SurroundView 360, SurroundView 270 and SurroundView 180. Each one is configured slightly differently.



SurroundView fabric does cost more to produce, and in many applications, hunters will not need a full 360-degree viewing experience. But for those that do, the SurroundView 360 offers a 77-inch hub-to-hub dimension, with a 60-inch floor space and 70-inch height. It's great for two full-grown hunters, or an adult and a couple of kids. It incorporates the 180-degree shoot-through window configuration that is on the current Double Bull Deluxe Blind. It also comes with a blackout curtain that can be positioned on any of the four wall panels.



The next size is the SurroundView 270. It incorporates one black-out wall with three SurroundView walls, and features more traditional port-style shooting windows. It is 73 inches hub-to-hub and has a floor that is 55 inches. The windows are vertical to allow hunters to use bow or rifle, plus larger, horizontal shooting windows are located above the rod and hub systems.



The SurroundView 180 is the smallest of the three. It has the same window configuration as the SurroundView 270, but is 64 inches hub-to-hub, with a 48-inch floor space, and a 65-inch height. It's perfect for the solo hunter. It incorporates two SurroundView see-through panels, giving you a 180-degree field of view.

The NextGen Component

Primos, who owns Double Bull, is getting behind the SurroundView blind fully with a strong marketing campaign. One component is a smartphone app that will allow users to test drive the SurroundView models. Using Augmented Reality software like that found in Pokemon Go and other next-generation apps, the SurroundView app will let the user “place” a blind in a location via their smartphone’s camera. They can then “step inside” the blind to see if the placement is right before ever setting up a blind.

“It’s going be useful for determining blind setups in the field,” Harris said. “But I think it’s also going to really showcase at the store level the kind of experience these blinds can provide.”

The new SurroundView blinds will have MSRPs of \$499, \$399 and \$299 for the 360-degree model down to the SurroundView 180. To find out more visit www.primos.com. The Primos team will be using the blinds on the top-rated Truth About Hunting TV show and product information videos will be posted to YouTube at Primos’ Stream the Language channel: <https://www.youtube.com/user/PrimosHuntingVideo>.

For 2018, Double Bull is introducing a swivel stool to compliment blinds that offer far greater viewing areas than ever before.

"We've had a lot of success with our current QS3 stool," said Jason Harris Senior Product Manager for Double Bull. "It's a triangle blind stool that's designed to house guys over 300 pounds with a small footprint in the blind. But consumers have continued to ask for an adjustable stool that has the ability to swivel."

This year, we're meeting that demand with a stool that marries nicely with having a blind that lets you see 360 degrees."

The Double Bull Swivel Stool is rated for weights over 275 pounds. It also has adjustable legs, so users can level it regardless of the terrain. This also helps in adjusting your height for making a perfect shot through the window of the blind.

The Double Bull Swivel Stool will have an MSRP of \$79.99 and will be available through Double Bull dealers as well as online at www.primos.com.



Dan Kidder

My name is Dan Kidder, I am Managing Editor of Sportsman's News Magazine. I am a former Marine who served with the Fleet Anti Terrorism Security Team Company during Operation Desert Storm. Prior to moving to Utah, I served as communications director for Georgia Congressman Mac Collins in his Washington, DC office. I am the President and CEO of On Target Defensive Training, offering firearms and unarmed combat courses to civilians and law enforcement. My students have included federal agents of the FBI, CIA, Secret Service, Border Patrol, ICE, local and state law enforcement, national celebrities, and the general public. My beat at Sportsman's News includes tactical firearms, personal protection, survival, first aid, camping, and hiking.

<https://www.bowhuntingmag.com/editorial/ata-2018-top-new-treestands-ground-blinds-accessories/309560>

ATA 2018: Top New Treestands, Ground Blinds & Accessories



January 12, 2018

By Lynn Burkhead

EXHIBIT I

EX. 2032-I

It's time for the 2018 ATA Show in downtown Indianapolis. Here are a few of the show's new treestand, ground blind, and stand accessories that caught the eye of OSG writers and editors.



Primos Double Bull SurroundView Ground Blind (Lynn Burkhead photo)

As the 2018 ATA Show kicks off this week at the Indiana Convention Center in downtown Indianapolis, treestands, ground blinds, and stand and blind accessories are among the countless new items being seen on the show floor.

Here are a few such products that have caught our attention so far this week in Indy.



Primos Double Bull **SurroundView** Ground Blind

The word revolutionary gets tossed around a lot at the annual ATA Show, but in this case, that might be the perfect word to describe the new Double Bull SurroundView ground blind from Primos. With exclusive one-way, see-through walls that look solid outside the blind and yet offer a wide open view from inside the blind, this Double Bull model has to be seen to be believed. Available in three different models - the 180, the 270, and the 360 - the SurroundView blind has the patented Double Bull hub system that makes set-up and takedown a breeze. With the Truth camouflage pattern and heavy duty materials, this new offering from Primos truly is a "blind without a blind spot!"

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Contact: 601-879-9323; www.primos.com

<https://blog.gritroutdoors.com/best-of-nwtf-2018-part-1/>

[Best Of NWTF 2018 - Part 1 - The blog of the gritroutdoors.com](#)



Best Of NWTF 2018 – Part 1

Posted on March 7, 2018 by Kate Lobanova



Innovative Turkey Hunting Gear from the 42nd NWTF Convention & Sport Show.

By **Nancy Jo Adams**

As with every year since its beginning, turkey hunters from all over converge upon the largest turkey hunting expo in the United States, and for a good reason. All of the turkey hunting gear favorites, including the newest turkey hunting gear in the industry, is on display. Every year I go with a laundry list of items I need to replace or replenish, items I want to try, and new items I have seen advertised. This year at the 42nd Annual NWTF Convention and Sport Show was no different. Here are the twelve items that I will be taking to the field with me this spring.

Primos SurroundView™ 360° Blind

If you have picked up a magazine, scanned social media, or read any of the outdoor industry wire services, you have more than likely heard and seen

EXHIBIT J

EX. 2032-J

the Primos Double Bull SurroundView™ 360°. This blind has received more attention in the Bowhunting and hunting world than any other product since its release at ATA in January. The one-way see-through walls allow the hunter inside the blind to have an unobstructed 180° view of the surroundings. All four walls of the blind are one-way see through with one being a moveable blackout wall for a customized back wall. There are five shoot-through ports and silent slide closures. The exterior material it constructed of the legendary Double Bull durable material in TRUTH Camo that works in all terrain. The blind is a full size 60"x60"x70" diameter and weighs 23 pounds packed in the convenient storage bag.



Gear Review: Primos SurroundView Series Blinds



July 05, 2018

By Christian Berg

There are hundreds of new bowhunting products released every year, but relatively few are unique, useful and innovative enough to truly stand out from the crowd. However, the new SurroundView ground blinds from Primos Double Bull certainly stand out. In fact, I believe SurroundView blinds — featuring an exclusive, one-way fabric that appears completely solid from the outside but allows a panoramic view of your surroundings from the inside — will revolutionize the category by eliminating the closed-in feeling so many bowhunters have hated about ground blinds in the past.

EXHIBIT K

EX. 2032-K



Although the SurroundView blinds are just now reaching store shelves, I had the opportunity to hunt from a prototype during a November deer hunt in Kansas. I know saying you have to see it to believe it is cliché, but in the case of the SurroundView, it's true. Approaching the blind from the outside, it didn't look

much different than any other hub-style blind on the market. But as soon as I opened the door and stepped inside, I literally couldn't believe my eyes. Instead of only being able to see out the windows, I could see right through the walls, offering me great visibility of the woodlot where my blind was set and the large alfalfa field adjacent to the woodlot. A couple hours into the hunt, I spotted a 10-point whitetail out in the alfalfa, hit my rattle bag and watched in amazement as the buck ran on a dead sprint from 250 yards away to just 20 yards before stopping and staring in my direction without any idea that I, or the blind, was there! The buck then proceeded to walk directly in front of me at less than eight yards before turning into the woods directly behind the blind and disappearing into the brush. Had I not filled my tag the day before, it certainly would have been game over.

The one-way fabric in SurroundView blinds isn't designed to be shot through, so you still have to arrange the various window openings based on your hunting style and anticipated shot opportunities. However, the unrestricted views the fabric offers eliminate the need to constantly stand up or lean awkwardly to "peek" from side and rear windows. I can't wait to have a SurroundView in my arsenal this spring when a big tom struts in two feet from the rear or side of the blind. That has happened to me so many times in the past, and it's maddening to be able to hear the bird approaching but not see him. Now, I'll be able to watch his every move and be drawn and ready when he finally presents a shot.

SurroundView blinds are available in three models. The 180 features two one-way fabric walls, measures 48 inches square, 65 inches tall and weighs 19 pounds. The 270 features three one-way fabric walls, measures 55 inches square, 70 inches tall and weighs 21 pounds. And the 360 features four one-way fabric walls, measures 60 inches square, 70 inches tall and weighs 23 pounds. All models feature Primos TRUTH camouflage, Double Bull's heavy-duty construction and a limited lifetime warranty.

MSRP: \$299.99 (180); \$399.99 (270); \$499.99 (360) | www.primos.com

<https://www.deeranddeerhunting.com/content/articles/deer-hunting-gear/primos-newest-double-bull-blind-the-surroundview>

Primos' Newest Double Bull Blind: SurroundView 360 (deeranddeerhunting.com)



Deer Hunting Gear / New Gear

PRIMOS' NEWEST DOUBLE BULL BLIND: THE SURROUNDVIEW

- Tuesday July 17, 2018 – DDH Staff

We first saw it at the January trade shows, but when our staff was able to finally test this revolutionary Primos Double Bull Blind on a June axis deer hunt in Texas, we were blown away. Primos touts the **SurroundView** as the “Blind Without A Blind Spot” – and it truly is. Thanks to the exclusive one-way, see-through walls that let you see all of your surroundings without being seen, hunters now can spot all of the movement that you missed with traditional blinds that have solid walls, yet remain just as concealed. It's like looking through a one-way mirror!



The Primos SurroundView 270 – what you see.

EXHIBIT L

There are three models available. The 360 comes with four one-way see-through walls with one movable black-out wall to place on any wall you choose. The 270 – the model we tested – comes with three one-way see-through walls and one rear blackout wall. The 180 comes with two one-way see-through walls and two rear blackout walls. The blind also features the same solid patented hub system that Double Bull users have come to trust for a quick, easy set up and takedown, and TRUTH camo specifically designed to hide ground blinds in any terrain. A limited lifetime warranty comes with each blind.



BOWHUNTING BLOG

Primos Double Bull SurroundView 270 Ground Blind Review [Video]

By Brodie Swisher | October 24, 2018 | 1 Comment

If there's one hunting product that stirred up the hunting industry about as much as anything else this year, it would have to be the new Primos Double Bull SurroundView ground blinds. There were a lot of folks talking about this one the moment it was released. It was something new and innovative that answered the demand for more visibility when it comes to hunting from the ground blind. The Primos crew stepped up and changed the game with this exciting new blind for 2018. If you've been hearing the talk, or maybe considering a new ground blind purchase, here's a closer look at the product in our Primos Double Bull SurroundView 270 ground blind review.



Primos Double Bull SurroundView 270 Ground Blind

Check out our video review on the Primos Double Bull SurroundView 270 ground blind here:

EXHIBIT M

Primos Double Bull SurroundView 270 Ground Blind Review



The Blind Without a Blind Spot



The SurroundView blind is being touted as The Blind Without a Blind Spot. It was designed with exclusive one-way see-through walls that let you see everything you need to see around you, without the critters you pursue seeing you. Say goodbye to deer and turkeys slipping in from the back side and catching you off guard. With this blind, you'll see them coming. It's a really slick concept and design. You really have to see it to appreciate just how big an impact it will have on your hunting opportunities.

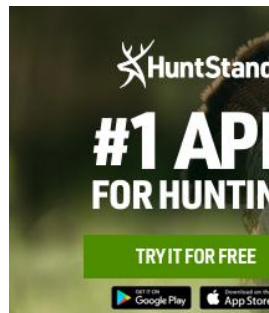
How Does it Work?

So how does the SurroundView concept work?

Thousands of very small holes dot the fabric. On the outside, the camo print and natural light force human and animal eyes to focus on the camo, making the holes "invisible." On the inside, the black print and darkened interior allow your eyes to focus on the holes, so you see "through" the fabric. It's genius!



The SurroundView design eliminates blind spots as game moves around your blind.



Specs on the Primos Double Bull SurroundView 270 Ground Blind

The SurroundView 270 ground blind features three one-way see-through walls and one rear blackout wall. Specs on the blind include the following:

- Dimensions: 55 in x 55 in x 70 in
- Brush loops
- Tie-Down Hub Straps
- Weight: 21 lbs. w/bag
- 7 shoot-through ports
- 3 max view openings
- Legendary Double Bull materials and construction
- TRUTH camo specifically designed to hide ground blinds in any terrain

The Double Bull SurroundView 270 ground blind also features a limited lifetime warranty.

SurroundView 270 Ground Blind – Conclusion



I spend a lot of time in the ground blind each spring, fall and winter hunting with my kids. I immediately saw the benefits of the SurroundView concept for hunting with them. No more frustrating blind spots and inability to see for my kids. They can now see what I'm seeing as animals move about in front of our blind. It will add so much more to the hunting experience for everyone.

The SurroundView 270 Ground Blind will cost you about \$400. You can check it out at www.primos.com or purchase it from our friends at Lancaster Archery at www.lancasterarchery.com.



Brodie Swisher

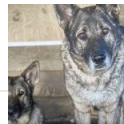
Brodie Swisher is a world champion game caller, outdoor writer, seminar speaker and Editor for Bowhunting.com. Brodie and his family live in the Kentucky Lake area of west Tennessee.

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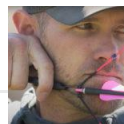
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American Hunter's 2019 Golden Bullseye Award Winners

by AMERICAN HUNTER STAFF posted on December 27, 2018

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[NRA Publications](#) will present its 17th annual Golden Bullseye Awards and Golden Bullseye Pioneer Award at an invitation-only breakfast on Friday, April 26, during the [2019 NRA Annual Meetings & Exhibits](#) in Indianapolis, Ind.

“We are pleased to announce the winners of the 2019 Golden Bullseye Awards,” said Doug Hamlin, Executive Director of [NRA Publications](#). “Selected by a seven-member committee consisting of editors, graphic designers and veteran NRA Publications staff, they epitomize what NRA members seek in their shooting and hunting equipment—outstanding performance, innovation and value. Congratulations to those who have created the industry’s best new products.”

To qualify for consideration for a Golden Bullseye Award, the product must have been:

- Recently introduced and available to consumers prior to the selection of the Golden Bullseye Awards;
- Used/tested by a staff member or regular contributor to the magazine and/or affiliated media;
- Reliable in the field, meeting or exceeding the evaluator’s expectations;
- Innovative in design and function;
- Readily perceived as a value to the purchaser; and
- Styled in a manner befitting the shooting and hunting industry and, perhaps more importantly, its enthusiasts.

The winners of ***American Hunter's 2019 Golden Bullseye Awards*** are:

EXHIBIT N

Gear of the Year: Primos Double Bull SurroundView 360 Blind



"It works like a two-way mirror—you can see out 360 degrees, but that deer or turkey will never know what lurks inside. Dubbed as the first 'blind without a blind spot,' the Primos Double Bull SurroundView 360 Blind utilizes a see-through fabric to allow complete visual awareness without the need to open windows."

—Jon Draper, Managing Editor

• [First Look: Primos Double Bull SurroundView 360 Blind](#)

MSRP: \$499; [primos.com](#)

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Innovative SHADOW MESH means you can see game, but they can't see you.

Roll over image to zoom in

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MUDDY INFINITY 3 PERSON POP-UP GROUND BLIND, EPIC CAMO

★★★★☆ (4.3) 24 reviews

\$199.98

Price when purchased online ⓘ

Actual Color: Camo

Camo

\$199.98

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Arrives by Oct 11

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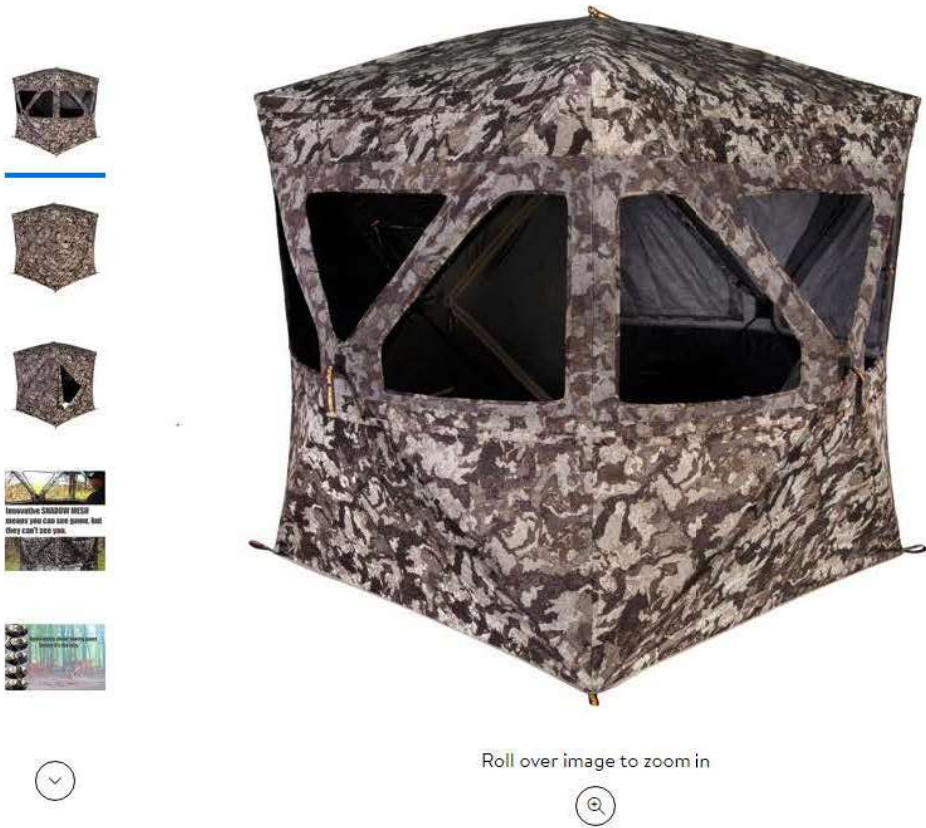


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Actual Color: Camo

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* Sold and shipped by Walmart.com

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PREVUE 2 - SEE-THROUGH BLIND

★★★★★ 5.0 (14) [Write a review](#)

\$229.99

Features: 2 person 2 full one-way see-through mesh Superb concealme duty construction 3 Full-width panoramic windows Zippered door entra interior Carry bag with...

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PREVUE 3 - SEE-THROUGH BLIND

★★★★★

4.6 (11)

[Write a review](#)

\$249.99

Features: 3 person One-way see-through mesh Superb concealment Easy set-up Heavy-duty construction 3 Full-width panoramic windows Zippered door entrance Blacked-out interior Carry bag with backpack...

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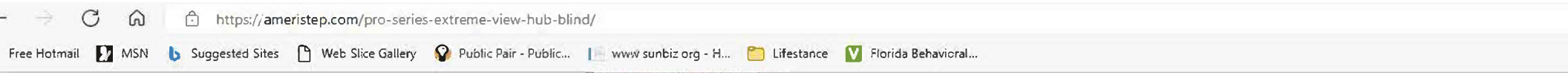
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DESCRIPTION

Ground blinds are only as good as their visibility and convenience. The Pro Series™ Extreme View™ blind takes these features to pro-level status with new Extreme View one-way, see-through mesh and an oversized, five-sided shape that's 37% larger than standard blinds. Up to three hunters fit comfortably inside with easy viewing through a unique system of geometric windows to accommodate any shot: bow, crossbow and rifle. The 12 windows also feature silent-slide covers for last-minute adjustments. With easy access, an extra-deep interior and clear, one-way views it's the ultimate blind to make sure that trophy buck doesn't give you the slip.

FEATURES

- NEW Extreme View™ one-way, see-through mesh for undetected visibility
- Full-size walk-through door for easy entry and exit
- Pentagon footprint with 37% more floor space than standard blinds
- Additional depth in rear for improved maneuverability and concealment
- Easily accommodates up to 3 hunters plus gear
- Silent-slide mesh windows for quick, quiet adjustments
- Multiple window geometries optimal for bow, crossbow and firearm hunters
- Black ShadowGuard™ interior eliminates shadows, silhouettes and scents
- Heavy-duty Durashell Plus™ fabric shell
- Remains concealed in Mossy Oak's NEW Country DNA camo

SPECS

WINDOW OPENINGS: **12**
WINDOW SYSTEM: **Silent Slide**
SHELL FABRIC: **Durashell™ Plus**
DIMENSIONS: **56" X 56" X 66"**
SHOOTING WIDTH: **77"**

INCLUDES

Ground Blind
Carry Bag w/ Strap
Tie-Downs and Ground Stakes

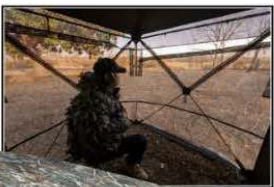
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RHINO 180 – SEE THROUGH BLIND

~~\$249.99~~ \$212.49 **Save \$37.50**

CAMO PATTERN

Realtree Edge Mossy Oak Break Up Country

Mossy Oak Bottomland Predator Camo

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Description & Information

The ALL NEW Rhino 180 See Through blind takes ground blind hunting to a whole new level! This unique 2-way mesh system prevents wild game from seeing in while allowing you, the hunter, to see out crystal clear without any obstruction. The Rhino 180 blends in seamlessly with almost any environment and can easily have other natural habitat added with the included brush-in straps around the top and bottom of the blind. Like all hub-style Rhino blinds, the R180



EXHIBIT T

to be there for dealers so they wouldn't miss out on that higher demand."

Another factor that has greatly contributed to Rhino Blinds' success in recent years is the company's approach to product innovation. For instance, just look at the Rhino 180 See Through Blind, which uses a revolutionary mesh material that allows hunters to see out without game seeing in.

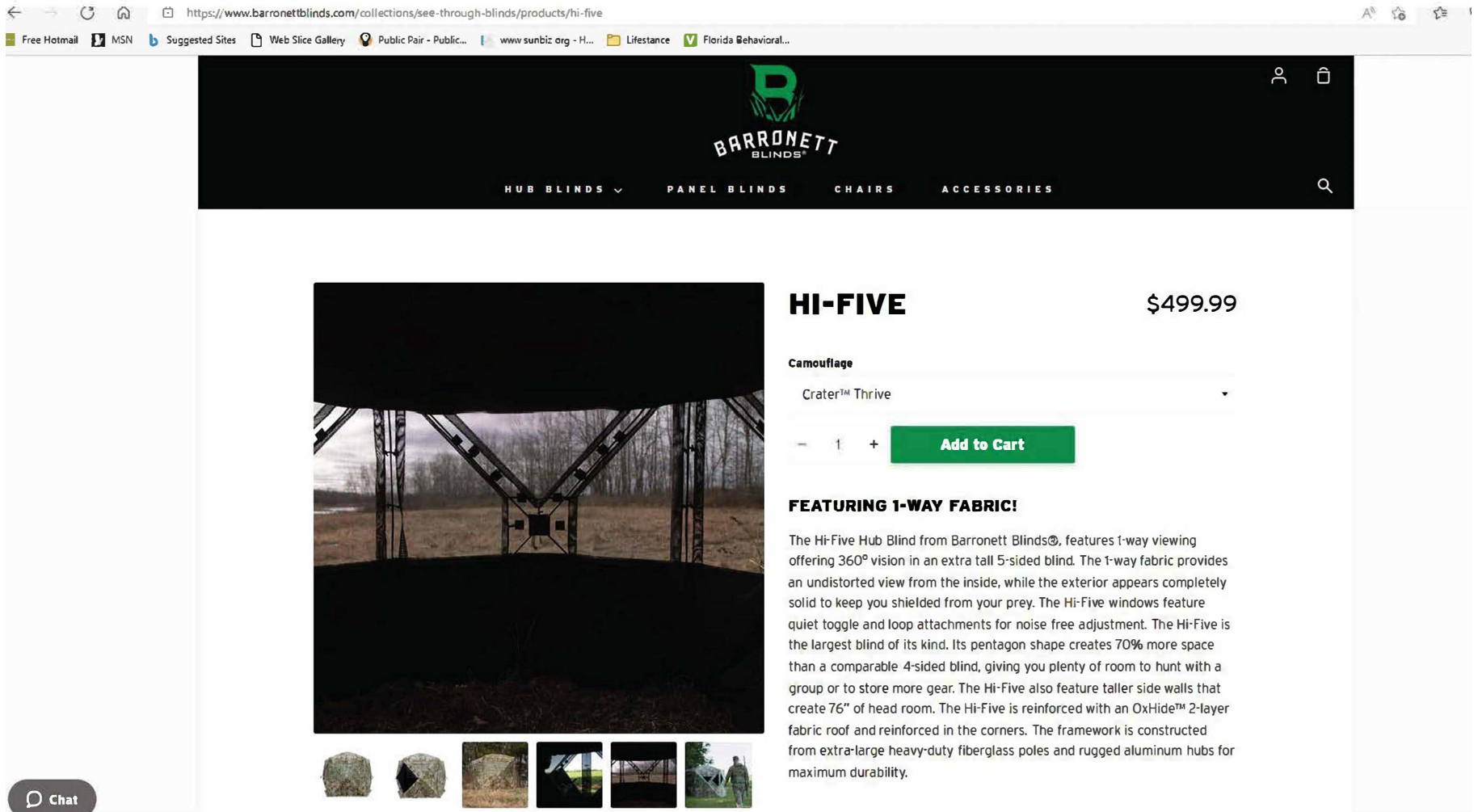
"We launched the Rhino 180 See Through Blind towards the end of 2020, and it just took off like wildfire," Danny Reaser said. "Our customers even ended up generating some organically viral content on social media. TikTok was getting more popular around that time, and our customers were posting videos of the 'Houdini effect' by showing what the blind looked like on the outside and then taking the camera inside to reveal what the one-way mesh can really do. There was one video that even reached about 1.4 million views. That grew a lot of awareness of the product, and people were just buying them left and right. The Rhino 180 See Through Blind also really captured the eyes of our dealers as something hot and new, and I believe every single one of our dealers is carrying it this year."

Catering the Treestand Market

The success and rapid growth of Rhino Blinds prompted Dan and Danny Reaser to consider other product categories. Over the years, they had acquired and grown other outdoor brands like LID-CAM, Wicked Tree Gear and Capsule Game Feeders, and they similarly helped these brands reach new heights. After repeated requests from customers, they decided to develop a new brand, Rhino Treestands, to make an impact in another category that's right up their alley.

"We kept having customers asking us when we were going to come out with a treestand line to go along with the other products we offer," Dan Reaser said. "We launched Rhino Treestands in 2021, and it has already experienced steep growth. Developing Rhino Treestands really





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Camouflage\$129.99

Realtree Edge\$139.99

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EX. 2032-V





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HUNTING BLIND

RACKHOUSE™ 300+ ONE WAY MESH HUNTING BLIND

SKU: BB-B300p

★★★★★ (9 customer reviews)

~~\$189.99~~

- Patented One Way Mesh® Windows
- Integrated Internal Blackout Curtain System
- Saloon Style Spring Blind Door
- Four sided Hub Style Hunting Blind

Buck Bourbon Rack House™ One Way Mesh 300+ is not for storing your aged bourbon, it's for harvesting big old bucks. The Rack House™ 300+ is our largest and most feature rich hub style blind. The Rack House™ 300+ is a four sided hub style blind with included carrying case. When deployed the Rack House™ 300+ features patented One Way Mesh on three of the four sides, and one mini rear door window to see bucks come into your Buck Bourbon feed sight from any direction. The Rack House™ 300+

EXHIBIT W







HUNTING BLIND

RACKHOUSE™ 300+ ONE WAY MESH HUNTING BLIND

SKU: BB-B300p

★★★★★ (9 customer reviews)

\$189.99

- Patented One Way Mesh® Windows
- Integrated Internal Blackout Curtain System
- Saloon Style Spring Blind Door
- Four sided Hub Style Hunting Blind

Buck Bourbon Rack House™ One Way Mesh 300+ is not for storing your aged bourbon, it's for harvesting big old bucks. The Rack House™ 300+ is our largest and most feature rich hub style blind. The Rack House™ 300+ is a four sided hub style blind with included carrying case. When deployed the Rack House™ 300+ features patented One Way Mesh on three of the four sides, and one mini rear door window to see bucks come into your Buck Bourbon feed sight from any direction. The Rack House™ 300+ features Buck Bourbon's saloon style spring back door for silent and easy access to the Rack House. All Rack House™ hunting blinds are patterned in Veil™ Wildland



WOLTER VANDYKE DAVIS
INTELLECTUAL PROPERTY LAW

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Main Office: 407-926-7700

Robert L. Wolter
Direct: 407-926-7706
rwolter@savvyIPLaw.com
www.savvyIPLaw.com

August 29, 2022

Via Federal Express/Overnight Delivery

Edward Castro, President/CEO
GSM, LLC
3385 Roy Orr Blvd.
Suite B
Grand Prairie, TX 75050

Re: U.S. Patent App. No. 11,399,535/Rhino Blinds Patent Infringement

Dear Mr. Castro:

Our firm represents Rugged Cross Hunting Blinds, LLC* (RCHB) with respect to its intellectual property and other related matters. More specifically, RCHB is the owner of U.S. Patent No. 11,399,535 (the '535 Patent), which discloses and claims a pop-up hunting blind including a mesh material that enables hunters to view from the interior of the blind without being seen from the outside. Attached hereto as Exhibit "A" is a copy of the '535 Patent.

RCHB was founded by first responders who introduced the RCHB camouflage mesh technology to the outdoor industry in 2016. RCHB has spent a significant amount of time, effort, and money in patenting, enforcing and licensing this technology. RCHB is seeking partners to continue to provide this technology to the outdoor industry; however, RCHB is finding that manufacturers and sellers are willing to go to great lengths to avoid paying for this technology.

It has come to RCHB's attention that GSM, LLC, via the MUDDY brand name, is selling hunting blinds that are covered by the '535 Patent. For example, GSM is making and selling the PREVUE 2, PREVUE 3, INFINITY 2-PERSON, and INFINITY 3-PERSON, (See, Exhibit "B") that are covered by the '535 Patent. By making, selling, offering for sale, and/or importing these hunting blinds, GSM is infringing one or more claims of the '535 Patent. Attached for your consideration is a claim chart for claim 1 (Exhibit "C") of the '535 Patent. Each limitation of claim 1 is found literally in the each of the above identified hunting blinds; therefore, GSM literally infringes at least claim 1 of the '535 Patent.

RCHB is also the owner of U.S. Patent No. 10,765,108 (the '108 Patent), but you already know about the '108 Patent. Attached as Ex. D, is correspondence, dated August 6, 2020, from my firm to you including actual notification of GSM's infringement of the '108 Patent.

* Rugged Cross Hunting Blinds, LLC is located at 9260 Lazy Lane, Tampa, Florida 33614.

EX. 2032-Y

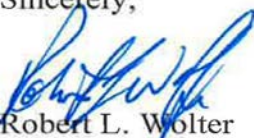
Edward Castro, President/CEO
GSM, LLC
August 29, 2022
Page 2 of 2, cont'd.

Accordingly, RCHB demands that GSM immediately cease and desist from further making, selling, or offering for sale in the United States, or importing into the U.S. its PREVUE and INFINITY hunting blinds. RCHB therefore requests confirmation no later than ten (10) days from receipt of this letter that GSM will cease all infringing activities with respect to these hunting blinds in the form of a written reply acknowledging the information contained herein. If you fail to advise us by this date, RCHB shall, without further notice to you, take such further action as it deems necessary to assert RCHB's rights and to otherwise protect its interests.

As an alternative to GSM ceasing its infringing conduct, as described above, RCHB is willing to discuss a non-exclusive license that will allow GSM to continue making, selling, offering for sale and/or importing its PREVUE and INFINITY hunting blinds. Such a license agreement would of course include an agreed reasonable royalty that covers all sales since at least as early as August 6, 2020 to the present and sales going forward. In the event OPI chooses to stop selling the infringing hunting blinds, GSI will still be required to compensate RCHB for past infringement.

Note further that RCHB has currently, two other continuation applications pending with the USPTO, including U.S. Patent Application Nos. 17/870,185 and 16/998,843 that further generally cover hunting blinds with a mesh material.

RCHB looks forward to hearing from OPI on this matter.

Sincerely,

Robert L. Wolter

RLW/bam
Encls.



(12) **United States Patent**
Seaton et al.

(10) **Patent No.:** **US 11,399,535 B2**
(45) **Date of Patent:** ***Aug. 2, 2022**

(54) **CAMOUFLAGE MATERIAL, FOR A HUNTING BLIND**

(71) Applicant: **RUGGED CROSS HUNTING BLINDS LLC**, Tampa, FL (US)

(72) Inventors: **Christopher M. Seaton**, Tampa, FL (US); **Timothy R. Seaton**, Tampa, FL (US)

(73) Assignee: **RUGGED CROSS HUNTING BLINDS LLC**, Tampa, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/345,981**

(22) Filed: **Jun. 11, 2021**

(65) **Prior Publication Data**

US 2021/0298288 A1 Sep. 30, 2021

Related U.S. Application Data

(63) Continuation of application No. 16/998,843, filed on Aug. 20, 2020, which is a continuation of application (Continued)

(51) **Int. Cl.**
A01M 31/02 (2006.01)
E04H 15/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **A01M 31/025** (2013.01); **E04H 15/001** (2013.01); **E04H 15/008** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC F41H 3/02
See application file for complete search history.

(56) **References Cited**

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4,425,959 A 1/1984 Von Mosshaim
(Continued)

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JP 09321485 A * 12/1997
WO 2017074394 A1 5/2017

OTHER PUBLICATIONS

ECHOD Graphics Vinyl Mesh Printing—Vinyl Mesh Banner 37% Air Flow (<https://web.archive.org/web/20140117130123/https://www.echodgraphics.com-/category1.asp?cid=101&iid=12103>) (Year: 2014).

(Continued)

Primary Examiner — David R Dunn

Assistant Examiner — Danielle Jackson

(74) *Attorney, Agent, or Firm* — Robert L. Wolter;
Wolter, Van Dyke, Davis, PLLC

(57) **ABSTRACT**

Mesh material is presented for a hunting blind with a camouflage pattern printed on a first side and a second side with a color coating. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and an intensity ratio of the reflected portion to the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible from the interior and the interior of the hunting blind is not visible from an exterior of the hunting blind. A hunting blind is also provided that includes a frame including frame members and panels of the mesh material attached to the frame members.

19 Claims, 8 Drawing Sheets

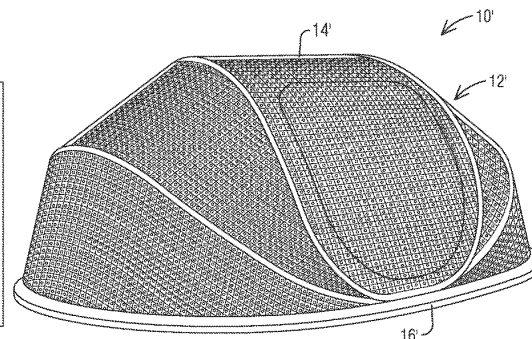
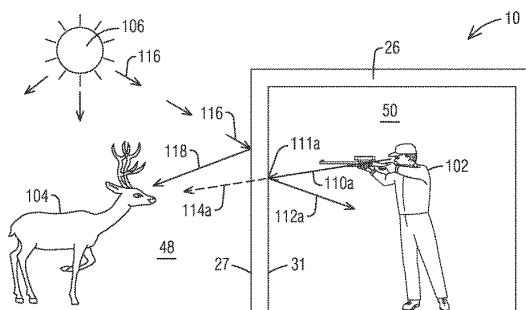


EXHIBIT A

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E04H 15/34 (2006.01)
F41H 3/02 (2006.01)
E04H 15/54 (2006.01)

(52) U.S. Cl.

CPC *E04H 15/34* (2013.01); *E04H 15/54* (2013.01); *F41H 3/02* (2013.01)

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FIG. 1A

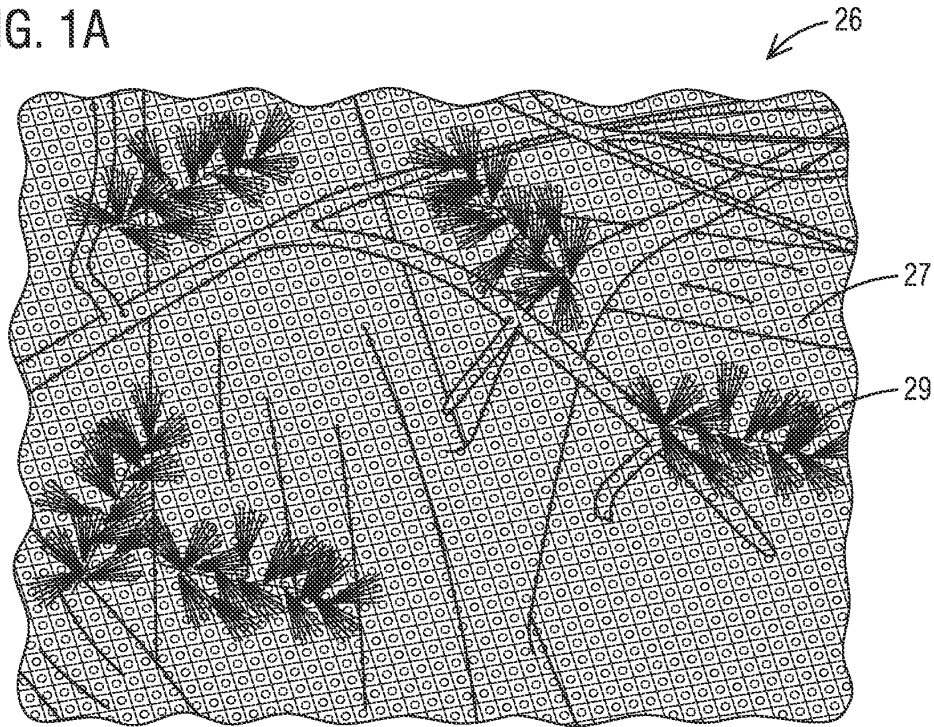


FIG. 1B

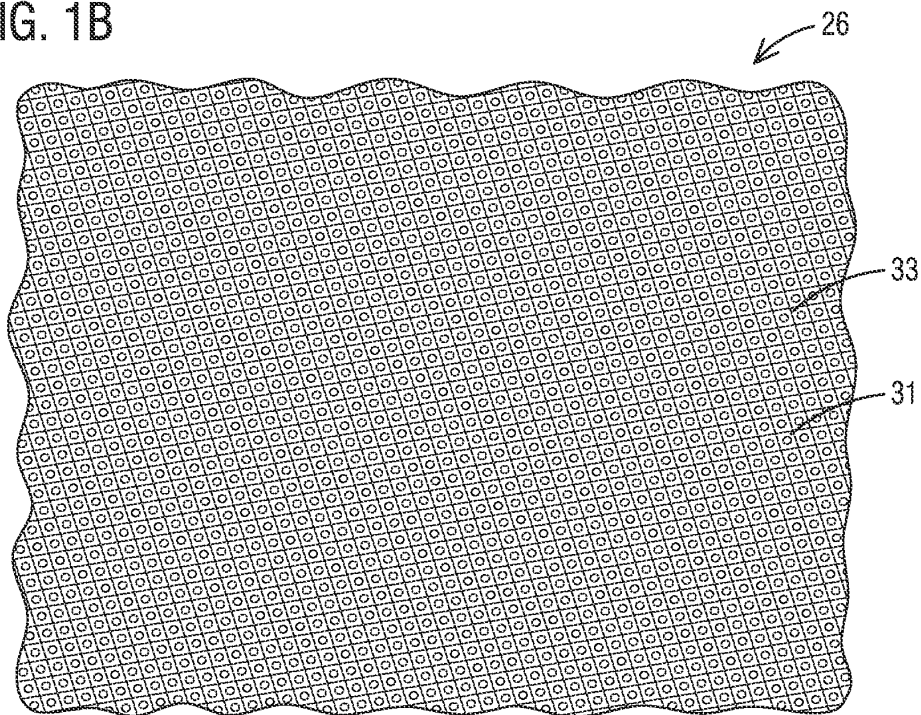
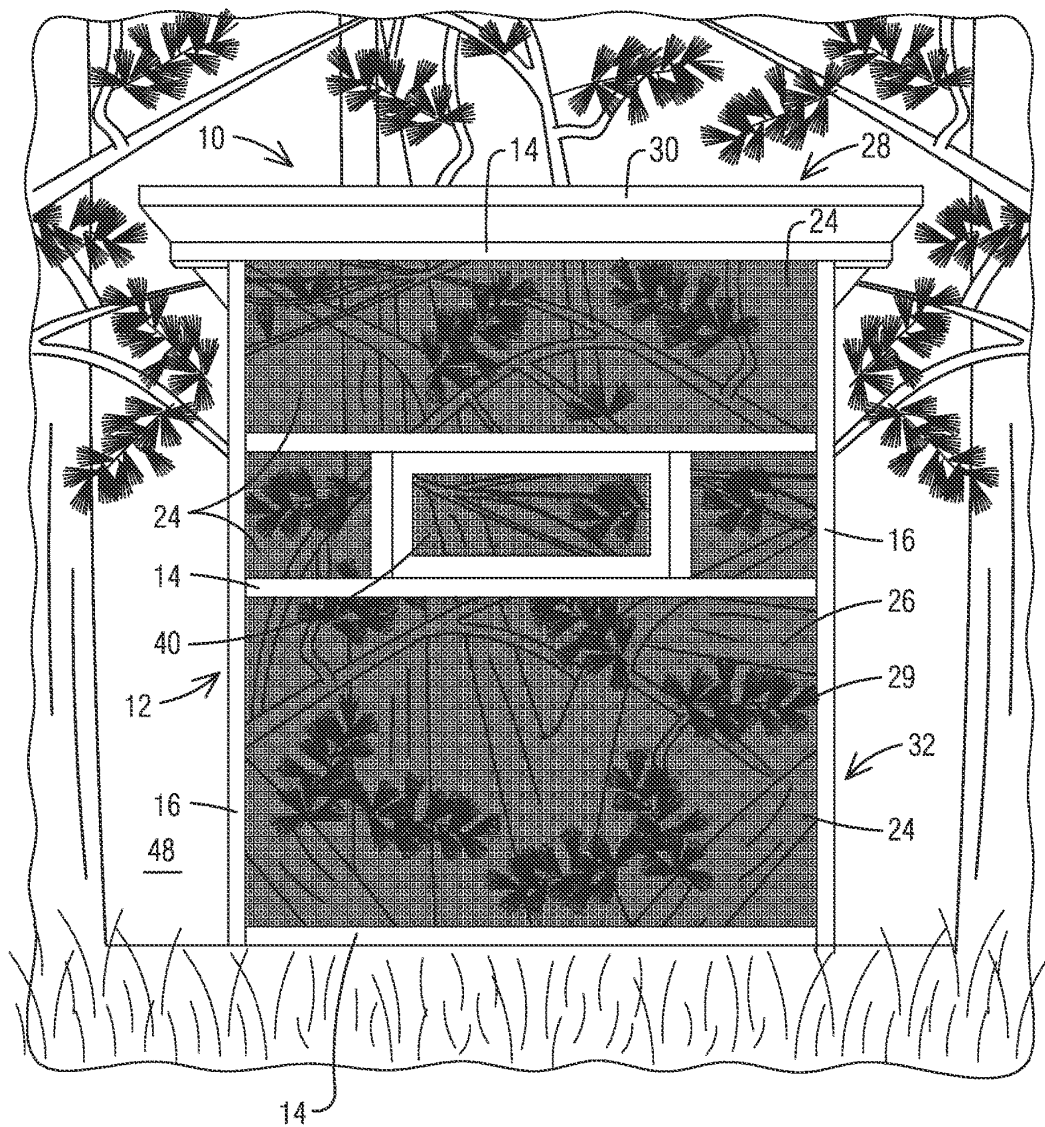


FIG. 2



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FIG. 3A

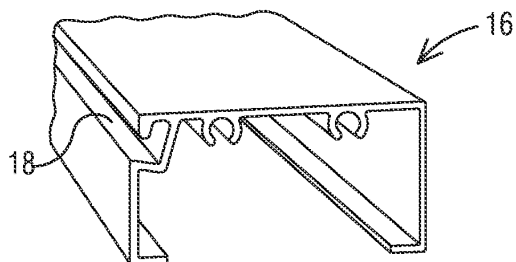


FIG. 3B

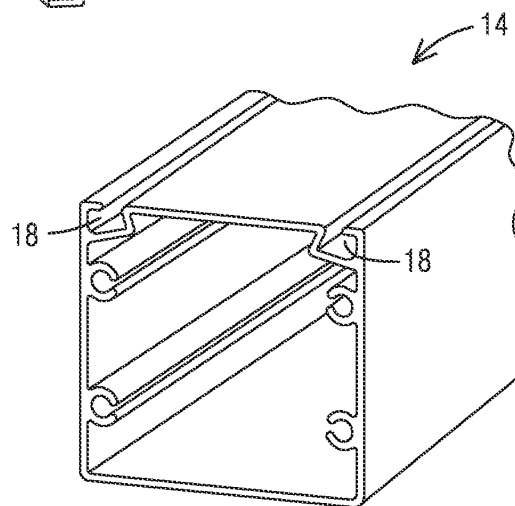


FIG. 4

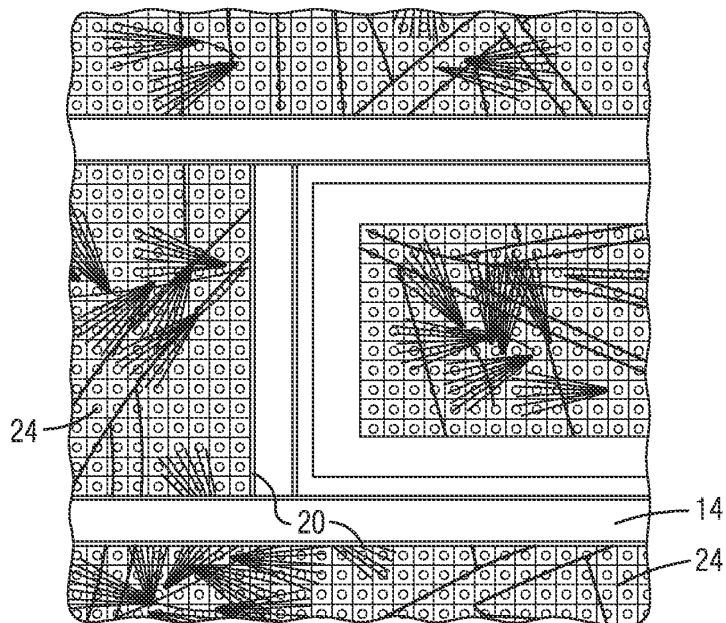


FIG. 5

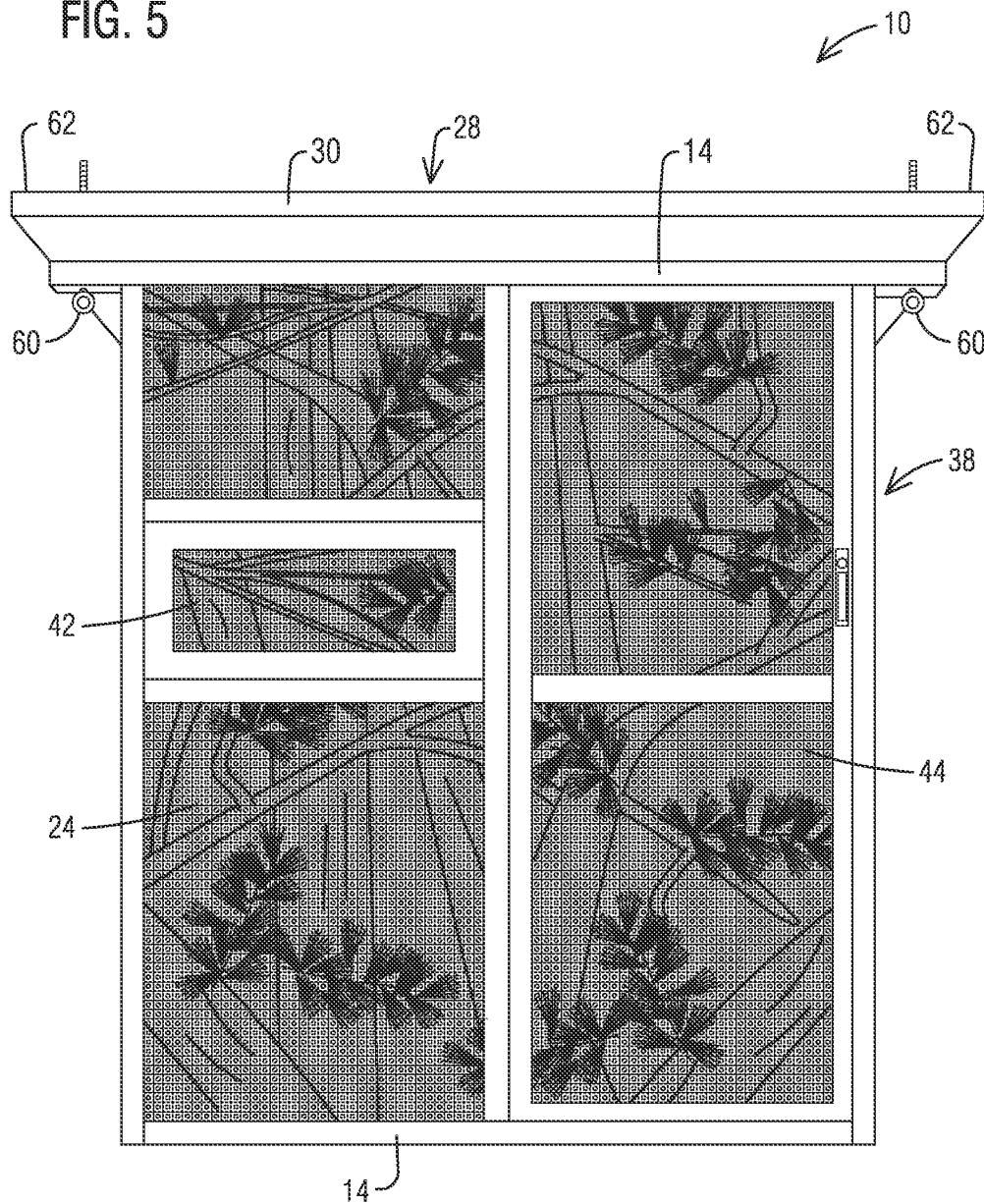
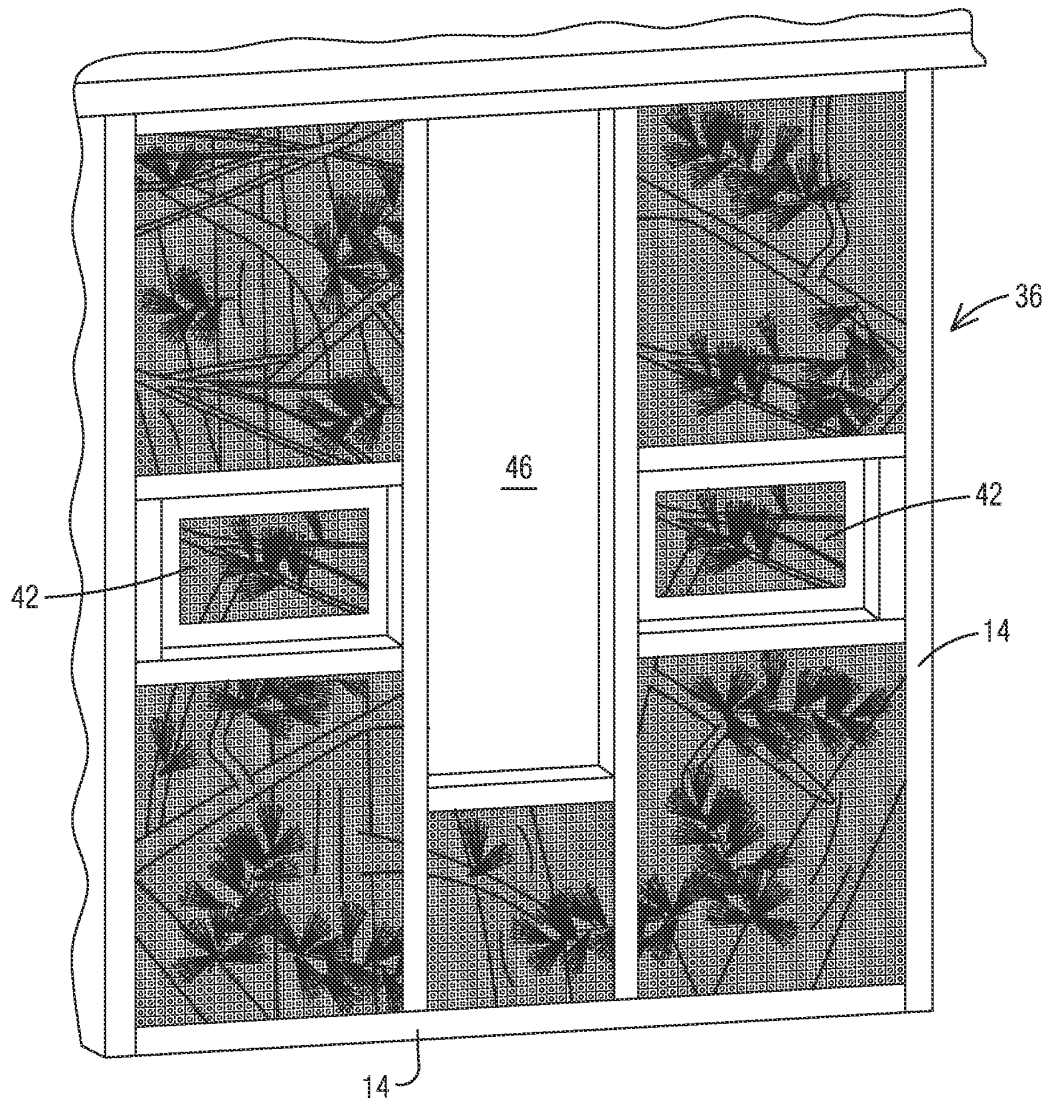


FIG. 6



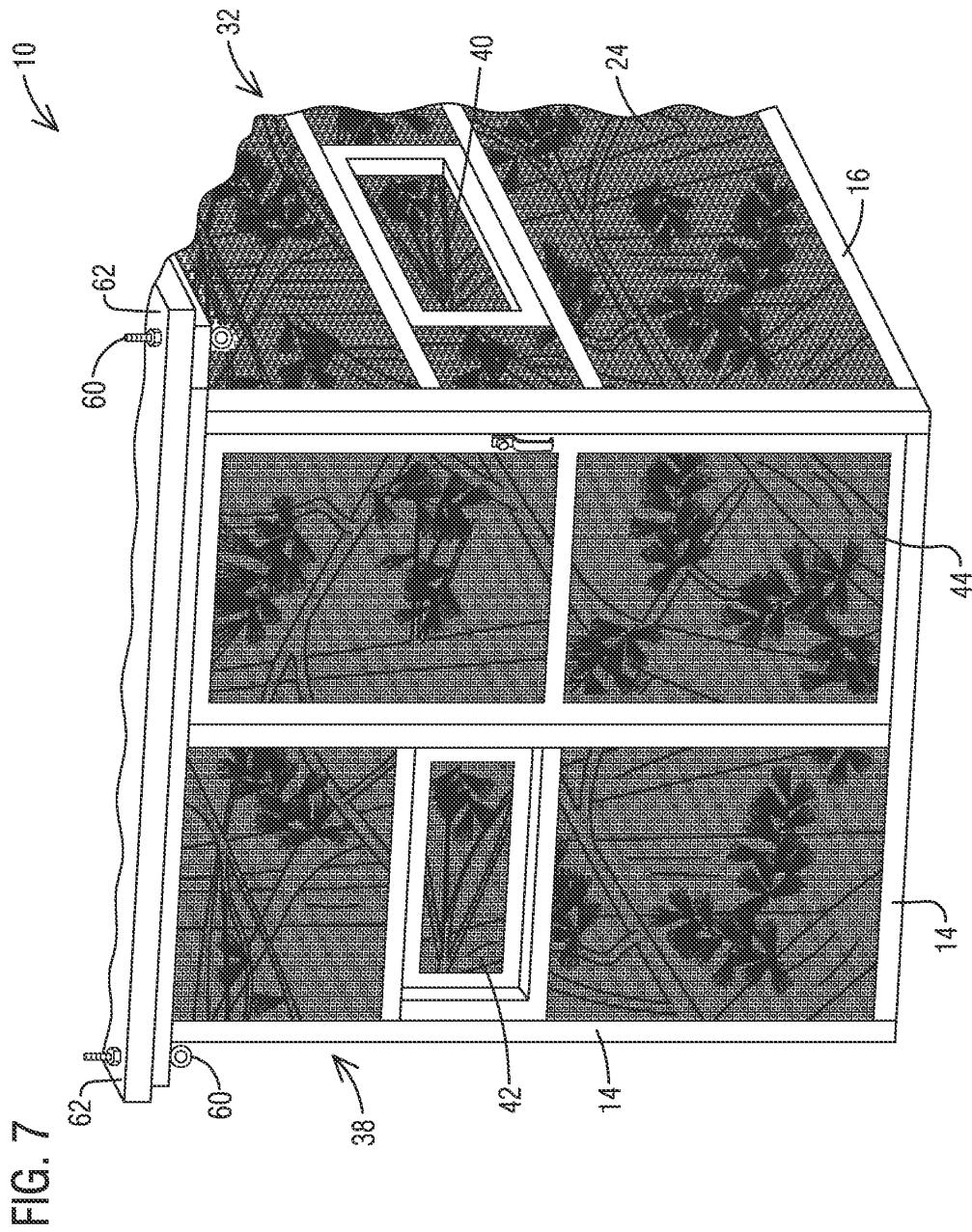


FIG. 8

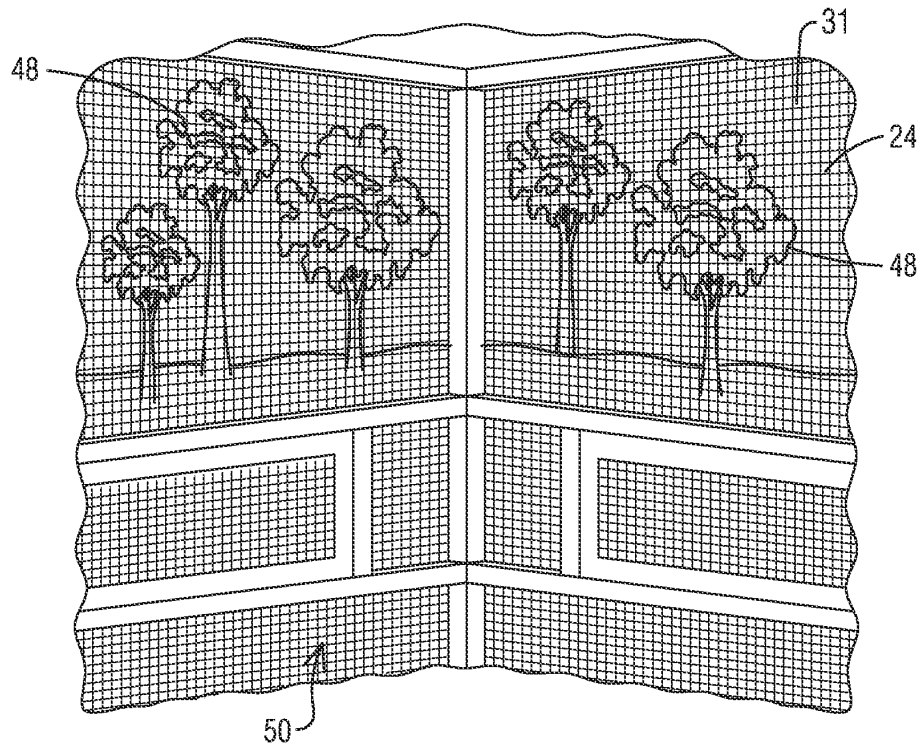
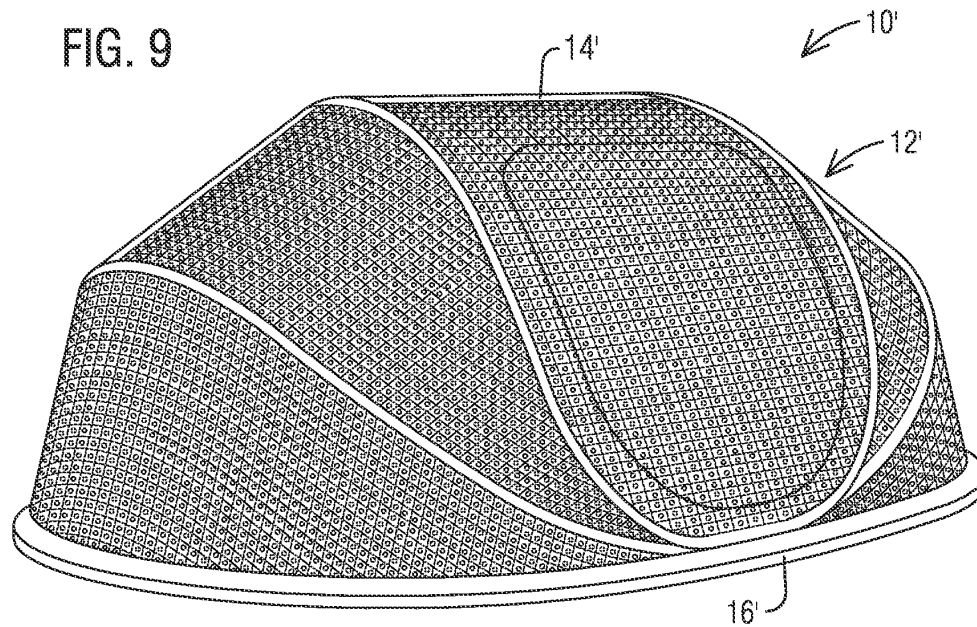


FIG. 9



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**CAMOUFLAGE MATERIAL, FOR A
HUNTING BLIND**

BACKGROUND OF THE INVENTION

Hunting blinds are used to conceal a hunter's location as game approaches. Although conventional hunting blinds have been developed, they have several drawbacks. For example, conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. Additionally, conventional hunting blinds feature structures with closed panels that provide limited ventilation. Thus, these hunting blinds have limited use in high humidity hunting climates.

BRIEF DESCRIPTION OF THE INVENTION

In one embodiment of the invention, mesh material of interwoven fabric is provided for a hunting blind including a camouflage pattern printed on a first side and a second side with a dark color coating, the second side opposite to the first side. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected off the camouflage pattern on the first side back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible through the mesh material from the interior of the hunting blind and the interior of the hunting blind is not visible through the mesh material from the exterior of the hunting blind during daylight conditions.

In another embodiment of the invention, a hunting blind is provided including a frame with a plurality of frame members and panels of mesh material attached to the frame members that cover an area between the frame members to define an interior of the hunting blind.

In another embodiment of the invention, a mesh material is provided that is capable of being secured to a frame of a hunting blind. The mesh material includes a camouflage pattern printed on a first side of the mesh material that faces an exterior of the hunting blind and a single color coating on a second side of the mesh material that faces an interior of the hunting blind.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a perspective view of a first side of mesh material in accordance with aspects of embodiments of the invention;

FIG. 1B is a perspective view of a second side of mesh material of FIG. 1A;

FIG. 1C is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an interior of the hunting blind;

FIG. 1D is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an exterior of the hunting blind;

FIG. 2 is a side view of a hunting blind in accordance with aspects of embodiments of the invention;

FIG. 3A is a perspective view of an open back extruded aluminum member used to form a frame of the hunting blind of FIG. 2;

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FIG. 3B is a perspective view of a hollow extruded aluminum member used to form the frame of the hunting blind of FIG. 2;

FIG. 4 is a view of an interconnection between extruded members and mesh material in the hunting blind of FIG. 2;

FIG. 5 is a back view of the hunting blind of FIG. 2;

FIG. 6 is a perspective front view of the hunting blind of FIG. 2 with an open bow window;

FIG. 7 is a perspective back view of the hunting blind of FIG. 2;

FIG. 8 is a view of an exterior of the hunting blind through mesh material from an interior of the hunting blind of FIG. 2; and

FIG. 9 is a side view of a hunting blind in accordance with aspects of embodiments of the invention.

DETAILED DESCRIPTION OF THE
INVENTION

A more particular description of the invention briefly described above will be rendered by reference to specific embodiments thereof that are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered to be limiting of its scope, the invention will be described and explained.

The inventors of the present invention designed an improved hunting blind that overcomes the above noted drawbacks of conventional hunting blinds. In one example, the inventors of the present invention recognized that conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with a frame that features interconnected extruded aluminum members that provide structural integrity to withstand elements of the outdoors. While some embodiments of the present invention disclose a hunting blind with a frame including rigid interconnected members, the present invention is not limited to this arrangement and also features a hunting blind with a frame including flexible frame members. In another example, the inventors of the present invention recognized that conventional hunting blinds are formed with closed panels that provide limited ventilation and thus have limited use in high humidity hunting climates. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with panels of mesh material that simultaneously provide ventilation to an interior of the hunting blind and camouflage the interior of the hunting blind.

In selecting an appropriate mesh material to form the improved hunting blind, the inventors of the present invention recognized that conventional mesh material used in connection with hunting has notable drawbacks. For example, the inventors recognized that such conventional mesh material easily catches and tears on branches as an individual wearing the mesh material moves through dense woods. In another example, the inventors recognized that such conventional mesh material is relatively light and transparent and thus would not effectively camouflage the interior of the hunting blind. To overcome these noted drawbacks, the inventors of the present invention selected a mesh material that is heavier and/or more durable than the conventional mesh material used in connection with hunting. This mesh material advantageously provides an effecting

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tive camouflage to the interior of the hunting blind and is more durable thereby extending a projected lifetime of the hunting blind.

Although some embodiments of the present invention discuss the use of mesh material in the context of hunting blinds, the present invention is not limited to this context and includes all uses of camouflage material in the context of hunting. In other embodiments, the camouflage material (e.g. mesh material 26) can be used to form a ground blind or stake out blind that is mounted in the ground to conceal an individual positioned behind the blind. In still other embodiments, the camouflage material can be used to form windows or tree sand skirts. For purposes of this invention, “camouflage material” means material that is used to cover people, equipment and/or installations, such as the hunting blinds discussed herein, to make them blend in with their surroundings.

FIG. 1A is a perspective view of a first side 27 of mesh material 26 in accordance with aspects of embodiments of the invention. FIG. 1B is a perspective view of a second side 31 of mesh material 26 of FIG. 1A that is opposite to the first side 27. Panels of mesh material 26 are used to form an improved hunting blind, as discussed below. As shown in FIG. 1A, the first side 27 of the mesh material 26 features a camouflage pattern 29. In an example embodiment, the camouflage pattern 29 is based on an exterior environment where the hunting blind will be positioned.

In an example embodiment, the camouflage pattern 29 is based on a photograph of the exterior environment of the hunting blind, and the camouflage pattern 29 can be printed on the first side 27 using ink. As shown in FIG. 1B, the second side 31 of the mesh material 26 includes a dark color coating, such as dark colored ink 33. However, in other embodiments, any color coating, such as any colored ink can be coated on the second side 31, including white colored coating, blue colored coating, red colored coating, yellow colored coating, green colored coating, orange colored coating and purple colored coating. In some embodiments, an exterior surface of the second side 31 is coated with the dark colored ink 33. In other embodiments, dark colored mesh material 26 is used and thus the second side 31 does not need to be coated with dark colored ink 33. In this embodiment, only the first side 27 of the mesh material 26 needs to be printed with the camouflage pattern 29. In some embodiments, for purposes of this description, “dark colored ink” means a colored ink that absorbs a substantial portion of incident visible light. In an example embodiment, the dark colored ink absorbs 50% or more of incident visible light. In another example embodiment, the dark colored ink absorbs 80% or more of incident visible light, for example. In other embodiments, for purposes of this description, “dark colored ink” means one or more of black colored ink, brown colored ink, grey colored ink, dark black colored ink, dark brown colored ink, dark grey colored ink, light brown colored ink, light grey colored ink, dark red colored ink, dark green colored ink, dark blue colored ink, dark purple colored ink, dark orange colored ink, dark yellow colored ink, or any combination thereof. In still other embodiments, “dark colored ink” means one or more color coded inks provided by ink manufacturers, as discussed below.

In an example embodiment, panels of the mesh material 26 are oriented on the hunting blind such that the first side 27 is directed toward the exterior of the hunting blind and the second side 31 is directed toward the interior of the hunting blind. During daylight conditions, the exterior of the hunting blind is visible from the interior of the hunting blind, but the interior of the hunting blind is not visible from the

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exterior of the hunting blind. FIG. 1C is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on the hunting blind 10 from an interior 50 of the hunting blind 10. A hunter 102 is positioned in the interior 50 of the hunting blind 10 and game 104 (e.g. deer) is positioned in an exterior 48 of the hunting blind 10. In some embodiments, the hunting blind 10 is used during daylight conditions, when the sun 106 emits radiation 116. The hunter 102, game 104 and sun 106 are not part of the hunting blind 10. As depicted in FIG. 1C, incident radiation 110a from the hunter 102 is incident on the second side 31 of the mesh material 26. A first portion 111a of the incident radiation 110a is absorbed by the coating of the second side 31. In some embodiments, the dark colored ink of the second side 31 is selected to maximize the absorbed portion 111a of the incident radiation 110a. In other embodiments, an intensity ratio of the absorbed portion 111a to the incident radiation 110a for the second side 31 is greater than an intensity ratio of the absorbed portion 111b to the incident radiation 110b for the first side 27. A second portion 112a of the incident radiation 110a is reflected off the second side 31 back into the hunting blind interior 50. A third portion 114a of the incident radiation 110a is transmitted through the mesh material 26 to the game 104. As further depicted in FIG. 1C, radiation 116 from the sun 106 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 118 of the incident radiation 116 is reflected off the camouflage pattern 29 to the game 104. In some embodiments, an intensity of the reflected portion 118 of light from the camouflage pattern 29 is much greater than an intensity of the transmitted portion 114a of light from the interior 50 (e.g. hunter 102). Since the intensity of the light from the camouflage pattern 29 is much greater than the intensity of the light from the interior 50 (e.g. hunter 102), the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. For purposes of this description, “much greater” is based on the threshold value of the intensity ratio discussed below. Instead, the camouflage pattern 29 is visible from the exterior 48 and conceals the interior 50 of the hunting blind 10. In an example embodiment, the radiation discussed above is in one or more regions of the visible portion (e.g. 400-700 nm) of the optical spectrum that overlaps with a detection spectrum of game 104. In other embodiments, the radiation discussed above is in a detection spectrum of game 104, including one or more regions of the visible portion and ultra-violet (UV) portions of the spectrum. In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the reflected portion 118 to the intensity of the transmitted portion 114a during daylight conditions is more than a threshold value such that the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. In one embodiment, the threshold value is 1. In other embodiments, the threshold value is 2. In still other embodiments, the threshold value is 5. In still other embodiments, the threshold value is 10. In still other embodiments, the threshold value is 100.

FIG. 1D is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on the hunting blind 10 from the exterior 48 of the hunting blind 10. As depicted in FIG. 1D, incident radiation 110b from the game 104 is incident on the first side 27 of the mesh material 26. A first portion 111b of the incident radiation 110b is absorbed by the camouflage pattern 29 on the first side 27. A second portion 112b of the incident radiation 110b is reflected off the first side 27 back to the exterior 48. A third

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portion 114b of the incident radiation 110b is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). As further depicted in FIG. 1D, radiation 115 from an object 122 (e.g. tree) in the exterior 48 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 120 of the incident radiation 115 is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). In some embodiments, an intensity of the transmitted portion 114b of light from the game 104 is approximately equal to an intensity of the transmitted portion 120 from the object 122. For purposes of this description, "approximately equal" is based on a range of intensity ratio, as discussed below. Since the intensity of the light from the game 104 is approximately equal to the intensity of the light from the object 122, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10. In an example embodiment, distinct forms (e.g. game 104, object 122, etc.) in the exterior 48 are visibly distinguishable, as viewed from the interior 50 of the hunting blind 10. In this embodiment, the hunter 102 can visibly distinguish the game 104 from other parts of the exterior 48 (e.g. object 122) since the intensity of the light from the game 104 is approximately equal to the intensity of light from other parts of the exterior 48 (e.g. object 122). In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the transmitted portion 114b to the intensity of the transmitted portion 120 during daylight conditions is approximately equal to 1. In other embodiments, the ratio is in a range from 0.9-1.1. In still other embodiments, the ratio is in a range from 0.8-1.2. In still other embodiments, the ratio is in a range from 0.5-2. In still other embodiments, the ratio is in a range from 0.2-5. In still other embodiments, the ratio is in a range from 0.1-10.

Different types of ink and printing techniques can be used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Each ink includes a colorant (e.g. dye or pigment) and a carrier liquid (e.g. solvent). A defining quality of each ink is the process used to adhere the colorant to the mesh material 26.

In some embodiments, a solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Solvent ink refers to an oil-based solution that holds a colorant (e.g. pigment), and is advantageously fade-resistant, waterproof and resistant to abrasion. During a printing process of the solvent-based ink, the solvent ink (i.e. colorant and solvent) is printed on the mesh material 26, after which the solvent evaporates or is flashed off with heaters on the printer, leaving the colorant behind. In an embodiment, the solvent based ink resists fading for five to seven years. In one embodiment, a region where the printing is performed is vented to exhaust volatile organic compounds (VOC) that are present during the solvent printing process.

In other embodiments, an eco-solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. In an example embodiment, eco solvent ink is used that is sold under the ECO SOL MAX® brand name. Eco-solvent ink is made using ether extracts taken from refined mineral oil. The eco-solvent ink printing process is similar to solvent ink printing, with the exception that eco-solvent ink takes longer to dry and venting is not required since VOC are not present during the printing process. The eco-solvent ink can be removed by alcohol and glass cleaner and accordingly, the durability of eco-solvent ink is reduced as compared to solvent ink. In some embodiments, eco-solvent ink resists

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fading for two to three years, which is reduced from the period of solvent ink. In an embodiment, manufacturers offer eco-solvent inks in various color sets. In an example embodiment, manufacturers offer color coded inks using letters, including cyan (C), magenta (M), yellow (Y), black (K), light cyan (LC), light magenta (LM), light black (LK), white, silver and metallic. In an example embodiment, one or more of the black (K), light black (LK), silver and metallic colored inks can be used to print the dark colored ink 33 on the second side 31.

In other embodiments, a latex based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Latex ink is a pigmented, water-based ink that uses an aqueous-dispersed polymer. As with the eco-solvent based ink, there is no VOC and accordingly, no venting is required during the latex ink printing process. In one embodiment, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 comes out of the printer completely cured. In some embodiments, radiant heaters with airflow are incorporated into the printer to evaporate the latex ink liquid, which causes the latex polymer particles to coalesce, forming a polymer layer that adheres to the mesh material 26 and encapsulates the pigment. In other embodiments, the printer uses ceramic radiated plates for a constant and even heat source.

In other embodiments, an ultra-violet (UV) based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. UV based ink includes oligomer and monomer acrylate resins and photo initiators. During the printing process, after the ink is applied to the mesh material 26, the ink is exposed to UV radiation such that free radicals are released that cause the polymerization of the compound to harden to a dry ink film. The pigment is then encapsulated within this film. In some embodiments, the UV radiation is applied with a light emitting diode (LED) source (i.e. low-heat, long-life) or a mercury arc lamp (i.e. higher heat, shorter life). Unlike the solvent based ink, the UV based ink does not evaporate and instead is "cured" when the UV light system of the printer passes overhead. Due to a low viscosity of the UV based inks and since UV based inks do not penetrate the mesh material 26, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 can be advantageously printed using a reduced volume of UV based ink, as compared to solvent based ink.

In some embodiments, the mesh material 26 is a mesh banner material, for example. In one embodiment, the mesh material 26 is made of polyester. In an example embodiment, the mesh material 26 is made of polyester material that is coated with a PVC (polyvinyl chloride) film or backing. In an example embodiment, the mesh material 26 is a vinyl coated polyester made of polyester scrim, a bonding or adhesive agent and an exterior PVC coating or backing. The scrim supports the coating and provides tensile strength, elongation, tear strength and dimensional stability of the resulting fabric. In some embodiments, vinyl-coated polyester is manufactured in large panels by heat-sealing an over-lap seam with either a radio-frequency welder or a hot-air sealer. In other embodiments, the mesh material 26 is made from a textile or cloth material that is a flexible material and includes a network of natural or artificial fibers (e.g. yarn or thread). In an example embodiment, the mesh material 26 is formed by yarn that is produced by spinning raw fibers of wool, flax, cotton or other material producing long strands. In other embodiments, the mesh material 26 is formed by textiles that are formed by weaving, knitting,

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crocheting, knotting or felting. In still other embodiments, the mesh material 26 is formed using synthetic textile material, including one or more of polyester, aramid fiber, acrylic fiber, nylon, spandex, olefin fiber, ingeo, lurex and carbon fiber. In another embodiment, the mesh material 26 features a PVC (polyvinyl chloride) backing. The PVC backing creates an air-tight print surface to prevent ink spraying through the mesh material 26 and helps to feed the mesh material 26 through the printer during the printing process. The PVC backing is removed from the mesh material after printing, such as by peeling the PVC backing off the polyester material. In another example embodiment, the mesh material 26 has a weight density of approximately 8 ounce (oz) per square yard (yd²). In another example embodiment, the mesh material 26 is a coated polyester scrim mesh banner material. In an example embodiment, the mesh material 26 allows airflow in a range of 30-40%, such as 37%, for example, where airflow is defined as a ratio of a velocity of outgoing air from the mesh material 26 to a velocity of incident air onto the mesh material 26. In another example embodiment, the mesh material 26 has a tensile strength of approximately 160×160 pounds/inch and/or a tear strength of approximately 34×34 pounds/inch. In another example embodiment, the mesh material 26 has a low temperature crack threshold of approximately -22 degrees Fahrenheit (F). In another example embodiment, the mesh material 26 is fungus resistant and flame resistant, NFPA701, title 19, CSFM, ASTM E84.

FIG. 2 is a side view of a first side 32 of a hunting blind 10 in accordance with aspects of embodiments of the invention. The hunting blind 10 includes a frame 12 with one or more frame members, such as aluminum extruded members 14, 16 that are interconnected together. In an example embodiment, the aluminum extruded member 14 is a 2"×2" closed hollow member and the aluminum extruded member 16 is a 1"×2" open back member. FIG. 3A is a perspective view of an open back extruded aluminum member 16 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3A, the extruded aluminum member 16 includes one spline groove 18 to receive a spline, as discussed below. FIG. 3B is a perspective view of a hollow extruded aluminum member 14 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3B, the extruded aluminum member 14 includes a pair of spline grooves 18 to receive respective splines, as discussed below. In an example embodiment, 3" bronze sheet screws are internally screwed to attach interconnecting extruded members 14, 16. In an example embodiment, 10³/₄" text screws are used to attach clips in interconnected areas of the extruded members 14, 16 that are not internally screwed together.

The hunting blind 10 also includes panels 24 of the mesh material 26 that are secured between aluminum extruded members 14, 16. In some embodiments, the panels 24 of the mesh material 26 are attached to the members 14, 16 of the frame 12 to cover an area between the members 14, 16 and define an interior of the hunting blind 10. In an example embodiment, the camouflage pattern 29 on the mesh material 26 is based on the exterior 48 of the hunting blind 10. FIG. 4 is a view of an interconnection between extruded members 14, 16 and panels 24 of mesh material 26 in the hunting blind 10 of FIG. 2. As shown in FIG. 4, a spline 20 is provided along a perimeter of the panel 24 and the spline 20 is positioned within one of the spline grooves 18 of the extruded member 14, to secure the panel 24 along the length of the extruded member 14. In an example embodiment, the spline 20 is a rubber spline. In some embodiments, the spline

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20 secures a first side of the panel 24 within a spline groove 18 of a first extruded member 14, 16 and the spline 20 further secures a second side of the panel 24 within a spline groove 18 of a second extruded member 14, 16, where the first and second extruded members 14, 16 are interconnected to form the frame 12. In further embodiments, the spline 20 secures a third side of the panel 24 within a spline groove 18 of a third extruded member 14, 16 and the spline 20 secures a fourth side of the panel 24 within a spline groove 18 of a fourth extruded member 14, 16, where the first, second, third and fourth extruded members 14, 16 are interconnected to form the frame 12. In other embodiments, a respective spline 20 is used to secure each side of the panel 24 within a respective spline groove of the extruded member.

FIG. 5 is a back view of the hunting blind 10 of FIG. 2. A roof 28 of the hunting blind 10 includes roof panels 30. In an example embodiment, the roof panels 30 have a high-density polystyrene core and are laminated on both sides by stucco textured aluminum. In an example embodiment, the roof panels 30 are 2" Elite® aluminum panels. Anchor bolts 60 are secured through an extruded member 14 and the roof panels 30 at each corner 62 of the hunting blind 10. In an example embodiment, the anchor bolts 60 include a stainless steel eyebolt that is attached with a pair of washers and a hex nut. In an example embodiment, 3" bronze sheet screws (not shown) with neoprene washers are used to attach the roof panels 30 to the extruded members 14 that extend around a perimeter of an undersurface of the roof panels 30.

The hunting blind 10 includes one or more doors and windows. Each door and window includes one or more panels 24 of mesh material 26 that forms an interior of the door or window and is interconnected to extruded members 14, 16 that form the frame of each door and window. As shown in FIG. 2, the first side 32 of the hunting blind 10 includes a window 40 that can be opened (inward to the interior of the blind 10) to provide a shooting position upon the approach of prey from the first side 32. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a window 42 that provides a shooting position upon the approach of prey from the back side 38. FIG. 6 is a perspective front view of a front side 36 of the hunting blind 10 of FIG. 2 with an open bow window 46 that provides an arching position upon the approach of prey from the front side 36. In an example embodiment, dimensions of the windows 40, 42 are 26" (width)×12" (height), for example. In an example embodiment, dimensions of the bow window 46 is 13" (width)×46" (height), for example. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a door 44 that can open (either inward or outward) for entry to the interior of the hunting blind 10. In an example embodiment, dimensions of the door 44 are 30" (width)×66" (height), for example. In an example embodiment, the windows 40, 42, 46 or door 44 can be customized, in terms of length or width. In an example embodiment, the door 44 can be customized to have a width up to 48". In an example embodiment, the windows 40, 42, 46 and door 44 have a frame made of bronze extruded aluminum members. The above numerical dimensions of the windows 40, 42, 46 and door 44 are merely exemplary and the dimensions of the windows 40, 42, 46 and door 44 are not limited to any specific dimension. FIG. 7 depicts another view of the hunting blind 10, including the windows 40, 42 and door 44.

In an example embodiment of the frame 12, the extruded members 14 are 2"×2". In another example embodiment, a height of the frame 12 at the front side 36 is approximately 6' and a width of the frame 12 at the front side 36 and back side 38 is approximately 5'4". As previously discussed,

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panels 24 of mesh material 26 are secured within the frames of each window 42, 46, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

In an example embodiment of the frame 12, the extruded members 14 are 2"x2" and the extruded members 16 are 1"x2". In another example embodiment, a height of the frame 12 at the sides 32, 34 varies from a first height (e.g. 5'10") to a second height (e.g. 6') that is greater than the first height, to provide a pitch in the roof 28 for rainwater runoff. Additionally, a width of the frame 12 at the sides 32, 34 is approximately 5'. As previously discussed, panels 24 of mesh material 26 are secured within the frames of each window 40, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

FIG. 8 is a view of the exterior 48 of the hunting blind 10 through panels 24 of mesh material 26 from an interior 50 of the hunting blind 10 of FIG. 2. The second side 31 of the mesh material 26 faces the interior 50 of the hunting blind 10. The mesh material 26 is partially transmissive such that during daylight conditions, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10 yet the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. As depicted in the view of FIG. 9 since the panels 24 of mesh material 26 are provided on each side of the hunting blind 10, the hunting blind 10 provides a 360 degree view of the exterior 48 through the panels 24 in each side of the hunting blind 10.

FIG. 9 is a side view of a hunting blind 10' in accordance with aspects of embodiments of the invention. The hunting blind 10' includes a frame 12' that is formed of interconnected flexible frame members 14', 16'. In an example embodiment, the hunting blind 10' has a structure that is similar to a pop-up tent. As with the hunting blind 10, the hunting blind 10' includes panels of the mesh material 26 that are secured between the flexible frame members 14', 16'. However, the panels differ from the panels 24 of the hunting blind 10, due to a variation in the spacing between the flexible frame members 14', 16' of the frame 12', as compared to the spacing between the frame members 14, 16 of the frame 12. Thus, although the frame 12 of the hunting blind 10 is a fixed frame including interconnected extruded members 14, 16, the frame 12 of the hunting blind is not limited to a fixed frame and may include a pop-up frame 12' with foldable frame members 14', 16'. In an example embodiment, the pop-up frame includes panels of the mesh material 26 secured between the foldable frame members 14', 16' such that when the frame 12' is moved from a folded position to a deployed position, the exterior of the hunting blind 10' is visible through the panels from the interior of the hunting blind yet the interior of the hunting blind 10' is not visible through the panels from the exterior of the hunting blind 10'.

While certain embodiments of the present invention have been shown and described herein, such embodiments are provided by way of example only. Numerous variations, changes and substitutions will occur to those of skill in the art without departing from the invention herein. Accordingly, it is intended that the invention be limited only by the spirit and scope of the appended claims.

What is claimed is:

1. A camouflage structure comprising:
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members

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along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and

one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:

- a first side with a camouflage pattern; and
- a second side with a dark color coating, said second side opposite to the first side; and

one or more panels of non-mesh material provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;

wherein the one or more panels of the mesh material define an outer surface of the camouflage structure; and wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material.

2. The camouflage structure of claim 1, wherein the camouflage pattern comprises one or more ink substances printed on the first side and the dark color coating comprises a second ink substance printed on the second side.

3. The camouflage structure of claim 1, wherein the camouflage pattern is based on an exterior environment where the camouflage structure will be positioned to make the camouflage structure blend in with the exterior environment.

4. The camouflage structure of claim 1, wherein the dark color coating comprises a single color coating.

5. The camouflage structure of claim 1, wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure;

and wherein the threshold value is 2.

6. The camouflage structure of claim 1, wherein a first side of the camouflage structure includes a window that can be opened to provide a shooting position upon the approach of prey from the first side.

7. The camouflage structure of claim 6, wherein a second side of the camouflage structure includes a window that can be opened to provide a shooting position upon the approach of prey from the second side.

8. The camouflage structure of claim 1, wherein the mesh material is made of polyester material and an acrylic fiber.

9. The mesh material of claim 1, wherein the mesh material is a vinyl-coated polyester material.

10. The mesh material of claim 1, wherein the mesh material is formed by weaving yarn material.

11. The camouflage structure of claim 1,

wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage

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pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage material from the interior of the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure;
and wherein the threshold value is 1.
12. The camouflage structure of claim 1, wherein the mesh material is produced by;
printing the camouflage pattern on the first side of the mesh material using a first ink, and
printing the dark color coating on the second side of the mesh material using a second ink.
13. The camouflage structure of claim 1, wherein the second side of the one or more panels of the mesh material defines an interior of the camouflage structure and the first side of the one or more panels of the mesh material defines an exterior of the camouflage structure; and
wherein the plurality of frame members are configured to form an enclosure that surrounds the interior.
14. The camouflage structure of claim 13, wherein the one or more panels of mesh material provide a 360 degree view of the exterior of the camouflage structure from the interior of the camouflage structure.
15. The camouflage structure of claim 1, wherein flexible frame members along the side of the camouflage structure are interconnected with the one or more panels of non-mesh material along the roof of the camouflage structure.
16. The camouflage structure of claim 15, wherein the pop-up frame is movable from a folded position to a deployed position.
17. The camouflage structure of claim 16, wherein the one or more panels of mesh material are secured between the at least two spaced apart frame members along the side of the camouflage structure in the folded position such that when the frame is moved from the folded position to the deployed position an exterior of the camouflage structure is visible through the one or more panels of mesh material from an interior of the camouflage structure yet the interior of the camouflage structure is not visible through the one or more panels of mesh material from the exterior of the camouflage structure.
18. The camouflage structure of claim 1, wherein the frame members have a variation in the spacing between the at least two spaced apart frame members along the side of the camouflage structure.

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19. A camouflage structure comprising:
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and
one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:
a first side with a camouflage pattern; and
a second side with a dark color coating, said second side opposite to the first side; and
one or more panels of non-mesh material configured to be provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;
wherein the one or more panels of the mesh material define an outer surface of the camouflage structure;
wherein the camouflage pattern is based on an exterior environment where the camouflage structure will be positioned to make the camouflage structure blend in with the exterior environment;
wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material;
wherein the camouflage structure includes a window along the side of the camouflage structure that can be opened to provide a shooting position upon the approach of prey from the side;
wherein the pop-up frame is movable from a folded position to a deployed position; and
wherein the one or more panels of mesh material are secured between the at least two spaced apart flexible frame members along the side of the camouflage structure in the folded position such that when the frame is moved from the folded position to the deployed position an exterior of the camouflage structure is visible through the one or more panels of mesh material from an interior of the camouflage structure yet the interior of the camouflage structure is not visible through the one or more panels of mesh material from the exterior of the camouflage structure.

* * * * *

EXHIBIT “B”

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INFINITY 3-PERSON GROUND BLIND

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PREVUE 2 - SEE-THROUGH BLIND

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PREVUE 3 - SEE-THROUGH BLIND

★★★★★ 4.6 (11) [Write a review](#)

\$249.99

Features: 3 person One-way see-through mesh Superb concealment Easy set-up Heavy-duty construction 3 Full-width panoramic windows Zippered door entrance Blacked-out interior Carry bag with backpack...

[FULL DESCRIPTION](#)

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EXHIBIT “C”

CLAIM CHART OF U.S. PATENT NO. 11,399,535
GSM MUDDY BLIND INFRINGEMENT

Claim 1	GSM MUDDY BLIND
1. A camouflage structure comprising:	A Muddy blind 10 is depicted, for example, Exs. 1 and 2. The Muddy blind as shown includes a frame and attached camouflage. The Muddy 10 is used to camouflage a person according to outdoor surroundings and is especially used by persons hunting wild game.
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and	The blind shown in Exs. 1 and 2 includes a pop-up frame that includes a plurality of flexible frame members. The blind 10, when shipped, for example, or otherwise stored, is in a folded state. The flexible frame members are interconnected at hubs, which promote expansion of the frame members relative to one another to unfold the blind as shown in Exs. 1 and 2. The blind 10 includes a roof 12 and sides 14, which are defined in part by the frame members 12A and 14A, respectively. See, Ex.2. The Muddy blind 10 includes at least two spaced apart frame members 14A along the side 14, and at least two frame members 12A along its roof.
one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:	With respect to Exs. 1 and 2, the Muddy blind 10 includes mesh material along the sides 14 of the blind 10 , and the mesh material is composed of an interwoven fabric. The mesh material spans a space between two side frame members 14A .
a first side with a camouflage pattern; and	As shown in Ex. 1, the outside surface (first side) of the mesh material spanning the two spaced apart frame members 14A , is printed with a camouflage pattern.

a second side with a dark color coating, said second side opposite to the first side; and	The inside side surface (second side) of the Muddy blind 10 has a dark color coating, which is defined in the specification (col. 3, lines 50-60) as including a dark or light grey colored ink). The Muddy blind 10 includes a grey color coating along inside side surfaces of the mesh material.
one or more panels of non-mesh material provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;	As shown in Ex 2, the Muddy blind 10 includes a non-mesh material that is black and is attached to the spaced apart roof frame members 12A .
wherein the one or more panels of the mesh material define an outer surface of the camouflage structure; and	The mesh material of the Muddy blind 10 , as shown in Ex. 1, defines an outer surface along sides 14 of the Muddy blind 10 .
wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material.	The non-mesh material along the roof 12 of the Muddy blind 10 is not light transmissive, or light from an exterior source is not transmitted through the non-mesh material. In this manner, and as shown in Exs. 1 and 2, a person positioned within the Muddy blind 10 , can see from the inside of the blind 10 game on the outside the blind 10 ; however, the game on the outside cannot see the person inside the blind 10 .

EXHIBIT “1”



EXHIBIT “2”

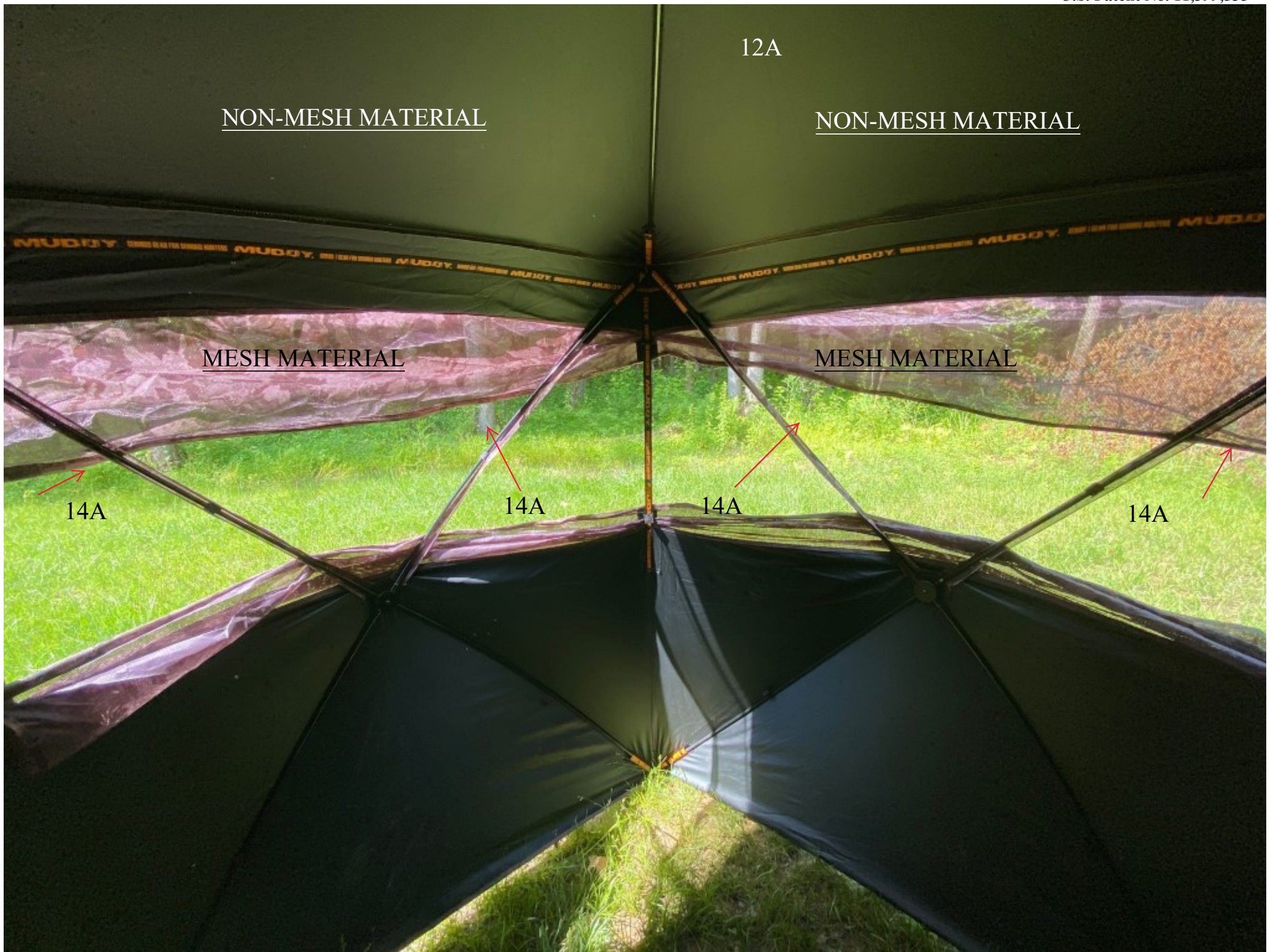


EXHIBIT “D”



WOLTER VANDYKE DAVIS
INTELLECTUAL PROPERTY LAW

390 N. Orange Ave., Suite 2500
Orlando, FL 32801
Main Office: 407-926-7700
Fax: 407-926-7720

Robert L. Wolter
Direct: 407-926-7706
rwolter@savvyIPLaw.com
www.savvyIPLaw.com

August 6, 2020

Via Federal Express/Overnight Delivery

Edward Castro, President/CEO
GSM, LLC
3385 Roy Orr Blvd.
Suite B
Grand Prairie, TX 75050

Re: U.S. Patent App. No. 15/444,909 (U.S. Pub. No. 2017/024591)

Dear Mr. Castro:

Our firm represents Rugged Cross Hunting Blinds, LLC (RCHB) with respect to its intellectual property and other related matters. More specifically, RCHB is the owner of U.S. Patent App. No. 15/444,909 (U.S. Pub. No. 2017/024591 or the '909 Application), which discloses and claims a pop-up hunting blind including a mesh material that enables hunters to view from the interior of the blind without being seen from the outside. Attached hereto as composite Exhibit "A" are the allowed claims and Notice of Allowance.

You should also be aware that Bushnell, Inc., which includes the Primos brand products is the exclusive licensee of the technology associated with '909 Application, owned by RCHB. Both Bushnell and Primos are standing by the RCHB claim for infringement and have a vested interest in the outcome of this matter. To that end Vista Outdoors is also very interested in this matter.

It has come to our attention that GSM, LLC (via the Muddy brand name) is selling hunting blinds that include a mesh material covered in the patent application. When the RCHB patent issues, RCHB will take action to enforce the patent and prevent future infringement.

Accordingly, RCHB demands that GSM, LLC immediately cease and desist from further making, selling, or offering for sale in the United States, or importing into the U.S. its pop-up hunting blinds. RCHB therefore requests confirmation no later than one week from receipt of this

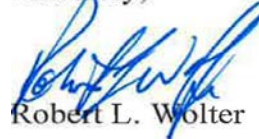
Edward Castro, President/CEO
GSM, LLC
August 6, 2020
Page 2 of 2, cont'd.

letter that GSM, LLC will cease all infringing activities with respect to the pop-up hunting blind in the form of a written reply acknowledging the information contained herein. If you fail to advise us by this date, RCHB shall, without further notice to you, take such further action as it deems necessary to assert RCHB's rights and to otherwise protect its interests.

It is also RCHB's understanding that GSM may be a licensee under the Tru-View patent, U.S. 10,457,015 (the '015 Patent). RCHB believes that the '015 Patent is invalid based on the RCHB's prior art published application which was published more than one year prior to Tru-View's filing of its patent application. RCHB plans on taking steps to invalidate the '015 Patent. Moreover, if there is a license agreement between Tru-View and GSM, that license agreement does not obviate, RCHB's claim for patent infringement.

I look forward to hearing from you.

Sincerely,



Robert L. Wolter

RLW/bam
Encls.

COMPOSITE EXHIBIT “A”



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Robert L. Wolter
Beusse, Wolter, Sanks & Maire PLLC
390 N. Orange Ave., Suite 2500
Orlando, FL 32801

EXAMINER

JACKSON, DANIELLE

ART UNIT

PAPER NUMBER

3636

DATE MAILED: 06/12/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/444,909	02/28/2017	Christopher M. SEATON	12914-003	5946

TITLE OF INVENTION: CAMOUFLAGE MATERIAL FOR A HUNTING BLIND

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	09/14/2020

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

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PART B - FEE(S) TRANSMITTAL

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(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/444,909	02/28/2017	Christopher M. SEATON	12914-003	5946

TITLE OF INVENTION: CAMOUFLAGE MATERIAL FOR A HUNTING BLIND

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	09/14/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
JACKSON, DANIELLE	3636	135-115000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/444,909	02/28/2017	Christopher M. SEATON	12914-003	5946
151692	7590	06/12/2020		
Robert L. Wolter Beusse, Wolter, Sanks & Maire PLLC 390 N. Orange Ave., Suite 2500 Orlando, FL 32801			EXAMINER JACKSON, DANIELLE	
			ART UNIT	PAPER NUMBER
			3636	

DATE MAILED: 06/12/2020

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b) (2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/444,909		Applicant(s) SEATON et al.	
	Examiner DANIELLE JACKSON		Art Unit 3636	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview on 6/5/2020.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 32-38 and 44-46. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☒ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date. <u>20200605</u> .	

/DAVID R DUNN/ Supervisory Patent Examiner, Art Unit 3636	
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Application/Control Number: 15/444,909
Art Unit: 3636

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EXAMINER'S AMENDMENT

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Cian O'Brien on June 5, 2020.

The application has been amended as follows:

Claims 1, 23-25, 27-31, 39-43, and 47-49 have been cancelled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE JACKSON whose telephone number is (571)272-2268. The examiner can normally be reached on M-F: 11AM-7PM EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

Application/Control Number: 15/444,909
Art Unit: 3636

Page 3

interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on (571)272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DNJ/
Examiner, Art Unit 3636

/DAVID R DUNN/
Supervisory Patent Examiner, Art Unit 3636

<i>Applicant-Initiated Interview Summary</i>	Application No. 15/444,909	Applicant(s) SEATON, Christopher M.	
	Examiner DANIELLE JACKSON	Art Unit 3636	AIA (FITF) Status Yes

All participants (applicant, applicants representative, PTO personnel):

(1) Danielle Jackson. (3) ____.

(2) Cian O'Brien. (4) ____.

Date of Interview: 05 June 2020.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: ____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1,23-25 and 27-49.

Identification of prior art discussed: N/A.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant called to request that the claims rejected in the most recent Office Action (mailed 5/29/2020) be canceled by Examiner's Amendment and the application be therefore allowed.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/DAVID R DUNN/ Supervisory Patent Examiner, Art Unit 3636	
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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

ALLOWED CLAIMS
USAN 15/444,909
Attorney Docket No. 12914-003

1-31. Cancelled

32. A camouflage structure comprising:

a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members;

a plurality of panels of a mesh material defining an outer surface of the camouflage structure and attached to the flexible frame members covering an area between the spaced apart frame members and defining an interior of the camouflage structure; and

one or more panels of non-mesh material provided along a roof of the camouflage structure and attached to the flexible frame members;

wherein the mesh material is interwoven fabric with a camouflage pattern printed on a first side, and a second side with a dark color coating, said second side opposite to the first side;

and wherein the mesh material is partially transmissive and has an aperture density that corresponds to an airflow between 30% and 40%, wherein the airflow is defined as a ratio of a velocity of outgoing air from the mesh material to a velocity of incident air onto the mesh material.

33. The camouflage structure of claim 32, comprising a front side and a back side each formed by the frame members and panels of the mesh material secured between the frame members, wherein a door is formed in one of the back side and the front side.

34. The camouflage structure of claim 32, wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the

reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage material from the interior of the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure .

35. The camouflage structure of claim 32, wherein the frame members have a variation in the spacing between the spaced apart frame members.

36. The camouflage structure of claim 32, wherein the frame includes a pair of sides, a front side and a back side, and wherein the frame includes the frame members and wherein panels of the mesh material are secured between the frame members to form at least one window in one or more of the pair of sides, the front side and the back side.

37. The camouflage structure of claim 32, wherein said panels of mesh material comprise;

a first panel attached to the spaced apart frame members to cover a first area between the spaced apart frame members, and

a second panel attached to the spaced apart frame members to cover a second area between the spaced apart frame members,

and wherein the first panel and the second panel are one of;

positioned such that the second panel is opposite to the first panel on the frame and the second panel is oriented parallel to the first panel, and
disposed at an angle relative to each other.

38. The camouflage structure of claim 32, wherein the plurality of frame members are configured to form an enclosure that surrounds the interior.

39-43. Cancelled

44. The camouflage structure of claim 32,
wherein the panels of mesh material and the panels of non-mesh material cover
the area between the spaced apart frame members and define the interior of the
camouflage structure.

45. The camouflage structure of claim 44, wherein the panels of non-mesh
material are non-transmissive such that incident radiation from an exterior of the
camouflage structure is not transmitted through the non-mesh material.

46. The camouflage structure of claim 45, wherein the panels of non-mesh
material comprises roof panels and wherein the non-mesh material comprises
polystyrene.

47-49. Cancelled



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August 25, 2022

**Via Email: mick@opioutdoors.com and
Federal Express/Overnight Delivery**

Daniel Reaser, President/CEO
Outdoor Product Innovations, Inc.
177 Reaser Court
Elyria, OH 44035

Re: U.S. Patent App. No. 11,399,535/Rhino Blinds Patent Infringement

Dear Mr. Reaser:

Our firm represents Rugged Cross Hunting Blinds, LLC* (RCHB) with respect to its intellectual property and other related matters. More specifically, RCHB is the owner of U.S. Patent No. 11,399,535 (the '535 Patent), which discloses and claims a pop-up hunting blind including a mesh material that enables hunters to view from the interior of the blind without being seen from the outside. Attached hereto as Exhibit "A" is a copy of the '535 Patent.

RCHB was founded by first responders who introduced the RCHB camouflage mesh technology to the outdoor industry in 2016. RCHB has spent a significant amount of time, effort, and money in patenting, enforcing and licensing this technology. RCHB is seeking partners to continue provide this technology to the outdoor industry; however, RCHB is finding that manufacturers and sellers are willing to go to great lengths to avoid paying for this technology.

It has come to RCHB's attention that Outdoor Product Innovations, Inc. (OPI), via the Rhino Blinds brand name, continues to sell hunting blinds that are covered by the '535 Patent. For example, OPI is making and selling the Rhino 180 – See Through Blind. (See, Exhibit "B"). Indeed, OPI promotes these blinds as having the "Houdini effect." See, Exhibit "C."

By making, selling, offering for sale, and/or importing these hunting blinds, OPI is infringing one or more claims of the '535 Patent. Attached for your consideration is a claim chart for claim 1 (Exhibit "D") of the '535 Patent. Each limitation of claim 1 is found literally in the Rhino 180 blind; therefore, OPI literally infringes at least claim 1 of the '535 Patent.

* Rugged Cross Hunting Blinds, LLC is located at 9260 Lazy Lane, Tampa, Florida 33614.

Daniel Reaser, President/CEO
Outdoor Product Innovations, Inc.
August 25, 2022
Page 2 of 2, cont'd.

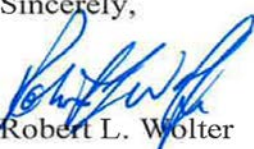
RCHB is also the owner of U.S. Patent No. 10,765,108 (the '108 Patent), but you already know about the '108 Patent. Attached as Ex. E, is correspondence, dated December 21, 2020, from my firm to you including actual notification of OPI's infringement of the '108 Patent.

Accordingly, RCHB demands that OPI immediately cease and desist from further making, selling, or offering for sale in the United States, or importing into the U.S. its Rhino 180 hunting blinds. RCHB therefore requests confirmation no later than ten (10) days from receipt of this letter that OPI will cease all infringing activities with respect to the Rhino 180 hunting blind in the form of a written reply acknowledging the information contained herein. If you fail to advise us by this date, RCHB shall, without further notice to you, take such further action as it deems necessary to assert RCHB's rights and to otherwise protect its interests.

As an alternative to OPI ceasing its infringing conduct, as described above, RCHB is willing to discuss a non-exclusive license that will allow OPI to continue making, selling, offering for sale and/or importing its Rhino 180 hunting blind. Such a license agreement would of course include an agreed reasonable royalty that covers all sales since at least as early as December 21, 2020 to the present and sales going forward. In the event OPI chooses to stop selling the Rhino 180 hunting blind, OPI will still be required to compensate RCHB for past infringement.

Note further that RCHB has currently, two other continuation applications pending with the USPTO, including U.S. Patent Application Nos. 17/870,185 and 16/998,843 that further generally cover hunting blinds with a mesh material.

RCHB looks forward to hearing from OPI on this matter.

Sincerely,

Robert L. Wolter

RLW/bam
Encls.



(12) **United States Patent**
Seaton et al.

(10) **Patent No.:** **US 11,399,535 B2**
(45) **Date of Patent:** ***Aug. 2, 2022**

(54) **CAMOUFLAGE MATERIAL, FOR A HUNTING BLIND**

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(72) Inventors: **Christopher M. Seaton**, Tampa, FL (US); **Timothy R. Seaton**, Tampa, FL (US)

(73) Assignee: **RUGGED CROSS HUNTING BLINDS LLC**, Tampa, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/345,981**

(22) Filed: **Jun. 11, 2021**

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E04H 15/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **A01M 31/025** (2013.01); **E04H 15/001** (2013.01); **E04H 15/008** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC F41H 3/02
See application file for complete search history.

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Primary Examiner — David R Dunn

Assistant Examiner — Danielle Jackson

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Wolter, Van Dyke, Davis, PLLC

(57) **ABSTRACT**

Mesh material is presented for a hunting blind with a camouflage pattern printed on a first side and a second side with a color coating. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and an intensity ratio of the reflected portion to the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible from the interior and the interior of the hunting blind is not visible from an exterior of the hunting blind. A hunting blind is also provided that includes a frame including frame members and panels of the mesh material attached to the frame members.

19 Claims, 8 Drawing Sheets

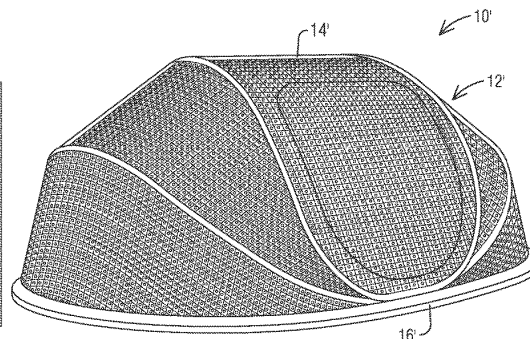
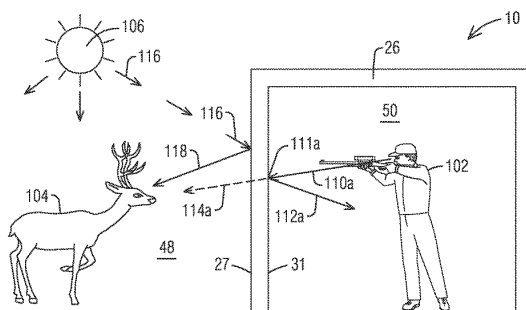


EXHIBIT A

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E04H 15/54 (2006.01)

(52) U.S. Cl.

CPC *E04H 15/34* (2013.01); *E04H 15/54* (2013.01); *F41H 3/02* (2013.01)

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FIG. 1A

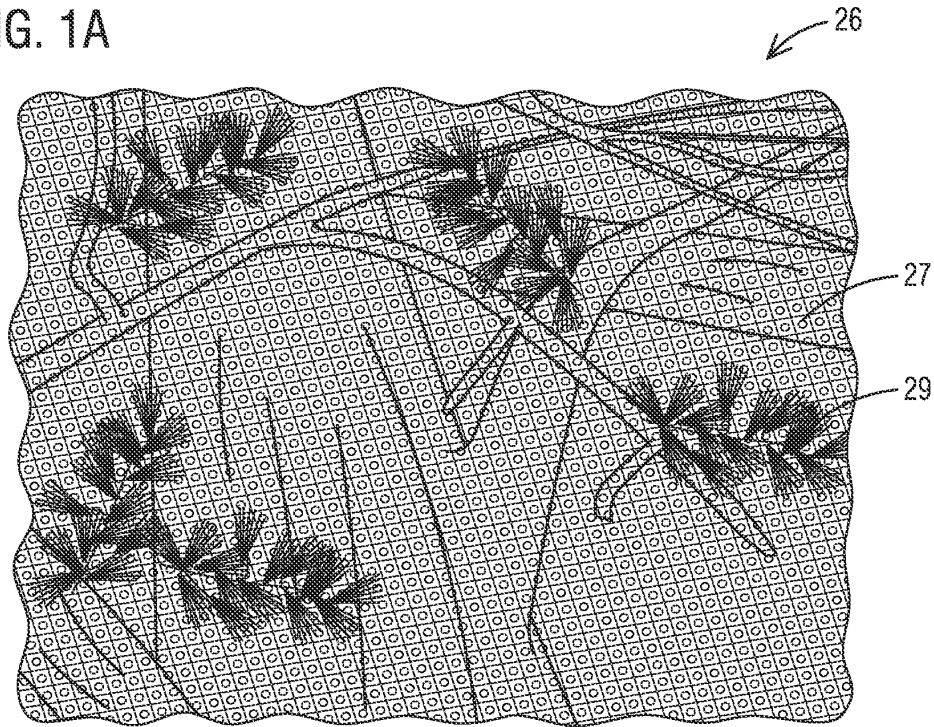


FIG. 1B

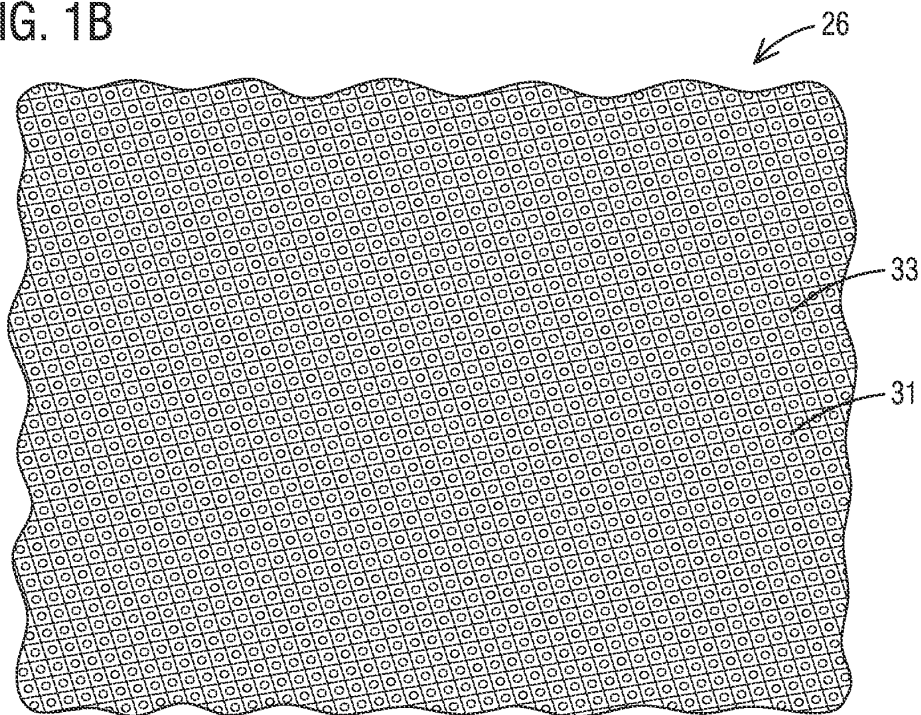
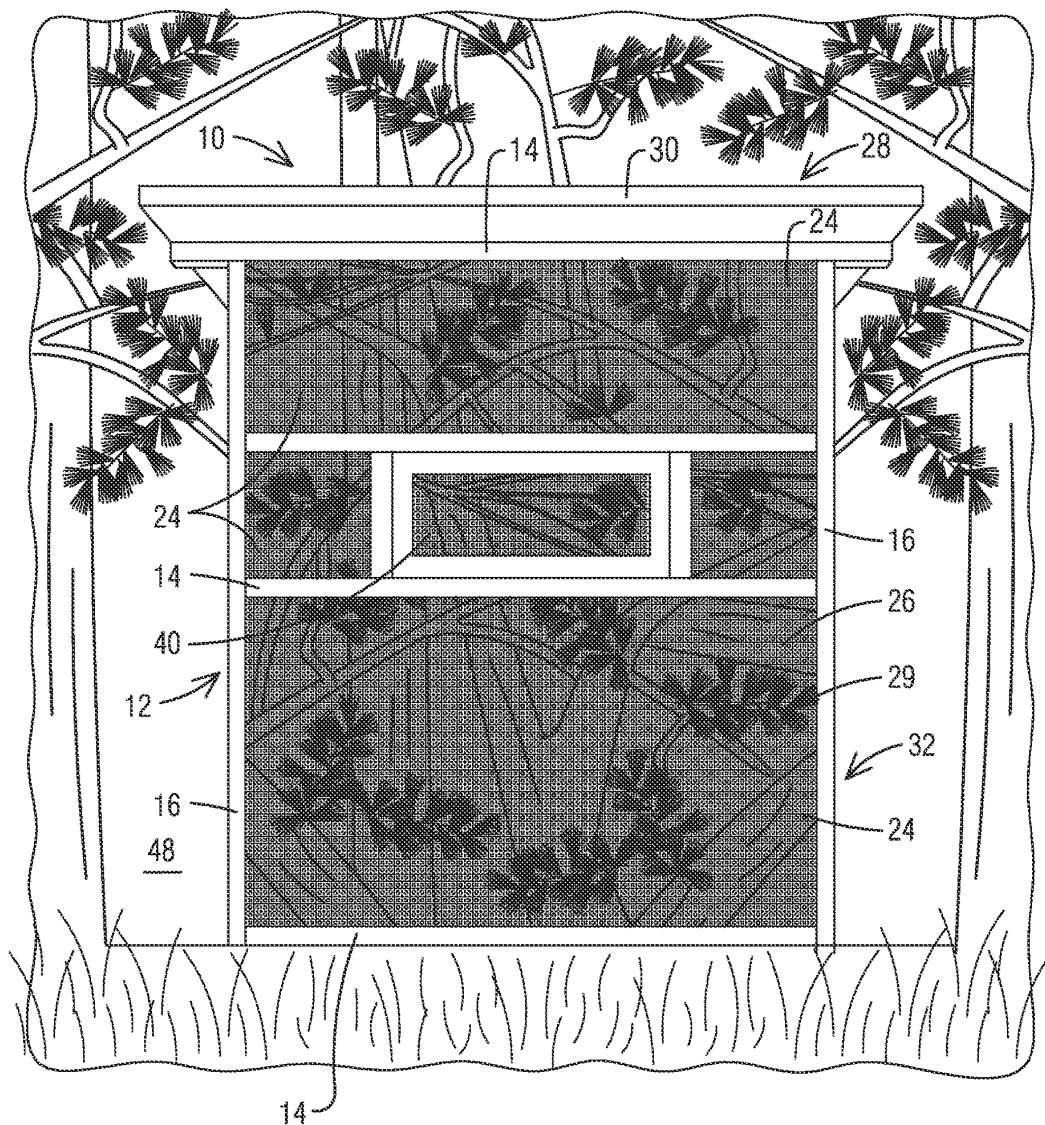


FIG. 2



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FIG. 3A

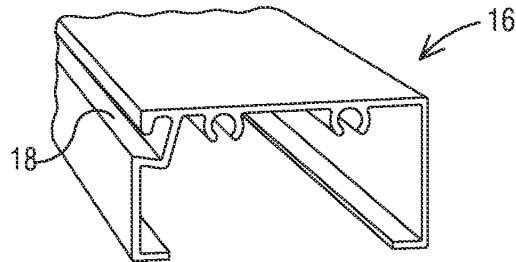


FIG. 3B

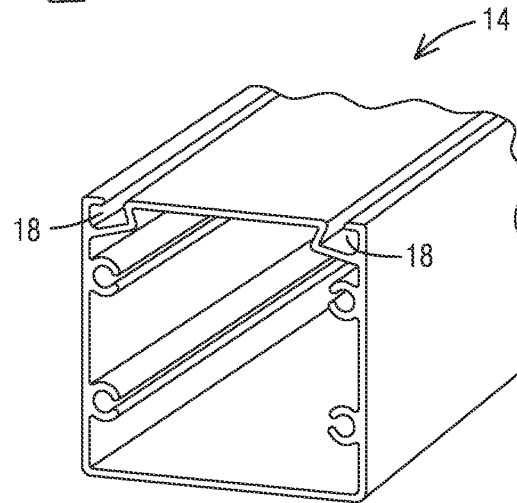


FIG. 4

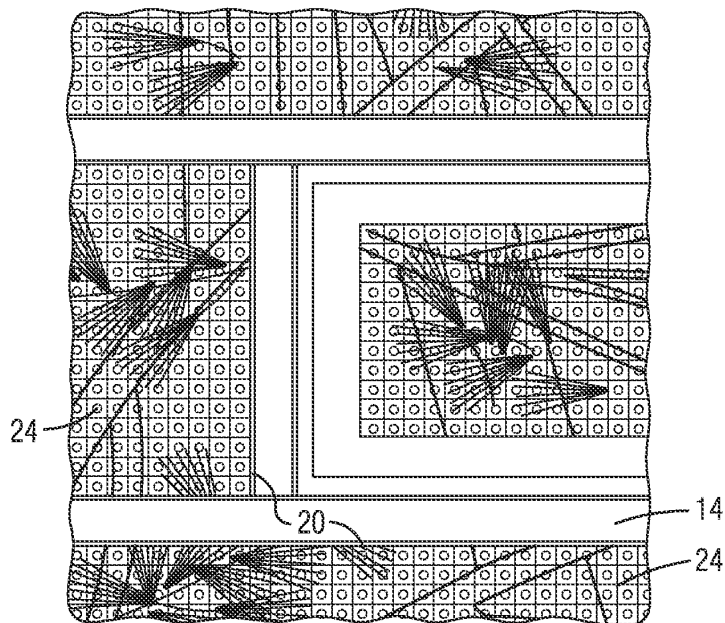


FIG. 5

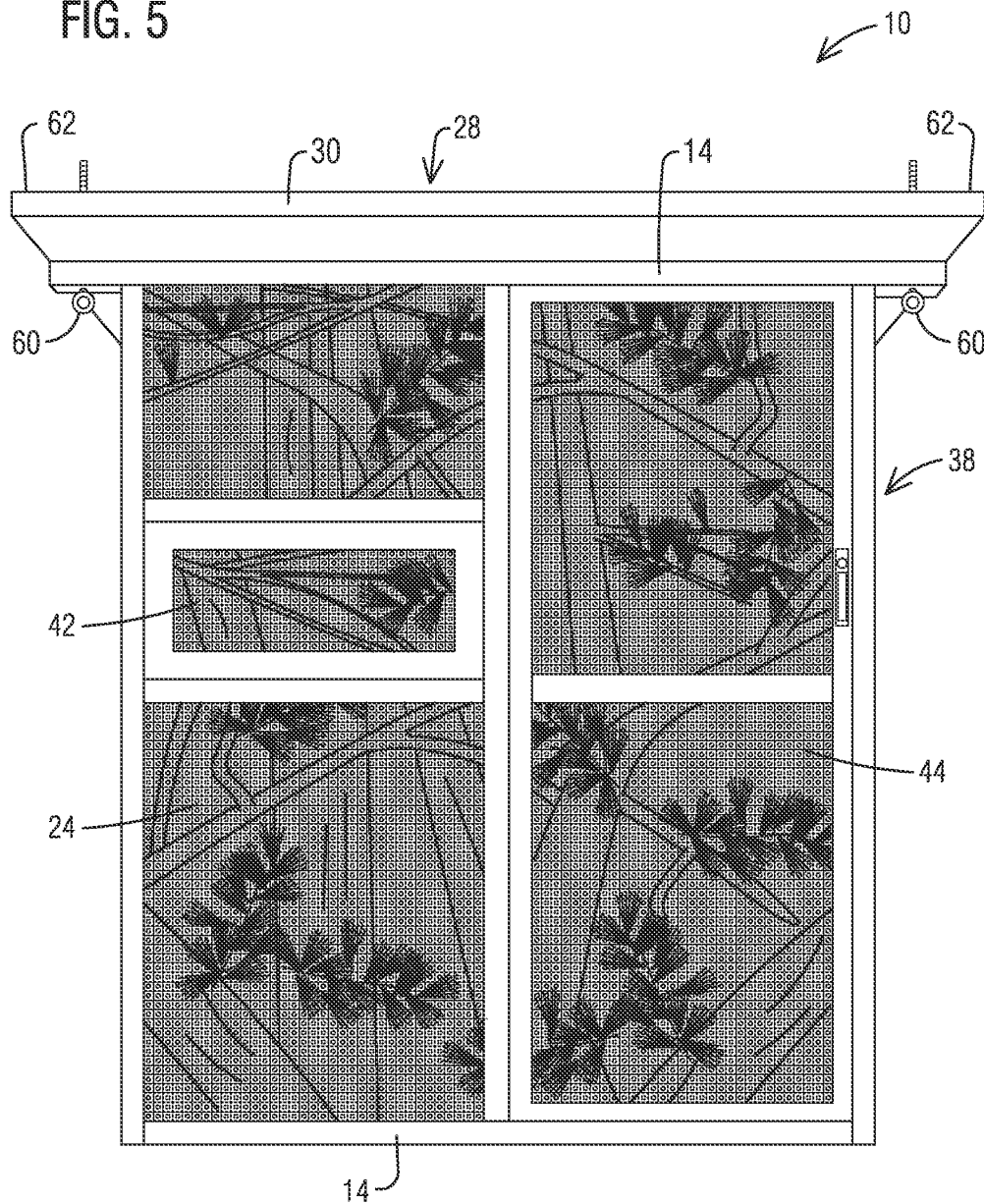
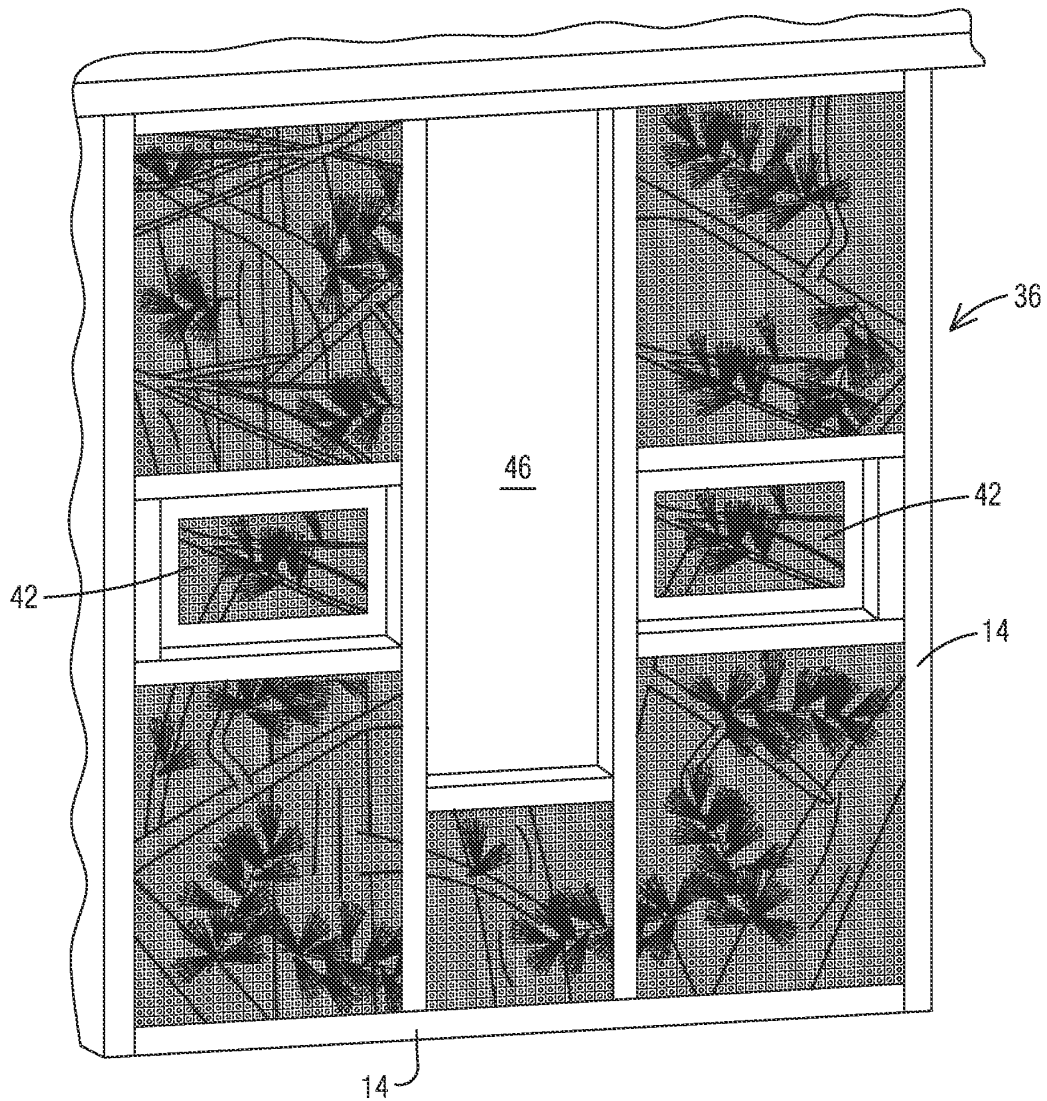


FIG. 6



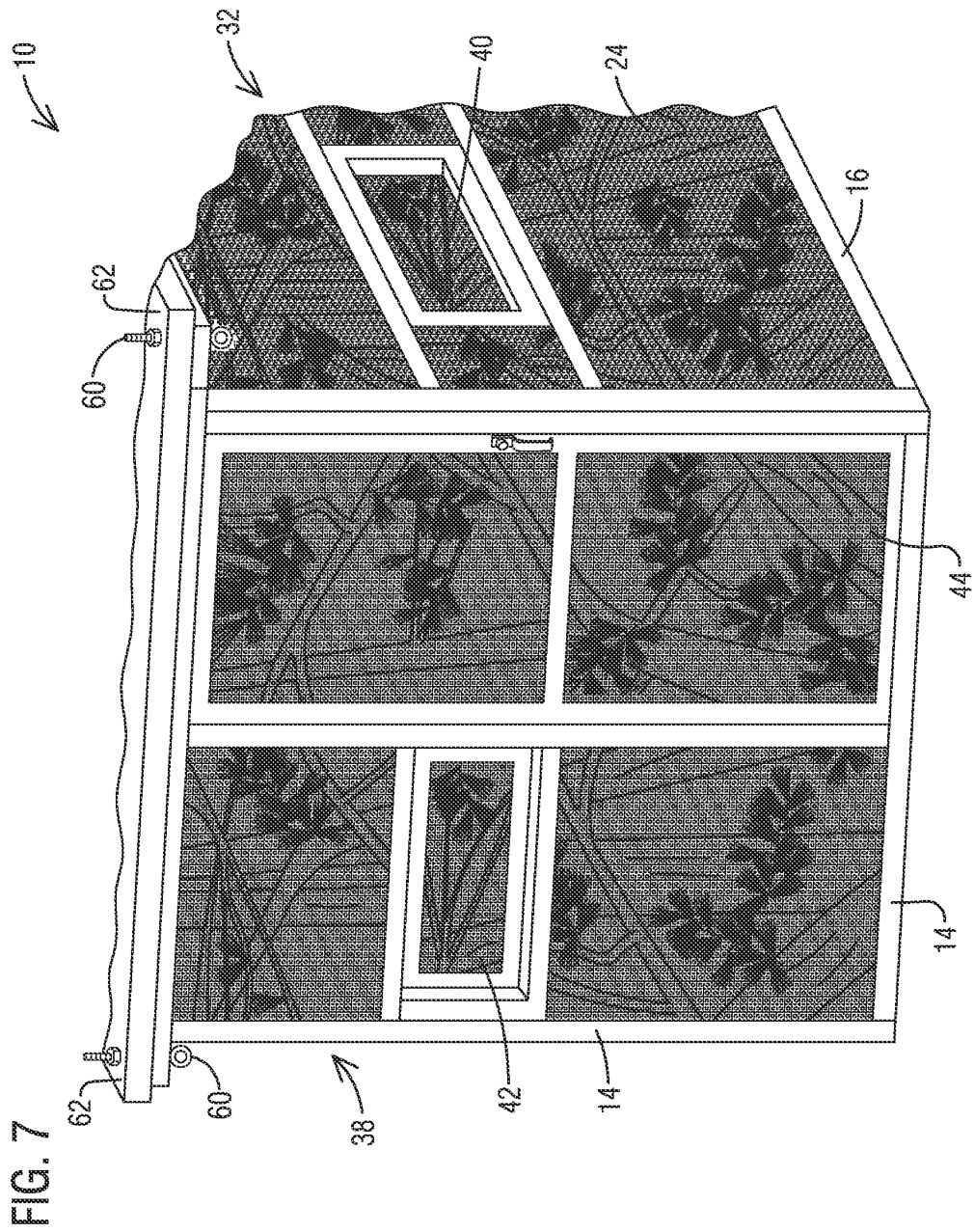


FIG. 8

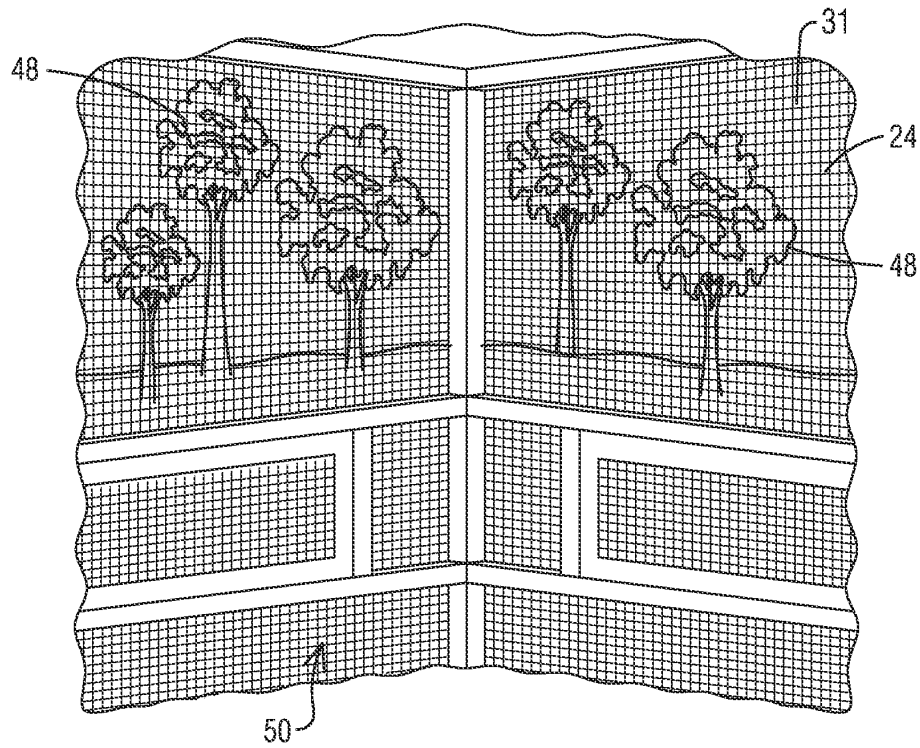
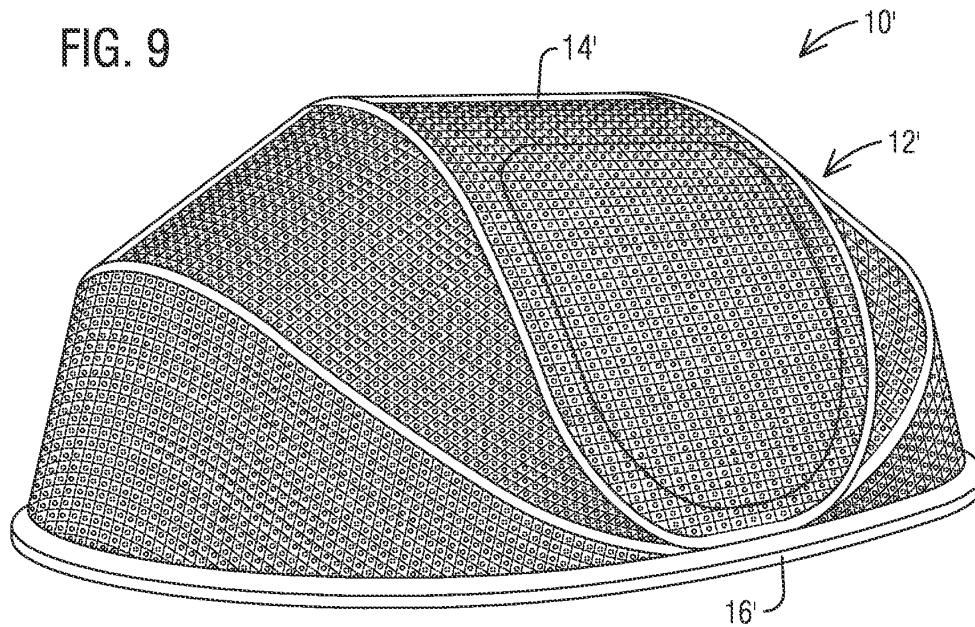


FIG. 9



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**CAMOUFLAGE MATERIAL, FOR A
HUNTING BLIND**

BACKGROUND OF THE INVENTION

Hunting blinds are used to conceal a hunter's location as game approaches. Although conventional hunting blinds have been developed, they have several drawbacks. For example, conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. Additionally, conventional hunting blinds feature structures with closed panels that provide limited ventilation. Thus, these hunting blinds have limited use in high humidity hunting climates.

BRIEF DESCRIPTION OF THE INVENTION

In one embodiment of the invention, mesh material of interwoven fabric is provided for a hunting blind including a camouflage pattern printed on a first side and a second side with a dark color coating, the second side opposite to the first side. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected off the camouflage pattern on the first side back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible through the mesh material from the interior of the hunting blind and the interior of the hunting blind is not visible through the mesh material from the exterior of the hunting blind during daylight conditions.

In another embodiment of the invention, a hunting blind is provided including a frame with a plurality of frame members and panels of mesh material attached to the frame members that cover an area between the frame members to define an interior of the hunting blind.

In another embodiment of the invention, a mesh material is provided that is capable of being secured to a frame of a hunting blind. The mesh material includes a camouflage pattern printed on a first side of the mesh material that faces an exterior of the hunting blind and a single color coating on a second side of the mesh material that faces an interior of the hunting blind.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a perspective view of a first side of mesh material in accordance with aspects of embodiments of the invention;

FIG. 1B is a perspective view of a second side of mesh material of FIG. 1A;

FIG. 1C is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an interior of the hunting blind;

FIG. 1D is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an exterior of the hunting blind;

FIG. 2 is a side view of a hunting blind in accordance with aspects of embodiments of the invention;

FIG. 3A is a perspective view of an open back extruded aluminum member used to form a frame of the hunting blind of FIG. 2;

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FIG. 3B is a perspective view of a hollow extruded aluminum member used to form the frame of the hunting blind of FIG. 2;

FIG. 4 is a view of an interconnection between extruded members and mesh material in the hunting blind of FIG. 2;

FIG. 5 is a back view of the hunting blind of FIG. 2;

FIG. 6 is a perspective front view of the hunting blind of FIG. 2 with an open bow window;

FIG. 7 is a perspective back view of the hunting blind of FIG. 2;

FIG. 8 is a view of an exterior of the hunting blind through mesh material from an interior of the hunting blind of FIG. 2; and

FIG. 9 is a side view of a hunting blind in accordance with aspects of embodiments of the invention.

DETAILED DESCRIPTION OF THE
INVENTION

A more particular description of the invention briefly described above will be rendered by reference to specific embodiments thereof that are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered to be limiting of its scope, the invention will be described and explained.

The inventors of the present invention designed an improved hunting blind that overcomes the above noted drawbacks of conventional hunting blinds. In one example, the inventors of the present invention recognized that conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with a frame that features interconnected extruded aluminum members that provide structural integrity to withstand elements of the outdoors. While some embodiments of the present invention disclose a hunting blind with a frame including rigid interconnected members, the present invention is not limited to this arrangement and also features a hunting blind with a frame including flexible frame members. In another example, the inventors of the present invention recognized that conventional hunting blinds are formed with closed panels that provide limited ventilation and thus have limited use in high humidity hunting climates. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with panels of mesh material that simultaneously provide ventilation to an interior of the hunting blind and camouflage the interior of the hunting blind.

In selecting an appropriate mesh material to form the improved hunting blind, the inventors of the present invention recognized that conventional mesh material used in connection with hunting has notable drawbacks. For example, the inventors recognized that such conventional mesh material easily catches and tears on branches as an individual wearing the mesh material moves through dense woods. In another example, the inventors recognized that such conventional mesh material is relatively light and transparent and thus would not effectively camouflage the interior of the hunting blind. To overcome these noted drawbacks, the inventors of the present invention selected a mesh material that is heavier and/or more durable than the conventional mesh material used in connection with hunting. This mesh material advantageously provides an effecting

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tive camouflage to the interior of the hunting blind and is more durable thereby extending a projected lifetime of the hunting blind.

Although some embodiments of the present invention discuss the use of mesh material in the context of hunting blinds, the present invention is not limited to this context and includes all uses of camouflage material in the context of hunting. In other embodiments, the camouflage material (e.g. mesh material 26) can be used to form a ground blind or stake out blind that is mounted in the ground to conceal an individual positioned behind the blind. In still other embodiments, the camouflage material can be used to form windows or tree sand skirts. For purposes of this invention, “camouflage material” means material that is used to cover people, equipment and/or installations, such as the hunting blinds discussed herein, to make them blend in with their surroundings.

FIG. 1A is a perspective view of a first side 27 of mesh material 26 in accordance with aspects of embodiments of the invention. FIG. 1B is a perspective view of a second side 31 of mesh material 26 of FIG. 1A that is opposite to the first side 27. Panels of mesh material 26 are used to form an improved hunting blind, as discussed below. As shown in FIG. 1A, the first side 27 of the mesh material 26 features a camouflage pattern 29. In an example embodiment, the camouflage pattern 29 is based on an exterior environment where the hunting blind will be positioned.

In an example embodiment, the camouflage pattern 29 is based on a photograph of the exterior environment of the hunting blind, and the camouflage pattern 29 can be printed on the first side 27 using ink. As shown in FIG. 1B, the second side 31 of the mesh material 26 includes a dark color coating, such as dark colored ink 33. However, in other embodiments, any color coating, such as any colored ink can be coated on the second side 31, including white colored coating, blue colored coating, red colored coating, yellow colored coating, green colored coating, orange colored coating and purple colored coating. In some embodiments, an exterior surface of the second side 31 is coated with the dark colored ink 33. In other embodiments, dark colored mesh material 26 is used and thus the second side 31 does not need to be coated with dark colored ink 33. In this embodiment, only the first side 27 of the mesh material 26 needs to be printed with the camouflage pattern 29. In some embodiments, for purposes of this description, “dark colored ink” means a colored ink that absorbs a substantial portion of incident visible light. In an example embodiment, the dark colored ink absorbs 50% or more of incident visible light. In another example embodiment, the dark colored ink absorbs 80% or more of incident visible light, for example. In other embodiments, for purposes of this description, “dark colored ink” means one or more of black colored ink, brown colored ink, grey colored ink, dark black colored ink, dark brown colored ink, dark grey colored ink, light brown colored ink, light grey colored ink, dark red colored ink, dark green colored ink, dark blue colored ink, dark purple colored ink, dark orange colored ink, dark yellow colored ink, or any combination thereof. In still other embodiments, “dark colored ink” means one or more color coded inks provided by ink manufacturers, as discussed below.

In an example embodiment, panels of the mesh material 26 are oriented on the hunting blind such that the first side 27 is directed toward the exterior of the hunting blind and the second side 31 is directed toward the interior of the hunting blind. During daylight conditions, the exterior of the hunting blind is visible from the interior of the hunting blind, but the interior of the hunting blind is not visible from the

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exterior of the hunting blind. FIG. 1C is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on the hunting blind 10 from an interior 50 of the hunting blind 10. A hunter 102 is positioned in the interior 50 of the hunting blind 10 and game 104 (e.g. deer) is positioned in an exterior 48 of the hunting blind 10. In some embodiments, the hunting blind 10 is used during daylight conditions, when the sun 106 emits radiation 116. The hunter 102, game 104 and sun 106 are not part of the hunting blind 10. As depicted in FIG. 1C, incident radiation 110a from the hunter 102 is incident on the second side 31 of the mesh material 26. A first portion 111a of the incident radiation 110a is absorbed by the coating of the second side 31. In some embodiments, the dark colored ink of the second side 31 is selected to maximize the absorbed portion 111a of the incident radiation 110a. In other embodiments, an intensity ratio of the absorbed portion 111a to the incident radiation 110a for the second side 31 is greater than an intensity ratio of the absorbed portion 111b to the incident radiation 110b for the first side 27. A second portion 112a of the incident radiation 110a is reflected off the second side 31 back into the hunting blind interior 50. A third portion 114a of the incident radiation 110a is transmitted through the mesh material 26 to the game 104. As further depicted in FIG. 1C, radiation 116 from the sun 106 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 118 of the incident radiation 116 is reflected off the camouflage pattern 29 to the game 104. In some embodiments, an intensity of the reflected portion 118 of light from the camouflage pattern 29 is much greater than an intensity of the transmitted portion 114a of light from the interior 50 (e.g. hunter 102). Since the intensity of the light from the camouflage pattern 29 is much greater than the intensity of the light from the interior 50 (e.g. hunter 102), the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. For purposes of this description, “much greater” is based on the threshold value of the intensity ratio discussed below. Instead, the camouflage pattern 29 is visible from the exterior 48 and conceals the interior 50 of the hunting blind 10. In an example embodiment, the radiation discussed above is in one or more regions of the visible portion (e.g. 400-700 nm) of the optical spectrum that overlaps with a detection spectrum of game 104. In other embodiments, the radiation discussed above is in a detection spectrum of game 104, including one or more regions of the visible portion and ultra-violet (UV) portions of the spectrum. In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the reflected portion 118 to the intensity of the transmitted portion 114a during daylight conditions is more than a threshold value such that the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. In one embodiment, the threshold value is 1. In other embodiments, the threshold value is 2. In still other embodiments, the threshold value is 5. In still other embodiments, the threshold value is 10. In still other embodiments, the threshold value is 100.

FIG. 1D is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on the hunting blind 10 from the exterior 48 of the hunting blind 10. As depicted in FIG. 1D, incident radiation 110b from the game 104 is incident on the first side 27 of the mesh material 26. A first portion 111b of the incident radiation 110b is absorbed by the camouflage pattern 29 on the first side 27. A second portion 112b of the incident radiation 110b is reflected off the first side 27 back to the exterior 48. A third

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portion 114b of the incident radiation 110b is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). As further depicted in FIG. 1D, radiation 115 from an object 122 (e.g. tree) in the exterior 48 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 120 of the incident radiation 115 is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). In some embodiments, an intensity of the transmitted portion 114b of light from the game 104 is approximately equal to an intensity of the transmitted portion 120 from the object 122. For purposes of this description, "approximately equal" is based on a range of intensity ratio, as discussed below. Since the intensity of the light from the game 104 is approximately equal to the intensity of the light from the object 122, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10. In an example embodiment, distinct forms (e.g. game 104, object 122, etc.) in the exterior 48 are visibly distinguishable, as viewed from the interior 50 of the hunting blind 10. In this embodiment, the hunter 102 can visibly distinguish the game 104 from other parts of the exterior 48 (e.g. object 122) since the intensity of the light from the game 104 is approximately equal to the intensity of light from other parts of the exterior 48 (e.g. object 122). In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the transmitted portion 114b to the intensity of the transmitted portion 120 during daylight conditions is approximately equal to 1. In other embodiments, the ratio is in a range from 0.9-1.1. In still other embodiments, the ratio is in a range from 0.8-1.2. In still other embodiments, the ratio is in a range from 0.5-2. In still other embodiments, the ratio is in a range from 0.2-5. In still other embodiments, the ratio is in a range from 0.1-10.

Different types of ink and printing techniques can be used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Each ink includes a colorant (e.g. dye or pigment) and a carrier liquid (e.g. solvent). A defining quality of each ink is the process used to adhere the colorant to the mesh material 26.

In some embodiments, a solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Solvent ink refers to an oil-based solution that holds a colorant (e.g. pigment), and is advantageously fade-resistant, waterproof and resistant to abrasion. During a printing process of the solvent-based ink, the solvent ink (i.e. colorant and solvent) is printed on the mesh material 26, after which the solvent evaporates or is flashed off with heaters on the printer, leaving the colorant behind. In an embodiment, the solvent based ink resists fading for five to seven years. In one embodiment, a region where the printing is performed is vented to exhaust volatile organic compounds (VOC) that are present during the solvent printing process.

In other embodiments, an eco-solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. In an example embodiment, eco solvent ink is used that is sold under the ECO SOL MAX® brand name. Eco-solvent ink is made using ether extracts taken from refined mineral oil. The eco-solvent ink printing process is similar to solvent ink printing, with the exception that eco-solvent ink takes longer to dry and venting is not required since VOC are not present during the printing process. The eco-solvent ink can be removed by alcohol and glass cleaner and accordingly, the durability of eco-solvent ink is reduced as compared to solvent ink. In some embodiments, eco-solvent ink resists

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fading for two to three years, which is reduced from the period of solvent ink. In an embodiment, manufacturers offer eco-solvent inks in various color sets. In an example embodiment, manufacturers offer color coded inks using letters, including cyan (C), magenta (M), yellow (Y), black (K), light cyan (LC), light magenta (LM), light black (LK), white, silver and metallic. In an example embodiment, one or more of the black (K), light black (LK), silver and metallic colored inks can be used to print the dark colored ink 33 on the second side 31.

In other embodiments, a latex based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Latex ink is a pigmented, water-based ink that uses an aqueous-dispersed polymer. As with the eco-solvent based ink, there is no VOC and accordingly, no venting is required during the latex ink printing process. In one embodiment, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 comes out of the printer completely cured. In some embodiments, radiant heaters with airflow are incorporated into the printer to evaporate the latex ink liquid, which causes the latex polymer particles to coalesce, forming a polymer layer that adheres to the mesh material 26 and encapsulates the pigment. In other embodiments, the printer uses ceramic radiated plates for a constant and even heat source.

In other embodiments, an ultra-violet (UV) based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. UV based ink includes oligomer and monomer acrylate resins and photo initiators. During the printing process, after the ink is applied to the mesh material 26, the ink is exposed to UV radiation such that free radicals are released that cause the polymerization of the compound to harden to a dry ink film. The pigment is then encapsulated within this film. In some embodiments, the UV radiation is applied with a light emitting diode (LED) source (i.e. low-heat, long-life) or a mercury arc lamp (i.e. higher heat, shorter life). Unlike the solvent based ink, the UV based ink does not evaporate and instead is "cured" when the UV light system of the printer passes overhead. Due to a low viscosity of the UV based inks and since UV based inks do not penetrate the mesh material 26, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 can be advantageously printed using a reduced volume of UV based ink, as compared to solvent based ink.

In some embodiments, the mesh material 26 is a mesh banner material, for example. In one embodiment, the mesh material 26 is made of polyester. In an example embodiment, the mesh material 26 is made of polyester material that is coated with a PVC (polyvinyl chloride) film or backing. In an example embodiment, the mesh material 26 is a vinyl coated polyester made of polyester scrim, a bonding or adhesive agent and an exterior PVC coating or backing. The scrim supports the coating and provides tensile strength, elongation, tear strength and dimensional stability of the resulting fabric. In some embodiments, vinyl-coated polyester is manufactured in large panels by heat-sealing an over-lap seam with either a radio-frequency welder or a hot-air sealer. In other embodiments, the mesh material 26 is made from a textile or cloth material that is a flexible material and includes a network of natural or artificial fibers (e.g. yarn or thread). In an example embodiment, the mesh material 26 is formed by yarn that is produced by spinning raw fibers of wool, flax, cotton or other material producing long strands. In other embodiments, the mesh material 26 is formed by textiles that are formed by weaving, knitting,

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crocheting, knotting or felting. In still other embodiments, the mesh material 26 is formed using synthetic textile material, including one or more of polyester, aramid fiber, acrylic fiber, nylon, spandex, olefin fiber, ingeo, lurex and carbon fiber. In another embodiment, the mesh material 26 features a PVC (polyvinyl chloride) backing. The PVC backing creates an air-tight print surface to prevent ink spraying through the mesh material 26 and helps to feed the mesh material 26 through the printer during the printing process. The PVC backing is removed from the mesh material after printing, such as by peeling the PVC backing off the polyester material. In another example embodiment, the mesh material 26 has a weight density of approximately 8 ounce (oz) per square yard (yd²). In another example embodiment, the mesh material 26 is a coated polyester scrim mesh banner material. In an example embodiment, the mesh material 26 allows airflow in a range of 30-40%, such as 37%, for example, where airflow is defined as a ratio of a velocity of outgoing air from the mesh material 26 to a velocity of incident air onto the mesh material 26. In another example embodiment, the mesh material 26 has a tensile strength of approximately 160×160 pounds/inch and/or a tear strength of approximately 34×34 pounds/inch. In another example embodiment, the mesh material 26 has a low temperature crack threshold of approximately -22 degrees Fahrenheit (F). In another example embodiment, the mesh material 26 is fungus resistant and flame resistant, NFPA701, title 19, CSFM, ASTM E84.

FIG. 2 is a side view of a first side 32 of a hunting blind 10 in accordance with aspects of embodiments of the invention. The hunting blind 10 includes a frame 12 with one or more frame members, such as aluminum extruded members 14, 16 that are interconnected together. In an example embodiment, the aluminum extruded member 14 is a 2"×2" closed hollow member and the aluminum extruded member 16 is a 1"×2" open back member. FIG. 3A is a perspective view of an open back extruded aluminum member 16 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3A, the extruded aluminum member 16 includes one spline groove 18 to receive a spline, as discussed below. FIG. 3B is a perspective view of a hollow extruded aluminum member 14 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3B, the extruded aluminum member 14 includes a pair of spline grooves 18 to receive respective splines, as discussed below. In an example embodiment, 3" bronze sheet screws are internally screwed to attach interconnecting extruded members 14, 16. In an example embodiment, 10³/₄" text screws are used to attach clips in interconnected areas of the extruded members 14, 16 that are not internally screwed together.

The hunting blind 10 also includes panels 24 of the mesh material 26 that are secured between aluminum extruded members 14, 16. In some embodiments, the panels 24 of the mesh material 26 are attached to the members 14, 16 of the frame 12 to cover an area between the members 14, 16 and define an interior of the hunting blind 10. In an example embodiment, the camouflage pattern 29 on the mesh material 26 is based on the exterior 48 of the hunting blind 10. FIG. 4 is a view of an interconnection between extruded members 14, 16 and panels 24 of mesh material 26 in the hunting blind 10 of FIG. 2. As shown in FIG. 4, a spline 20 is provided along a perimeter of the panel 24 and the spline 20 is positioned within one of the spline grooves 18 of the extruded member 14, to secure the panel 24 along the length of the extruded member 14. In an example embodiment, the spline 20 is a rubber spline. In some embodiments, the spline

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20 secures a first side of the panel 24 within a spline groove 18 of a first extruded member 14, 16 and the spline 20 further secures a second side of the panel 24 within a spline groove 18 of a second extruded member 14, 16, where the first and second extruded members 14, 16 are interconnected to form the frame 12. In further embodiments, the spline 20 secures a third side of the panel 24 within a spline groove 18 of a third extruded member 14, 16 and the spline 20 secures a fourth side of the panel 24 within a spline groove 18 of a fourth extruded member 14, 16, where the first, second, third and fourth extruded members 14, 16 are interconnected to form the frame 12. In other embodiments, a respective spline 20 is used to secure each side of the panel 24 within a respective spline groove of the extruded member.

FIG. 5 is a back view of the hunting blind 10 of FIG. 2. A roof 28 of the hunting blind 10 includes roof panels 30. In an example embodiment, the roof panels 30 have a high-density polystyrene core and are laminated on both sides by stucco textured aluminum. In an example embodiment, the roof panels 30 are 2" Elite® aluminum panels. Anchor bolts 60 are secured through an extruded member 14 and the roof panels 30 at each corner 62 of the hunting blind 10. In an example embodiment, the anchor bolts 60 include a stainless steel eyebolt that is attached with a pair of washers and a hex nut. In an example embodiment, 3" bronze sheet screws (not shown) with neoprene washers are used to attach the roof panels 30 to the extruded members 14 that extend around a perimeter of an undersurface of the roof panels 30.

The hunting blind 10 includes one or more doors and windows. Each door and window includes one or more panels 24 of mesh material 26 that forms an interior of the door or window and is interconnected to extruded members 14, 16 that form the frame of each door and window. As shown in FIG. 2, the first side 32 of the hunting blind 10 includes a window 40 that can be opened (inward to the interior of the blind 10) to provide a shooting position upon the approach of prey from the first side 32. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a window 42 that provides a shooting position upon the approach of prey from the back side 38. FIG. 6 is a perspective front view of a front side 36 of the hunting blind 10 of FIG. 2 with an open bow window 46 that provides an arching position upon the approach of prey from the front side 36. In an example embodiment, dimensions of the windows 40, 42 are 26" (width)×12" (height), for example. In an example embodiment, dimensions of the bow window 46 is 13" (width)×46" (height), for example. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a door 44 that can open (either inward or outward) for entry to the interior of the hunting blind 10. In an example embodiment, dimensions of the door 44 are 30" (width)×66" (height), for example. In an example embodiment, the windows 40, 42, 46 or door 44 can be customized, in terms of length or width. In an example embodiment, the door 44 can be customized to have a width up to 48". In an example embodiment, the windows 40, 42, 46 and door 44 have a frame made of bronze extruded aluminum members. The above numerical dimensions of the windows 40, 42, 46 and door 44 are merely exemplary and the dimensions of the windows 40, 42, 46 and door 44 are not limited to any specific dimension. FIG. 7 depicts another view of the hunting blind 10, including the windows 40, 42 and door 44.

In an example embodiment of the frame 12, the extruded members 14 are 2"×2". In another example embodiment, a height of the frame 12 at the front side 36 is approximately 6' and a width of the frame 12 at the front side 36 and back side 38 is approximately 5'4". As previously discussed,

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panels 24 of mesh material 26 are secured within the frames of each window 42, 46, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

In an example embodiment of the frame 12, the extruded members 14 are 2"x2" and the extruded members 16 are 1"x2". In another example embodiment, a height of the frame 12 at the sides 32, 34 varies from a first height (e.g. 5'10") to a second height (e.g. 6') that is greater than the first height, to provide a pitch in the roof 28 for rainwater runoff. Additionally, a width of the frame 12 at the sides 32, 34 is approximately 5'. As previously discussed, panels 24 of mesh material 26 are secured within the frames of each window 40, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

FIG. 8 is a view of the exterior 48 of the hunting blind 10 through panels 24 of mesh material 26 from an interior 50 of the hunting blind 10 of FIG. 2. The second side 31 of the mesh material 26 faces the interior 50 of the hunting blind 10. The mesh material 26 is partially transmissive such that during daylight conditions, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10 yet the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. As depicted in the view of FIG. 9 since the panels 24 of mesh material 26 are provided on each side of the hunting blind 10, the hunting blind 10 provides a 360 degree view of the exterior 48 through the panels 24 in each side of the hunting blind 10.

FIG. 9 is a side view of a hunting blind 10' in accordance with aspects of embodiments of the invention. The hunting blind 10' includes a frame 12' that is formed of interconnected flexible frame members 14', 16'. In an example embodiment, the hunting blind 10' has a structure that is similar to a pop-up tent. As with the hunting blind 10, the hunting blind 10' includes panels of the mesh material 26 that are secured between the flexible frame members 14', 16'. However, the panels differ from the panels 24 of the hunting blind 10, due to a variation in the spacing between the flexible frame members 14', 16' of the frame 12', as compared to the spacing between the frame members 14, 16 of the frame 12. Thus, although the frame 12 of the hunting blind 10 is a fixed frame including interconnected extruded members 14, 16, the frame 12 of the hunting blind is not limited to a fixed frame and may include a pop-up frame 12' with foldable frame members 14', 16'. In an example embodiment, the pop-up frame includes panels of the mesh material 26 secured between the foldable frame members 14', 16' such that when the frame 12' is moved from a folded position to a deployed position, the exterior of the hunting blind 10' is visible through the panels from the interior of the hunting blind yet the interior of the hunting blind 10' is not visible through the panels from the exterior of the hunting blind 10'.

While certain embodiments of the present invention have been shown and described herein, such embodiments are provided by way of example only. Numerous variations, changes and substitutions will occur to those of skill in the art without departing from the invention herein. Accordingly, it is intended that the invention be limited only by the spirit and scope of the appended claims.

What is claimed is:

1. A camouflage structure comprising:
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members

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along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and

one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:

- a first side with a camouflage pattern; and
- a second side with a dark color coating, said second side opposite to the first side; and

one or more panels of non-mesh material provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;

wherein the one or more panels of the mesh material define an outer surface of the camouflage structure; and wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material.

2. The camouflage structure of claim 1, wherein the camouflage pattern comprises one or more ink substances printed on the first side and the dark color coating comprises a second ink substance printed on the second side.

3. The camouflage structure of claim 1, wherein the camouflage pattern is based on an exterior environment where the camouflage structure will be positioned to make the camouflage structure blend in with the exterior environment.

4. The camouflage structure of claim 1, wherein the dark color coating comprises a single color coating.

5. The camouflage structure of claim 1, wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage material from the interior of the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure;

and wherein the threshold value is 2.

6. The camouflage structure of claim 1, wherein a first side of the camouflage structure includes a window that can be opened to provide a shooting position upon the approach of prey from the first side.

7. The camouflage structure of claim 6, wherein a second side of the camouflage structure includes a window that can be opened to provide a shooting position upon the approach of prey from the second side.

8. The camouflage structure of claim 1, wherein the mesh material is made of polyester material and an acrylic fiber.

9. The mesh material of claim 1, wherein the mesh material is a vinyl-coated polyester material.

10. The mesh material of claim 1, wherein the mesh material is formed by weaving yarn material.

11. The camouflage structure of claim 1, wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage

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pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage material from the interior of the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure;
and wherein the threshold value is 1.
12. The camouflage structure of claim 1, wherein the mesh material is produced by;
printing the camouflage pattern on the first side of the mesh material using a first ink, and
printing the dark color coating on the second side of the mesh material using a second ink.
13. The camouflage structure of claim 1, wherein the second side of the one or more panels of the mesh material defines an interior of the camouflage structure and the first side of the one or more panels of the mesh material defines an exterior of the camouflage structure; and
wherein the plurality of frame members are configured to form an enclosure that surrounds the interior.
14. The camouflage structure of claim 13, wherein the one or more panels of mesh material provide a 360 degree view of the exterior of the camouflage structure from the interior of the camouflage structure.
15. The camouflage structure of claim 1, wherein flexible frame members along the side of the camouflage structure are interconnected with the one or more panels of non-mesh material along the roof of the camouflage structure.
16. The camouflage structure of claim 15, wherein the pop-up frame is movable from a folded position to a deployed position.
17. The camouflage structure of claim 16, wherein the one or more panels of mesh material are secured between the at least two spaced apart frame members along the side of the camouflage structure in the folded position such that when the frame is moved from the folded position to the deployed position an exterior of the camouflage structure is visible through the one or more panels of mesh material from an interior of the camouflage structure yet the interior of the camouflage structure is not visible through the one or more panels of mesh material from the exterior of the camouflage structure.
18. The camouflage structure of claim 1, wherein the frame members have a variation in the spacing between the at least two spaced apart frame members along the side of the camouflage structure.

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19. A camouflage structure comprising:
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and
one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:
a first side with a camouflage pattern; and
a second side with a dark color coating, said second side opposite to the first side; and
one or more panels of non-mesh material configured to be provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;
wherein the one or more panels of the mesh material define an outer surface of the camouflage structure;
wherein the camouflage pattern is based on an exterior environment where the camouflage structure will be positioned to make the camouflage structure blend in with the exterior environment;
wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material;
wherein the camouflage structure includes a window along the side of the camouflage structure that can be opened to provide a shooting position upon the approach of prey from the side;
wherein the pop-up frame is movable from a folded position to a deployed position; and
wherein the one or more panels of mesh material are secured between the at least two spaced apart flexible frame members along the side of the camouflage structure in the folded position such that when the frame is moved from the folded position to the deployed position an exterior of the camouflage structure is visible through the one or more panels of mesh material from an interior of the camouflage structure yet the interior of the camouflage structure is not visible through the one or more panels of mesh material from the exterior of the camouflage structure.

* * * * *

EXHIBIT “B”



SKU: **R180-ST-RTE** Availability: **Many in stock**

RHINO 180 - SEE THROUGH BLIND

Rhino Blinds

\$249.99

CAMO PATTERN:

REALTREE EDGE

QTY:

1



ADD TO CART



EXHIBIT “C”



to be there for dealers so they wouldn't miss out on that higher demand."

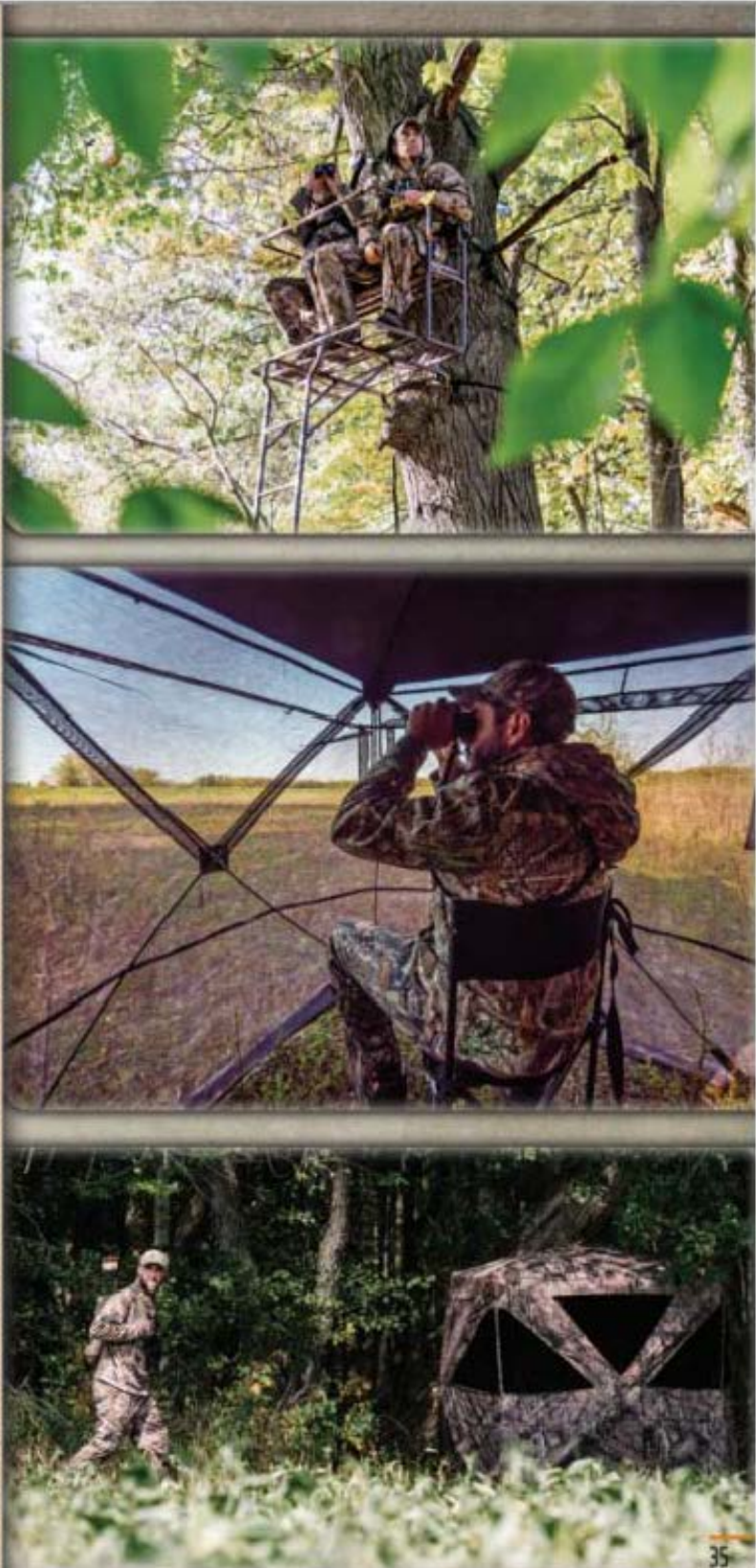
Another factor that has greatly contributed to Rhino Blinds' success in recent years is the company's approach to product innovation. For instance, just look at the Rhino 180 See Through Blind, which uses a revolutionary mesh material that allows hunters to see out without game seeing in.

"We launched the Rhino 180 See Through Blind towards the end of 2020, and it just took off like wildfire," Danny Reaser said. "Our customers even ended up generating some organically viral content on social media. TikTok was getting more popular around that time, and our customers were posting videos of the **Houdini effect** by showing what the blind looked like on the outside and then taking the camera inside to reveal what the one-way mesh can really do. There was one video that even reached about 1.4 million views. That grew a lot of awareness of the product, and people were just buying them left and right. The Rhino 180 See Through Blind also really captured the eyes of our dealers as something hot and new, and I believe every single one of our dealers is carrying it this year."

Entering the Treestand Market

The success and rapid growth of Rhino Blinds prompted Dan and Danny Reaser to consider other product categories. Over the years, they had acquired and grown other outdoor brands like LiD-CAM, Wicked Tree Gear and Capsule Game Feeders, and they similarly helped these brands reach new heights. After repeated requests from customers, they decided to develop a new brand, Rhino Treestands, to make an impact in another category that's right up their alley.

"We kept having customers asking us when we were going to come out with a treestand line to go along with the other products we offer," Dan Reaser said. "We launched Rhino Treestands in 2021, and it has already experienced steep growth. Developing Rhino Treestands really



CLAIM CHART OF U.S. PATENT NO. 11,399,535
RHINO BLIND INFRINGEMENT

Claim 1	RHINO 180 BLIND
1. A camouflage structure comprising:	A Rhino 180 blind 10 is depicted, for example, Exs. 1 and 2. The Rhino blind as shown includes a frame and attached camouflage. The Rhino blind 10 is used to camouflage a person according to outdoor surroundings and is especially used by persons hunting wild game.
a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members along a side of the camouflage structure and at least two spaced apart frame members along a roof of the camouflage structure; and	The blind shown in Exs. 1 and 2 includes a pop-up frame that includes a plurality of flexible frame members. The blind 10, when shipped, for example, or otherwise stored, is in a folded state. The flexible frame members are interconnected at hubs, which promote expansion of the frame members relative to one another to unfold the blind as shown in Ex. 2. The blind 10 includes a roof 12 and sides 14, which are defined in part by the frame members 12A and 14A, respectively. Ex 2, from the inside of the Rhino blind 10, shows an upper corner of the blind 10. The Rhino 180 blind 10 includes at least two spaced apart frame members 14A along the side 14, and at least two frame members 12A along its roof.
one or more panels of mesh material of interwoven fabric configured to be attached between the at least two spaced apart frame members that are along the side of the camouflage structure, said one or more panels comprising:	With respect to Exs. 1 and 2, the Rhino blind 10 includes mesh material along the sides 14 of the blind 10 , and the mesh material is composed of an interwoven fabric. The mesh material spans a space between two side frame members 14A .

EXHIBIT D

a first side with a camouflage pattern; and	As shown in Ex. 1, the outside surface (first side) of the mesh material spanning the two spaced apart frame members 14A , is printed with a camouflage pattern.
a second side with a dark color coating, said second side opposite to the first side; and	The inside side surface (second side) of the Rhino blind 10 has a dark color coating, which is defined in the specification (col. 3, lines 50-60) as including a dark or light grey colored ink). The Rhino blind 10 includes a grey color coating along inside side surfaces of the mesh material.
one or more panels of non-mesh material provided along the roof of the camouflage structure and configured to be attached to the at least two spaced apart frame members that are along the roof of the camouflage structure to cover an area between the at least two spaced apart frame members;	As shown in Ex 2, the Rhino blind 10 includes a non-mesh material that is black and is attached to the spaced apart roof frame members 12A .
wherein the one or more panels of the mesh material define an outer surface of the camouflage structure; and	The mesh material of the Rhino blind 10 , as shown in Ex. 1, defines an outer surface along sides 14 of the Rhino blind 10 .
wherein the one or more panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material.	The non-mesh material along the roof 12 of the Rhino blind 10 is not light transmissive, or light from an exterior source is not transmitted through the non-mesh material. In this manner, and as shown in Ex. 2, a person positioned within the Rhino blind 10 , can see from the inside of the blind 10 game on the outside the blind 10 ; however, the game on the outside cannot see the person inside the blind 10 .

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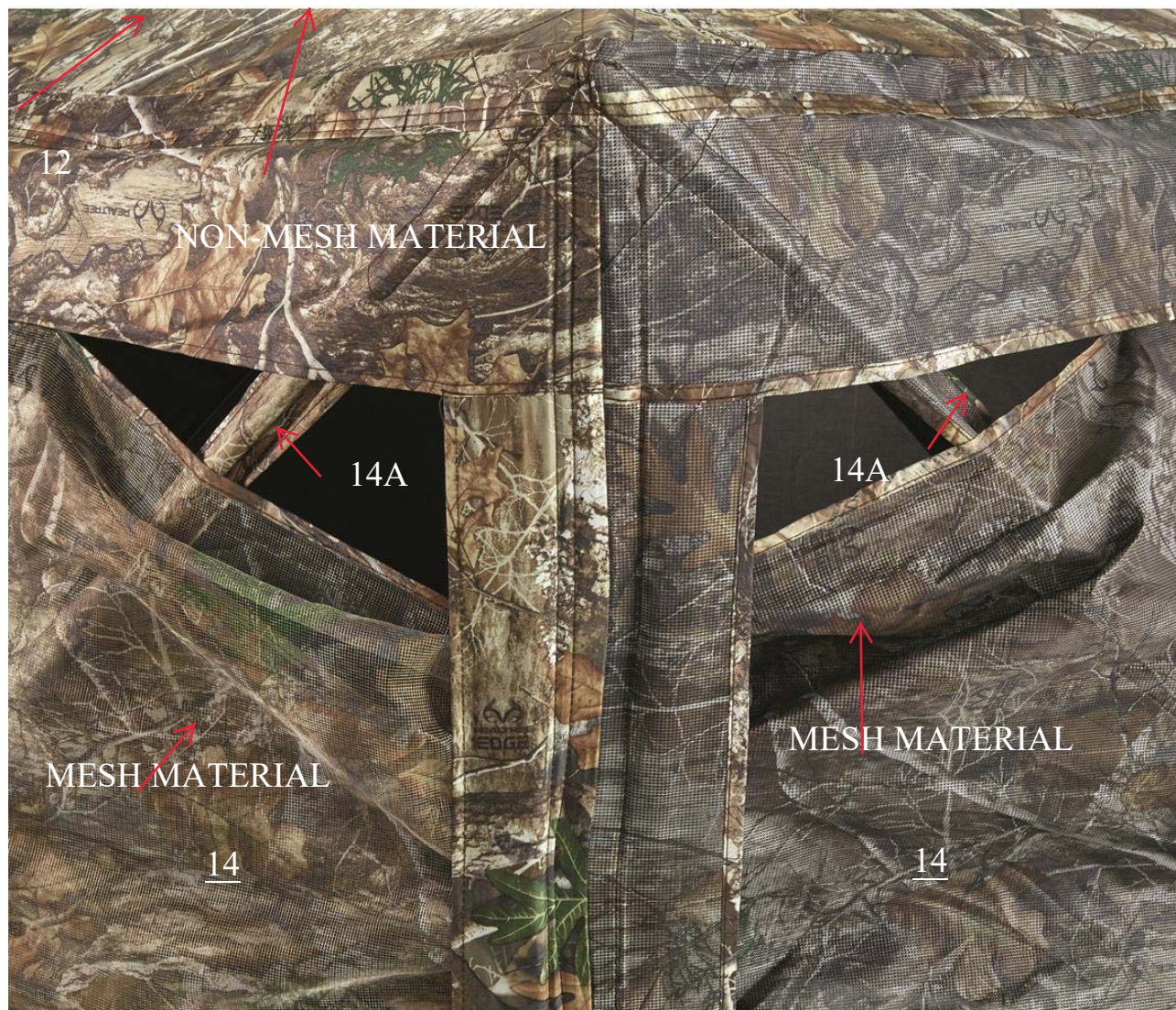


EXHIBIT 1





WOLTER VANDYKE DAVIS
INTELLECTUAL PROPERTY LAW

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December 21, 2020

**Via Email: mick@opioutdoors.com and
Federal Express/Overnight Delivery**

Dan Reaser, President/CEO
Outdoor Product Innovations, Inc.
177 Reaser Court
Elyria, Ohio 44035

Re: U.S. Patent No. 10,765,108

Dear Mr. Reaser:

Our firm represents Rugged Cross Hunting Blinds, LLC (RCHB) with respect to its intellectual property and other related matters. More specifically, RCHB is the owner of U.S. Patent No. 10,765,108 (the '108 Patent), which discloses and claims a pop-up hunting blind including a mesh material that enables hunters to view from the interior of the blind without being seen from the outside. Attached hereto as Exhibit "A" is a copy of U.S. Patent No. 10,765,108.

You should also be aware that Bushnell, Inc., which includes the Primos brand products is the exclusive licensee of the technology associated with '108 Patent, owned by RCHB. Both Bushnell and Primos are standing by the RCHB claim for infringement and have a vested interest in the outcome of this matter. To that end Vista Outdoors is also very interested in this matter.

It has come to our attention that Outdoor Product Innovations is selling hunting blinds under the brand name Rhino Blinds that include a mesh material covered in the patent.

Accordingly, RCHB demands that Outdoor Product Innovations immediately cease and desist from further making, selling, or offering for sale in the United States, or importing into the U.S. its pop-up hunting blinds. RCHB therefore requests confirmation no later than one week from receipt of this letter that Outdoor Product Innovations will cease all infringing activities with respect to the pop-up hunting blind in the form of a written reply acknowledging the information contained herein. If you fail to advise us by this date, RCHB shall, without further notice to you,

Orlando – 390 N. Orange Avenue, Suite 2500, Orlando, FL 32801
Melbourne – 1290 W. Eau Gallie Blvd., Melbourne, FL 32935
Manassas – 9215 Prescott Avenue, Manassas, VA 20110

EXHIBIT E

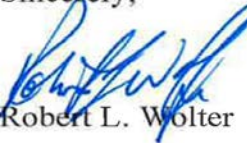
EX. 2032-Z

Dan Reaser, President/CEO
Outdoor Product Innovations, Inc.
December 21, 2020
Page 2 of 2, cont'd.

take such further action as it deems necessary to assert RCHB's rights and to otherwise protect its interests.

I look forward to hearing from you.

Sincerely,



Robert L. Wolter

RLW/bam
Encl.

EXHIBIT “A”



(12) **United States Patent**
Seaton et al.

(10) **Patent No.:** **US 10,765,108 B2**
(45) **Date of Patent:** **Sep. 8, 2020**

(54) **CAMOUFLAGE MATERIAL FOR A HUNTING BLIND**

(71) Applicant: **RUGGED CROSS HUNTING BLINDS LLC**, Tampa, FL (US)

(72) Inventors: **Christopher M. Seaton**, Tampa, FL (US); **Timothy R. Seaton**, Tampa, FL (US)

(73) Assignee: **RUGGED CROSS HUNTING BLINDS LLC**, Tampa, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 399 days.

(21) Appl. No.: **15/444,909**

(22) Filed: **Feb. 28, 2017**

(65) **Prior Publication Data**

US 2017/0245491 A1 Aug. 31, 2017

Related U.S. Application Data

(60) Provisional application No. 62/301,007, filed on Feb. 29, 2016.

(51) **Int. Cl.**
A01M 31/02 (2006.01)
F41H 3/02 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **A01M 31/025** (2013.01); **E04H 15/001** (2013.01); **E04H 15/008** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC **F41H 3/02**
(Continued)

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Primary Examiner — David R Dunn

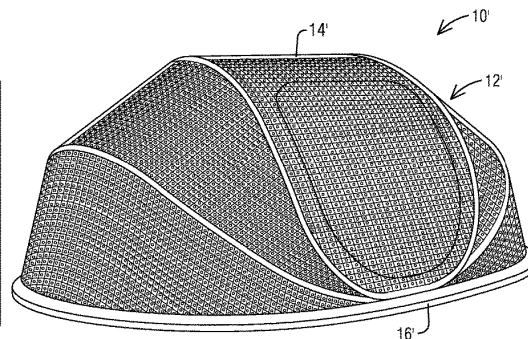
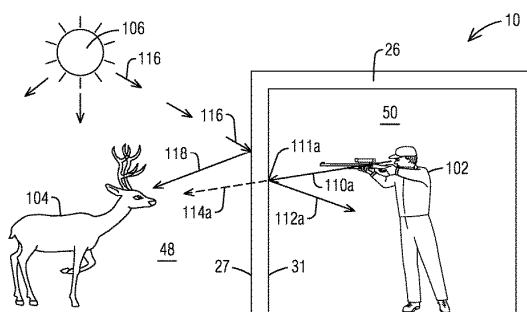
Assistant Examiner — Danielle Jackson

(74) *Attorney, Agent, or Firm* — Beusse, Wolter, Sanks & Maire PLLC; Robert L. Wolter

(57) **ABSTRACT**

Mesh material is presented for a hunting blind with a camouflage pattern printed on a first side and a second side with a color coating. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and an intensity ratio of the reflected portion to the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible from the interior and the interior of the hunting blind is not visible from an exterior of the hunting blind. A hunting blind is also provided that includes a frame including frame members and panels of the mesh material attached to the frame members.

10 Claims, 8 Drawing Sheets



US 10,765,108 B2

Page 2

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135/901 |
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428/131 |
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135/115 |
| | CPC <i>E04H 15/34</i> | (2013.01); <i>E04H 15/54</i> | | | | | |
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| | | (2013.01); <i>F41H 3/02</i> | 9,163,451 | B1 * | 10/2015 | Curry | E06B 9/24 |
| (58) | Field of Classification Search | | 2003/0096546 | A1 * | 5/2003 | Strength | B32B 5/02
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FIG. 1A

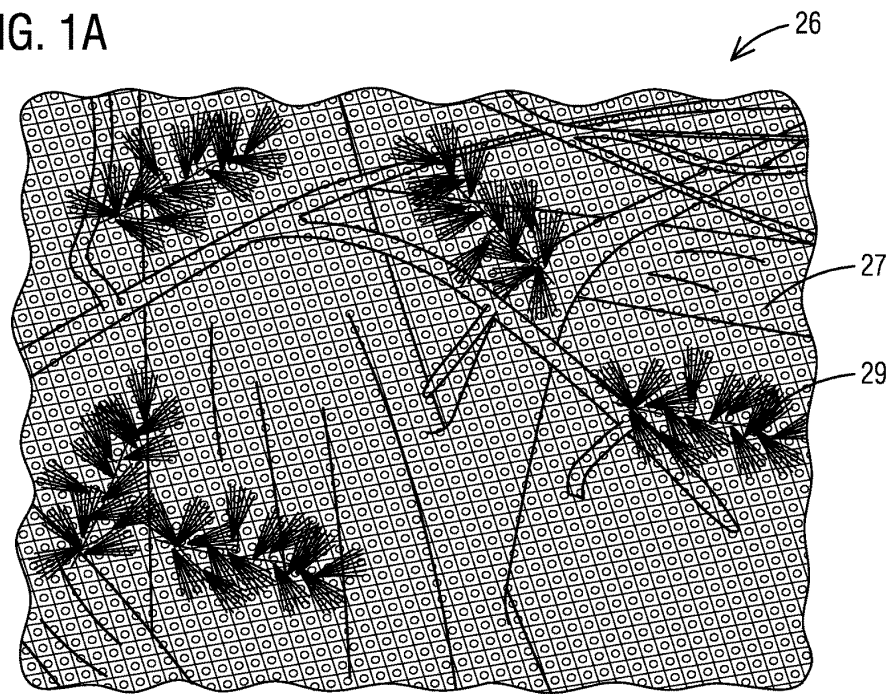


FIG. 1B

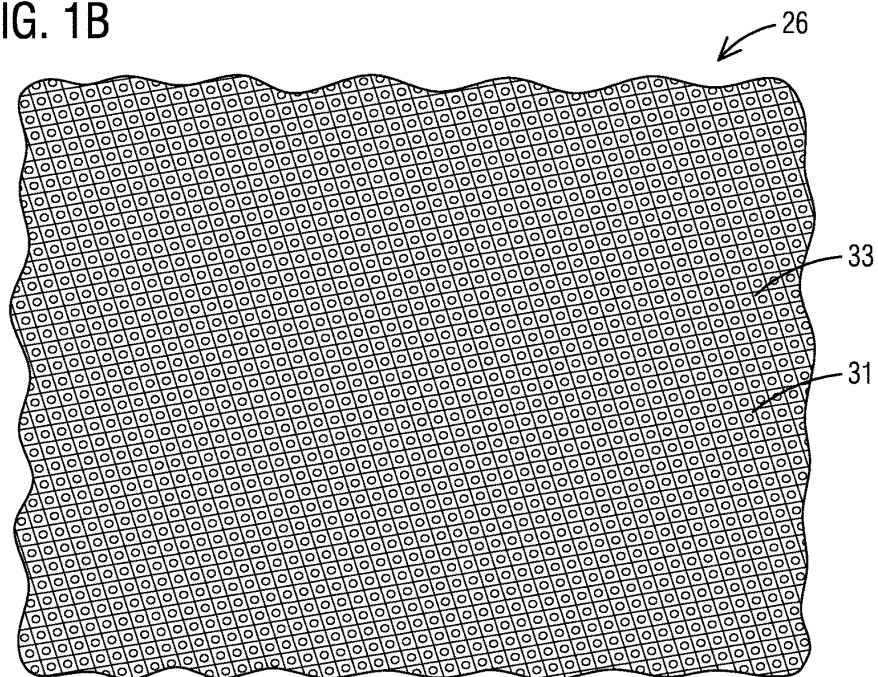


FIG. 1C

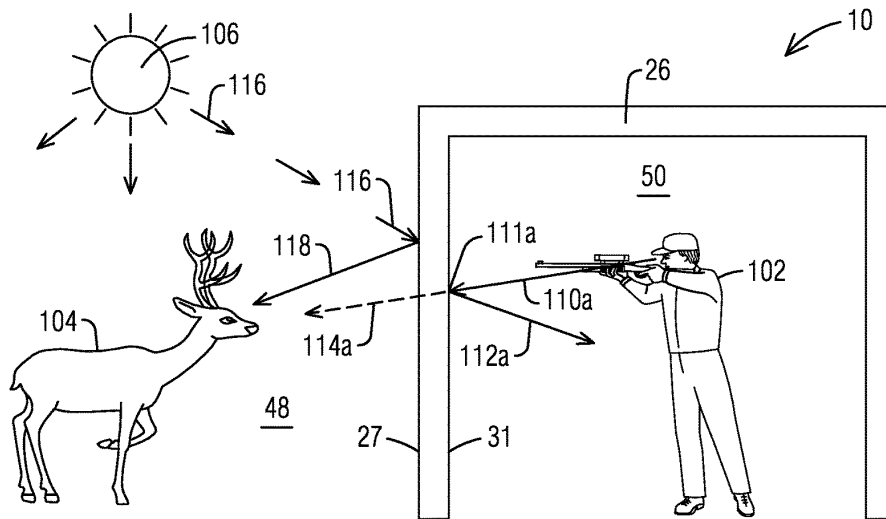


FIG. 1D

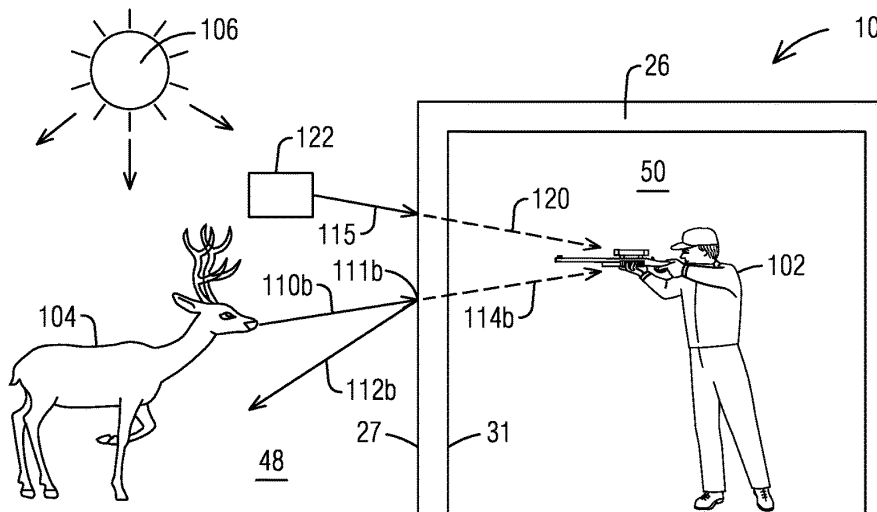


FIG. 2

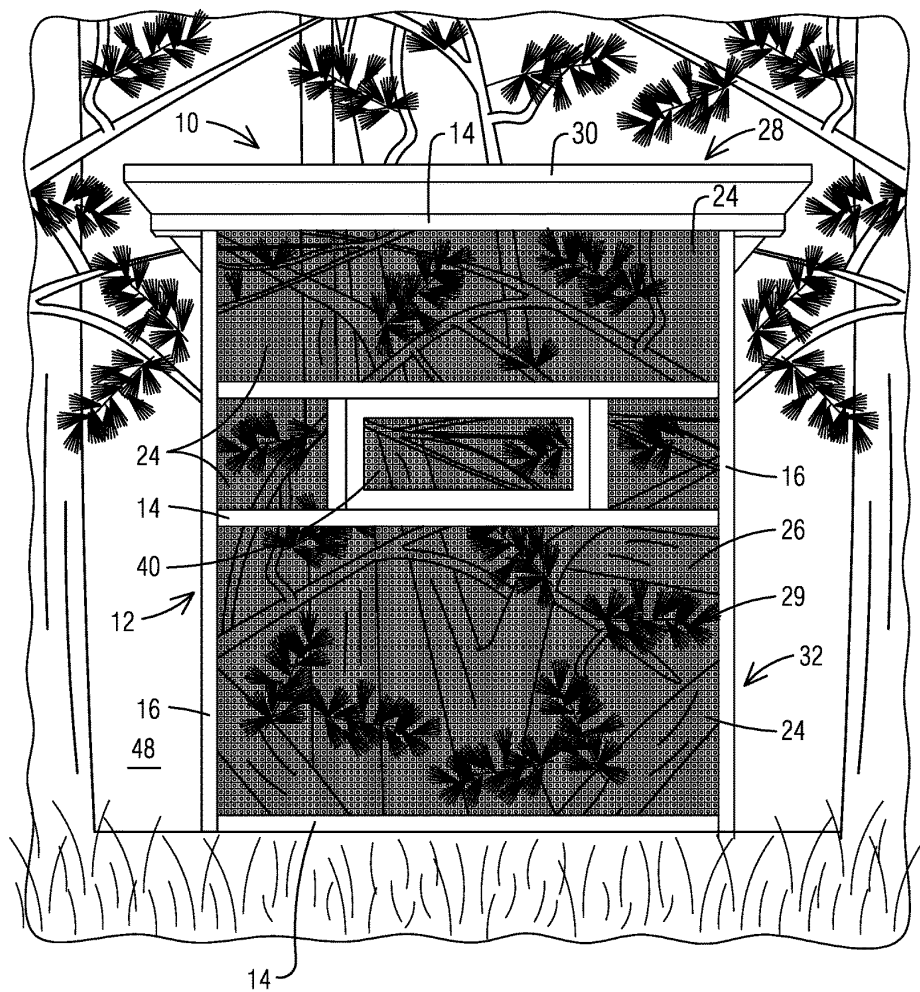


FIG. 3A

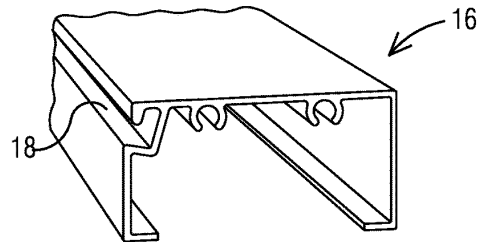


FIG. 3B

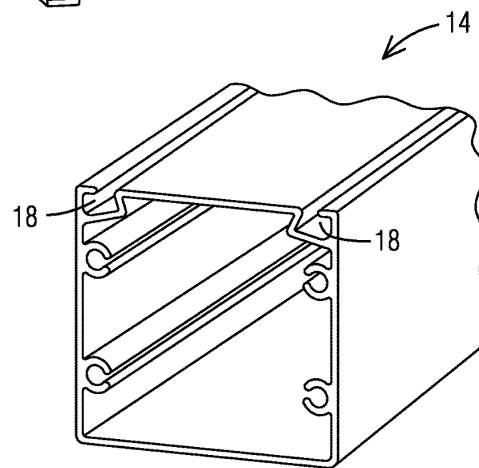


FIG. 4

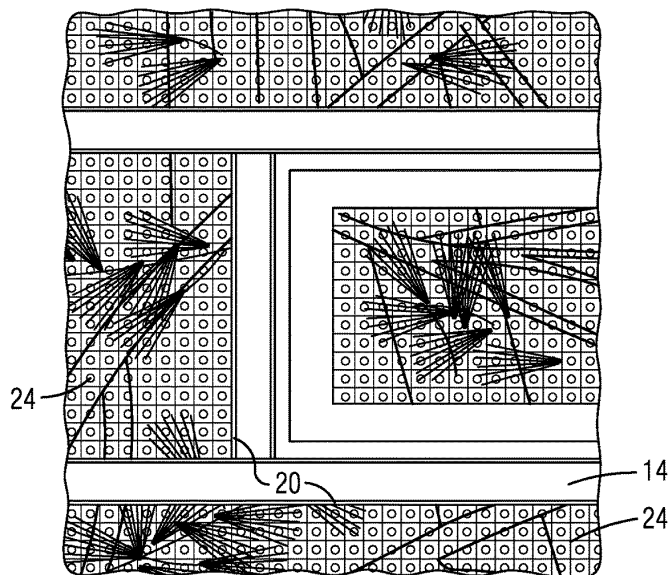


FIG. 5

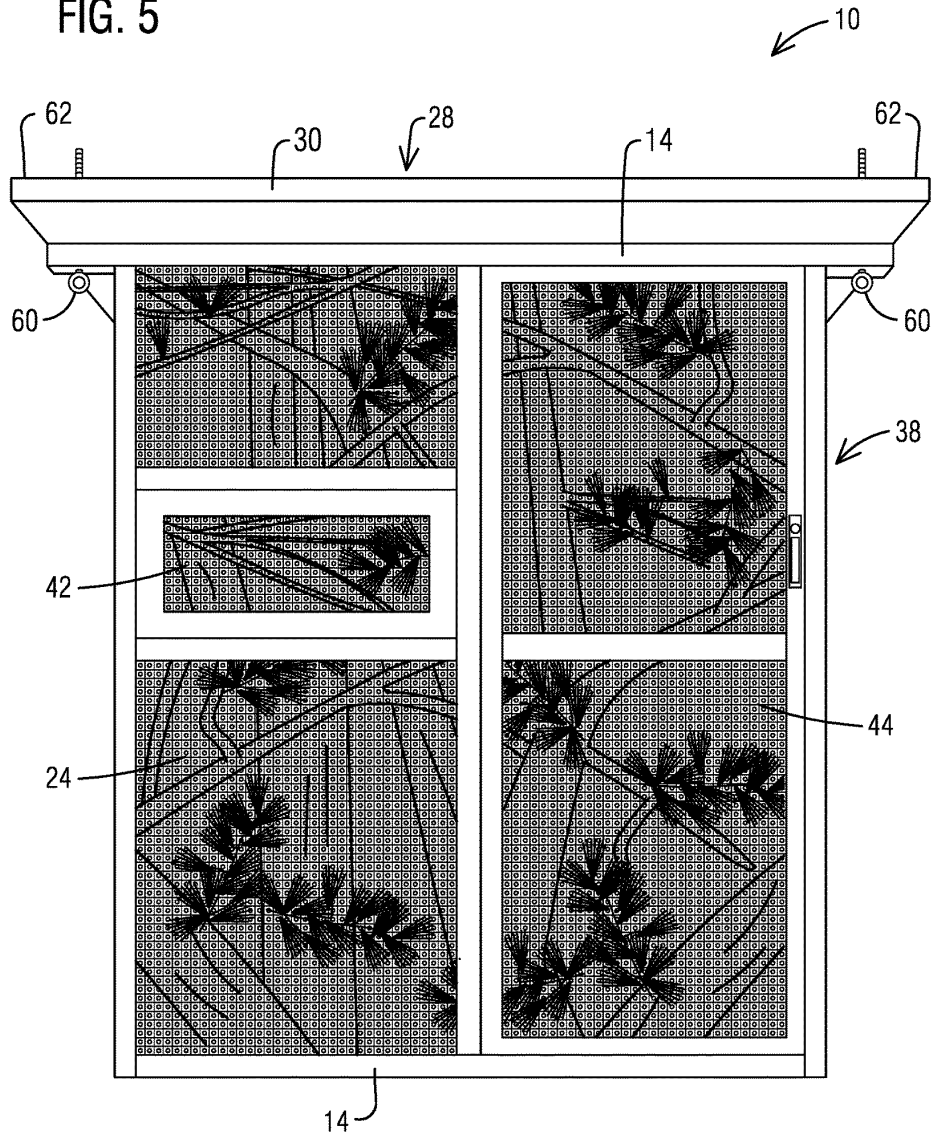
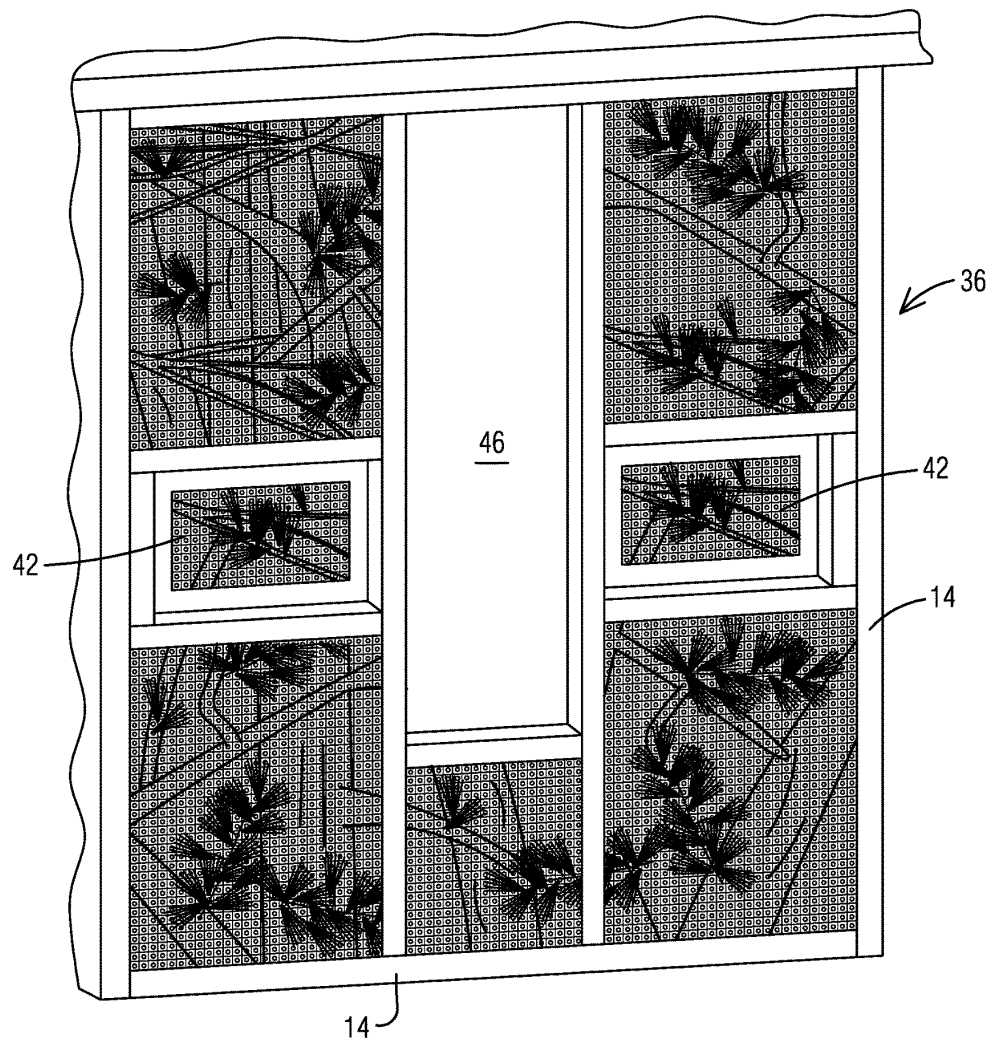


FIG. 6



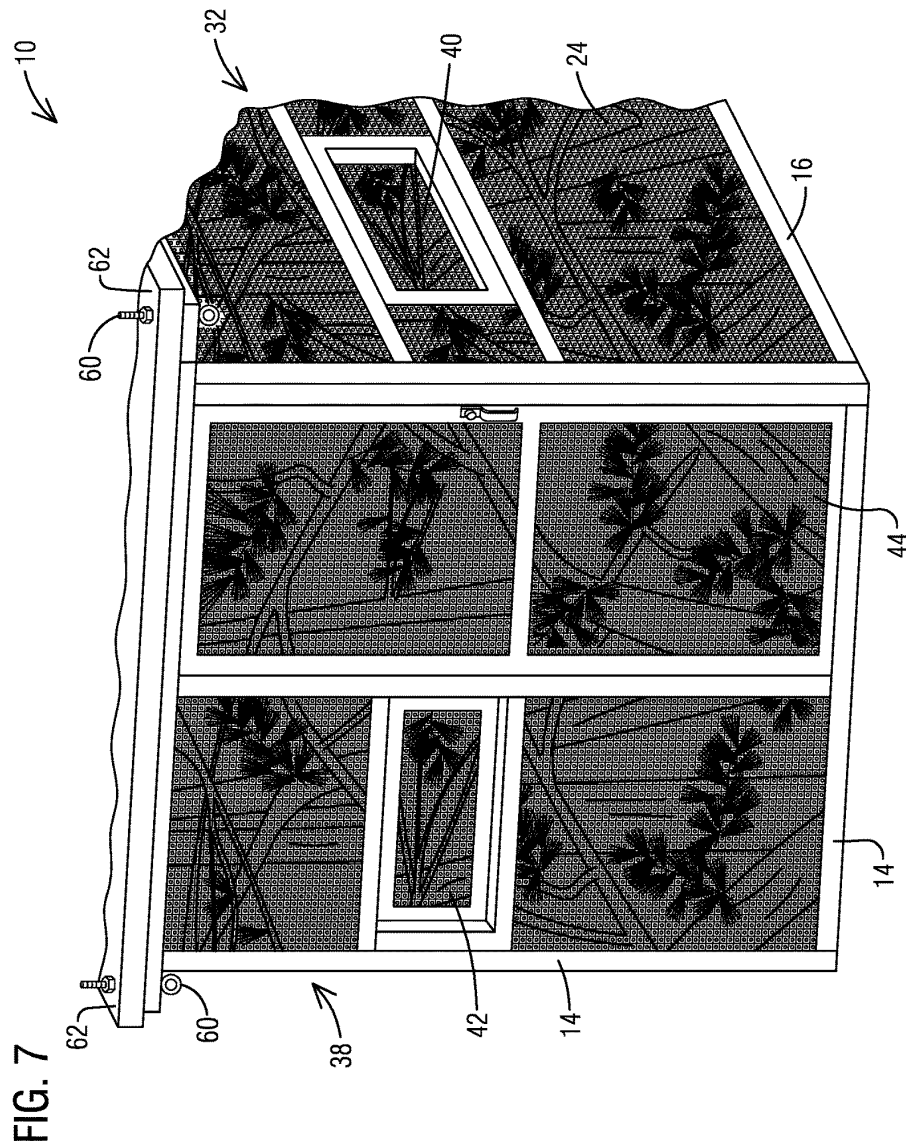


FIG. 8

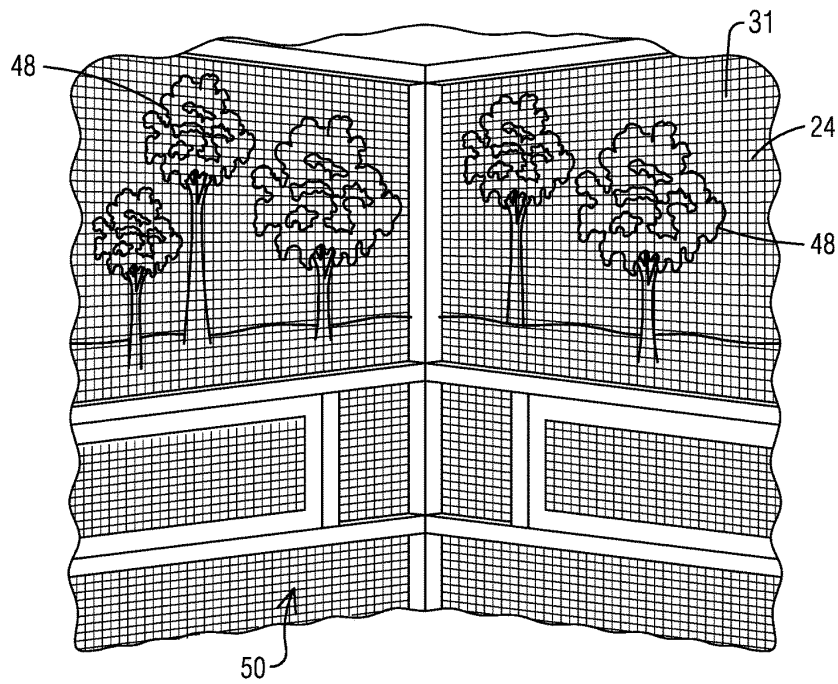
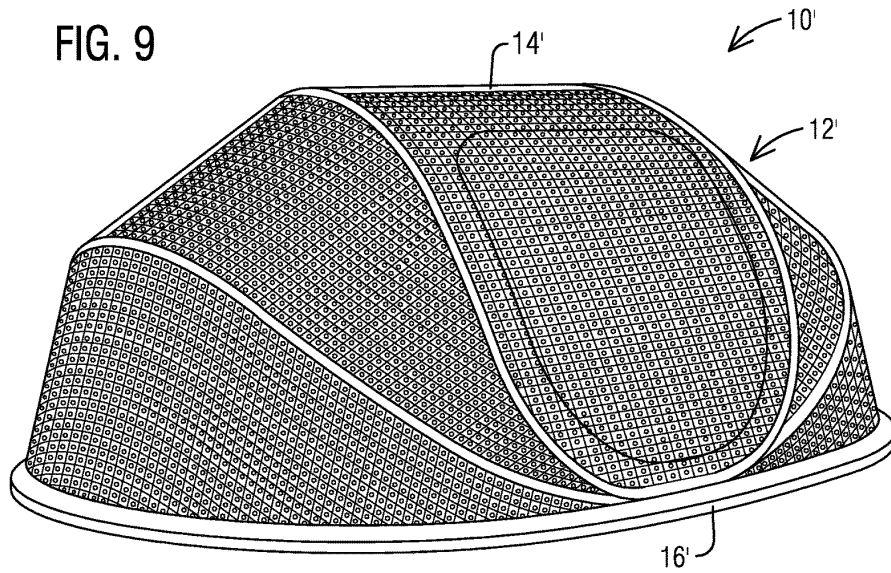


FIG. 9



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**CAMOUFLAGE MATERIAL FOR A
HUNTING BLIND**

CROSS REFERENCE TO RELATED
APPLICATIONS

This application is a Non-Provisional Patent Application that claims the benefit to U.S. Provisional Patent Application No. 62/301,007 filed on Feb. 29, 2016, and incorporated by reference herein in its entirety.

BACKGROUND OF THE INVENTION

Hunting blinds are used to conceal a hunter's location as game approaches. Although conventional hunting blinds have been developed, they have several drawbacks. For example, conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. Additionally, conventional hunting blinds feature structures with closed panels that provide limited ventilation. Thus, these hunting blinds have limited use in high humidity hunting climates.

BRIEF DESCRIPTION OF THE INVENTION

In one embodiment of the invention, mesh material of interwoven fabric is provided for a hunting blind including a camouflage pattern printed on a first side and a second side with a dark color coating, the second side opposite to the first side. The mesh material is partially transmissive such that a portion of incident radiation from an exterior of the hunting blind is reflected off the camouflage pattern on the first side back into the exterior, a portion of incident radiation from an interior of the hunting blind is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion during daylight conditions is above a threshold value such that the exterior of the hunting blind is visible through the mesh material from the interior of the hunting blind and the interior of the hunting blind is not visible through the mesh material from the exterior of the hunting blind during daylight conditions.

In another embodiment of the invention, a hunting blind is provided including a frame with a plurality of frame members and panels of mesh material attached to the frame members that cover an area between the frame members to define an interior of the hunting blind.

In another embodiment of the invention, a mesh material is provided that is capable of being secured to a frame of a hunting blind. The mesh material includes a camouflage pattern printed on a first side of the mesh material that faces an exterior of the hunting blind and a single color coating on a second side of the mesh material that faces an interior of the hunting blind.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a perspective view of a first side of mesh material in accordance with aspects of embodiments of the invention;

FIG. 1B is a perspective view of a second side of mesh material of FIG. 1A;

FIG. 1C is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an interior of the hunting blind;

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FIG. 1D is a side cutaway view of the hunting blind of FIG. 2 depicting a ray diagram of light incident on the hunting blind from an exterior of the hunting blind;

FIG. 2 is a side view of a hunting blind in accordance with aspects of embodiments of the invention;

FIG. 3A is a perspective view of an open back extruded aluminum member used to form a frame of the hunting blind of FIG. 2;

FIG. 3B is a perspective view of a hollow extruded aluminum member used to form the frame of the hunting blind of FIG. 2;

FIG. 4 is a view of an interconnection between extruded members and mesh material in the hunting blind of FIG. 2;

FIG. 5 is a back view of the hunting blind of FIG. 2;

FIG. 6 is a perspective front view of the hunting blind of FIG. 2 with an open bow window;

FIG. 7 is a perspective back view of the hunting blind of FIG. 2;

FIG. 8 is a view of an exterior of the hunting blind through mesh material from an interior of the hunting blind of FIG. 2; and

FIG. 9 is a side view of a hunting blind in accordance with aspects of embodiments of the invention.

DETAILED DESCRIPTION OF THE
INVENTION

A more particular description of the invention briefly described above will be rendered by reference to specific embodiments thereof that are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered to be limiting of its scope, the invention will be described and explained.

The inventors of the present invention designed an improved hunting blind that overcomes the above noted drawbacks of conventional hunting blinds. In one example, the inventors of the present invention recognized that conventional hunting blinds have limited structural integrity and thus are not capable of withstanding elements of the outdoors. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with a frame that features interconnected extruded aluminum members that provide structural integrity to withstand elements of the outdoors. While some embodiments of the present invention disclose a hunting blind with a frame including rigid interconnected members, the present invention is not limited to this arrangement and also features a hunting blind with a frame including flexible frame members. In another example, the inventors of the present invention recognized that conventional hunting blinds are formed with closed panels that provide limited ventilation and thus have limited use in high humidity hunting climates. To overcome this noted drawback, the inventors of the present invention designed a hunting blind with panels of mesh material that simultaneously provide ventilation to an interior of the hunting blind and camouflage the interior of the hunting blind.

In selecting an appropriate mesh material to form the improved hunting blind, the inventors of the present invention recognized that conventional mesh material used in connection with hunting has notable drawbacks. For example, the inventors recognized that such conventional mesh material easily catches and tears on branches as an individual wearing the mesh material moves through dense woods. In another example, the inventors recognized that such conventional mesh material is relatively light and

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transparent and thus would not effectively camouflage the interior of the hunting blind. To overcome these noted drawbacks, the inventors of the present invention selected a mesh material that is heavier and/or more durable than the conventional mesh material used in connection with hunting. This mesh material advantageously provides an effective camouflage to the interior of the hunting blind and is more durable thereby extending a projected lifetime of the hunting blind.

Although some embodiments of the present invention discuss the use of mesh material in the context of hunting blinds, the present invention is not limited to this context and includes all uses of camouflage material in the context of hunting. In other embodiments, the camouflage material (e.g. mesh material 26) can be used to form a ground blind or stake out blind that is mounted in the ground to conceal an individual positioned behind the blind. In still other embodiments, the camouflage material can be used to form windows or tree sand skirts. For purposes of this invention, "camouflage material" means material that is used to cover people, equipment and/or installations, such as the hunting blinds discussed herein, to make them blend in with their surroundings.

FIG. 1A is a perspective view of a first side 27 of mesh material 26 in accordance with aspects of embodiments of the invention. FIG. 1B is a perspective view of a second side 31 of mesh material 26 of FIG. 1A that is opposite to the first side 27. Panels of mesh material 26 are used to form an improved hunting blind, as discussed below. As shown in FIG. 1A, the first side 27 of the mesh material 26 features a camouflage pattern 29. In an example embodiment, the camouflage pattern 29 is based on an exterior environment where the hunting blind will be positioned.

In an example embodiment, the camouflage pattern 29 is based on a photograph of the exterior environment of the hunting blind, and the camouflage pattern 29 can be printed on the first side 27 using ink. As shown in FIG. 1B, the second side 31 of the mesh material 26 includes a dark color coating, such as dark colored ink 33. However, in other embodiments, any color coating, such as any colored ink can be coated on the second side 31, including white colored coating, blue colored coating, red colored coating, yellow colored coating, green colored coating, orange colored coating and purple colored coating. In some embodiments, an exterior surface of the second side 31 is coated with the dark colored ink 33. In other embodiments, dark colored mesh material 26 is used and thus the second side 31 does not need to be coated with dark colored ink 33. In this embodiment, only the first side 27 of the mesh material 26 needs to be printed with the camouflage pattern 29. In some embodiments, for purposes of this description, "dark colored ink" means a colored ink that absorbs a substantial portion of incident visible light. In an example embodiment, the dark colored ink absorbs 50% or more of incident visible light. In another example embodiment, the dark colored ink absorbs 80% or more of incident visible light, for example. In other embodiments, for purposes of this description, "dark colored ink" means one or more of black colored ink, brown colored ink, grey colored ink, dark black colored ink, dark brown colored ink, dark grey colored ink, light brown colored ink, light grey colored ink, dark red colored ink, dark green colored ink, dark blue colored ink, dark purple colored ink, dark orange colored ink, dark yellow colored ink, or any combination thereof. In still other embodiments, "dark colored ink" means one or more color coded inks provided by ink manufacturers, as discussed below.

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In an example embodiment, panels of the mesh material 26 are oriented on the hunting blind such that the first side 27 is directed toward the exterior of the hunting blind and the second side 31 is directed toward the interior of the hunting blind. During daylight conditions, the exterior of the hunting blind is visible from the interior of the hunting blind, but the interior of the hunting blind is not visible from the exterior of the hunting blind. FIG. 1C is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on the hunting blind 10 from an interior 50 of the hunting blind 10. A hunter 102 is positioned in the interior 50 of the hunting blind 10 and game 104 (e.g. deer) is positioned in an exterior 48 of the hunting blind 10. In some embodiments, the hunting blind 10 is used during daylight conditions, when the sun 106 emits radiation 116. The hunter 102, game 104 and sun 106 are not part of the hunting blind 10. As depicted in FIG. 1C, incident radiation 110a from the hunter 102 is incident on the second side 31 of the mesh material 26. A first portion 111a of the incident radiation 110a is absorbed by the coating of the second side 31. In some embodiments, the dark colored ink of the second side 31 is selected to maximize the absorbed portion 111a of the incident radiation 110a. In other embodiments, an intensity ratio of the absorbed portion 111a to the incident radiation 110a for the second side 31 is greater than an intensity ratio of the absorbed portion 111b to the incident radiation 110b for the first side 27. A second portion 112a of the incident radiation 110a is reflected off the second side 31 back into the hunting blind interior 50. A third portion 114a of the incident radiation 110a is transmitted through the mesh material 26 to the game 104. As further depicted in FIG. 1C, radiation 116 from the sun 106 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 118 of the incident radiation 116 is reflected off the camouflage pattern 29 to the game 104. In some embodiments, an intensity of the reflected portion 118 of light from the camouflage pattern 29 is much greater than an intensity of the transmitted portion 114a of light from the interior 50 (e.g. hunter 102). Since the intensity of the light from the camouflage pattern 29 is much greater than the intensity of the light from the interior 50 (e.g. hunter 102), the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. For purposes of this description, "much greater" is based on the threshold value of the intensity ratio discussed below. Instead, the camouflage pattern 29 is visible from the exterior 48 and conceals the interior 50 of the hunting blind 10. In an example embodiment, the radiation discussed above is in one or more regions of the visible portion (e.g. 400-700 nm) of the optical spectrum that overlaps with a detection spectrum of game 104. In other embodiments, the radiation discussed above is in a detection spectrum of game 104, including one or more regions of the visible portion and ultra-violet (UV) portions of the spectrum. In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the reflected portion 118 to the intensity of the transmitted portion 114a during daylight conditions is more than a threshold value such that the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. In one embodiment, the threshold value is 1. In other embodiments, the threshold value is 2. In still other embodiments, the threshold value is 5. In still other embodiments, the threshold value is 10. In still other embodiments, the threshold value is 100.

FIG. 1D is a side cutaway view of the hunting blind 10 of FIG. 2 depicting a ray diagram of visible light incident on

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the hunting blind 10 from the exterior 48 of the hunting blind 10. As depicted in FIG. 1D, incident radiation 110b from the game 104 is incident on the first side 27 of the mesh material 26. A first portion 111b of the incident radiation 110b is absorbed by the camouflage pattern 29 on the first side 27. A second portion 112b of the incident radiation 110b is reflected off the first side 27 back to the exterior 48. A third portion 114b of the incident radiation 110b is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). As further depicted in FIG. 1D, radiation 115 from an object 122 (e.g. tree) in the exterior 48 is incident on the camouflage pattern 29 on the first side 27 of the mesh material 26. A portion 120 of the incident radiation 115 is transmitted through the mesh material 26 to the interior 50 (e.g. hunter 102). In some embodiments, an intensity of the transmitted portion 114b of light from the game 104 is approximately equal to an intensity of the transmitted portion 120 from the object 122. For purposes of this description, "approximately equal" is based on a range of intensity ratio, as discussed below. Since the intensity of the light from the game 104 is approximately equal to the intensity of the light from the object 122, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10. In an example embodiment, distinct forms (e.g. game 104, object 122, etc.) in the exterior 48 are visibly distinguishable, as viewed from the interior 50 of the hunting blind 10. In this embodiment, the hunter 102 can visibly distinguish the game 104 from other parts of the exterior 48 (e.g. object 122) since the intensity of the light from the game 104 is approximately equal to the intensity of light from other parts of the exterior 48 (e.g. object 122). In one embodiment, the camouflage pattern 29 on the first side 27 and colored coating on the second side 31 are selected such that a ratio of the intensity of the transmitted portion 114b to the intensity of the transmitted portion 120 during daylight conditions is approximately equal to 1. In other embodiments, the ratio is in a range from 0.9-1.1. In still other embodiments, the ratio is in a range from 0.8-1.2. In still other embodiments, the ratio is in a range from 0.5-2. In still other embodiments, the ratio is in a range from 0.2-5. In still other embodiments, the ratio is in a range from 0.1-10.

Different types of ink and printing techniques can be used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Each ink includes a colorant (e.g. dye or pigment) and a carrier liquid (e.g. solvent). A defining quality of each ink is the process used to adhere the colorant to the mesh material 26.

In some embodiments, a solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Solvent ink refers to an oil-based solution that holds a colorant (e.g. pigment), and is advantageously fade-resistant, waterproof and resistant to abrasion. During a printing process of the solvent-based ink, the solvent ink (i.e. colorant and solvent) is printed on the mesh material 26, after which the solvent evaporates or is flashed off with heaters on the printer, leaving the colorant behind. In an embodiment, the solvent based ink resists fading for five to seven years. In one embodiment, a region where the printing is performed is vented to exhaust volatile organic compounds (VOC) that are present during the solvent printing process.

In other embodiments, an eco-solvent based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. In an example embodiment, eco solvent ink is used that is sold under the ECO SOL MAX brand name. Eco-solvent ink is made using ether extracts taken from refined mineral oil. The eco-

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solvent ink printing process is similar to solvent ink printing, with the exception that eco-solvent ink takes longer to dry and venting is not required since VOC are not present during the printing process. The eco-solvent ink can be removed by alcohol and glass cleaner and accordingly, the durability of eco-solvent ink is reduced as compared to solvent ink. In some embodiments, eco-solvent ink resists fading for two to three years, which is reduced from the period of solvent ink. In an embodiment, manufacturers offer eco-solvent inks in various color sets. In an example embodiment, manufacturers offer color coded inks using letters, including cyan (C), magenta (M), yellow (Y), black (K), light cyan (LC), light magenta (LM), light black (LK), white, silver and metallic. In an example embodiment, one or more of the black (K), light black (LK), silver and metallic colored inks can be used to print the dark colored ink 33 on the second side 31.

In other embodiments, a latex based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. Latex ink is a pigmented, water-based ink that uses an aqueous-dispersed polymer. As with the eco-solvent based ink, there is no VOC and accordingly, no venting is required during the latex ink printing process. In one embodiment, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 comes out of the printer completely cured. In some embodiments, radiant heaters with airflow are incorporated into the printer to evaporate the latex ink liquid, which causes the latex polymer particles to coalesce, forming a polymer layer that adheres to the mesh material 26 and encapsulates the pigment. In other embodiments, the printer uses ceramic radiated plates for a constant and even heat source.

In other embodiments, an ultra-violet (UV) based ink is used to print the camouflage pattern 29 on the first side 27 and the dark colored ink 33 on the second side 31. UV based ink includes oligomer and monomer acrylate resins and photo initiators. During the printing process, after the ink is applied to the mesh material 26, the ink is exposed to UV radiation such that free radicals are released that cause the polymerization of the compound to harden to a dry ink film. The pigment is then encapsulated within this film. In some embodiments, the UV radiation is applied with a light emitting diode (LED) source (i.e. low-heat, long-life) or a mercury arc lamp (i.e. higher heat, shorter life). Unlike the solvent based ink, the UV based ink does not evaporate and instead is "cured" when the UV light system of the printer passes overhead. Due to a low viscosity of the UV based inks and since UV based inks do not penetrate the mesh material 26, the camouflage pattern 29 on the first side 27 and dark colored ink 33 on the second side 31 can be advantageously printed using a reduced volume of UV based ink, as compared to solvent based ink.

In some embodiments, the mesh material 26 is a mesh banner material, for example. In one embodiment, the mesh material 26 is made of polyester. In an example embodiment, the mesh material 26 is made of polyester material that is coated with a PVC (polyvinyl chloride) film or backing. In an example embodiment, the mesh material 26 is a vinyl coated polyester made of polyester scrim, a bonding or adhesive agent and an exterior PVC coating or backing. The scrim supports the coating and provides tensile strength, elongation, tear strength and dimensional stability of the resulting fabric. In some embodiments, vinyl-coated polyester is manufactured in large panels by heat-sealing an over-lap seam with either a radio-frequency welder or a hot-air sealer. In other embodiments, the mesh material 26 is made from a textile or cloth material that is a flexible

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material and includes a network of natural or artificial fibers (e.g. yarn or thread). In an example embodiment, the mesh material 26 is formed by yarn that is produced by spinning raw fibers of wool, flax, cotton or other material producing long strands. In other embodiments, the mesh material 26 is formed by textiles that are formed by weaving, knitting, crocheting, knotting or felting. In still other embodiments, the mesh material 26 is formed using synthetic textile material, including one or more of polyester, aramid fiber, acrylic fiber, nylon, spandex, olefin fiber, ingeo, lurex and carbon fiber. In another embodiment, the mesh material 26 features a PVC (polyvinyl chloride) backing. The PVC backing creates an air-tight print surface to prevent ink spraying through the mesh material 26 and helps to feed the mesh material 26 through the printer during the printing process. The PVC backing is removed from the mesh material after printing, such as by peeling the PVC backing off the polyester material. In another example embodiment, the mesh material 26 has a weight density of approximately 8 ounce (oz) per square yard (yd²). In another example embodiment, the mesh material 26 is a coated polyester scrim mesh banner material. In an example embodiment, the mesh material 26 allows airflow in a range of 30-40%, such as 37%, for example, where airflow is defined as a ratio of a velocity of outgoing air from the mesh material 26 to a velocity of incident air onto the mesh material 26. In another example embodiment, the mesh material 26 has a tensile strength of approximately 160×160 pounds/inch and/or a tear strength of approximately 34×34 pounds/inch. In another example embodiment, the mesh material 26 has a low temperature crack threshold of approximately -22 degrees Fahrenheit (F.). In another example embodiment, the mesh material 26 is fungus resistant and flame resistant, NFPA701, title 19, CSFM, ASTM E84.

FIG. 2 is a side view of a first side 32 of a hunting blind 10 in accordance with aspects of embodiments of the invention. The hunting blind 10 includes a frame 12 with one or more frame members, such as aluminum extruded members 14, 16 that are interconnected together. In an example embodiment, the aluminum extruded member 14 is a 2"×2" closed hollow member and the aluminum extruded member 16 is a 1"×2" open back member. FIG. 3A is a perspective view of an open back extruded aluminum member 16 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3A, the extruded aluminum member 16 includes one spline groove 18 to receive a spline, as discussed below. FIG. 3B is a perspective view of a hollow extruded aluminum member 14 that forms the frame 12 of the hunting blind 10 of FIG. 2. As shown in FIG. 3B, the extruded aluminum member 14 includes a pair of spline grooves 18 to receive respective splines, as discussed below. In an example embodiment, 3" bronze sheet screws are internally screwed to attach interconnecting extruded members 14, 16. In an example embodiment, 10³/₄" text screws are used to attach clips in interconnected areas of the extruded members 14, 16 that are not internally screwed together.

The hunting blind 10 also includes panels 24 of the mesh material 26 that are secured between aluminum extruded members 14, 16. In some embodiments, the panels 24 of the mesh material 26 are attached to the members 14, 16 of the frame 12 to cover an area between the members 14, 16 and define an interior of the hunting blind 10. In an example embodiment, the camouflage pattern 29 on the mesh material 26 is based on the exterior 48 of the hunting blind 10. FIG. 4 is a view of an interconnection between extruded members 14, 16 and panels 24 of mesh material 26 in the

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hunting blind 10 of FIG. 2. As shown in FIG. 4, a spline 20 is provided along a perimeter of the panel 24 and the spline 20 is positioned within one of the spline grooves 18 of the extruded member 14, to secure the panel 24 along the length of the extruded member 14. In an example embodiment, the spline 20 is a rubber spline. In some embodiments, the spline 20 secures a first side of the panel 24 within a spline groove 18 of a first extruded member 14, 16 and the spline 20 further secures a second side of the panel 24 within a spline groove 18 of a second extruded member 14, 16, where the first and second extruded members 14, 16 are interconnected to form the frame 12. In further embodiments, the spline 20 secures a third side of the panel 24 within a spline groove 18 of a third extruded member 14, 16 and the spline 20 secures a fourth side of the panel 24 within a spline groove 18 of a fourth extruded member 14, 16, where the first, second, third and fourth extruded members 14, 16 are interconnected to form the frame 12. In other embodiments, a respective spline 20 is used to secure each side of the panel 24 within a respective spline groove of the extruded member.

FIG. 5 is a back view of the hunting blind 10 of FIG. 2. A roof 28 of the hunting blind 10 includes roof panels 30. In an example embodiment, the roof panels 30 have a high-density polystyrene core and are laminated on both sides by stucco textured aluminum. In an example embodiment, the roof panels 30 are 2" Elite® aluminum panels. Anchor bolts 60 are secured through an extruded member 14 and the roof panels 30 at each corner 62 of the hunting blind 10. In an example embodiment, the anchor bolts 60 include a stainless steel eyebolt that is attached with a pair of washers and a hex nut. In an example embodiment, 3" bronze sheet screws (not shown) with neoprene washers are used to attach the roof panels 30 to the extruded members 14 that extend around a perimeter of an undersurface of the roof panels 30.

The hunting blind 10 includes one or more doors and windows. Each door and window includes one or more panels 24 of mesh material 26 that forms an interior of the door or window and is interconnected to extruded members 14, 16 that form the frame of each door and window. As shown in FIG. 2, the first side 32 of the hunting blind 10 includes a window 40 that can be opened (inward to the interior of the blind 10) to provide a shooting position upon the approach of prey from the first side 32. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a window 42 that provides a shooting position upon the approach of prey from the back side 38. FIG. 6 is a perspective front view of a front side 36 of the hunting blind 10 of FIG. 2 with an open bow window 46 that provides an arching position upon the approach of prey from the front side 36. In an example embodiment, dimensions of the windows 40, 42 are 26" (width)×12" (height), for example. In an example embodiment, dimensions of the bow window 46 is 13" (width)×46" (height), for example. Additionally, as shown in FIG. 5, a back side 38 of the hunting blind 10 includes a door 44 that can open (either inward or outward) for entry to the interior of the hunting blind 10. In an example embodiment, dimensions of the door 44 are 30" (width)×66" (height), for example. In an example embodiment, the windows 40, 42, 46 or door 44 can be customized, in terms of length or width. In an example embodiment, the door 44 can be customized to have a width up to 48". In an example embodiment, the windows 40, 42, 46 and door 44 have a frame made of bronze extruded aluminum members. The above numerical dimensions of the windows 40, 42, 46 and door 44 are merely exemplary and the dimensions of the windows 40, 42, 46 and door 44 are not limited to any

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specific dimension. FIG. 7 depicts another view of the hunting blind 10, including the windows 40, 42 and door 44.

In an example embodiment of the frame 12, the extruded members 14 are 2"x2". In another example embodiment, a height of the frame 12 at the front side 36 is approximately 6' and a width of the frame 12 at the front side 36 and back side 38 is approximately 5'4". As previously discussed, panels 24 of mesh material 26 are secured within the frames of each window 42, 46, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

In an example embodiment of the frame 12, the extruded members 14 are 2"x2" and the extruded members 16 are 1"x2". In another example embodiment, a height of the frame 12 at the sides 32, 34 varies from a first height (e.g. 5'10") to a second height (e.g. 6') that is greater than the first height, to provide a pitch in the roof 28 for rainwater runoff. Additionally, a width of the frame 12 at the sides 32, 34 is approximately 5'. As previously discussed, panels 24 of mesh material 26 are secured within the frames of each window 40, to form the hunting blind 10. These numerical dimensions are merely exemplary and the frame 12 is not limited to these numerical dimensions.

FIG. 8 is a view of the exterior 48 of the hunting blind 10 through panels 24 of mesh material 26 from an interior 50 of the hunting blind 10 of FIG. 2. The second side 31 of the mesh material 26 faces the interior 50 of the hunting blind 10. The mesh material 26 is partially transmissive such that during daylight conditions, the exterior 48 of the hunting blind 10 is visible from the interior 50 of the hunting blind 10 yet the interior 50 of the hunting blind 10 is not visible from the exterior 48 of the hunting blind 10. As depicted in the view of FIG. 9 since the panels 24 of mesh material 26 are provided on each side of the hunting blind 10, the hunting blind 10 provides a 360 degree view of the exterior 48 through the panels 24 in each side of the hunting blind 10.

FIG. 9 is a side view of a hunting blind 10' in accordance with aspects of embodiments of the invention. The hunting blind 10' includes a frame 12' that is formed of interconnected flexible frame members 14', 16'. In an example embodiment, the hunting blind 10' has a structure that is similar to a pop-up tent. As with the hunting blind 10, the hunting blind 10' includes panels of the mesh material 26 that are secured between the flexible frame members 14', 16'. However, the panels differ from the panels 24 of the hunting blind 10, due to a variation in the spacing between the flexible frame members 14', 16' of the frame 12', as compared to the spacing between the frame members 14, 16 of the frame 12. Thus, although the frame 12 of the hunting blind 10 is a fixed frame including interconnected extruded members 14, 16, the frame 12 of the hunting blind is not limited to a fixed frame and may include a pop-up frame 12' with foldable frame members 14', 16'. In an example embodiment, the pop-up frame includes panels of the mesh material 26 secured between the foldable frame members 14', 16' such that when the frame 12' is moved from a folded position to a deployed position, the exterior of the hunting blind 10' is visible through the panels from the interior of the hunting blind yet the interior of the hunting blind 10' is not visible through the panels from the exterior of the hunting blind 10'.

While certain embodiments of the present invention have been shown and described herein, such embodiments are provided by way of example only. Numerous variations, changes and substitutions will occur to those of skill in the art without departing from the invention herein. Accord-

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ingly, it is intended that the invention be limited only by the spirit and scope of the appended claims.

What is claimed is:

1. A camouflage structure comprising:

a pop-up frame including a plurality of flexible frame members, said plurality of flexible frame members comprising at least two spaced apart frame members; a plurality of panels of a mesh material defining an outer surface of the camouflage structure and attached to the flexible frame members covering an area between the spaced apart frame members and defining an interior of the camouflage structure; and

one or more panels of non-mesh material provided along a roof of the camouflage structure and attached to the flexible frame members;

wherein the mesh material is interwoven fabric with a camouflage pattern printed on a first side, and a second side with a dark color coating, said second side opposite to the first side;

and wherein the mesh material is partially transmissive and has an aperture density that corresponds to an airflow between 30% and 40%, wherein the airflow is defined as a ratio of a velocity of outgoing air from the mesh material to a velocity of incident air onto the mesh material.

2. The camouflage structure of claim 1, comprising a front side and a back side each formed by the frame members and panels of the mesh material secured between the frame members, wherein a door is formed in one of the back side and the front side.

3. The camouflage structure of claim 1, wherein the mesh material is partially transmissive such that a portion of incident radiation from an exterior of the camouflage structure is reflected off the camouflage pattern back into the exterior, a portion of incident radiation from an interior of the camouflage structure is transmitted through the mesh material to the exterior and wherein a ratio of an intensity of the reflected portion to an intensity of the transmitted portion is above a threshold value such that an exterior of the camouflage structure is visible through the camouflage material from the interior of the camouflage structure and the interior of the camouflage structure is not visible through the mesh material from the exterior of the camouflage structure.

4. The camouflage structure of claim 1, wherein the frame members have a variation in the spacing between the spaced apart frame members.

5. The camouflage structure of claim 1, wherein the frame includes a pair of sides, a front side and a back side, and wherein the frame includes the frame members and wherein panels of the mesh material are secured between the frame members to form at least one window in one or more of the pair of sides, the front side and the back side.

6. The camouflage structure of claim 1, wherein said panels of mesh material comprise;

a first panel attached to the spaced apart frame members to cover a first area between the spaced apart frame members, and

a second panel attached to the spaced apart frame members to cover a second area between the spaced apart frame members,

and wherein the first panel and the second panel are one of;

positioned such that the second panel is opposite to the first panel on the frame and the second panel is oriented parallel to the first panel, and disposed at an angle relative to each other.

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7. The camouflage structure of claim 1, wherein the plurality of frame members are configured to form an enclosure that surrounds the interior.

8. The camouflage structure of claim 1, wherein the panels of mesh material and the panels of non-mesh material cover the area between the spaced apart frame members and define the interior of the camouflage structure.

9. The camouflage structure of claim 8, wherein the panels of non-mesh material are non-transmissive such that incident radiation from an exterior of the camouflage structure is not transmitted through the non-mesh material.

10. The camouflage structure of claim 9, wherein the panels of non-mesh material comprises roof panels and wherein the non-mesh material comprises polystyrene.

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EXHIBIT AA

EX. 2032-AA

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EXHIBIT BB

EX.2032-BB