**Manufacturing Material:**

The material used to make the mainspring is a white alloy, composed of nickel, chrome and cobalt metals. The benefits of manufacturing a white alloy mainspring is its resilience to corrosion, which is important so that the mainspring does not build up rust. The alloy increases the longevity of the mainspring so that it does not break or lose performance. The white alloy has a higher elastic limit than most metals, such as carbon and steel (which were used as mainspring materials pre-1950’s). The mainspring will not deteriorate (tire out) and also maintains a constant torque.

**Manufacturing Process:**

The first step in manufacturing a mainspring is coiling, in which the alloy is heated so that it maintains flexibility and is shaped into its specific dimensions. It is in the heated stage where the stopper hole is grooved in and the barrel hook hole is cut out. Directly after the coiling process, the mainspring is placed into an oven, decreasing the temperature, which allows the metal to slowly cool down and harden. To ensure a smooth, clean finish, the mainspring rotates around an abrasive wheel, flattening the surface. Lastly, it is cooled in water and packaged so that it can be transferred to the manufacturing facility.

“Springs,” How springs is made - material, manufacture, making, history, how to make, used, composition. [Online]. Available: http://www.madehow.com/Volume-6/Springs.html. [Accessed: 26-Nov-2016].

“Mainsprings.” [Online]. Available: <http://www.nawcc-index.net/Articles/Elgin_bulletin_mainsprings.pdf>, [Accessed: 26-Nov-2016].

These were the websites I got the information from:

<http://www.madehow.com/Volume-6/Springs.html>

<http://www.nawcc-index.net/Articles/Elgin_bulletin_mainsprings.pdf>