

Name: \_\_\_\_\_ Period: \_\_\_\_\_ STEM Activity January 2021 Who Created Paper Clips?

A paper clip is a tool used to hold pieces of paper together. It is typically made of wire, although there are some that are large and plastic. Its shape is best described as two attached oval shapes that have straight sides. Before paper clips were invented, a stack of papers that needed to stay together were held with string or ribbon. This was the method for 600 years. Once pins were invented and mass produced in 1835, a straight pin might be used to hold a small stack of papers together. Obviously, this put holes in the papers, which at times was not acceptable.

Before the paper clip could be invented, however, someone had to figure out how to make low-cost, industrially produced steel. The steel needed to be both strong and flexible. This was figured out in 1855 and opened the door for later inventions as the clothes hanger, safety pins, and the paper clip.

Although there were a lot of attempts to make a clip that would hold papers, the first patent issued was in 1887. This early paper clip was a flexible wire that could be bent to grasp papers. Johann Vaaler, a Norwegian inventor with degrees in electronics, science and mathematics, received a patent from Germany for a clip to hold papers together in 1899. His clip, however, was considered less functional because it did not have the secure second loop.

According to the website Early Office Museum.com, the first patent in the United States for a paper clip was given to Samuel B. Fay in 1867. This clip was originally created to attach tickets to fabric. However the patent said it could also be used to attach papers together.

In 1899 a patent was given to William Middlebrook for the design of a machine that would make the paper clip we use today. He sold the patent to an American office supply company named Cushman & Dennison. The paper clip that they made with the machine was named the Gem Clip. This paper clip had the shape that we are familiar with today. It was a loop within a loop, able to be opened enough to put papers between the loops, and yet springy enough to press the papers together so that they don't come apart.

Today, Americans purchase over eleven billion paper clips a year. They are used for many things including hanging ornaments, cleaning pipes, unclogging tubes of glue, cleaning fingernails, and as a fidget tool. But they continue to be mainly used for holding papers together.

Answer each question in a complete sentence.

1. What is a paper clip? \_\_\_\_\_  
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2. What was used to hold papers together before the paper clip was invented? How long was this method used?  
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3. Who invented an early paper clip? Why was this version considered to be not very good?  
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4. Who invented the machine that first created the paper clip that we use today? What was it called?  
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5. About how many paper clips do Americans purchase per year? Besides holding papers together, how else can they be used? \_\_\_\_\_  
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