Fidget clicky pen compatible with Pentel Energel liquid gel ink pen

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VIEW IN BROWSER

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Summary

A retractable pen with removable fidgets that can fit Energel pen refills

Household > Office

Tags: pen pentel energel

Description

This is a pen cover that can fit the Pentel Energel refill, has rotatable fidgets on it and uses the same clicking mechanism. The fidgets were inspired by Sean Liang's sensory bolt action pen (https://www.printables.com/model/1760172-sensory-bolt-action-pen-pilot-g2-compatible/files), but I made the whole pen from scratch and didn't modify his fidgets beyond just looking at them on his Printables page.

I made this because I really enjoyed the ink of the Energel, but I wasn't a fan of the metallic blue exterior and I wanted something to fidget with during class. I couldn't find any pen models that were compatible with this brand and used the same

clicking mechanism (not the bolt action). As a result, I designed this pen, which is retractable like most commercial pens. In the future, I might design more fidgets to put on the pen.

Parts

	pen barrel **This part makes up most of the pen and is where the fidgets will slide into.**
	pen body (printed upside down) The top of this picture will screw into the top of the pen barrel while the bottom of the pen body in this picture is part of the clicking mechanism. The inner cam will slide into the grooves when the pen tip is out.
	clicker (printed upside down) This will slide into the pen body through the thread side when assembling the pen. The rectangular parts are so the clicker will stay on the pen instead of falling out if you hold the pen upside down. The inner cam will slide halfway through the grooves of the clicker when you retract the pen.
	inner cam This is the rotational part that allows the pen tip to be retractable. This will also be inserted into the pen body after the clicker through the thread side during assembly.
	fidgets The three fidgets that slide into the top of the pen barrel.
	You will also need a spring and the Pentel Energel refill (can be any size).

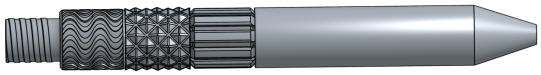
Assembly and Printing

I recommend watching this video to understand how the pen works, which will help when assembling it. I've included the stl file with all of the parts as well as files of them individually in case you want to print certain parts in different colors.

**I have not printed the pen myself. I will try making a video of me assembling when I do print it and fix any potential errors that might come up.

Step 1

Put the fidgets over the pen barrel. Drop the screw and insert the pen refill into the pen barrel as well.



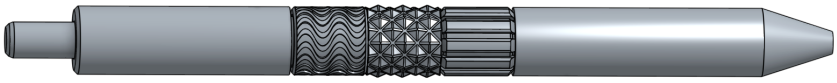
Step 2

Hold the pen body with the thread side up and drop the clicker and inner cam in that order. You might have to shake it a little so they are in the right positions.

Step 3

Put the pen refill (which is inside the pen barrel and should be sticking out) into the pen body while the whole pen is sideways,

and then screw the two parts together.



Model files

individual step files 7 files

pen-barrel.step

clicker.step

spiral-fidget.step

pen-body.step

rect-fidget.step

spiky-fidget.step

inner-cam.step

indvidual stl files 7 files

pen-barrel.stl

inner-cam.stl

spiky-fidget.stl

spiral-fidget.stl

rect-fidget.stl

clicker.stl

pen-body.stl

final_pen.step

final_pen.stl

☐ all parts in one file

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