

RUBBER BAND ENGINEER

BUILD:

SLINGSHOT-POWERED ROCKETS

RUBBER BAND RIFLES

UNCONVENTIONAL CATAPULTS

*** AND MORE GUERILLA GADGETS
FROM HOUSEHOLD HARDWARE**

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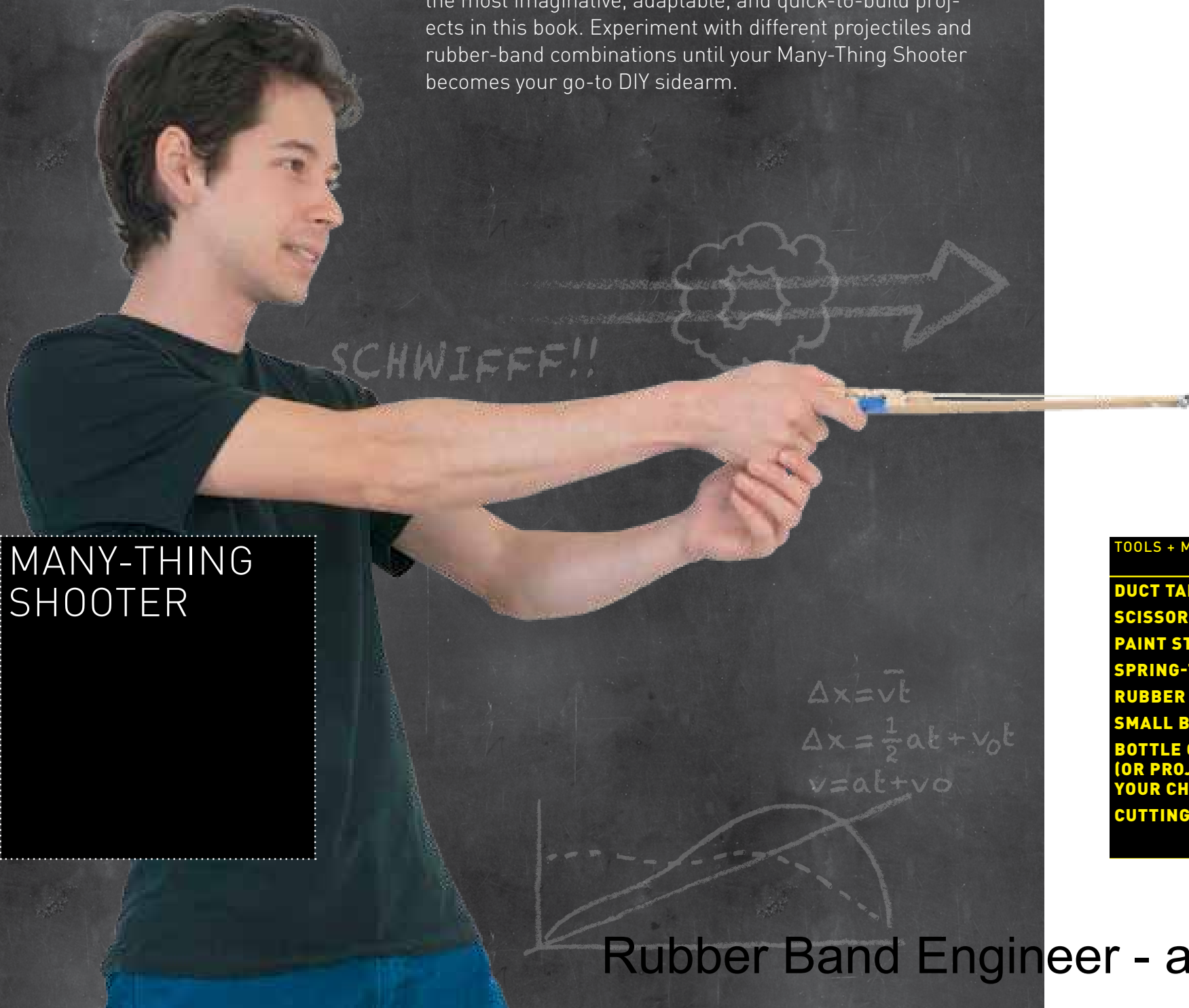


Rubber Band Engineer - available now!



The Many-Thing Shooter earns its name from its versatility: it can be built from many things. It can also launch many things, including candy, beads, and pieces of cork, to name a few. Every material in the shooter can be replaced with another household item, making this one of the most imaginative, adaptable, and quick-to-build projects in this book. Experiment with different projectiles and rubber-band combinations until your Many-Thing Shooter becomes your go-to DIY sidearm.

MANY-THING SHOOTER



CHOOSE YOUR RUBBER BAND WISELY

The rubber band is a critical component of the shooter. Choose a band that has a maximum stretched length about equal to the length of the stick. Avoid using very thin bands that break easily or very thick bands that are difficult to stretch. Try doubling your rubber bands for additional firepower!



TOOLS + MATERIALS

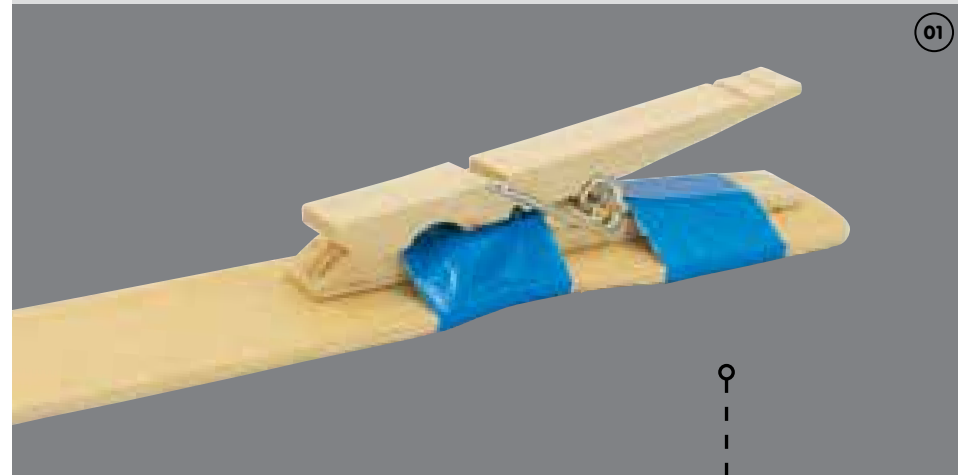
- DUCT TAPE**
- SCISSORS**
- PAINT STIRRER**
- SPRING-TYPE CLOTHESPIN**
- RUBBER BAND**
- SMALL BINDER CLIP**
- BOTTLE CORK (OR PROJECTILE OF YOUR CHOICE)**
- CUTTING TOOL (OPTIONAL)**

MATERIAL SUBSTITUTIONS

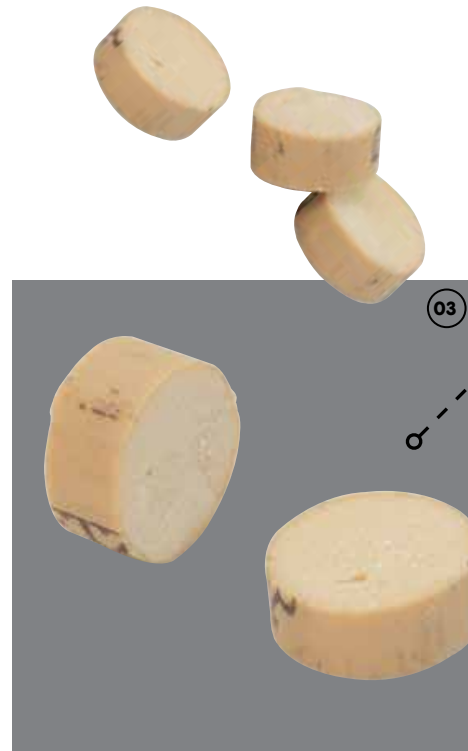
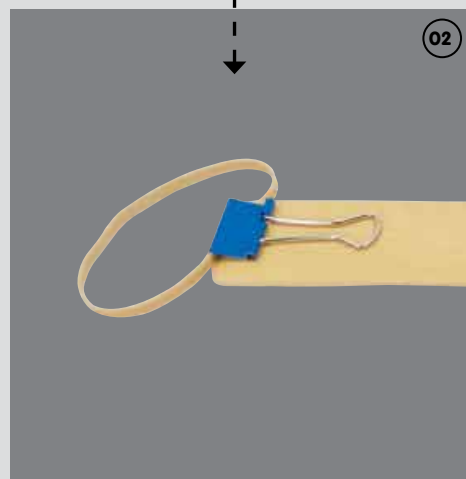
<i>PAINT STIRRER</i>	Ruler, wood shim, craft sticks, or another flat, rigid strip of wood, plastic, or cardboard
<i>CLOTHES PIN</i>	Binder clip, chip clip, or anything that can clamp onto a rubber band and act as a trigger
<i>BINDER CLIP</i>	Masking tape or duct tape
<i>DUCT TAPE</i>	Hot glue, masking tape, or any glue or tape that can secure the trigger in place
<i>PROJECTILE</i>	Anything that is slightly wider than the trigger. Reasonably dense and aerodynamic objects, such as wooden beads, pebbles, or candy, work best.

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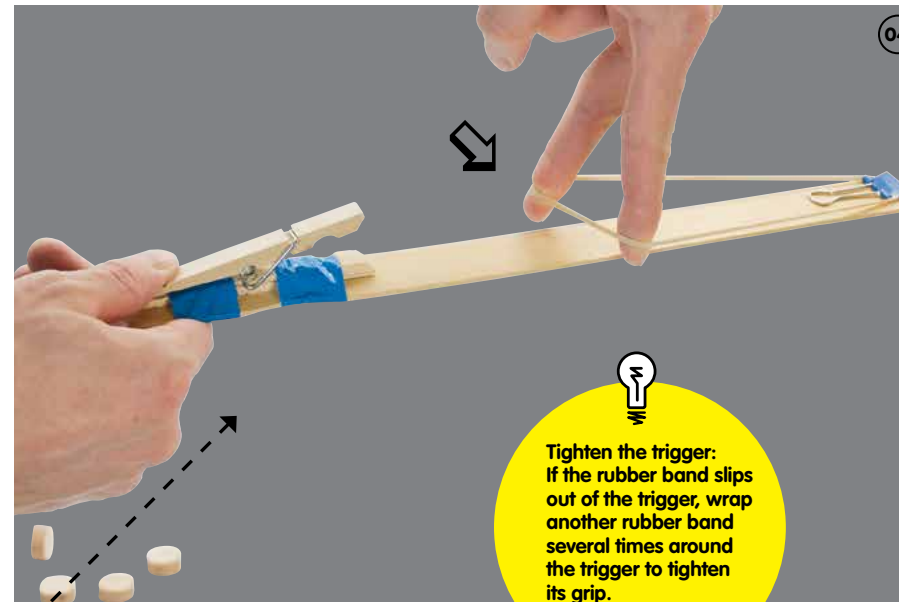
01 > Make the trigger. Cut a 6" (15 cm) piece of duct tape and split it lengthwise. Use the two pieces of tape to attach the clothespin to one end of the paint stirrer, making sure the pinching tip of the clothespin faces the middle of the stick.



02 > Use the binder clip to clamp the rubber band to the other end of the stick. Fold the binder clip handles down. Using a binder clip allows you to quickly swap out rubber bands with different shooting power, or replace broken ones.



03 > Choose your projectile. For indoor shooting, try disks made from cutting a synthetic cork into quarter slices approximately 1/4" to 1/2" (6 mm to 1.3 cm) thick. These are dense enough to shoot a good distance and maintain a fairly accurate trajectory, but not so dense that you'll break a window. Ideally, the projectile should be slightly wider than the trigger so the rubber band can hold it in place.



Tighten the trigger: If the rubber band slips out of the trigger, wrap another rubber band several times around the trigger to tighten its grip.

04 > You're ready to shoot! Squeeze the trigger open with one hand. Use two fingers from your other hand to stretch the rubber band into the open trigger. The rubber band should remain stretched taut when you clamp the trigger onto it.



05 > Wedge the projectile between the two sides of the rubber band directly in front of the trigger. This will prevent the projectile from falling as you prepare your shot and ensures that the projectile receives the full force of the rubber band's elastic energy.

06 > Scan your surroundings for something fun to shoot at. Things that fall over, make noise, or shatter (so long as they're not of value to anyone!) are great choices. Avoid shooting point-blank at hard surfaces—your projectile might ricochet back at you.



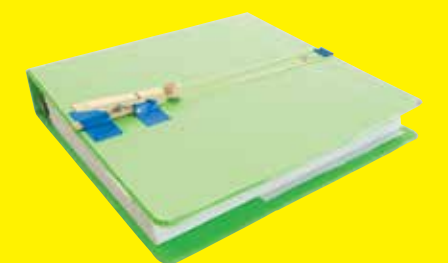
DESIGN VARIABLE

The shooter can be modified to fire pencils. To prevent the pencil from veering to the side when it's fired, add a paper clip guide to the shooter. Open the paper clip into a right angle with one curved end wide enough for the pencil to pass through. Attach the paper clip to the shooter with tape.



NOW GET TINKERING

The Many-Thing Shooter can be attached to almost any flat and rigid surface. Try turning boring objects, like a binder or instruction manual, into an improvised firearm.



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