

Sewing Machines, Sergers, and You: History of Garment Manufacturing Technology

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I would easily wager that just about everyone thinks about their clothes but almost no one thinks about the machines that make them. As someone who makes her own clothes, it has always been pertinent to me to learn every facet of my new Brother sewing machine and all its bells and whistles. Why should you care, however? Here's why. The quality of the sewing and other manufacturing machines chosen in manufacturing determines, by a large margin, the quality of your garments. Loose threads, seams coming apart, or poorly fitted garments are all symptoms of poor-quality sewing machines.¹ This is not only frustrating as a consumer who would like to enjoy everyday life without unraveling. It can also be frustrating to the brand associated with the poor quality. Sewing machines can teach us much about our clothing and how we can participate in more sustainable fashion.

The innovative machine that led to the mass production of clothing as we know it now was invented in 1829 by a French tailor by the name of Barthelemy Thimonnier.² Before this invention, there were many attempts and many patented failures.³ One notable attempt came from a cabinet maker by the name of Thomas Saint who patented a machine powered hand crank used to sew leather and canvas in 1790.⁴ The result was a wooden mechanism powered by a hand crank with featuring many bulky components, however, it worked!⁵ Barthelemy pioneered a sewing machine that used a needle and thread that created a chain stitch, similar to what we have today.⁶ It was not a beautiful piece of machinery by any stretch of the imagination, and it looked similar to that of a rudimentary rig consisting of random ply wood and simple machinery.⁷ Believe it or not, this innovation in garment making was not well received at all by the hard-working tailors in France, as they stormed Thimonnier with torches attempting to set fire to him and his invention.⁸ Fortunately, both factions survived, but it is interesting to ponder what would have happened to the sewing machine if his design did not survive.

Following this model came Elias Howe's patented model in 1846, which improved on previous models and incorporated an eye-pointed needle.⁹ However, his design failed to attract investors and as he was abroad in London, multiple copycats infringed on his patent.¹⁰ Upon his return to the states he won every patent infringement case.¹¹ The lack of investment in his design turned around quickly as an inventor by the name of Isaac Singer (should sound familiar to the sewers out there) invented his own sewing machine offering to buy the patent rights and royalties

¹ See generally Wendy Hamilton, *Checklist of Common Sewing Machine Problems*, NEW MEXICO STATE UNIVERSITY (Dec. 2016), https://pubs.nmsu.edu/_c/C202/index.html.

² Stefanie, *History of the Sewing Machine: A Story Stitched in Scandal*, CONTRADO (Jun. 26, 2019), <https://www.contrado.com/blog/history-of-the-sewing-machine/>.

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ Jimmy Stamp, *The Many, Many Designs of the Sewing Machine*, SMITHSONIAN MAG. (Oct. 16, 2023), <https://www.smithsonianmag.com/arts-culture/the-many-many-designs-of-the-sewing-machine-2142740/>.

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

to add the eye-pointed needle to his own design.¹² From this patent pool came one of the most popular sewing machines ever made – the Singer.

Helen Blanchard has also contributed to the boom of the sewing machine with the introduction of her patented Zig-Zag Sewing Machine.¹³ Basically, a zig-zag stitch makes clothing sturdier and stronger, thus preventing snags and rips. Her design was largely used in factories saving time and money as it uses less thread to reinforce seams and took half the time.¹⁴

The invention of the sewing machine has also fast-tracked the manufacturing of garments, thereby drastically reducing the price of clothing.¹⁵ Before this innovation, many made their own clothing, while those in upper classes went to tailors and dressmakers to get their clothing.¹⁶ When the sewing machine brought about mass manufacturing in the beginning of the 20th century, owning more clothing became standardized.

Today, Singer sewing machines are well capable of fulfilling industrial and home sewing needs. Should you look for one in Joann's, Target, or Walmart, you will notice that there are all kinds of sewing machines, most of which are equipped with a zig-zag stitch function. While they vary in size, design and available functions, the components are fairly similar across the board. Most sewing machines have a wired foot pedal, stitch selection panel, needle and thread, balance wheel, reverse lever and a place for the bobbin and thread.¹⁷ From the simple design of yesterday, the sewing machine has become a complicated piece of machinery that comes with a steep learning curve for those wanting to sew. With more features comes more functionality and possibilities for assembling garments, but it also can increase the possibility of mistakes and malfunctions in the machinery.¹⁸ Despite having around five years of experience with sewing, there are still little things I'm learning about my sewing machine and how to avoid mistakes.

Often manufacturers cut corners today in clothing manufacturing to avoid dealing with these issues by removing certain sewing techniques that create beautiful and neat seams.¹⁹ Likely with the advent of fast fashion, the priority became getting clothing out the door, rather than taking the time to create quality work. The result is unraveling seams, poorly fitted clothing, and clothing that easily snags and rips. This is both due to the hasty sewing techniques and the quality of the fabric employed. This may come as a surprise to some, but the degradation on the size and quality of pockets also has to do with poor sewing techniques.²⁰ Women's pockets are either extremely shallow or easily torn apart as it is generally cheaper and easier not to bother making them.²¹ Pockets require multiple steps to reinforce them this may require interlocking stitches on top of previous stitches to achieve a sturdy pocket.²²

¹² *Id.*

¹³ *Sewing Together Patent Protection*, NAT'L INVENTORS HALL OF FAME (last accessed Mar. 26, 2024), <https://www.invent.org/blog/inventors/National-Sewing-Machine-Day>.

¹⁴ *Id.*

¹⁵ Charles Daniel McDonald, *The History of Fast Fashion*, FORC (last accessed Mar. 26, 2024), <https://www.forcmagazine.com/the-history-of-fast-fashion/>.

¹⁶ *Id.*

¹⁷ *Basic Parts of Sewing Machine and Their Functions*, TEXTILE ENG'G (Jun. 24, 2023), <https://textileengineering.net/basic-parts-of-sewing-machine-and-their-functions/>.

¹⁸ Hamilton, *supra* note 1.

¹⁹ Lucianne Tonti, 'One Size Fits Nobody': *Markers of High-Quality Clothing Are Getting Harder to Find*, THE GUARDIAN (Sep. 18, 2023), <https://theguardian.com/lifeandstyle/2023/sep/19/garment-quality-not-the-same-why-closet-clinic>.

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

I am almost certain that none of the inventors attributed to innovations of the sewing machine anticipated its use to degrade the quality of clothing rather than to just make the process more convenient. To combat this, it is imperative that everyone educate themselves on the construction of clothing, so that they learn how to differentiate quality clothing from the poor quality. In this way, we can all demand better quality clothing that will last longer and will be less likely to end up in a waste pile.