In 1955, my grandfather started working for the Louisville & Nashville Railroad. He worked there for nearly 30 years, leading to a lifelong interest in railroads in my father and me. Although I never met my grandfather, I have still learned a lot about railroads, such as what types of rolling stock they use, what date the Missouri Pacific Railroad got merged into the Union Pacific Railroad and why modern trains no longer use a caboose. I knew basics details such as why locomotives have ditch lights, but I wanted to know about one of the most important things that happened in railroad history: the invention of the air brake. The air brake was such a turning point because it saved lives of railroad workers and passengers, while growing the United States Economy.

I read most of my information about air brakes from books and the internet. There were about four books that I read that were about trains and George Westinghouse. I used the Harrison Memorial Library in Carmel, California and the Stevenson School Library in Pebble Beach, California to find my books. For websites, I used Stevenson’s electronic database including *New York Times* online and Infotrac. The New York Times articles were important because they had preluding evidence from 1848 on. I was able to interview Caltrain employee, John Bourbin. It was important because he works with the modern air brakes and had insight on them.

In the summer of 2012, I took a class at Digital Media Academy camp held at Stanford University. The class was titled “Web Design and Development for Teens.” I had much fun there and had found a new love of web design. When I found that one of the options for History Day 2013 was to have a website, I quickly decided what to do. A website is complex and interactive just like a railroad. I was able to distinguish quotes with font color. I used the website creator, Weebly, through, NHD. I decided that I would organize the information upon an approximate timeline of importance. I used the website designer to make the format of the website, while I used the some programs like Microsoft Paint to edit photos that I took to more accurately show railroad safety

Air brakes were a turning point in history because they were one of the first developments in and toward railroad and human safety. Air brakes started a revolution towards advanced safety in the railroads through decreasing stopping time and increasing reliability. The air brake did that by applying the brakes on the whole entire train, rather than a brakeman jumping from car to car, day or night, rain or shine, and applying the brakes by means of a brake wheel. Air brakes also grew the still young United States Economy and Social System. Finally, a train that was able to operate at a very reliable pace spurred great expansion of the United States and beyond.

Word Count: 492