AN UNTearable SITUATION

Bet you can't rip a tissue!

THE SETUP
You will need a paper tissue, a cardboard tube from a roll of paper towels, a rubber band, table salt or sand, and a broomstick. Stretch the tissue across the end of the paper towel tube. Fasten it in place with the rubber band. Pour four inches of salt or sand into the tube. Now hold the tube in one hand and press a broomstick into the salt. Try to push hard enough to rip the tissue.

INSIDER INFORMATION
The tissue is thin and the broomstick is strong, but you won’t be able to rip that tissue! The force you put on the broomstick is not all going straight down the tube toward the tissue. There are many tiny spaces between the salt crystals. When you jam the broomstick into the salt, the crystals collide, sending the force in every direction. Salt absorbs some of the force and divides the rest so it is diverted to all the surfaces of the tube. Only a tiny fraction of the original force reaches the tissue. The human body is not a strong enough powerhouse to deliver the force needed to send the broomstick through the tissue. For centuries, bags of sand have been used to stop speeding bullets in a dramatic adaptation of this marvel of nature.