UMass | Dartmouth

Material Science: Fabric/Textiles

Title: ***Lead Pellet Recovery Fabrics (UMD 04-01)***

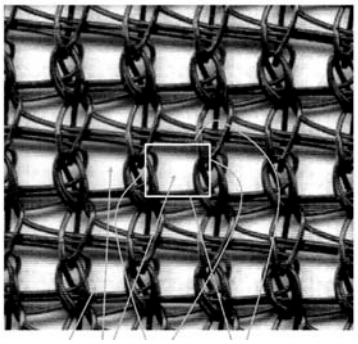
Inventors: ***Yong Kim et al.***

Applications: Controlling and minimizing lead contamination at shooting ranges

Benefits: Single and double layers of the fabrics of the invention are effective at trapping lead shot, to enable easier less costly environmental clean-up at shooting ranges, skeet ranges and trap ranges.

Technology Description: Environmental contamination by spent lead shot that accumulates on skeet and trap ranges and other shooting ranges is a major problem. Lead contamination is a persistent threat to wildlife, habitat and water quality and therefore causes a potential health hazard to humans. In addition, sportsmen and sportswomen potentially face direct exposure to spent lead at shooting ranges. There is therefore a need for technology for minimizing lead contamination at locations such as skeet and trap ranges and sporting clay courses. The invention provides fabrics for containing fired lead shot. Such fabrics can be hung on poles or other such devices as a backdrop or barrier at a shooting range or course. As a result of hitting the fabric, the lead shot pellet loses all or most of its kinetic energy and thus falls to the ground near the fabric. The spent shot can then be collected and recycled with overall minimal environmental impact. The improved functionality of these knitted fabrics is made possible by novel repeat unit sizes and textile fabric finishing methods. U.S. Patent No. 7,851,388 claims these novel knitted fabrics and U.S. Patent No. 8,124,175 claims methods of fabricating such materials.

Patent Status: US Patent Nos. 7,851,388 and 8,124,175.



The image shows one embodiment of the invention, a mesh fabric that can be used to trap

For more information:

David J. Glass, Ph.D.
Technology Transfer Consultant
University of Massachusetts Dartmouth
UMass office: 508-910-9815
Cell: 617-653-9945
dglass@umassd.edu

Return to Available Inventions Page