

Trick Bolt with Small Nut

You couldn't figure it out? But this is an easy one. All you have to do is remove the nut from the bolt. Think about it; we got the nut on somehow. Come on. Give it another shot before you consult the rest of the solution!

Still can't get it? OK ... So, the first thing you have to do is run the nut all the way up to the bolt head.

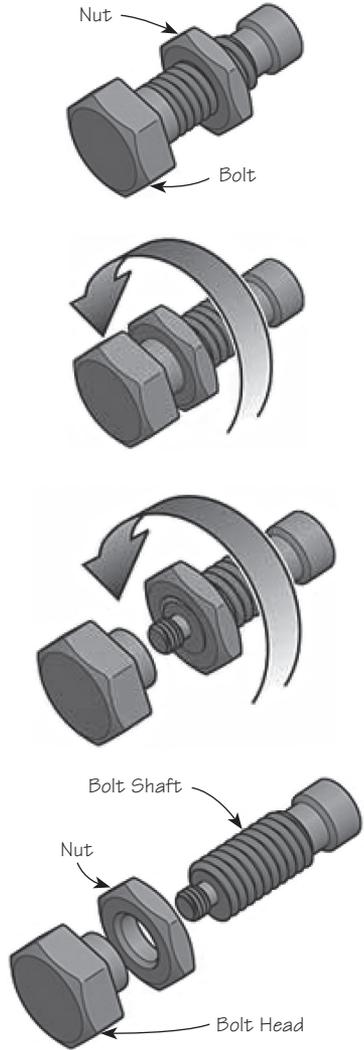
Once the nut is jammed right onto the end of the threads, give it another little twist. The secret should reveal itself. (The bolt is actually made up of two parts – a small threaded shaft is attached to the bolt shaft, which has a left-hand thread.)

It's an easy matter to remove the nut once you have detached the bolt head from the bolt shaft.

To re-assemble the parts, just run the nut back onto the bolt shaft and thread the bolt shaft back into the bolt head. (Remember, though: it has a left-hand thread.)

Now, practise the solution. See if you can disguise what you're doing such that no one can see how you get the nut off.

Hand the bolt over to a friend and ask her/ him to remove the nut from the bolt. Don't heap too much scorn upon her/him; *you* couldn't figure it out either.



Trick Bolt with Large Nut

You couldn't get the nut off, could you? In fact, it seems you could only get the nut further on, right? Frustrating, isn't it?

Now, before you consult the rest of the solution, think about it a little bit. The nut moves only toward the part of the bolt you're holding.

So, you still can't get it off and now the nut is jammed right up against the head, isn't it? OK... see what happens when you hold the bolt by the shaft rather than by the head. Slowly turn the nut off.

As you turn the nut, the secret will eventually appear. (There is actually a joint in the bolt shaft, which is really two separate parts.)

Once the nut is clear of the joint, the bolt head section will fall off. At this stage, it will be relatively easy to remove the nut.

Take a closer look at the joint details. See if you can figure out what is actually happening to lock the threads.

Hint: It has to do with the shape of the shoulder on the section of the bolt with the head.

To put it all back together again, thread the nut back onto the bolt shaft until just one or two threads of the shoulder portion are exposed. Align the shoulder of the bolt head section with the shoulder of the bolt shaft section and carefully turn the nut to conceal the joint. This step can be a little fiddly, since the threads need to align. There might be a lot of drag in the joint until everything aligns properly.

Hand the bolt over to an unsuspecting friend (victim) and see if she/he can remove the nut. Be nice, now. Remember, *you* had to consult the solution.

