

The Servant in the House: A Brief History of the Sewing Machine

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Book Summary by Gates Museum

Why the Sewing Machine Was Invented

The sewing machine emerged as a mechanical necessity during a period of acute demand for rapid garment production. Human hand-sewing was a grueling, occupation, criticized in Hood's poem, *the Shirt*. Initial automate from the need uniforms in clothing for whale



low-wage famously Thomas *The Song of* efforts to sewing arose for military France and New England fishermen.

However, early inventions faced intense public resistance from workers who feared immediate displacement and starvation. Mobs destroyed industrial machines in France, and early American inventors suppressed their own designs out of moral concern for seamstresses. Despite being showcased at the 1851 Crystal Palace Exhibition in London, contemporary analysts initially failed to recognize the sewing machine's impending global impact. While England birthed the earliest concept, American inventors ultimately revolutionized the machine into a practical, labor-saving device.

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The Pioneer Inventors

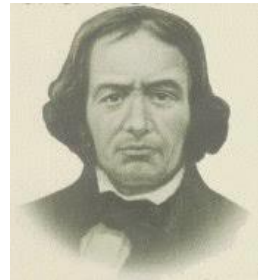
1. Thomas Saint

The conceptual origin of machine sewing belongs to an Englishman, Thomas Saint, who secured a patent in 1790 for a leather-sewing machine. Though his technical drawings outlined elements fundamental to modern machines—including an overhanging arm and a horizontal cloth plate—there is no record that Saint ever built or utilized a functional prototype.



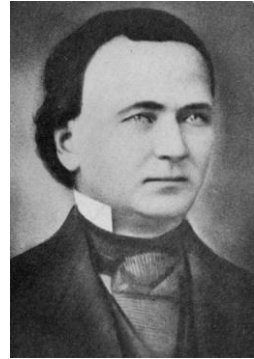
2. Barthelemy Thimonnier

In 1829, a poor French tailor named Barthelemy Thimonnier mastered the mechanical hurdles of sewing by engineering a machine that utilized a hooked, crochet-like needle to produce a chain stitch. By 1831, he partnered with an engineer and operated 80 machines to sew French army uniforms. An infuriated mob of tailors subsequently destroyed his workshop, forcing Thimonnier to flee. Though he improved his machines to sew 200 stitches per minute by 1845 and secured international patents, mechanical competition and political revolutions kept him in poverty until his death in 1857. He is recognized as the first inventor to put a sewing machine to practical, public use.



3. Walter Hunt

Between 1832 and 1834, New York inventor Walter Hunt constructed a functioning machine that introduced the two most critical components of modern sewing: **the eye-pointed needle** attached to a vibrating arm, and a **shuttle carrying a second thread** to form an interlocking stitch. Hunt was a prolific inventor who also created the safety pin and a hard-coal stove, but he lacked business acumen. He sold his machine rights to George Arrowsmith, who declined to patent or manufacture it due to financial distress and fears of ruining hand-sewers. Hunt's original machines were abandoned in a garret and largely forgotten for 15 years, depriving him of a fortune, yet cementing his legacy as the true creator of the combination lock stitch.



4. Elias Howe, Jr.

Elias Howe, a young Massachusetts machinist living in poverty, began experimenting with mechanical sewing in 1843. After abandoning an attempt to copy the human arm's motion, he independently conceived a two-thread shuttle system. Funded by his partner George Fisher, Howe completed a functional metal model in April 1845. To prove its worth, Howe successfully raced his machine against five swift hand-seamstresses, out-stitching them in speed and quality.

Howe's Early Milestone (July 1845):

Successfully sewed two complete wool suits on his prototype machine.

Howe patented his machine on September 10, 1846. Facing American indifference, he traveled to England and sold a single machine and its British rights to clothing manufacturer William Thomas for a meager £250. Thomas



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exploited the patent, generating a massive fortune while leaving Howe destitute. Howe returned to America in 1849 with only half a crown, only to find that other mechanics had copied his patented eye-pointed needle and shuttle combination. Backed by new financial partners, Howe launched an aggressive legal campaign to defend his patent rights.

5. Isaac Merrit Singer

In August 1850, practical machinist Isaac M. Singer examined a clumsy, rotating-shuttle sewing machine brought to a Boston repair shop. In a matter of days, Singer redesigned the apparatus. His prototype introduced several revolutionary elements:

- A **straight needle** working vertically up and down.
- A **horizontal table** to support the fabric.
- A **yielding vertical presser foot** to hold the cloth steady.
- A **wheel feed** featuring short periphery pins to move fabric continuously.



Financed with just \$40, Singer built his machine in 11 days. After fixing a minor thread tension issue, it sewed perfectly. Singer formed *I. M. Singer & Co.* with Orson Phelps and George Zieber, later partnering with lawyer Edward Clark. When Elias Howe demanded \$25,000 for patent infringement, Singer fought the claim using Walter Hunt's prior invention as a defense. The courts ruled that Hunt's unpatented, abandoned machine did not invalidate Howe's patent. Consequently, in 1854, Singer submitted to the court, took out a license, and paid Howe a \$15,000 settlement. Singer focused heavily on commercialization, introducing the

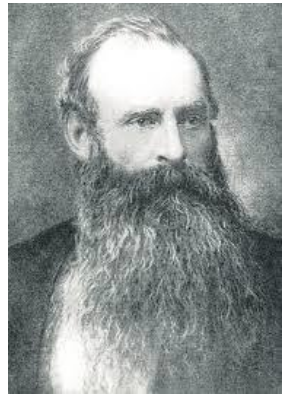
first highly practical domestic sewing machine and ultimately accumulating a \$13,000,000 estate.

6. Allen Benjamin Wilson

Allen B. Wilson independently invented a sewing machine in 1849 without any knowledge of Howe's work. Partnering with manufacturer Nathaniel Wheeler, he formed the *Wheeler & Wilson Manufacturing Co.* Wilson was the most mechanically original pioneer, introducing three enduring innovations:

- The **revolving hook** system to form lock stitches, replacing the heavy, back-and-forth shuttle.
- A stationary, circular **disk bobbin**.
- The universally adopted **four-motion roughened-surface feed**.

Wilson's compact, 6.5-pound machine was drastically superior to Singer's 55-pound industrial models. Like Hunt, Wilson suffered from poor health and a sensitive temperament, selling off major patent rights for fractions of their value, though his mechanical principles remain intact in modern manufacturing.



7. William O. Grover & James E. A. Gibbs

William O. Grover, a Boston tailor, patented the **double-locked chain stitch** in 1851, creating the *Grover & Baker Sewing Machine Co.*, which eliminated the need to rewind under-thread onto bobbins. In 1857, Virginian James E. A. Gibbs invented the first practical **single-thread chain-stitch machine** after deciphering a newspaper woodcut. He partnered with James Willcox to form the *Willcox & Gibbs Sewing Machine Co.*

The Sewing Machine Combination

By 1854, continuous patent warfare threatened to bankrupt the infant industry. To end the gridlock, Orlando B. Potter, president of the Grover & Baker Co., engineered the first major American patent pool: **The Sewing Machine Combination**.

The "Big Four" Patent Pool (1854-1877)

Members: Elias Howe, Jr. | I.M. Singer & Co. | Wheeler & Wilson | Grover & Baker

This historic trust pooled basic patents, including Howe's eye-pointed needle, Wilson's four-motion feed, and Singer's vertical presser foot and wheel feed. Under the agreement:

- Manufacturers paid a unified **\$15 license fee** per machine to the combination.
- Elias Howe received a special **\$5 royalty** per domestic machine (\$1 per export).
- A central fund was maintained to prosecute unlicensed infringers.

The license fee dropped to \$7 in 1860. When the final foundational patent (the John Bachelder patent) expired in 1877, open market competition emerged, causing prices to plummet and triggering rapid industry advancement.

Key Historical Contributions & Legacy

The technical and socio-economic legacy of these pioneers is summarized below:

Inventor	Major Contribution	Long-Term Impact
Thomas Saint	First conceptual patent (1790)	Outlined the structural framework of the machine arm.
B. Thimonnier	Hooked needle chain stitch machine (1830)	First to implement machine sewing for practical, industrial work.
Walter Hunt	Eye-pointed needle & shuttle lock stitch	Formed the absolute technical baseline of modern mechanical sewing.
Elias Howe, Jr.	First patented American lock stitch machine (1846)	Popularized the machine commercially and validated basic patent rights.
Isaac M. Singer	Vertical needle, presser foot, continuous wheel feed	Mass-marketed the first viable, heavy-duty domestic sewing machines.
Allen B. Wilson	Revolving hook, stationary bobbin, four-motion feed	Created the four-motion feed mechanism used in modern machines.

Inventor	Major Contribution	Long-Term Impact
William O. Grover	Double-thread chain stitch	Widely utilized in manufacturing underwear, shoes, and bags.
James E. A. Gibbs	Single-thread chain-stitch revolving hook	Enabled the production of affordable, lightweight home machines.

The sewing machine fundamentally altered human society by ushering in an era of cheap, clean, and accessible mass-manufactured clothing. By automating a chore that historically consumed half of the global female population's time, it acted as a major catalyst for shifting women's roles into broader legal, business, and social landscapes. Even as manufacturing moved out of the home and into factories, the sewing machine remained a vital "servant in the house."