

Mosquitos, Athletic Shoes, and Golf Clubs



"Adding Buttons Isn't Innovation, Removing Them Is"---Acura magazine ad

Three items this month, two from the September issue of Popular Science, and one from Hammacher Schlemmer (Skymall Catalog) illustrating TRIZ principles in product design.

First, mosquitos. As most of you know, malaria is a disease that still plagues the world. It is caused by a very clever parasite that is unwittingly carried by mosquitos. It is possible to block this attachment by blocking the binding to a protein in the mosquito's gut. Blocking the protein blocks the attachment. And as the article asks, how do you vaccinate a mosquito? Some very clever biologists at Johns Hopkins University have figured it out. You vaccinate the people and when a mosquito bites a person, the mosquito takes up the anti-bodies produced by the injection. Clever! What is the TRIZ principle here? "Do It In Reverse"

Second, a new sneaker from Adidas:

<http://www.adidas.com/us/product/mens-running-springblade-m/AY699?cid=G66970>

Take a look at this shoe and see how many times you see the TRIZ principle of "separation in space" you see being used in its design. The deliberate use of non-uniformity in spring design and position allow conservation and reuse of energy, increased gripping, and lessen the effect of impact. I am constantly amazed at all the new uses of separation principles used in exercise and athletic equipment.

Third, the 33-in-1 golf club:

<http://www.skymall.com/hammacher-schlemmer/33-in-1-golf-club/GHAM249.html>

This is an iron which has an adjustable head that adjusts to 33 different loft angles, replacing not only a putter, but all the different separate irons clubs...and it contracts to 19" in length to allow easy transport! The TRIZ line of evolution known as "dynamism" as well as "separation in time, and "separation upon condition".

Keep looking all around you and you will constantly see examples of TRIZ principles and when you do, ask yourself--why couldn't this have been brought to market years ago? Then apply those principles that you see to your own products.

Next public TRIZ classes are in Miami (Oct 7-9 at the airport convention center Doubletree) and New Orleans (December 12-14 at the Hyatt Regency):

<https://www.asme.org/products/courses/triz--the-theory-of-inventive-problem-solving>

If you need a good basic book on TRIZ principles (supplied with the courses above), take a look at:

<http://link.springer.com/book/10.1007/978-1-4614-3707-9/page/1>