

# Can AI replace patent attorneys?

---

 [hgf.com/news/can-ai-replace-patent-attorneys](https://hgf.com/news/can-ai-replace-patent-attorneys)



December 2022

OpenAI recently released a dialogue-based AI chatbot called ChatGPT, which is free for anyone to try out. You can try it here (<https://chat.openai.com/chat>). It's been shown that it can set, write, and grade essays, generate prompts for creating AI art, create ideas for films, and even create text adventure games.

But can AI write a patent claim?

Despite the risk of putting myself out of a job, I decided to give it a try. I asked ChatGPT to write a patent claim for the first thing I saw on my desk: a stapler.

*Human: Write a patent claim for a stapler*

*AI: A stapler, comprising a body, two arms pivotably attached to the body and having a base end and an apex end, a magazine containing a supply of staples, wherein the staples are inserted into the magazine through an insertion opening, a hammer pivotally mounted to the arms, a drive mechanism adapted to move the arms between open and closed positions, and a spring biased ejector adapted to eject the staples from the magazine and into the arms.*

This is an admirable attempt, though there are significant issues that a human attorney (hopefully) wouldn't make. For example, it would be better not to state that the magazine contains a supply of staples, as doing so means that the claim doesn't cover an empty stapler. Instead you could write, for example, "a magazine adapted to contain a supply of staples".

What else is on my desk?

*Human: Ok, now write a patent claim for a paperclip*

*AI: A paperclip, comprising a metal wire of a predetermined length having a first end connected to a second end in a u-shaped bend, wherein the u-shaped bend is configured to allow the metal wire to retain a stack of documents together and to be manipulable by hand for easy attachment and detachment of documents.*

*Human: How does that work?*

*AI: The paperclip works by allowing for a stack of documents to be held together by the U-shaped bend in the metal wire. This bend is designed to allow the user to easily attach and detach documents by using their hands to manipulate the paperclip. The metal wire also provides a strong grip on the documents, ensuring that they stay secure without slipping away.*

*Human: Is it only one u-shaped bend?*

*AI: Yes, the paperclip typically has only one u-shaped bend, however some paperclips may have more than one bend depending on the design.*

*Human: How can it hold paper together with only one bend?*

*AI: The paperclip holds the papers together by using friction created between the papers and the metal wire, which is supported by the U-shaped bend. The bend also helps to lock the papers into place so that they don't slip away. Additionally, the bends allow the user to easily attach and detach documents by using their hands to manipulate the paperclip.*

*Human: Would it be improved with additional bends?*

*AI: Yes, additional bends can help to improve the performance of a paperclip. By adding additional bends, the friction between the papers and the metal wire is enhanced, providing a stronger grip and making it more difficult for the papers to slip away. Additionally, an increased amount of bends allows for easier manipulation of the paperclip by hand.*

*Human: Why did you only include one bend in your patent claim?*

*AI: The patent claim was written to cover the typical design of a paperclip, which is typically composed of only one u-shaped bend. By including only one bend in the claim, we can ensure that the patent is valid for all designs of paperclips that include one or more bends.*

Again, an impressive attempt. Note that this claim says configured to retain a stack of documents together and so avoids the mistake made in the stapler claim. On the other hand, the claim limits the paperclip to being made of metal, and having a u-shaped bend. While this is an accurate description of a typical paperclip, other materials and bend-shapes are possible and so the claim is unnecessarily limited.

Of course, ChatGPT is also wrong about how many bends a typical paperclip has, though it does ‘know’ that some paperclips have more. Furthermore, it is technically possible to make a usable paperclip with only one bend (I tried it), and ChatGPT appears to ‘understand’ that claim with one bend will cover paperclips with more than one bend.

In conclusion:

I was impressed by the results, but I don’t think we are anywhere near the stage where it would be a good idea to trust AI to draft your patent application. The example claims above are for well-known and well-documented existing objects, and it is unlikely that AI would be able to do a patent attorney’s job of taking a previously unarticulated inventive concept, capturing its essence, and using the clearest language to capture the essential defining features with the right scope to catch infringers. A qualified patent attorney will be able to use their commercial and strategic expertise and real-life experience to maximise your chances of obtaining a valuable scope of protection for your invention. Plus it’s always reassuring to know that your application is being handled by a real person with genuine enthusiasm for your idea. However, given the frantic pace of AI advancement, you might want to arrange an in-person meeting, just to be sure...

---

This article was prepared by HGF’s Senior Patent Attorney [Dr Mark Sellick](#).